

## Stakeholder and Conflict Analysis

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### Scope: questions/ challenges the tool addresses

Stakeholder and Conflict Analysis (SCA) provides a structured way to identify stakeholders, and to explore how potential interactions among them may affect a project. The motivation for developing and using the SCA tool is the ubiquity of conflict over water quality and quantity.

Water, if scarce or polluted, can pose a threat to livelihood security. Conflicts can arise between downstream water-users dependant on a water source and upstream users who affect its quality or quantity in ways that make “normal” downstream activities impossible. But water scarcity or pollution may also serve as an incentive for water users to cooperate in actions that help improve water quality and quantity. (Swain, p.1, 2004)

There are various types of conflicts, some more intractable and prone to violence than others. Conflicts can be social, ethnic, political or solely based on access to land and water resources. Conflict over water resources is ubiquitous, and the manner in which it unfolds and the way it is managed is important. When it comes to use and sharing of resources, it is not always possible to satisfy all stakeholders all of the time. Although conflicts cannot always be fully resolved, but there is often some room for conflict management. Therefore, ways are needed whereby stakeholders can cooperate in “agreeing to disagree”.

Conflicts tend to consume resources that could be used for development. They can weaken a region’s social structure as well as undermine poverty reduction efforts. It is therefore important to identify stakeholders: the people, groups or organisations that must be involved in siting, building and managing small reservoirs. The next step is to identify how stakeholders are (or potentially could be) involved in these activities, and what are the potential and existing relationships among stakeholders, so that possibilities for cooperation, conflict and competition can be identified. This can lead to better understanding on how to foster appropriate forms of stakeholder engagement.

### Target group of the tool

Anyone helping to organize small reservoir projects, including water resources managers, water engineers, rural district council planners, policy makers, communities, and non-governmental Organisations (NGOs)

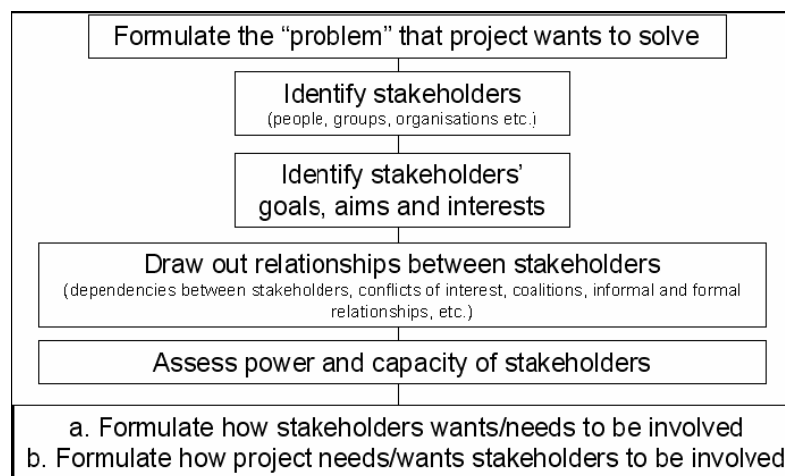
The tool is intended to be used in project strategic planning and risk management.

## Requirements for tool application

Prior to using this tool the small reservoir development problem should be identified, although it may be refined over the course of SCA. Implementation of the tool itself requires the time and resources to carry out interviews, discussions and analysis in order to identify stakeholders; carry out an institutional survey; identify where decision-making steps take place; and evaluate possible conflicts. Additionally, use of this tool requires an ability to think analytically about a project, the stakeholders involved, and their interactions.

## Tool: description and application

SCA begins with a stakeholder analysis, steps for which are shown in Figure 1. It is often carried out prior to the start of a project to assess the project environment and the social dimension within which it will operate. Stakeholder analysis can help formulate appropriate forms of engagement (Allen and Kilvington, 2001) because it requires the implementing organisation to develop an understanding of the social and cultural dimensions that will influence the extent to which a project is successful. It can also help ascertain possible modes of participation by different stakeholders across the project life cycle (Overseas Development Administration, 1995).



**Figure 1:** Steps of a stakeholder analysis

The SCA tool assumes that the “problem that the project wants to solve” has been identified and that, in accord with Figure 1, the first step is to identify possible stakeholders. Initially, this need not be more than a sketch of the various stakeholders that might possibly be involved. Once project specification is more advanced, it is important to conduct a more detailed analysis of the most relevant stakeholders. Communities are not identical, so it is essential to listen to stakeholders from different communities to better understand how reservoir development may differentially affect them.

Different aspects can be taken into account when identifying people, groups or organisations as stakeholders: (1) the extent to which they are interested in or responsible for reservoir development; (2) their reasons for being interested in reservoir development; (3) the extent to which they may end up being future reservoir users, even if at present they show little interest.

Note that the project itself is a stakeholder concerned with the development of small reservoirs, and that other stakeholders may have a bias towards involving SRP in that development.

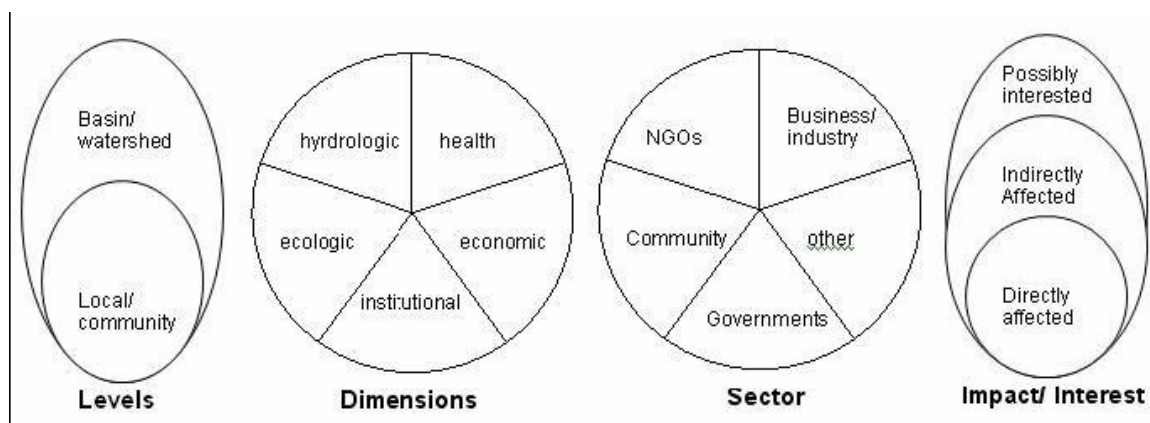
After identifying stakeholders, the next steps are to identify their goals, aims and interest in the project or in its envisioned outcomes; identify their relationships with other stakeholders; assess their power and capacity; and determine their level of involvement.

After stakeholder analysis comes conflict analysis. This involves assessing the degree to which identified interests and goals: conflict with or complement each other; relate to the specific goals of the development project; are influenced by present relationships between stakeholders; will likely determine future relationships between the stakeholders.

In short, the relative importance of different stakeholders for project success and their relative influence over the project need to be identified.

### *Step 1 Identifying stakeholders*

Stakeholder identification can be done from four perspectives: (1) organisational level, (2) small reservoir dimension in which a stakeholder is involved, (3) institutional sector, and (4) degree to which a stakeholder is interested in or affected by reservoir development (see Figure 2).



**Figure 2:** Stakeholder identification perspectives

A stakeholders' organizational level depends on the SRP objective and can be placed either at the basin/watershed level (planning, development and management of small reservoir ensembles) or at the local/community level (*use* of small multi-purpose reservoirs). The dimensions shown in Figure 2 are based on the dimensions which the SRP itself uses in research planning.

By identifying organization level, the following two questions can be answered:

- Who is likely to benefit from this project?
- Who is likely to suffer from development activities?

### *Step 2 Identifying and categorizing stakeholder perspectives*

Once stakeholders have been identified, their perspectives concerning the development of the small reservoir system need to be gathered through interviews. Table 1 shows an example of how this information can be organised. Information is gathered on how stakeholders currently view the reservoirs (e.g., the extent to which reservoirs are important or necessary for livelihood), what they expect of the reservoir systems in the future (e.g., continuous, reliable supply of water), and

the reasoning behind these perceptions. For example, the current interest in a reservoir of a public-sector government stakeholder may lie in maintaining influence, not whether reservoir water is depleted in the dry season.

Stakeholder	Interests in reservoir development	Goals to reach through assisting with development	Perceptions of present	Perceptions of future	Reasoning for perceptions	Possibilities for involvement
Stakeholder 1						
Stakeholder 2						
<u>Example:</u> Local Farmer at reservoir location	Improvement of livelihood, through increased access to water for irrigation purposes.	a. access to reservoir water  b. more crop production	Reservoir water needed for irrigation, domestic use and livestock watering.	Water must be available during the dry season for irrigation, unless reservoir levels become critical for continuation of livestock watering and for crocodile and fish survival.	- social responsibility towards livestock  - traditional responsibility towards crocodiles  - responsibility towards family for survival.	- Assist in construction  - Assist in operation  - Assist in maintenance (all this could translate also into involvement with Water User Association)

**Table 1:** Stakeholder matrix

While gathering this kind of information about stakeholders, better insights can be obtained regarding:

- i. How stakeholders view issues of poverty reduction, participation and capacity building
- ii. The differential roles of stakeholders in reservoir development
- iii. Interactions and power relations among stakeholders
- iv. The data, information, knowledge or wisdom stakeholders possess or can gather which could be of use in reservoir development.
- v. The degree to which views/interests based on individual ideals are compatible with collective ideals

Having identified stakeholders and their interests in reservoir development, the next step is to categorise stakeholders according to the scheme presented in Table 2, in which perceptions, interests and goals of identified stakeholder are compared with regard to the project.

A stakeholder is identified as “dedicated” if they are committed to and active in carrying forth and in defending their interests, goals and perceptions. For example, the District Director of Agriculture may be called “dedicated” when it is in his interest that small reservoirs be developed and maintained in order to improve agriculture within the district.

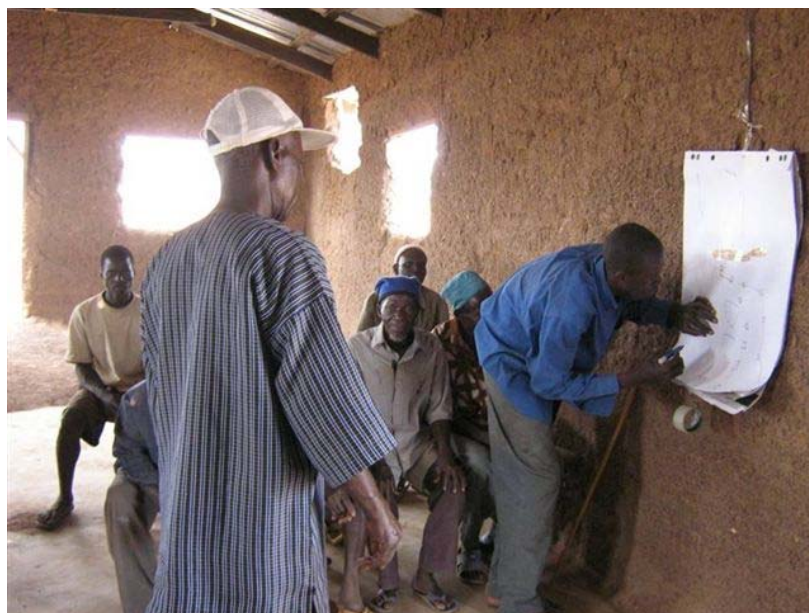
A stakeholder is identified as “critical” if they have the power and/or means to either facilitate or hinder development. For example, a person with land rights in the planned irrigable land

surrounding the dam can seriously hinder development if they are not willing to share these land rights for use of the land during the dry season.

	Dedicated		Non-dedicated	
	Critical	Non-critical	Critical	Non-critical
Similar perceptions, interests and goals	Actors that will most likely participate and could possibly become partners.	Actors that will most likely participate and could possibly become partners.	Valuable potential partners who are difficult to activate	Actors who do not initially have to be involved
Opposite perceptions, interests and goals	Potential "blockers" of (certain) changes  "biting dogs"	Potential critics of (certain) changes  "barking dogs"	Potential "blockers" who will not immediately spring into action  "sleeping dogs"	Actors who initially do not require attention

**Table 2:** (Non) dedicated and (non) critical stakeholders

The reason for developing the kind of matrix shown in Table 2 is for the project to become more aware of possible reactions of stakeholders towards small reservoir development, and the manner in which the project envisions that development will take place. For example, if there are many "biting dogs" then the project's vision may need adjustment – since it may be necessary to first pacify or accommodate these stakeholders.



*Step 3 Institutional Survey*

Having identified and categorized relevant stakeholders, it becomes possible to identify which institutions (official, governmental or traditional) are most relevant for small reservoir development. An institutional survey is conducted in order to identify the most appropriate interventions.

In planning small reservoir development it is necessary to understand which institutions are (or should be) involved in which activities, their respective roles, weaknesses and strengths, and possible opportunities or threats to their playing a suitable role.

Part of the information needed to better understand institutions will already have been gathered in the Stakeholder Identification step. Further information about the structure and activities of the institutions can be obtained from people who are part of the institution. Community members can be asked about their attitudes toward and relationship with the institution.

This last step can be useful for understanding the position of the institution within the community; are community members aware of the purpose and capabilities of the institution? Why or why not? Through an institutional survey more detailed information can be gathered concerning the:

1. Interaction between stakeholders within the institution,
2. Responsibilities of stakeholders within the institution,
3. Responsibilities of other stakeholders towards the institution,
4. Activities that should be undertaken by institution,
5. Reasons as to why some activities are not undertaken,
6. Possible solutions that can ensure that (relevant) activities are undertaken,
7. Reasons as to why some activities are undertaken.

In other words, what are the strengths and weaknesses of the present institution and what possibilities are there to overcome these weaknesses? One useful approach is SWOT analysis, an acronym for “strengths”, “weaknesses”, “opportunities”, and “threats”. This tool uses questions such as those in Box 1 to identify the strengths and weaknesses of a stakeholder or institution and the opportunities and threats with which it is faced.

**Box 1: Questions to ask in SWOT analysis**

**Strengths**

1. What advantages does the stakeholder have?
2. What is done well?
3. What relevant resources does the stakeholder have access to?
4. What do others see as strengths?

**Weaknesses**

1. What could be improved?
2. What is done badly?
3. What should be avoided?

**Opportunities**

1. Where are the good opportunities that the stakeholder is faced with?
2. What are the interesting trends the stakeholders are aware of?

**Threats**

1. What obstacles are being faced?
2. Are relevant situations changing?
3. Do the stakeholders have debts or cash-flow problems?
4. Are there cultural/social/political conflicts?

*Step 4: Decision-making process*

In order to effectively develop small reservoirs, it is necessary to understand decision-making processes concerning small reservoir development at the community, district, region or basin, and country levels. How decisions are made depends on the capability of decision makers to carry out their responsibilities. It is also depends on decision maker access to information.

Understanding decision-making processes at various levels will help better understand:

- a. What information is needed by whom, and at what stage in the decision-making process,
- b. Why some communities or districts invest in reservoir rehabilitation and others do not,
- c. How communities or districts choose sites for construction of new reservoirs and relevant irrigation works,
- d. Why communities or districts decide that rehabilitation or development is not necessary or possible at certain locations.

Regarding the first of these points, by understanding how and when decision processes take place, it can be determined *from whom* necessary information can be gathered and *to whom* (and where and when) information should be provided, regarding issues of hydraulics, economics, health and environment. The Global Water Partnership (2003, p. 141) has identified four types of information:

- Data: quantifiable and qualitative facts about characteristic of water resources
- Information: interpreted data
- Knowledge: information held in the mind
- Wisdom: agreement and commonly accepted methods of using water resources to ensure sustainability.

These types of information are needed by decision makers to understand problems in small reservoir systems and how these may addressed, including, technical, organizational and managerial aspects (Table 3).

<p><b><u>1. Physical aspects of the reservoir systems</u></b></p> <ul style="list-style-type: none"> <li>- hydrology</li> <li>- geology, soils etc.</li> <li>- water quality and quantity</li> <li>- water cycles (also includes climate)</li> <li>- ecology.</li> </ul>		<p><b><u>2. Water related problems</u></b></p> <ul style="list-style-type: none"> <li>- water borne diseases</li> <li>- drought</li> <li>- floods</li> <li>- erosion and sedimentation</li> <li>- pollution and eutrophication</li> <li>- social problems                             <ul style="list-style-type: none"> <li>- land use water use (disputes)</li> <li>- traditional/cultural aspects</li> </ul> </li> </ul>
<p><b><u>3. Technical solutions</u></b> (solutions for water related problems)</p>	<p><b><u>4. Organisational solutions</u></b> (solutions for water related problems ... related to technical solutions)</p>	<p><b><u>5. Management aspects</u></b></p> <ul style="list-style-type: none"> <li>- regulations (land and water rights)</li> <li>- finances</li> <li>- education (local people)</li> <li>- organisational structure building</li> <li>- capacity building</li> <li>- communication</li> </ul>

**Table 3:** Areas about which information would be needed to make informed decisions.

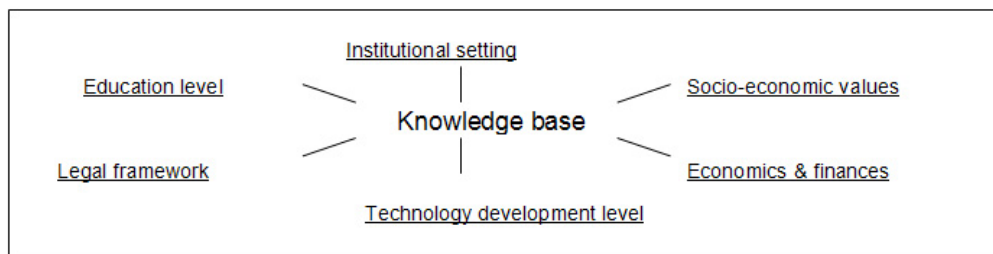
## Decision Trees

It is important to realize that a small reservoirs project on its own cannot possibly gather and interpret all relevant information and data. Collaboration with other organisations, institutions, researchers, local communities, local decision makers, etc., is indispensable. At the same time, it is important to identify what information will be needed by decision-makers in order to carry out small reservoir development. In this way, SRPs can more effectively carry out their role of assisting with local decision processes.

Taking into account the responsibilities, wisdom, and knowledge of local and community decision-makers, the following questions about existing information should be asked in order to understand what can (further) be done to aid development of small reservoir systems:

- What type of information has been gathered?
- Who has gathered and interpreted the information? (NGOs, local community members, Ministry of Food and Agriculture, other projects etc.)
- Where is this information stored and can it be found?
- How relevant is the information for the present situation?
- What information is lacking?
- By whom and in what manner can it be found?

In posing these questions, it is well to remember that the knowledge base of the district and communities is made up of knowledge, data, wisdom and information, regarding the following six elements:



**Figure 4:** Six elements that make up the knowledge base

Local communities will often possess much of the desired information in the form of knowledge and wisdom based on experience. This is understandable, given that these people live in areas where dams have stood/ do stand and have experience in using a small reservoir.

This knowledge base also coincides with the SRPs five dimensions – hydrologic, economic, ecological, health, and institutional – and indicates that districts as well as communities possess information of importance when researching those five dimensions.

Better understanding of the six elements can then lead to a better understanding of:

- The location of reservoirs needing rehabilitation
- Locations where ensembles of reservoirs can be developed
- Who should be included (from various levels) in reservoir development and management

The figures below give an indication of the questions that need to be answered when taking decisions on dam rehabilitation or construction, factors that influence the answers to these questions, and which stakeholders need to be involved:

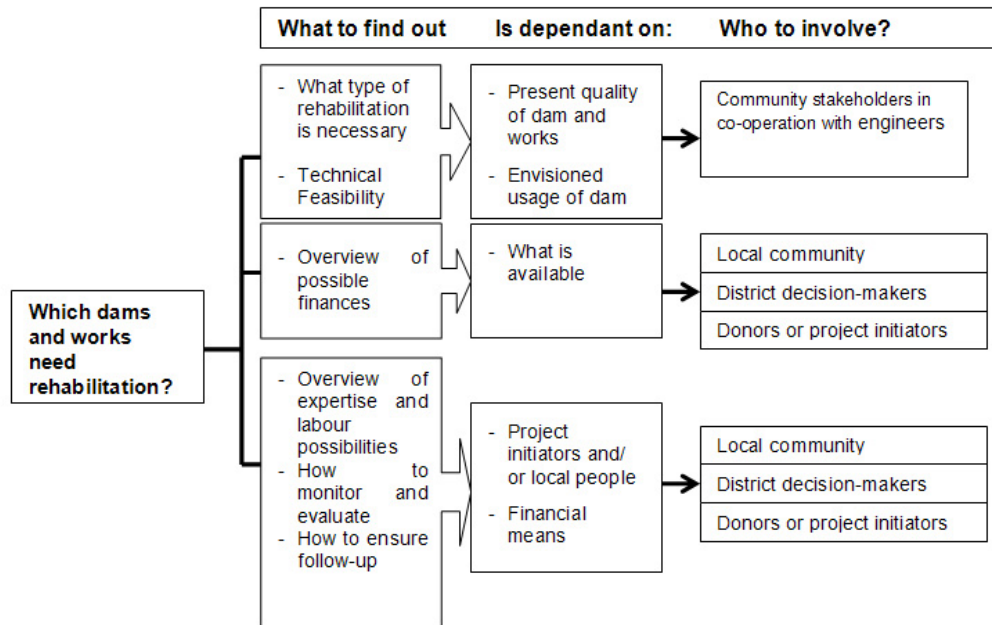


Figure 5: Schematization of issues to consider and whom to involve in dam rehabilitation decisions

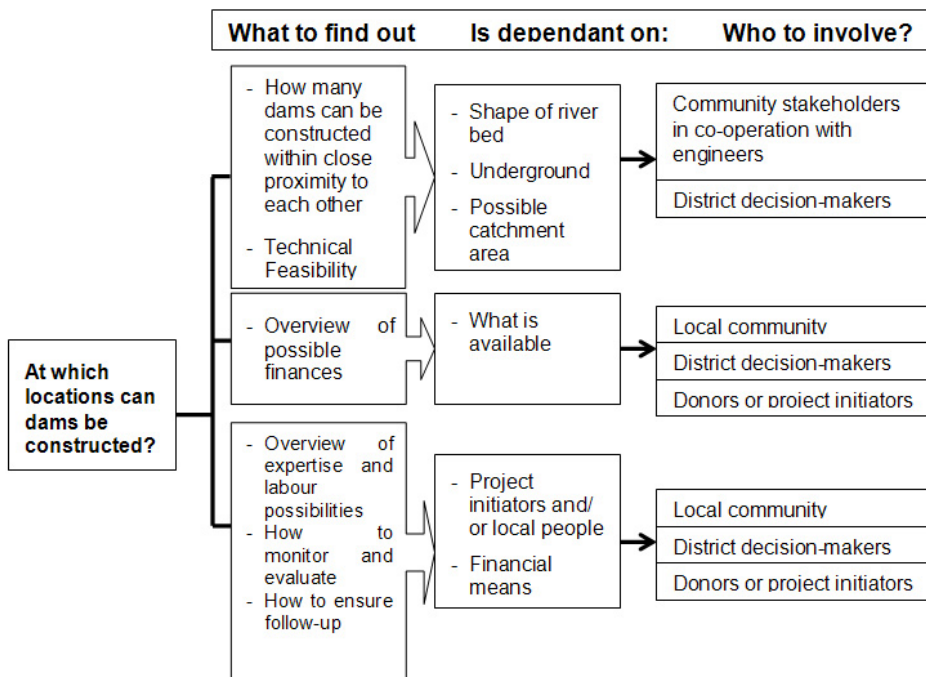


Figure 6: Schematization of issues to consider and whom to involve in (multiple) dam operation

*Step 5: Conflict Analysis*

Whether conflicts are amenable to resolution depends on the kind of conflict and what feeds it. Needs, perceptions, power, values, feeling and emotions are “ingredients” that can lead to conflict when stakeholders take opposing sides. Conflicts can thus be grouped according to sources. Three basic sources of conflict are conflicting goals, factual disagreements, and ineffective relationships (distrust and power struggles).

During the identification of the stakeholders and the institutional survey a number of these ingredients will already have been identified. The next step is to look at human activity and interactivity in order to examine where there are differences between stakeholders and if these are likely to lead to conflicts. However, it should be realised that conflict is not always negative. In fact, it can be healthy when effectively managed. Healthy conflict can lead to growth and innovation, new ways of thinking, and additional management options.

Nonetheless, a number of questions can be posed that will help uncover likely kinds of conflicts, between whom, and opportunities for resolution:

1. What conflicts exist at present?
2. What conflicts are not yet visible, but might arise?
3. What are possible reasons for conflicts:
  - o in general in the region?
  - o at specific points during small reservoir development?

If a conflict has been identified:

4. How did the conflict arise?
  - o what issues/interests does the conflict concern?
  - o how long has it been going on?
5. Is there sufficient information available concerning issues (why/why not)?
6. Who is involved in these conflicts?
  - o what are their interests in the conflict?
  - o what kind of official and/or traditional power do they have?
  - o what are historical relationships between conflicting groups?
  - o can the groups work together at all?
    - Why or why not?
    - In what manner might it be possible?

Possibilities for (re)solving conflict:

7. What kind of agreements could be tolerated by all?
8. Can the problem be solved internally or amongst groups with out external assistance?
9. Are outsiders tolerated?
  - o. How can an outsider be involved to (re)solve the conflict?
  - o. What kind of outsider?
10. How can solutions/resolutions be made sustainable?
  - o. are written agreements sufficient?
  - o. what is traditionally considered “lasting” and binding?
  - o. what recourse do stakeholders have if agreements are not honoured?
  - o. Are there also other optional “solutions”?

Studies of conflict analysis should be conducted before small reservoir development takes place. Measures to prevent conflicts must be set up before or during development to prevent or curb subsequent conflicts.



### Issues for (possible) conflict

There are a number of general issues around which conflict can arise:

1. Ethnical/ cultural/ traditional differences
2. Politics
3. Religion
4. Issues concerning money flows
5. Issues in which small reservoir development may affect livelihoods:
  - o Water and land rights
  - o Water and land use
 (which both relate to water quality and quantity)

Some conflicts may arise between various local groups or peoples concerning religion, politics traditions, etc. Other conflicts may arise between local people and foreigners (development workers) active in the basin and region, or even amongst the different development workers.

The most pressing conflicts, however, are likely to be those between riparian countries. The Limpopo basin includes land in Botswana, Mozambique, South Africa, and Zimbabwe. The Volta basin covers land in Burkina Faso, Ghana, Ivory Coast, Mali, and Togo. The Sao Francisco basin lies entirely within Brazil – but does include parts of different states: Minas Gerias, Bahia, Alagas and Sergioe, Penambuco and Brasilia. In this basin, conflicts may be between states rather than between countries.

## Case Study

The analysis was carried out in a case study carried out in the Upper East Region of Ghana., which lies in the Volta Basin. The SCA was conducted at the local/community level, focussing on the institutional dimension of small reservoir management.

Interviews were held with various members of the Region's District Assemblies and the Departments of Agriculture. These groups are most directly involved in planning and supporting small reservoir development and maintenance. The goal of these interviews was to discover in what manner the District Assembly and the Department of Agriculture think that better development and management of small reservoirs can be achieved.

The case study illustrates how the steps described above were implemented, and describes problems that arose in performing some of the steps.

### *Step 1: Stakeholder Identification*

The stakeholders important for development of small reservoir systems are shown in the following table. They were identified during the field study. In some cases the committees or people who are also stakeholders within a group have been indicated.

<b><i>Stakeholder</i></b>	<b><i>Sector</i></b>	<b><i>Interest/ Affected</i></b>
<b>District Assemblies (DA)</b> - General Assembly - Executive Committee - District Coordinating Directorate <i>(in which departments can be found. Such as the dept. of Agriculture, of Environmental Health and of Forestry)</i>	Local Government	Interested and effected (are responsible for development of district in general)
<b>District Chief Executive</b>	Local Government representative	Interested (is responsible for functioning of District Assembly in general)
<b>Department of Agriculture</b> - Agricultural Extension Agents (AEAs) - Zonal Supervisors - District Agriculture Development Officers (DADOs) - District Director of Agriculture (DDA)	Local Government	Interested and effected (are responsible for agricultural development in district)
<b>District Engineers/ contractors/ consultants</b>	Business/ industry	Interested, possibly affected
<b>External Engineers/ contractors/ consultants (from projects)</b>	Business/ NGOs	Interested
<b>Area Councils</b>	Local representative body	Interested, some people they represent will be directly affected.
<b>Unit Committees</b>	Local representative body	Interested, some people they represent will be directly affected
<b>NGOs and projects</b> (i.e.: SRP, IFPRI, Red Cross)	NGOs, projects	Interested (possibly affected)
<b>Water User Associations (WUA)</b>	Community	Directly affected

<i>Stakeholder</i>	<i>Sector</i>	<i>Interest/ Affected</i>
<p><b>Community members</b>                      (directly at site, but also up- and downstream)                      Such as farmers, livestock owners, fishers, households who rely on water for domestic use, holders of water rights, holders of land rights, traditional authorities (the chief and tindana).</p>	Community	Directly affected

**Table 1:** Stakeholder identification in the UER

While this study was focused at a local community level, a similar analysis at the basin/watershed level in the Volta Basin would identify a different set of stakeholders:

- Ministry of Food and Agriculture
- Ministry of Local Government and Rural Development
- Water Resources Commission (WRC)
- Environmental Protection Agency (EPA)
- Lands Commission
- Donors (such as IFAD, DANIDA<sup>1</sup>, etc.)

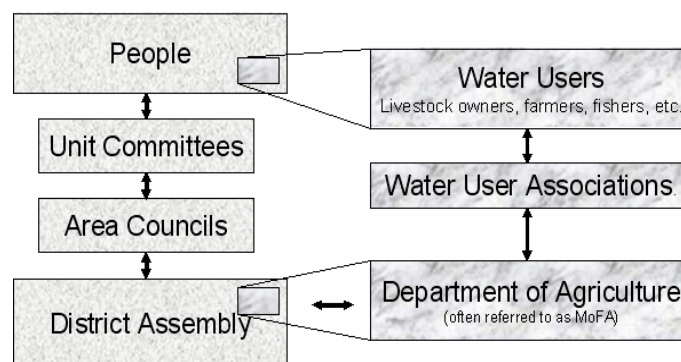
*Step 2 Identifying and Categorizing Stakeholder Perspectives*

Examining the stakeholder perspectives was not directly carried out in the Upper East Region of Ghana. Instead the focus was more on characterization of stakeholder institutions.

*Step 3: Institutional Survey*

The institutional survey gave a clear picture of the institutional bodies through which information passes concerning small reservoir development in the UER (see Figure 3). This also shows that responsibility for planning, operation and maintenance of small reservoirs falls under the District Assembly (especially for planning) and the department of Agriculture.

This responsibility includes gathering information through the “official” institutional bodies that have been set up.



**Figure 3:** Parallel Institutional Structures in UER

The analysis shows that according to the Ghanaian Constitution the District Assemblies are the “highest political authority in the district and shall have deliberative, legislative and executive powers.” This means that they have the responsibility for the overall development of the district which includes providing basic infrastructure municipal works and service and being responsible

<sup>1</sup> IFAD: International Fund for Agricultural Development. DANIDA: Danish International Development Agency.

for the “effective mobilization of the resources necessary for this overall development.” (1993 Local Government Act).

Part of the analysis resulted in a more detailed examination of the parallel institutional structures as shown in figure 3. However, rather than giving all those details, we show a SWOT analysis was carried out done for District Assemblies in Kassena-Nankana, Bolgatanga and Bawku-West. Some aspects of the Department of Agriculture were included in this analysis.

### **Strengths**

- All District Assemblies in the UER have parallel structures. There are multiple ways through which information can flow from local communities to decision-makers (via the area councils and via the different departments, for example).
- Several times a year the District Chief Executives of the region hold a meeting during which information and experiences are exchanged.
- The Department of Agriculture has experience on involving communities in part because of training provided with IFAD support.
- Communication between research institutes and the Department of Agriculture is generally good:

For example, a number of farmers in Bawku-West in March 2005 were faced with problems with their onions, which they could not explain. The Department of Agriculture called upon the Regional MoFA researchers for assistance.

### **Weaknesses**

- Despite a willingness to make changes, the capacity or knowledge as to how to do so is not sufficient.
- Not all Districts Assemblies have the same level of institutional structures through which information from communities can reach the DA (or vice versa). This can be due to:
  - Lack of funding
  - Lack of capacity
  - Lack of assistance from out side for funding or capacity building
- Integration between the District Assembly and the decentralised ministries (the Departments of Agriculture, Education and Health) is not always adequate. The departments often have more affinity with the regional ministries than with the DA.
- Not all district departments have an information sharing system in place. For example; a database officer does exist at the Department of Agriculture, but not always at the District Directorate.
- It is not well known, nor well documented, which research is being carried out in the districts, nor by whom and for what purpose.
- The researchers in the area, because they do not know whom to approach, do not provide information concerning research, which means that the DA remains unaware of what is

going on and could possibly hire independent researchers to do work that has already been done. This is also because information sharing or database systems are not always functional.

- Even though the county's official language is English, the local people in the different districts speak different languages (Kasem, Huasa, Frafra, Kusaal, Mampruli, Buli, etc.), and this could hinder communication with, for example, AEAs.
- Not much information is reaching local levels as to what is going on at the national level concerning water management.
- An AEA can be posted and does not specifically have to be from a village within the operational area. Also, District officials are not always from the district they are working for. This may mean that they are not as involved in development of the district as they would were it their own (and the same is true for AEAs). Finally, they may not speak the languages of the local people, which makes communication difficult.

### **Opportunities**

- The Upper East Region is an interesting investment area for donors and researchers.
- There is a general understanding within the DAs that changes need to be made in order to accelerate development.
- Small reservoirs have been in use in the UER for decades; there are many lessons that can be learned from past management attempts and from successes or failures thereof. Some of this knowledge may be present amongst those living near or who make use of the reservoirs.
- The connections that the regional ministries (or Departments of Agriculture) have with donors can be utilised for assistance in relevant department activities.
- Since districts have parallel structures, lessons learned in one district can be applied in the other districts.
- Since there are different communication routes between decision-makers and local communities, the failure of any one route does not entirely stop the flow of information. The same is true for information passing from the DA to local communities.
- If unit committees or area councils are not up and running as they should, use can be made of Department of Agriculture structure to receive information on reservoirs, irrigation etc.
- At the DCE-meetings information and knowledge concerning water resource management can also be exchanged.

### **Threats**

- Network structuring such as is proposed may bring with it over-bureaucratisation.
- Donors may not want to invest in a district that does not have a strong institutional structure because of fear that resources will not be properly used. This may increase development gaps between districts as less developed districts may receive less support.
- Cultural, traditional or religious aspects may affect how things are perceived and what is or

is not told. Men may traditionally be the ones who speak for the community, but women may be more aware of the issues concerning irrigation since the women do a majority of irrigation.

- Implementation of western ideas may be the way to get funding from donors but in practice these ideas may not always line up with the mannerisms of the Ghanaians. For example, in the past, the increase in irrigation brought many problems with it as the local population, traditionally, did not have experience in dry-season farming or in selling the produce.

#### *Step 4: Decision-making process*

The brunt of the decision-making process in the Volta River basin concerning small reservoirs takes place at the district and community levels. At the moment the Small Reservoirs Project and the GLOWA-Volta<sup>2</sup> project have already collected quite a lot of data that can assist especially in understanding the **physical aspects** of the reservoir system within the White Volta Basin. For example;

- The locations of the small reservoirs have been mapped,
- The storage volumes of these small reservoirs has been estimated based on their surface area which can be observed via radar satellites,
- Irrigation areas surrounding the reservoirs have been mapped,
- Meteorological and hydrological models have been developed.

Also, there is information based on **knowledge** and **wisdom** of the local people concerning managerial aspects of development;

- Land use and demographic developments over the last 30 years are known,
- Roles of traditional, colonial and present day legal constructions have been analysed.

However, information concerning other possible water-related problems, such as health issues, pollution, erosion, and social disputes has not yet been fully gathered or interpreted. Nor have the traditional technical and organisational solutions to solving such problems been fully researched.

#### **What happens at the moment?**

When local officials are not able to help, local people turn to assistance from outside. A number of cases have been seen whereby a number of local people found a willing foreigner who would help organise the rehabilitation of the reservoir. In cooperation with the traditional chiefs and local people, these outsiders;

- Set up plans as to how to carry out development;
- Raise funds from various donors who support small scale projects;
- Find people to carry out work (experts and labourers);
- Find materials and machinery for activities;
- Set up plans to ensure that the local people remain involved.

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<sup>2</sup> The GLOWA Volta Project is an interdisciplinary project supporting sustainable water resource management in the Volta Basin. Main aim is the development of a Decision Support System (DSS) that will help the authorities in Ghana, Burkina Faso and the other riparian countries to optimize water allocation within the basin.

Though these outsiders often do ask for official permission from official institutions, they otherwise have few links with these institutions. Interestingly, in many cases the foreigner was, in turn, backed by a church (as is the case in Busongo and in Gambibgo, in the Bolgatanga Municipality, Ghana). This may imply that the **role of the church** should not be underestimated in the development of small reservoir development, at least not in the Upper East Region of Ghana.

If the focus shifts more specifically to the White Volta River Basin (WVB), responsibility concerning small reservoir development shifts from the districts to the *White Volta Basin Management Board (WVBMB)*, which has been initiated by the Water Resources Commission.

Also, in Ghana there are Regional Coordinating Councils (RCCs), which may not be directly involved in water resources management, but serve as the link between the central government and the District Assemblies. The RCCs consist of representatives from the region's District Assemblies and from the regional House of Chiefs. The representatives' role is to coordinate the implementation of policies amongst the DAs in the region.

At the national level, the Water Resources Commission (WRC) is responsible for the regulation and management of the utilisation of water resources in Ghana and for the coordination of policy related to them.

#### *Step 5: Conflict Analysis*

This step looks at possibilities for conflicts based on the case study carried out in the Upper East Region of Ghana. It serves as an example of the types of conflicts that may arise considering the stakeholders and their interests in small reservoir development. These are the results of asking the questions posed under "step 5" in the description above. It should be noted, however, that this example focuses on conflicts that may arise at the community level and does not include issues that may occur at national and international levels.

### **1. Ethnological/ cultural/ traditional differences**

Ethnological differences may not be very obvious for foreigners; however, the manner in which groups are spread over the region is of importance. This is especially true when ethnological groups cross national boundaries and people feel more affinity to their neighbours in bordering countries than to fellow citizens.

#### ***Formalities***

Foreigners in some cases do not take the time to understand local social, traditional and cultural formalities. They therefore carry out work without, for example, the permission of the traditional chief. During the field study it was reported that a researcher had neglected to inform the chief that he wanted to install a rain gauge in the village. A number of weeks or days later the researcher returned to record the data only to find that the gauge (and therefore the data) had disappeared.

Taking formalities that are customary during meetings into account also alleviate a number of frustrations on behalf of the foreigner. Though time-consuming and seeming useless to the outsider, such formalities are of great importance to local and social context.

## **2. Traditional versus Political**

As is the case in many developing countries, and especially in Africa, in the Volta Basin there is a multiplicity of local institutions with overlapping responsibilities. On the one hand there are the traditional rulers which include a chief and a tindana and on the other the political leaders who have, in most cases, been elected. These two groups do not always mix. The institution of chieftaincy, together with its traditional councils as established by customary law and usage, is guaranteed in Ghana's 1992 Constitution. The tindana is a very important traditional ruler in dealing with natural resources and so for reservoir development as well. Yet representative (local) government officials are also responsible for overall development of a district or region and need to be included as well in land and resource issues.

## **3. Religion**

Depending on the region, different religions can play an important role. In the Volta Basin for example, traditional religions, as well as Islam and various Christian beliefs can be found. However, it should also be realized that the spread of such religions is dependant of the location within the basin. For example, figures indicate that in Ghana 63% of the population is Christian, 16% is Muslim and 21% practices indigenous religions. In Burkina Faso, however, the percentages are 10%, 50% and 40% respectively.

The manner in which people from these religions live together in the community is of importance. For example, even though there are many Muslims in Navrongo, pigs (owned by non-Muslims) walk freely through town. In a number of other towns and cities, Muslims may not accept this.

## **4. Money flows**

Money and cash flow is a common source of conflict all over the world, especially when people are given money for certain activities then which are not properly carried out. Conflict can arise from differences in beliefs and expectations:

- expectations of donor and receiver differ,
- amount does not take social/cultural/traditional aspects into account,
- amount donated/earned is truly not sufficient for prescribed activities,
- people who pay may not be those who enjoy benefits,
- financial resources are limited, yet desire and need to carry out activities is high.

## **5. Water and land use rights**

An issue of concern for small reservoir development is the manner in which water and land use rights are divided. While the tindana plays a role in this division, it is of interest to understand what the issues are in the area that small reservoir development is planned.

There often is conflict among water users regarding use rights, the volume available by different users, and the rights to land use in areas near reservoirs. While farmers say they will stop

irrigation when water levels drop to levels that endanger livestock watering and fish survival, not all farmers share that interest if they do not benefit from livestock or fishing.

Some conflicts also arise when outsiders feel that they can do whatever they want in an area. Many projects are start without consultation of local people, local chiefs or local representatives. Researchers and field workers may go about their work with the assumption that everything that can be done will help the local people, even without having consulted them.

Having too many outsiders present can also create problems when local decision-makers are blamed by local people for work done by development organisations that was unfinished and work that was done improperly even though the decision-makers may not even have been aware of the fact that the work was being carried out.

### ***Understanding the local system***

Foreigners and local people will have different ideas as to how the catchment area and the reservoir system can best be developed. While foreigners may have access to satellite technology and good hydrological models, local people have a better understanding of what truly happens in the area.

### ***Technical solutions to development***

While foreign experts may know very well how to design and construct a dam and relevant structures, they may not have a clear understanding of how local construction methods may impinge on design. This may imply that technical drawings underestimate certain aspects in the region about which the designer has little knowledge. This can lead to problems during and after construction and lead to conflicts with local decision makers, local water users and other donors.

### ***Possible Conflicts of Interest***

The analysis showed that the major issues about which conflict may arise include:

- Political loyalties
- Official Responsibilities
- Personal interests
- Financial Means

These are especially possible reason for conflict for officers in higher positions at the District Assemblies, the Department of Agriculture. At the small institutional officers at the Area Councils and unit committees Representation of different interests and Social/traditional interests are possible major issues about which conflict may arise.

For NGOs and projects that often perceive that they are “helping the local people” a conflict may arise due to:

- the varying organisational interests (between organisation and local groups),
- lack of information sharing,
- lack of immersion or understanding of cultural and social issues (thus not knowing who to approach)
- lack of understanding of physical situation at the location.

Conflicts with or between Water User Associations (WUAs) and Community members may arise due to:

- carrying out representative functions,
- social and traditional contexts which may cause conflicting ideas about how to manage the infrastructure and water,
- Enforcement of the rules
- Land and water rights
- Land and water uses
- Personal interests versus interests of the group
- Financial means (lack thereof)

## Reflection

Semi-structured interviews were carried out in order to trace out the structures of decision-making institutions. Though the literature suggests that an institutional survey should be conducted by asking communities about their opinions towards the various institutions, this was not done during the field study.

At the moment it is doubtful whether such an approach is desirable in the UER due to the fact that communities and local people do not appear to know very much about what their local institutions are actually doing. This lack of knowledge, however, is in itself very interesting: why does information not reach local communities? One explanation, found during the research, is that some District Assemblies are most likely still setting up their own offices. Also, Water User Associations have only recently been set up, so evaluation of WUAs by community members may be premature.

One finding is that, at the moment, decision processes concerning small reservoir development in Ghana do not necessarily follow the official route. This is mainly due to the lack of organisation (often due to lack of financial means) within the official institutions that are to make decisions about such development.

Decisions for small reservoir construction or rehabilitation are not based on general information concerning the physical system, nor on general problems that might arise as institutions with their particular qualities engage in reservoir development. Instead, decisions are based on whether there is someone willing and capable to lead development and to raise funds to carry it out. Ideally the local government in the form of the district's Department of Agriculture should carry out this task, whereby it would then also be responsible for ensuring that data, wisdom and knowledge is gathered, interpreted, stored, shared and applied.

## Lessons learned and recommendations

Developing plans for reservoir development requires understanding the interests and roles of stakeholders, how these interests differ, and how such differences can lead to conflict. In reservoir development it is important to understand when possible conflicts might arise and, if they do, how to deal with them so that development can proceed.

These analyses were applied in a case study conducted in the Upper East Region of Ghana (which lies in the Volta River Basin). From this case study a number of lessons emerge:

- A.) A robust theoretical framework is needed, but may need to be adapted to local conditions
- Institutional Survey literature suggests asking public opinion about how institutions are performing. This doesn't apply when the public is not aware of the official tasks of the institutions.
  - Extensive stakeholder identification across all levels, dimensions, sectors and impact/interests is very time consuming. Stakeholder analysis that is unnecessarily broad and intensive should be avoided.
  - Not all stakeholders are equal. For example, in the Upper East Region of Ghana, a Department of Agriculture in one district is not necessarily the same as its “sister” in another district. Though they are officially considered equal, in practice their level of development and competence is influenced by many factors.
  - The procedure for carrying out Stakeholder Analysis is a guideline that can be adjusted depending on the problem the project is trying to address. In the Ghana case study, the stakeholder analysis was carried out after the project had started. It was launched because of a perceived need to better understand the various roles stakeholders currently or potentially play in small reservoir development.
- B.) Not all local conditions can be defined clearly in advance.
- Some unofficial stakeholders, and their role in taking decisions, may not be very visible to outsiders.
  - It may be difficult to truly define the interests of all stakeholders. Articulated interests may not be identical to those actually valued by the stakeholder. It is important to establish which other interests the stakeholders might harbour that may conflict with small reservoir development.
  - When project implementers do not consult local communities, the result is usually a poor familiarity with local conditions. Use of indigenous knowledge is crucial in small reservoir development. Indigenous knowledge should be mainstreamed into the planning process when carrying out a stakeholder analysis.

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