

Understanding Each Other: Creating Common Ground for Dialogue

Authors

Martine Poolman, Water Resources Management, Faculty of Civil Engineering, Delft University of Technology, The Netherlands

Scope: questions/ challenges the tool addresses

Knowledge sharing takes many forms. This tool is an approach to knowledge sharing that uses drawing as a means of fostering better communication, and improved mutual stakeholder understanding of aims, views and goals. By asking water-user communities to draw their reservoir systems, it brings out and illustrates their views and perceptions. Such drawings are external representations of collective ideas or memories of water-user communities (Rogers, 1997). They are representational media similar to writings, paintings or photographs: works of communication that record what people see or think (Fiske, 1990).

By improving communication, the tool can facilitate the development of improved reservoir design strategies in both the short and long term. It supports better communication by overcoming language barriers, clarifying messages, saving time and focusing discussion.

The drawing approach aims to help water-users take on a larger role in the design and implementation of small reservoir improvements. It introduces water users' perspectives and views into problem identification and the design of improvements. Drawing is emphasized because such visual aids can significantly add to information obtained during field trips and verbal discussions. On field trips, for example, there is a risk that information may be obtained largely from unrepresentative groups of water-users. Moreover, the interpretation of a visitor may not be similar to community perceptions. By discussing drawings, misunderstandings can be exposed. Collective drawing helps the whole group understand the thoughts and perceptions of different sub-groups. This was observed in an application of the tool in the Upper East Region of Ghana, where groups tended to correct each other during the drawing process.

Target group of the tool

Agricultural extension agents, water-user communities, NGOs, researchers, policy-makers at various levels who wish to communicate with each other about small reservoir issues, and how different groups view these issues and what can be done to resolve them.

This tool can be applied by external persons to encourage communication across different stakeholder groups, or within groups as long as intra-group conflicts are not too severe. It offers an alternative to interviews or questionnaires as a means of learning more about reservoir-level problems.

Requirements for tool application

The most important requirement for applying this tool is the willingness of small reservoir communities to participate. This means gathering information from the community about when and where to hold activities. Such information is especially important when not all reservoir

users reside permanently near the reservoir, or when the reservoir itself is not used the whole year round.

The tool was developed and tested at twelve reservoirs across the Upper East Region of Ghana. It is low-tech and low-cost. It can be used in rural reservoir communities with materials that are locally available.

Materials used include:

- Notebook and pencil/pen to take notes
- Flip-chart papers (size A1)
- Coloured markers and pencils
- Pre-made pictures of cows, trees, houses, plots, people, the spillway and the dam wall (see picture on the right), laminated to protect them from dust, water and prolonged use.
- Scotch tape, to stick pre-made pictures to flip-chart paper;
- Tape to ensure that the flip-chart pages are not blown away;
- (Optional) rope to display flip-chart pages



Communities often wished to keep their drawings.

A (digital) camera can be used to record the drawings, or the drawings can be copied onto another piece of flip-chart paper.

Hanging up flip-chart pages so that everyone can see them is sometimes difficult. Pages were hung on the project vehicle, trees, or chalkboards in schools or churches, as well as on the rope brought for that purpose.

Tool: description and application

Knowledge sharing through drawing is a tool for understanding how local water-users perceive the problems they encounter in their reservoirs. Water-users utilize drawings to describe the problems they experience in their sites and their vision of how these problems can be solved.

In applications of the tool that have been carried out so far, water-users have largely raised technical and infrastructure problems, with limited discussion of social or institutional issues. In most cases, tool users were able to identify the materials needed to solve the problems and who could provide them. How this was done is described below.

Preparation

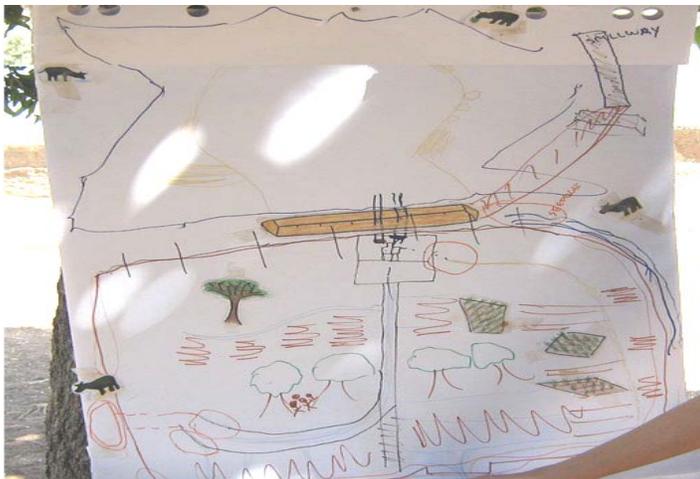
1. Pre-made pictures – To enable stakeholders to focus on the visualization of the system rather than the mechanics of drawing, the project team should prepare in advance a number of pictures to trigger the drawing activities and discussions. Examples include drawings of a

dam wall, trees, drinking cows, eating cows, cultivated plots, barren plots, houses, women carrying water, and fishermen. These pictures should be cut out and individually laminated to protect them from dust and water, and to prolong their usefulness.

2. Selection of reservoirs
3. Initial introductions with the community members
4. Arrangements with the chairman, assemblyman, chief or other local authority regarding the date, time, and location for the interaction to take place
5. Exploratory visit to the reservoir to familiarize the team with the site.

Steps

6. After introductions, a brief discussion is held in which the project team asks members of the water-user community for general information about the small reservoir.
7. After these questions, groups proceed towards drawing in order to portray the information held by community members. Steps include:
 - a. Tape a pre-drawn picture of a dam wall to the centre of a flip-chart sheet
 - b. Ask water-users to draw the:
 - i. Water body (with blue marker)
 - ii. Outlet (pipe or valve, depending on what the users call it)
 - iii. Canal(s) (with black marker if lined, with brown if unlined)
 - iv. Spillway
 - v. Location where meeting is being held (often under a tree or in a building)
 - c. Ask water users to stick the pre-made pictures on the drawing so as to portray the existing situation:



- Irrigable plots
- Houses
- Trees
- Cows (where they drink and eat)
- Women (where they fetch water)
- Fishermen (if present at site)

Figure 1: Drawing of present situation with problems circled

[Where necessary more trees, irrigable fields, cows, etc. were drawn by the project team on locations indicated by the water users.]

8. Request that groups circle the locations where problems currently exist. In Figure 1, problems are indicated at the valve, the end of the canals and in an area outside of the present irrigable fields (on the left hand side, below the cow). More difficult to see are the circles around the irrigable field, to the right of the dam wall (seepage) and the siltation in the reservoir.
9. Where problems mainly concern the rearrangement of irrigable fields, ask water users to draw a desirable “future” situation. Figure 2 provides an example of a drawing representing both present and desired future situations.
10. Have water users name the materials they would need to solve the problems or to arrive at the desired future situation. The project team can assist with this drawing as water users are sometimes hesitant to make drawings of needed materials (Figure 3).
11. Ask water-users to circle the materials they feel they themselves can supply (Figure 3).
12. Open up the discussion and encourage water users to express their ideas, for example, about:
 - How the problems could be solved if resources were available through the Ministry of Food and Agriculture as well as within the community
 - Who is responsible for, involved in and actively partaking in which activities?
 - What kind of support or information do water users need?
 - What actions could water users take on their own?

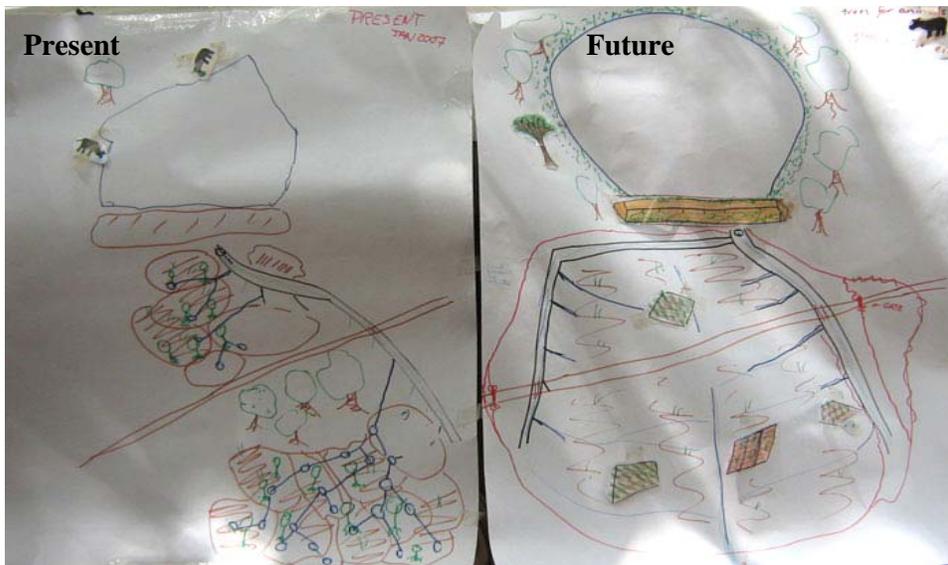


Figure 2: Drawing of present and desired future situations

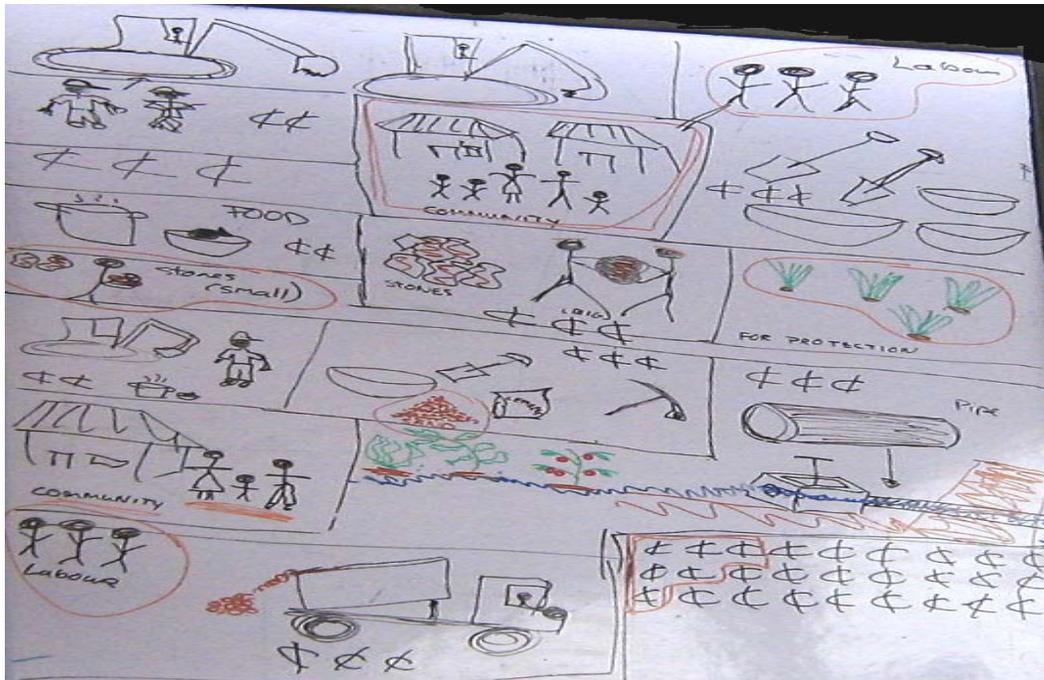


Figure 3: Materials

Lessons learned

In applications of this tool in the Upper East Region of Ghana, water users' drawings:

- elicited the views and perceptions of the water-user communities
- triggered discussion between stakeholders
- stimulated water-user groups to correct each others' drawings
- facilitate discussion of the situation off-site,
- helped clarify terms used by different stakeholders

The drawings showed that water users usually have a clear idea of what resources are needed to solve infrastructure problems at local dams (e.g., material, labour). However, during discussions they stressed that resource constraints (often financial) limits what they can do in practice. In further applications, the challenge will be to examine with water-users how their limited resources can be managed and used to solve agreed-on problems. This would mean working together to come up with strategies that can be implemented by water users, using only the limited resources available to them.

Water-user groups found the drawings helpful in improving communication amongst group members. In many cases, as the drawing progressed, participants were reminded of problems which they had not stated in the initial discussion. Also, by looking at what had already been drawn everyone could see which issues had been left out and still needed to be included. However, most groups stressed that a narrative is needed to accompany the drawing; it cannot stand on its own.

Recommendations

The tool is a first step towards the design of improved reservoir systems that better suit the circumstances of water users. After further development and testing, the next step will be to see how the tool can be used in practice by agricultural extension workers and development organisations. The tool's success will depend on the extent to which it fosters communication and discussion regarding scenarios for small reservoir development. Discussion of scenarios can lead to the development of solutions that are more compatible with local conditions and that take account of the level of resources available to water users.

Discussions held at reservoirs made it clear that the sub-optimal functioning and lack of maintenance of many small reservoirs is due to a lack of resources needed to fix problems, in other words, a lack of financial resources to purchase or rent materials. In some instances it may be possible to use less expensive and less conventional materials than those originally named by water users. Communities would need to be made aware of such possibilities.

One issue for future research will be how outcomes can be combined with outside knowledge to help address the issues and constraints raised by the communities. One challenge for research is to examine how agricultural extension workers and other stakeholders can use the outcomes (drawings) to develop solutions that can be attained despite resource limitations. This would mean interaction among the various stakeholders whereby the approach initiates joint analysis and critical reflection in order to develop solutions.

Another issue for follow-up is what happens when drawings fail to elicit information not already known to water-users or extension agents. This was, at least, the case in the Upper East Region. Sometimes drawings are a new way to gather and display information, making it available to a broader range of stakeholders, some of whom may find the information novel and interesting.

Drawings stimulates power-sharing between the researchers, extension workers and water-user communities. Information is not retained by only one of these groups. However, this does require a certain amount of stakeholder willingness to cross social barriers (Godinot, 2006). These barriers will also need to be crossed in order to build up understanding that there is no single answer for all problems and that stakeholders should continually search for methods that enable continual exploration of new ground (Simpson and Owens, 2002) The biggest challenge for this research will be to examine the conditions under which such boundary crossing and power sharing is possible.

Limitations of the tool

This drawing approach has limitations. For example, problems associated with plant diseases may be too difficult to represent in drawing. Managerial problems and social issues may also be difficult to represent via drawing. For example, participants may find it difficult "draw" issues of water access or land division. Instead, drawings can be used as a springboard for encourage in-depth stakeholder discussion as part of other interactions. Drawings do not eliminate the need for discussions nor can they substitute for them. However, they can draw attention to issues that merit follow-up. By pointing to parts of the drawn reservoir system, stakeholders

can more clearly indicate which part they are discussing and feel is most important. How, precisely, this might be done is subject to follow-up research planned in the coming year.

Another limitation of the approach is the risk that community members who are “too shy” to draw or who do not like to stand in front of the group will not volunteer to draw, and thus some important opinions or ideas may be missed. Enthusiastic and proficient facilitators, and full group participation, are needed to make the drawings clear, comprehensive and useful.

References

- Abbot, J. (1999) *Beyond Tools and Methods: Reviewing Developments in Participatory Learning and Action*. Environment and Urbanization; 11; 231.
- Chatty, D., S. Baas, A. Fleig (2003) *Participatory Processes Towards Co-Management of Natural Resources in Pastoral Areas of the Middle East. A Training of Trainers Source Book Based on the Principles of Participatory Methods and Approaches*. FAO: Rome and Palmyra.
- Fiske, J. (1990) *Introduction to Communication Studies, 2nd Edition*. Routledge: London.
- Godinot, X. (2006) *Making Services Work for Very Poor People: Comments of the World Development Report 2004*. p. 23- 34 in Godinot, X. and Q. Wodon (Eds.) (2006) *Participatory Approaches to Attacking Extreme Poverty Cases Studies Led by the International Movement ATD Fourth World*. World Bank Working Paper No. 77. The World Bank: Washington D.C.
- Poolman, M.I. (2005) *Developing Small Reservoirs, a participatory approach can help ...* Master’s thesis, Faculty of Technology Policy and Management, Delft University of Technology, the Netherlands.
- Poolman, M.I. and van de Giesen, N.C. (2006) *Participation; rhetoric and reality. The importance of understanding stakeholders based on a case study in Upper East Ghana*. International Journal of Water Resources Development, 22(4): pp. 561-573.
- Rogers, Y. (1997) *A Brief Introduction to Distributed Cognition*© Interact Lab, School of Cognitive and Computing Sciences, University of Sussex, Brighton last retrieved December 2007 via <http://mcs.open.ac.uk/yr258/papers/dcog/dcog-brief-intro.pdf>
- Simpson, B. M., & Owens, M. (2002). *Farmer field schools and the future of agricultural extension in Africa*. Journal of International Agricultural and Extension Education, 9 (2), 29-36.

Contacts and Links

- *Regional Directorate of Agriculture (Bolgatanga)*
Mr. Roy Ayariga (Regional Director)
 Ministry of Food and Agriculture, Regional Department
 PO Box 3, Bolgatanga, Upper East Region

Mme. Charity Gyasi, Monitoring and Evaluation Officer
 Ministry of Food and Agriculture, Regional Department
 PO Box 3, Bolgatanga, Upper East Region
- *Directors of Agriculture (DDA) and Agricultural Extension Agents of Departments of Agriculture (last update in Dec. 2007) involved in the project. This covers 5 of the 8 UER districts:*

Bawku Municipality in Bawku
Mr. Francis Apumbora, DDA 024-2106511

Bawku-West District in Zebilla
Mr. Yussif Sulemanna, DDA 0244-131653

Bongo District in Bongo
Mr. Emmanuel Abobine, Management Information System Officer, 020-9158300
Mme. Grace Anafo, Women in Agricultural Development (WIAD) Officer, 024-209728

Builsa District in Sandema
Mr. Paul Aygiba, DDA 024-5982008
Mr. David Akanwondi Management Information System Officer and the SRD
(Statistics, Research Information Directorate) supervisor. 024-2560289

Kassena-Nankana District in Navrongo.
Mr. Sixtus Sawine, DDA
Mr. Dominic Apinya, deputy DDA

- *White Volta Basin Board (Bolgatanga)*
Mr. A. Aduna, White Volta Basin Officer
(Discap Building in Bolga)
- *Non-governmental Organisations (NGOs)*
World Vision (Bongo)
Mme. Benedicta Pealore (Programme Manager)
Bongo ADP, PO Box 531, Bolgatanga
Tel: 072-227722, mob: 024-4722957
pealore@yahoo.com and benedicta_pealore@wvi.org
NB: Project ends in 2008.

TRAX (Bolgatanga)
Mr. Vincent Subbey
Project manager TRAX , PO Box 230, Bolgatanga, UER
Tel: 072-22501, fax – 22301
vincentsubbey@hotmail.com, traxghana@yahoo.com

Community Self Reliance Centre (CSRC) (Bolgatanga)
Mr. Philip Ayamba Tel: 024-4219044

Agric. Unit at the Secretariat of the Diocese of the Catholic Church (Bolgatanga)
Mr. Joe Ayemblem joeayem@yahoo.co.uk

Red Cross (Bolgatanga)
Mr. Joe Abarike Tel: 020-9373088, mob: 072-23174
abarike2004@yahoo.com

ZOVFA (Zebilla)
(Via Mr. Ayamba of CSRC)