



DELIVERABLE 2

PROJECT DESIGN & IDENTIFICATION OF SITE FOR RESEARCH

Jane Burt, Heila Lotz-Sisitka, Robert Berold, & Charles Phiri

WRC project K5/2074/1

Change Orientated Learning And Water Management Practices

LIST OF EXPECTED DELIVERABLES

Deliverable Title	Description
1. Review Document	Literature review and aligning of fieldwork planning and resource design with review.
2. Start up Document	Project design and identification of site for research.
3. Fieldwork report	Report on fieldwork and development of the resource
4. Development of question driven resource publications based on case activity systems	Question-driven resource publication and report on its development
5. Design of community directed catalogue	Document setting out an approach to designing a community directed resource and a WRC catalogue for mediating processes and expanding learning in WRM practice contexts.
6. Curriculum framework for mediator training programme	Mediator training programme.
7. Report on mediators training and activity systems	Report on mediator training programme, which will include the piloting of the question-driven resource.
8. Final report & masters studies	Final report and Masters studies.

INTRODUCTION

This project has two aims. The first is to research and develop a water knowledge resource in direct response to and in support of an existing community-based water management practice. This is intended to provide a 'demonstration context' for making scientific knowledge accessible in response to community-based water management practices.

The second aim is to identify and support the skills that are needed to develop and mediate such a resource. Based on what we learned from the recent WRC consultancy K8/813 on knowledge flow in rural communities (Burt, J & Berold, R. 2011 draft report, see summary of findings below) we need to support mediators of water knowledge to understand how their mediation influences successful learning and change practice.

In this context, 'mediators' refers to people who interpret and explain written resource information and available scientific information to communities directly, and usually orally. According to the water practitioners interviewed in project K8/813, mediators are key in research communication, even when the audience is literate. Mediators may be NGOs, extension officers, Water Affairs officials, teachers, or ordinary community members. Unfortunately their role is often taken for granted and they are seldom given any training, so they tend to be poorly equipped for the mediation task.

This project will be designing and implementing a training course for potential mediators who work with water knowledge in community learning and water management practice contexts. This training will give them the skills and confidence to access relevant knowledge and re-interpret it, either by writing resources themselves or to identify, locate, and use well-written resources relevant to the water practices of the communities they work with.

Four main findings emerged from WRC consultancy K8/813:

1. *Base resources on practice:* Most resources tend to impart knowledge without considering existing knowledge. Learning resources work more effectively when they engage people with expanding or changing practices that they already know about. This requires understanding the practices concerned and the questions that arise in these practices.
2. *Give attention to accessibility and dissemination:* Although there are many water knowledge resources produced in South Africa, few are presented in a way that is understandable to non-specialists. But even when resources are designed and written with local communities in mind, most do not reach their target audience. Written resources can be found lying in piles in many local government offices and school storerooms. Compared to the funds and time spent on producing knowledge products, much more thought and funding needs to go into ensuring that they are accessible and available.

3. *Mediate knowledge*: Practitioner experience shows that even when resources are accessible and available, this is no guarantee that they are used. Resources are only one part of the larger learning picture, and it seems that to be effective a local organization or individual who understands what is needed at a local level should mediate them. According to water practitioners, mediation is more effective when it is organically part of a water management practice, an activist movement, a process of institutional development, or a community movement.
4. *Knowing how we know*: Most human actions are based on deeply entrenched patterns and structures. With this in mind, resources should be developed in a way that encourages people to ask questions, challenge and build on their current practice. This requires a view of knowledge as an interactive and situated social process through which people construct their understanding of a given situation from a range of factors: information, values, morals, beliefs, cultures, personal gain, or community benefit, amongst others. For those developing resources, it means adjusting to an audience whose understanding may be quite different from the context of researchers. It requires in-depth understanding of how learning actually happens in such contexts of practice.

PHASE 1 (year one): DEVELOPING A QUESTION-BASED RESOURCE FOR CHANGE ORIENTATED LEARNING.

A: UNDERSTANDING COMMUNITY BASED WATER RESOURCE PRACTICES AND QUESTIONS RELATED TO THESE PRACTICES (Deliverables 1, 2, 3, & 8)

As indicated above, it is important to develop a clear understanding of the sociology of community-based water management practices, particularly how communities *learn* these practices. The first phase of this study will therefore produce an in-depth analysis of three water management practices identified at community level at one research site. The emphasis will be on identifying *existing* practices and identifying *how communities are learning* these practices. A further focus will be identifying current questions that communities have about these practices, as these are indicators of new opportunities for learning.

Case study methodology and a community of practice theoretical framework will be used. This methodology allows for in-depth interpretation of how communities learn practices *in situ* and also allows for understanding the diverse factors affecting practice, such as identity formation, meaning-making, culture and history. To provide further 'depth interpretation' we will also analyse the causal mechanisms that influence *how and why practices are learned in certain ways*: for example how cultural histories, gendered relationships or power structures influence how practices are learned. From this, current questions that communities have about the practices will be identified. The research will result in a *situated learning platform* for the mediation of water knowledge produced by scientists, leading to improved practices.

While three water resources management practices will be reviewed in the case study, only one will be chosen to take forward for the rest of the study, in order to gain further depth of interpretation and understanding. The site selected is Qata near Keiskammashoek in the Eastern Cape, as this community has requested Rhodes University to support various aspects of their development plan, including water resources management. The site is relatively close to Grahamstown, and matches the ELRC's interest in supporting change-oriented learning in rural areas of the Eastern Cape. The community also has an established leadership structure who welcome researchers.

The product from this will be the first tool for the mediators training course, namely a guide for mediators titled "*How to understand community based water resource practice and identify community questions*".

B: COMPILING LITERATURE REVIEWS COVERING CHANGE ORIENTATED LEARNING, KNOWLEDGE FLOW AND THE CHOSEN WATER MANAGEMENT PRACTICE (Deliverable 1)

A set of literature reviews will be compiled as a resource for project researchers as well as other researchers, educators and water practitioners. These will cover:

- Trends associated with the development of social learning and natural resources management (including water resources management)
- Learning challenges and opportunities influencing mediation and mediators in natural resource management social learning processes
- Learning challenges and opportunities associated with the selected water resource management practice: Water harvesting for domestic use and agriculture.

The first literature review involves a wide, historical analysis of social learning in natural resources management and includes social learning literature associated with water resources management. It provides a broader backdrop to the more specific literature reviews focusing on learning challenges and opportunities of social learning in water resource management practice contexts.

The product of this will be the a second tool for the mediators course, namely a summary of the literature reviews titled '*Challenges and opportunities for mediating learning in the context of community-based water resource management practices*' (Phase 3).

C: DEVELOPING A CATALOGUE OF KNOWLEDGE RESOURCES (Deliverable 5)

The focus here will be to identify and catalogue between 20 to 40 of the most useful and most used resources about the chosen water practice, rainwater harvesting -- this catalogue will become mediation tool 3 of the mediators course.

Each knowledge resource will be described by a short summary, and rated under various criteria such as language level, proven value, and current use of the resource. We will also investigate the most appropriate form of Internet presentation of this catalogue, and the most appropriate design and presentation of the printed form. The catalogue will indicate how the resources address the questions actually asked by the community about the practice; and how they link to the situated learning processes in community-based water management practices. [Note: the research budget does not cover the design of the website or a follow-up of its effectiveness, so we will make recommendations for the WRC to take this further, either directly or with a partner such as Sharenet.]

As we develop the resource, we will identify the skills needed by mediators to develop a similar catalogue for other water resource management practices. This will lead to mediation tool 4 for the mediators course, to be titled “*How to access, identify, and catalogue the most useful water resources available and their relevance to water resource management practices*” (Phase 3).

D: DEVELOPING A QUESTION-BASED RESOURCE AND RESOURCE USE METHODOLOGY FOR MEDIATION (Deliverable 4)

Using the knowledge gathered from the Masters case study and from the resources identified for the catalogue, we will develop a question-based mediation resource. This will show how to use the available resources (as outlined in the catalogue) to respond to the questions emerging from the community context while at the same time encouraging people to question their practice. The resource will be developed as a print publication, but possibly adapted and developed for other media. [Note: the research budget does not cover the production so we will make recommendations for the WRC to take this further, either directly or with a partner}.

As we develop this resource we will also identify the skills needed by mediators to develop similar resources for their own community contexts and water practices. This will lead us to mediation tool 5 for the mediators course to be titled “*How to develop a question-driven resource for mediating available knowledge resources*” (see Phase 3).

PHASE 2 (year 2) : EVALUATING THE EFFECTIVENESS OF THE QUESTION-DRIVEN RESOURCE MEDIATING TOOLS IN TWO COMMUNITIES AND DEVELOPING A CURRICULUM FRAMEWORK FOR THE MEDIATORS COURSE

*A: EVALUATING THE QUESTION-DRIVEN RESOURCE
(Deliverable 8)*

In the second year a second Masters student will work with water knowledge mediators to test the question-driven resource in the community from which the questions originally emerged, as well as in a second community engaged in a similar water practice. The effective and usefulness of the resource will be evaluated.

B: DEVELOPING CURRICULUM FRAMEWORK FOR MEDIATORS COURSE (Deliverable 6)

Drawing on the research of year one, the five mediation tools developed for the mediators course, and the resource testing phase of year two, we will draw up a curriculum framework for a mediators course to be run in the third year of the project. We will be guided by the literature review of year one to identify the candidates for the course and to decide where and how it should be offered.

PHASE 3 (year 3): PILOTING AND EVALUATING A MEDIATOR TRAINING PROGRAMME (Deliverables 7 & 8)

Besides the mediators course, this phase will include finalising a curriculum framework, synthesising the mediation tools into training modules, and an evaluation.

Research undertaken in the Environmental Learning Research Centre on professional development suggests that the curriculum design for the course should allow for the development of reflexive competence amongst water mediators. This requires models for 'work together sessions' as well as 'work away sessions'.

A curriculum framework for a water mediators course will be based on a reflexive learning process for the mediator, include praxis outcome, and use change-oriented workplace learning curriculum principles. It might look like this, although it will change according to research findings:

- **Unit 1: Orienting to the context of practice** (with praxis elements that allow mediators to examine water management practices and how they are being learned; and identify community questions) (2 days on course work; with time before the next session)
- **Unit 2: Examining existing knowledge of the practice** (with praxis elements that include surveying good quality knowledge resources and cataloguing them in accessible ways) (2 days on course work; with time before the next session)
- **Unit 3: Using knowledge resources in the context of practice to respond to questions** (with praxis elements in which mediators test and use selected knowledge resources (from their catalogues) in the context of practice) (2 days on course work; with time before final report back and certification).

The course will allow mediators to identify a community-based water resource management practice relevant to their work. The evaluation of the programme will be praxis based, examining how the mediators applied what they learned in the course to their community-based water resource management practices. Course tasks (the work together and work away tasks) and reportbacks (with photographic evidence) will form the main sources of data for the evaluation.