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### Learning Alliances for Scaling Up Innovative Approaches in the Water and Sanitation Ssector

Patrick Moriarty, Catarina Fonseca, Stef Smits and Ton Schouten

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Programme







## Learning Alliances for scaling up innovative approaches in the Water and Sanitation sector<sup>1</sup>

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June 2005

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<sup>&</sup>lt;sup>1</sup> This paper is a reduced version of the background paper for the Learning Alliances Symposium which took place 7-9 June 2005 in Delft, The Netherlands

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## List of Acronyms

AKIS	Agricultural Knowledge and Information System
AI	Anchoring Institute
BUS initiative	Basic Urban Services initiative
СВО	Community Based Organisation
CGIAR	Consultative Group on International Agricultural Research
CIAT	Centro Internacional de Agricultura Tropical
CINARA	Insituto de Investigación y Desarrollo en Agua Potable, Saneamiento Básico y
	Conservación del Recurso Hídrico
CoP	Communities of Practice
DfID	Department for International Development
DGIS	Directorate General for International Cooperation of the Netherlands Government
DLA	District Learning Alliance
EMPOWERS Partnership	Euro-Mediterranean Participatory Water Resources Scenarios Partnership
EU PCM	European Union Project Cycle Management
IDRC	International Development Research Institute
INGO	International Non-Governmental Organisation
IRC	International Water and Sanitation Centre
IRWGs	Inter-Institutional Regional Working Groups
IWRM	Integrated Water Resources Management
LA	Learning Alliance
MSF	Multi Stage Filtration
MSP	Multi Stakeholder Platform
MUS project	Multiple Use Systems
NGO	Non-Governmental Organisation
O&M	Operation & Maintenance
PRA	Participatory Rural Appraisal
PTD	Participatory Technology Development
QPA	Quantified Participatory Assessment
RAAKS	Rapid Appraisal of Agricultural Knowledge Systems
RC	Resource Centre
RCN	Resource Centre Network
RIDA	Resources Infrastructure Demand Access
SC	Steering Committee
SCP	Sustainable Cities Programme
SDCA	Stakeholder Dialogue and Concerted Action
SWAP	Sector Wide Approach
SWELL	Securing Water to Enhance Local Livelihoods
SWOT	Strengths, Weaknesses, Opportunities and Threats
TLP	Team Learning Projects
TRANSCOL	Technology Transfer Programme in Water Supply Treatment in Colombia
UN-HABITAT	United Nations Human Settlements Programme
UNICEF	United Nations Children's Fund
Woreda	District (Ethiopia)
WRA	Water Resources Assessment
WASH	Water, Sanitation and Hygiene
WUAs	Water Users Associations

## **Executive Summary**

Learning Alliances are a structured process of innovation and scaling up of innovation carried out within a framework of connected stakeholder platforms at key institutional levels (typically national, intermediate and local/community). They are designed and facilitated to break down barriers to both horizontal and vertical information sharing with the aim of speeding up the process of identification, development and uptake of innovation. Each stakeholder platform groups together a range of partners with complementary capabilities in such areas as implementation, regulation, policy and legislation, research and learning and documentation and dissemination.

The central premise of the Learning Alliance approach is that by giving as much attention to the *processes* of innovating and scaling up innovation as is normally given to the *subject* of innovation, barriers to uptake and replication can be overcome. The Learning Alliance approach has arisen from a sense of frustration over the failure of much relevant and effective innovation – technological or institutional – to move beyond the pilot stage.

A number of related reasons for these failures can be identified, all linked to the tendency to address innovation as isolated project activities, rather than as part of wider developmental processes. These include:

- Innovation that takes place in an environment that does not reflect the realities of the country or region concerned. Problems such as weak institutions, unfavourable legislation, or lack of financing opportunities are ignored or bypassed by project teams who want to 'show results' or 'achieved concrete outputs'. The result is 'successes' that have never really been tested in the real world
- Innovations are implemented as pilot projects by large, well equipped project teams. Linked to the previous point, large teams bring resources to bear on a problem that are simply not available to those who are supposed to scale-up the innovations developed. While it is acceptable to use specialist expertise to overcome specific difficulties in developing methodologies or technologies, this often spills over into un-replicable interventions in capacity building or process facilitation.
- Innovation and knowledge creation is not consolidated or structured. Typically, dissemination is an additional activity bolted onto the end of an innovation project. Yet this means that the people and institutions who are supposed to scale up the innovation have no knowledge or ownership of it. Added to this, the pressure on projects to 'deliver' means that no-one believes project case-studies and success stories!
- Failure to create ownership of innovation. Project teams work on an innovative approach with a community, declare it a success, have a dissemination workshop and leave the area. The innovation is never scaled up because no-one in the district, regions, or country feels that they own or are responsible for it. It does not fit into their administrative models, or personal areas of responsibility. Failure to create ownership is a result of all the above points.
- Failure to build capacity for replication and scaling-up. Reliance on specialised project teams means that no additional capacity is created within the institutions that, in the longer term, are expected to either replicate or support the innovation. Creating ownership, and creating capacity can and should take place at the same time, by involving people in the process of innovation itself.

The Learning Alliance approach is intended to overcome these problems by systematically addressing the issues surrounding going to scale *as part of the innovation process*. It aims to do this by:

- Carrying out innovation and learning within an alliance of practitioners, researchers, policy makers and activists who, together, will provide an 'engine' for uptake and replication.
- Ensuring that innovation happens in a context (institutional, financial) that is realistic for a given country or region, making the innovation suitable for quick uptake.
- Making explicit where extra resources must be brought to bear for specific technical or institutional reasons, and analysing how these extra resources can be found/created when it comes to scaling up.
- Creating an environment in which it is possible to be honest and open about lessons learned particularly failures.
- Creating an environment in which flexibility and adaptation to local circumstances become the norm when dealing with complex developmental problems.

Learning Alliances are proposed as a conceptual model for understanding and identifying the key elements required to scale up innovations in the water and sanitation sector. While a relatively new concept they draw heavily on a number of already well known approaches including in particular action research and social learning. They are currently being used in a number of IRC's projects, looking at issues as diverse as multiple-use water services, local level integrated water resource management and the provision of basic urban services. All of these projects are at an early stage of development but they have nevertheless provided a number of useful lessons and highlighted several questions for the future. These include:

#### Lessons learned:

- There are no technological or methodological silver bullets: Developmental processes are highly complex. There are no simple or single technological or methodological answers. Innovations often fail to be scaled up because they are "alien objects" with no roots in local contexts; they are not integrated into the enabling environment necessary to support and sustain them. It is the *process* of creating the enabling environment through learning among different stakeholders that will lead to impact and sustainability.
- *Learning Alliances take time and resources:* The process of making a few stakeholders interested in the concept, then inviting several other stakeholders to initiate the process and then keeping the process going takes time and resources.
- *Learning Alliances need an engine:* Champions are needed to sell the idea, organise the initial meetings and keep the process going after these first steps have been taken.
- *Learning, not planning, is the main focus of Learning Alliances:* In conventional approaches most meetings tend to be about planning and negotiation, not learning. Central to the learning alliance approach is the importance of creating the space to enable learning through negotiation.
- *Failures must be allowed and must be discussed openly* Being able to speak openly about failure calls for trust and shared desire to progress. Making the learning component the focus of the process requires good facilitators and committed stakeholders.
- Documentation, reporting and dissemination need a specific budget and time allocation throughout the process: In a Learning Alliance the learning is done throughout the process, not at the end. For this to happen, documentation, reporting and dissemination should be properly planned for.

#### **Outstanding questions:**

- *The learning process:* How can we best mediate the introduction of new information and its transformation into knowledge? How can we create a pro-learning environment?
- *Facilitation:* Learning Alliances require skilled facilitators. But who should facilitate such processes? Where do the skills exist?

• *Project management and funding:* Will we need to change existing models such as log frames that are focused on goals, objectives and outputs and ignore the process of innovation, adaptation and change?

## Introduction

The term Learning Alliance is fairly new, although many of the concepts behind it have been under development in different sectors for some time. In particular the concept draws heavily action research and social learning, as well as on discussions of scaling up more generally. The term, as used by IRC in this paper, has been adopted by CIAT (Centro Internacional de Agricultura Tropical) who advocate the use of Learning Alliances by the CGIAR (Consultative Group on International Agricultural Research) as a means of increasing the effectiveness and relevance of research, the impact of development work and better informed policies (Lundy and Ashby, 2004).

This paper sets out for further discussion the main concepts underlying IRC's approach to Learning Alliances as an innovative way of thinking about the structures and processes necessary to support stakeholder-led innovations and bring them to scale as quickly and effectively as possible. In other words, to focus on the process of innovation and scaling-up rather than, as is more usually the case, on the subject of the innovation.

The paper centres on innovation in the context of sustainable domestic water, sanitation and hygiene (WASH) services, and in the associated fields of multiple water use and water resource management. It nevertheless draws heavily on experiences in many other sectors, in particular those dealing with agricultural research and extension, and knowledge management.

This paper is based on the background paper for the Symposium on Learning Alliances, held in the Netherlands between the 7<sup>th</sup> and 9<sup>th</sup> of June, 2005 (Moriarty et al, 2005). It has been shortened and modified based on the discussions held during the symposium.

The paper is divided into five main sections:

- Section 1 deals with the conceptual background to Learning Alliances
- Section 2 deals with some of the practicalities of setting up and facilitating Learning Alliances
- Section 3 outlines lessons learnt from programmes where IRC and partners have been implementing and working with Learning Alliances
- Section 4 discusses the next steps and raises some questions about the further development of the Learning Alliances approach
- Section 5 provides references for further reading

## Section 1. Learning Alliances: theory and concepts

### **1.1. Definition: What is a Learning Alliance?**

At its simplest a Learning Alliance is the process and structure necessary to undertake and scale up innovation. Key components are:

- A series of linked stakeholder platforms, existing at different institutional levels (global, national, district, community, etc.), created with the aim of bringing together
- A range of stakeholders with complementary roles and capabilities (research, implementation, policy and legislation, documentation and dissemination etc) interested in
- **Innovation** and the creation of new knowledge in an area of common interest. Learning alliances require
- **Facilitation** to sustain and maintain the process, and to overcome barriers to interaction and communication within and between the stakeholder platforms. Facilitation aims to enable a shared learning process in which barriers to horizontal and vertical information sharing are broken down.

Learning alliances aim to ensure that by involving key stakeholders at all levels in the process of knowledge creation within a framework of local and national conditions and norms the resulting innovation and learning is relevant, appropriate, sustainable and scalable.

#### Scaling up

Scaling-up is understood to include not only the widespread *replication* of an innovation but also (and critically) ensuring its *quality* and *sustainability*. Rapid replication, for example of borehole and hand-pump installation, is of no use if the systems and services replicated are not sustainable in the long term. Learning Alliances aim to address the critical issue of sustainability by looking not only at the innovation itself but also at the enabling environment necessary to maintain and

### **1.2.** Why are Learning Alliances necessary?

Why is a conceptual model such as that proposed under the title of a 'learning alliance' necessary? Simply put, we believe that due to a number of failings in conventional models of knowledge development and innovation, much innovative and potentially useful work never succeeds in moving beyond the original area in which it was developed. Indeed much innovation takes place with no clear model for its uptake other than a vague idea that following the 'research' there must be some 'dissemination'.

We believe that, by putting the *processes* of *innovation* and the *scaling-up* of innovation centre stage, and by actively addressing the institutional *structures* required to house these processes, we will significantly reduce the potential for good innovation to simply wither from lack of support.

In this section we outline some of the key failings of earlier work, including that of IRC, that have either prevented good ideas from taking off or impeded the rate of their development.

#### Failure of research and local innovation to lead to go to scale

The failure of academic (on station, non-participatory etc.) research to lead to desired impacts in terms of changes in policy and practice is now well documented and understood (see for example Röling, 1986). There is also a long history of efforts to overcome this shortcoming through action research, farmer learning and other interactive methodologies (Leeuwis and Pyburn, 2002b). Some improvement has resulted but there have still been cases of limited impact because innovations were not immediately suitable for wide-spread uptake (see next point). Sometimes, innovations have been taken forward by implementers (NGOs, donors, governments). Rope pumps, treadle pumps, community gardens, family ponds and community small-dams are all well-known WASH innovations that have come from implementing organisations rather than "researchers" (Alberts and van der Zee, 2004; Robinson et al., 2004; Polak et al., 2004; Shah et al., 2000). Yet many of these local innovations have also failed to go to scale.

#### Failure to deal with the environment in which innovation took place

While the adoption of action research and related approaches has led to great strides in making research activities and agendas more relevant and practical it has, in many cases, focussed exclusively on the level of the individual or the community. This has often meant that organisations and institutions (such as water service providers or local representatives of line departments) who are supposed to support these communities have been sidelined, sometimes even becoming seen as 'part of the problem'. This is counter-productive because all these players have specific roles and are essential links in the chain necessary for the wider provision of water services. Without their participation the the impact of an innovation can become limited and unsustainable because the institutions vital to scaling up have not been represented. Experience suggests that, where local innovation has been successfully scaled up, for instance with rope pumps in Nicaragua and Zimbabwe (Alberts and van der Zee, 2004; Robinson et al., 2004), or treadle pumps in Bangladesh (Shah et al., 2000) it has been achieved by working closely within the realities of the country.

#### Failure to acknowledge the means that innovators bring to their task

A special case of the general problem of failing to take into account the environment in which innovation takes place, is that of researchers or external implementers failing to acknowledge the importance of their own role in processes of innovation. This can be as simple as the critical importance of having an outsider as 'honest broker' in a whole range of activities. But it often goes much further, with resources (human or financial) being used to solve a problem that are utterly unrealistic in terms of future replication. Depressingly familiar examples of this sort of practice include: subsidising inputs for farmers; paying for people's participation; subsidising the use of highly trained facilitators to overcome bottlenecks; creating parallel structures to bypass 'failing' government; using highly motivated project teams that cannot be replicated; unrealistic levels of resources for PRA (Participatory Rural Appraisal) - vehicles, fuel for vehicles, perdiems for government staff and so on. Understanding the weaknesses (and strengths) of the institutions that are supposed to be the future implementers and supporters of innovative approaches, and designing such approaches within that institutional setting is essential to sustainability and scaling up.

#### Failure to consolidate learning, share knowledge and build capacity

Researchers, NGOs, donors and other implementers typically come into a community, do their research (participatory or otherwise), produce a report and some academic papers, do a 'dissemination workshop' and move on to the next project. Often there is no consolidation of lessons learned, no true sharing of results and no development of national or district-level ownership. Uptake and scaling-up is left to ill-defined processes of 'dissemination' and 'advocacy'. This type of research programme does not allow for capacity building within the relevant regulatory and implementing institutions such as local government, the private sector,

NGOs and extension services. Staff in these agencies are not given the skills to take the innovations to scale.

#### Sector fragmentation

The above problems are fairly generic to any process of innovation but one additional set of issues is more specific to the water and sanitation sector. It is that of fragmentation into a number of sub-sectors, principally those dealing with a) domestic water supply, b) sewerage and wastewater, c) irrigation, d) water resources management, and of course e) health.

At the same time the sector is linked with many other sectors such as local government, rural development and social welfare. In the past centralised planning has made it difficult to bring these (typically) governmental stakeholders together to work effectively at the intermediate or local level, or to obtain synergies between them. Joint planning, financing and implementation of interventions has, therefore, been difficult. The recent trend towards greater decentralisation offers a platform at the intermediate level<sup>2</sup> and the opportunity to bring these actors together for more 'joined up' planning.

#### **1.3.** The Learning Alliance concept and approach

The concept of Learning Alliances is built around the central proposition that only an integrated approach to the process of innovation, bringing together all stakeholders (practitioners, researchers, policy makers, activists), can address the range of failings described above. The processes of interaction within Learning Alliance should foster a sense of ownership of the founding concepts and approaches, ensuring that the innovation developed is appropriate to the local situation and capable of replication with existing (or realistically achievable) resources, institutions, and policies.

It is to achieve this that the three key levels of National, Intermediate and Community are seen as being the most important to work with in a Learning Alliance. It is assumed, broadly speaking, that national authorities will remain responsible for broader issues of policy and legislation, that decisions on planning, implementation and support will generally be made at the intermediate level and that the community is the level at which most WASH interventions take place and have their primary locus of management.

The Learning Alliance concept is an attempt to build on the lessons learned from past failures (and successes) and to make the process of innovation and the scaling up of innovation the central focus of attention. It is not one more attempt to find a developmental silver bullet. On the contrary the base assumption is that complex developmental problems cannot be solved by quick fixes. The route to sustainability lies through the development of local knowledge to support local solutions while accounting for local realities. LAs are proposed as a structure to facilitate and guide this adaptive and flexible process.

 $<sup>^2</sup>$  We use the term intermediate level to indicate the level between national and strictly local where decisions regarding WASH service delivery are being (or should be) taken. The exact administrative name for that level may differ from country to country. In some places it is called a district, in others a municipality, a governorate or a local council. Sometimes there may even be 2 or 3 tiers of intermediate level. Put simply these are the levels between national government and the communities.

## Section 2. Establishing and working with Learning Alliances

This section describes what we see as the most important factors to be taken into account when setting out to establish and work within a learning alliance process. These ideas are in a relatively early stage of development and will require further testing before they can be formalised as a true methodology. For now they serve as a starting point.

#### 2.1. Stakeholder identification, and roles and responsibilities with LAs

All learning alliances will begin with a core or founding group of actors whose interest in innovation is to be served by the creation of a learning alliance. It is crucial that this core group has a clear idea of what they want to achieve and how they intend to do it. Only in this way will they be able to attract the interest of other key stakeholders. The core group will get bigger as the work of the alliance increases and more stakeholders buy into the idea.

There can be no hard rules about who should be involved and in what manner. Nor of who should initiate the process. It will depend on such factors as the specific work topic, the organisations available and interested, the resources available, etc. What is important is that stakeholders have a shared vision of the objectives of the alliance and background skills that can contribute to achieving them.

Which stakeholders should be involved at the different levels (and different stages) is something to be worked out organically by the founding members as they seek to develop a coalition around their area of interest and innovation. Ideally, each participating organisation should have some existing level of interest in innovation related to a specific area. An important exception is actors without such a direct interest who, because of their position, could impede or block progress at a later stage. They should be drawn in to the Alliance to avoid or reduce that possibility.

Since facilitation is crucial to the overall success of a learning alliance the core team must, at an early stage, identify the person or persons for that role. This can raise problems because some core members may feel they are suited to that position, whereas it is an essentially neutral role – not easily combined with the primary task of a core member in trying to move the alliance forward! In the early stages of setting up the LA founder members will need to work primarily in 'advocacy' mode – selling the idea to potential partners. If they do then deciding to play a facilitating role, it will be necessary for them to relatively quickly shift into that mode – helping the new partners to understand, adapt and own their own vision and objectives – which will undoubtedly diverge from the original!

Questions to be asked at this stage include:

- What does the group want the Alliance to achieve?
- What does each member organisation want the Alliance to achieve?
- What can each organisation contribute in terms of expertise, effort and resources?
- How should facilitation of the process be handled?

Deciding who is to be involved in an LA is critical both to the immediate success of sharing the results of action research and to the overall potential for successful scaling-up. Member organisations will vary according to the specific local and national conditions. Table 1 below identifies likely members of a Learning Alliance at national and intermediate (district/municipality) level.

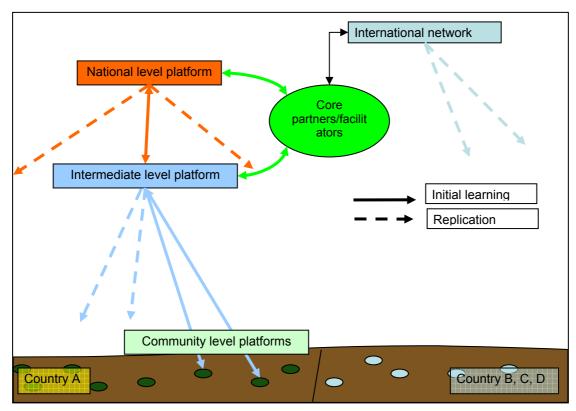


Figure 1: Structure of Learning Alliances at different levels

Table 1: Typical	members of a I	Learning Al	liance at national	and district level
Table I. Typical	members of a 1	Dear ming 7 M	nance at national	

At national level	At district level
- Policy makers	- Local government
- Line ministries (Water, Agriculture, Health)	- Catchment Councils
- National research institutes	- Local representatives of line ministries
- Resource Centres	- Local NGOs
- National training institutes	- CBOs, Water Users' Associations
- Financing organisations	- Local researchers, trainers and extension
- Donors and INGOs (International Non-	workers
Governmental Organisations)	- District fora (e.g. Provincial Water Task
- Organised local government (e.g. Association of	Team)
Local Government; Federation of Municipalities)	- Local private sector
- Organised CBOs (e.g. National Association of	- 'Projects'
Community Based Water Provider Organisations)	- Other implementing partners
- National fora (e.g. the National Task Force on	- Organised CBOs (e.g. Regional Association
Agriculture or the Water and Sanitation Forum)	of Community Based Water Provider
- Relevant private sector	Organisations)

Factors to take into account in the selection of members include:

- ongoing work that is relevant to the LA;
- interest in being involved;
- ability to commit and take decisions;
- ability to provide resources (financial, human);
- potential to take up findings (become a champion);
- ability to block or impede the project (local politicians for example may also be co-opted into the process);

It can be seen that the identification and selection of members of the LA is a complex process. It should be based on a thorough assessment process and a clear view of the role that members will

take in further uptake and scaling-up. Table 2 provides an example of stakeholder mapping for a Learning Alliance being developed by the Multiple Use Systems project (see <u>www.musproject.net</u>).

Table 2: Example of matrix for mapping stakeholders to be invited to the LA for the Multiple Use
Systems (MUS) project

Category	Stakeholder	Role in LA	Strength	Weakness
Regulation / policy making	Ministry of Water	Review norms and standards	Capacity to scale up policies	Politicised
	Ministry of Agriculture	Create enabling policies	Capacity to scale up policies	Politicised
Innovation	National/ local University	Test new methodology Research	Strong in content	Often in isolation Overly academic
	Government Research centres			Under resourced
Planning	Local government	Adopt MUS approach in planning	Capacity to adopt approach and support uptake	Politicised Under-staffed
Implementing	District council/ line dept. of Ministry responsible for Domestic Water	Scale up through implementation	Big reach Continuous presence	Politicised Under-staffed
	Private sector actors	Scale up through implementation	Sustainable Flexible	Unaccountable Profit oriented - no poverty mandate
	INGO	Scale up through implementation	Reach Strong capacity	Non-continuity (temporarily in district)
	Department of irrigation	Investments and extension support	Strong extension officers	Sectoral bias Lack of flexibility
Dissemination / Advocacy	Association of Municipalities	Mobilise other district councils	Big reach Credibility with other district councils	Little content expertise
	Resource Centre	Document and disseminate lessons learnt	Strong capacity	Often in isolation Under-resourced
	Local University			Often in isolation Under-resourced
Service provider (post- construction)	Community Based Organisation (CBO) in partnership with district council	Manage the innovation after project completion	Local level Relatively well skilled	Not very empowered communities
	Local private sector	Day to day Operation and Maintenance (O&M) Spare parts	Local level Flexible	May lack skills Profit driven (no poverty mandate)

### 2.2. Working at different levels

In order to better focus and tailor the needs of the different actors for multi-actor learning, Groot et al. (2002) discuss the concept of multiple nested subsystems. For LAs in the water and sanitation sector we propose to translate these subsystems to the administrative levels of water and sanitation services; i.e. the national, intermediate and community level.

When setting up LAs, it is important to consider how different levels relate to each other and who is a member of which platform at which level. Figure 2 illustrates an example, again from the MUS project. Government institutions at national level should be similar to (if not directly responsible for) those at district level. This ensures that activities at district level are compatible with what national government does and that activities at district level can easily be communicated to superiors at national level. Sometimes the national platform can be active in identifying a pilot district.

Effective communication between platforms at different levels of an Alliance is crucial. In case several platforms are involved, information flows, in all directions, are critical to ensuring that ownership of (and responsibility for working with) the findings of pilot activities is assumed by all.

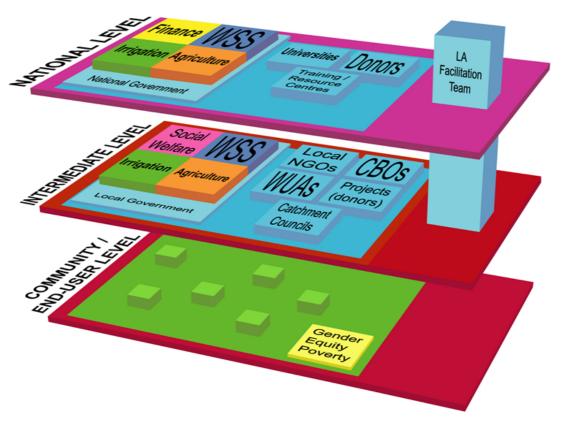


Figure 2: Linkages between district and national level platforms of a Learning Alliance: an example from the MUS project

#### 2.3. Building blocks for learning alliances

Learning is not a straightforward process in which all are happy to participate. Given the sort of broad based alliances being targeted, there will undoubtedly be conflicting interests as well as resistance to change, especially if people find their positions threatened. Honest documentation and dissemination of findings may not be welcome - people do not like their faults to be exposed

or to have to adapt their working methods. There will always be interests and power configurations, bringing many risks.

Avoiding (or minimising the impacts of) these risks is what makes the task of process facilitation for the Alliance absolutely critical. Support from a facilitator is needed for a wide range of activities, including: identifying and understanding different perspectives; constant checking that common understanding continues; sharing results and experiences both horizontally and vertically, within the Alliance and with outsiders; shared experimentation and learning within the boundaries of existing institutions and policies.

#### **Action research**

The central approach used in Learning Alliances is action research, which refers to the application of research processes to the solving of practical problems in support of and with the active collaboration of key stakeholders. This is achieved by working, as a group, through short cycles of planning, action, observation and reflection (see O'Brien 1998 for an excellent overview of action research concepts). Extensive debates about participatory approaches have shown the importance of involving people in the analysis of problems and the design of solutions; using action as a basis for learning. This creates *ownership* of the problem and the solution, and helps to develop the *skills and capacities* needed to tackle similar future problems and/or manage the solution in a sustainable manner.

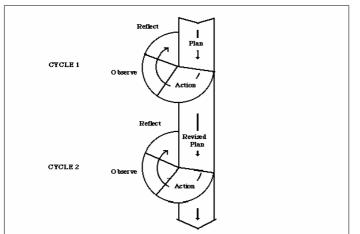


Figure 3 Cycles of action research (from MacIsaac, 1995 – in O'Brien 1998)

Without going into the details of different participatory approaches and methodologies the common factor has been the full *participation* of people in the processes of *learning* about their needs, capabilities and visions, and about the actions required to address them. In many cases this has meant a focus only the communities. resulting on undoubtedly in some community empowerment but often at the expense of sidelining the organisations and

institutions (such as water service providers or local representatives of line departments) around those communities.

Increasingly it is felt that intermediate level organisations have a key role to play in supporting communities in addressing their water-related needs. Therefore there is a need for different external (i.e. external to the community) stakeholders to *participate* actively in the process of *learning*. Specifically they must learn how they can best fulfil their community support role. The Learning Alliances approach provides the platform for action research with and between communities and these external stakeholders.

This means that action research needs to be designed to reflect not only the realities of communities, but also those of external support agencies. For example:

• Working within planning cycles (project cycles). This can imply tailoring the action research cycles to the project cycles used by many agencies, developing a structure of joint problem identification, solution identification, action, reflection, lesson learning, identification/modification of new solutions, etc. that is, as much as possible, linked with the planning approaches commonly used by the involved organisations.

• **Developing capacity to learn and manage adaptively.** This means developing *capacities* to work in a new, more flexible way. Essentially it means extending the empowering effects of participatory approaches to intermediate level actors. A key hypothesis of the LA approach is that blue prints to common developmental problems do not exist. As a result capacity has to be developed to manage adaptively, i.e to work in cycles of hypothesis development, information collection and analysis, action, further analysis and reflection and the development of new hypotheses.

#### **Process Documentation**

Process documentation is about capturing change processes in a way that helps others to understand and adopt them – hence leading to scaling up. Documenting the process (as well as the results) of the action research is critical to scaling up because we need to know *how* things were done; what worked, but also what didn't? What were the blockages and how were they overcome? Change is often frustrated by political and economic interests, by tradition, by attitudes e.g. by conservatism and resistance. Capturing, or recording, the struggle over interests, resistance and direct or indirect protest is good: for learning, revealing agendas, encouraging struggle and for adaptive management.

In addition, the expected outcomes or impacts of a Learning Alliance are often intangible, such as changes in attitude, behaviour and practice of key stakeholders, or changes in paradigms for water and sanitation development. Process documentation is also a tool to monitor and evaluate these more intangible impacts.

- Process documentation is a more systematic way to enhance the informal recording of events by the personal "radar" that many people use during complex programmes.
- Process documentation allows those most closely involved to step back far enough to be able to reflect on trends, patterns, opportunities and warning signs so that corrective action can be taken if and when needed. This also helps programme staff to step back from the fight over good outcomes.
- Process documentation specifically looks at (local) context, at history, at patterns. It acknowledges that something was going on before the start of the project that may make impact upon or hold relevance for the current process.
- Process documentation is like keeping a diary. It allows daily reflection on events. Over time
  a diary will reveal recurring themes and patterns.
- Process documentation is not another project tool it aims specifically at getting interesting
  and exciting information to other groups as quickly as possible. It provides programme staff
  with a bit more journalism and a bit less academic output.
- Process documentation helps to create and maintain political support; shows that things are happening and that people are continuing to interact.

For good analysis and reflection, process documentation needs a theory of change – owned by all stakeholders or by a programme team. Without a shared conceptual starting point there is nothing to reflect on, nothing to perceive as changing. Most programmes have implicit theories and assumptions which need to be made explicit.

Process documentation can be done by "insiders" (all stakeholders as members of a learning alliance) because their involvement in documentation stimulates their reflection and thus, learning. Alternatively, independent "outsiders" (such as journalists, film makers) can be involved, because they are in a "safer" position to objectively observe the process and to express criticism. However, one should be aware that "outsiders" can sometimes put too much of their own reflection and experience into the outputs and can go completely off track.

A number of organisations have developed methodologies and tools for process documentation and monitoring of qualitative change. A good resource document is the manual on Outcome Mapping, developed by IDRC (International Development Research Institute) (IDRC, 2004). This provides a complete overview of building learning and reflecting into development programmes. Simple tools can be derived from this and other frameworks.

Steps that IRC follows on process documentation in its programmes include (See Table 3 and Table 4):

- Capturing the change process;
- Reflecting on processes and analyzing (find the recurrent patterns and trends);
- Organising the information in specific formats for specific groups;
- Disseminating quickly enough to be most useful.

#### Table 3: example of a country work plan for process documentation

Country Work Plan					
Capturing	Capturing	Organising/filing	Analysis	<b>Outputs/editing</b>	Channels
What	How/who	How/Who	When/who	How/who	

#### **Dissemination and sharing**

Traditionally dissemination was done after a research project had come to its conclusion. Learning and action research programmes however, are not traditional scientific research. The researchers are just one of many stakeholder groups in a Learning Alliance. Furthermore, the cycle of research-reflection-action is much shorter. This means that results or findings are more quickly available even if they are temporary. It also means that findings do not have to be - and should not be - phrased in traditional scientific language.

Dissemination in learning and action research programmes is context specific. The aim is not to bring the results to a global website but back into the learning process. The primary target audience, therefore, is the stakeholders participating in the learning programme. Additionally, there will be a need for quick advocacy-type messages to a wider group.

In learning and action research programmes *feedback* is important: feedback in the Learning Alliances, from one stakeholder group to another; feedback after bits of research or experiments; feedback from one level of learning (district) to another (national). What has been learned and documented has to be fed back into the learning process and that is the most important dissemination function.

Table 4: example of a project plan for process documentation for the Basic Urban Services initiative (see www.irc.nl/page/7838)

Documentation matrix from BUS (Basic Urban Services) initiative						
What (process)	What (is documented)	Who to collect?	How to document?			
Roles played, expectations created (and fulfilled) and obstacles encountered by	Roles and responsibilities of different stakeholders at the start Review of changes in roles and responsibilities at the end of the	Anchoring Institute (AI) Local Consultants	SWOT (Strengths, Weakness, Opportunities, Trends) analysis Participatory assessment			
different stakeholders	project Identified needs and expectations of different stakeholders Obstacles to fulfilling expectations Expectations that were fulfilled	CBO/NGOs Other stakeholders such as private sector, users, etc.	Formal/informal interviews Stakeholder focus group and consultation meetings Observations from meetings, field visits, etc			

Documentation matrix from BUS initiative						
Tools	When	Who to analyse?	Potential End Product	Audience		
SWOT tool	Ongoing	AI	Case studies or brief	Other municipalities		
QPA <sup>3</sup> (Quantified Participatory Assessment)	process, in particular at key meetings and	Local consultant BUS	case examples for illustrating approach in a larger case study	National and local level policy makers		
Interview protocol	after key events	implementation team	write up of BUS experience	Donor agencies		
Facilitated stakeholder consultation meetings		Local municipalities	Advocacy materials for stakeholder involvement	Local CBOs/NGOs		
Observation protocol						
Log book						

In addition, advocacy will always remain an important function: the learning process must sell itself to be credible and respected by the wider group of stakeholders - those who are not participating directly in the learning programme.

New electronic equipment is very useful in short cycles of dissemination: Digital cameras, digital video, and audio recording equipment. And computers have relatively easy software programmes for editing (video and photo) and making presentations. Local media will also be needed to disseminate information.

<sup>&</sup>lt;sup>3</sup> Quantified Participatory Assessment is a methodology that collects qualitative information from rapid village assessments and converts some of this information into quantitative form. The details about this methodology are outside the scope of this paper, but more information can be found in (James 2002).

## Section 3. Experiences of applying the LA approach and concept

In recent years IRC, along with several partners has been, and remains, involved in projects and programmes that include many of the components now brought together as a Learning Alliance. This section provides one concrete example which applies the basic concepts of Learning Alliances as well as lessons learnt from different projects and initiatives.

# **3.1.** The EMPOWERS Partnership: a stakeholder dialogue for improved local water governance

#### Aim and approach

The EMPOWERS<sup>4</sup> Partnership (see <u>www.empowers.info</u>) is active in Jordan, Palestine and Egypt. It is facilitated and implemented by thirteen<sup>5</sup> organizations who have agreed to work together in a series of regional and national partnerships.

The aim of EMPOWERS is to improve water governance and long-term access to water by populations who currently experience scarcity and insecurity. It will do this through the following approach:

- Increasing the *influence* of different stakeholders, including end users, civil society and local government, on the planning and decision-making process for the use and management of scarce water resources. This will ensure that, at national and intermediate levels, planning and decision-making for IWRM will be better informed by local realities, leading to policy frameworks that support decision-making at lower levels.
- Enhancing *vertical and horizontal linkages and information flows*. Such linkages and flows between government agencies, local communities and others require that people and their organizations work together at different levels of influence and decision making.
- Demonstrating its approach through *pilot projects*. Through these pilots EMPOWERS will develop and test improved tools and approaches to planning in a hands-on learning process. In addition, it will build capacity, ownership and commitment at community and local government level, and bring the viewpoints of all those involved towards a shared vision and a common understanding of IWRM.
- *Documenting the learning process*. Documents and supportive videos describe the manner in which EMPOWERS has approached the issues at stake in the three countries, including lessons learned, bottlenecks, pitfalls, and how these have been resolved.
- *Sharing valuable information* and knowledge at regional level. In addition to approaches at the country level EMPOWERS will assume a role in regional networks, focusing on the wise use and management of local water resources in the Mediterranean Region.

<sup>&</sup>lt;sup>4</sup> This section is based on information that can be found on EMPOWERS (2004). EMPOWERS is initially funded by the European Commission in the framework of the MEDA Water programme, CARE International, IRC and PSO, a Netherlands organization for capacity building in developing countries.

<sup>&</sup>lt;sup>5</sup> Ministry of Agriculture - Water Department, Inter-Islamic Network on Water Resources Development and Management, and CARE Jordan (Jordan); Palestine Hydrological Group, Union of Agricultural Work Committees, and CARE West Bank/Gaza (Palestine); Development Research Technology & Planning Centre at Cairo University, Social Planning, Analysis and Administration Consultants, National Water Research Centre of the Ministry of Water Resources and Irrigation, Egyptian Water Partnership and CARE Egypt (Egypt); IRC (the Netherlands); and CARE International (USA, UK and NL).

#### Structure of the learning model

The EMPOWERS Partnership approach adopts something close to a pure learning alliance model to scale up the innovative approaches to developing IWRM frameworks and participatory water governance at local level.

Platforms at regional, national, district/governorate and village level have been created and are supported and facilitated by multidisciplinary regional and national teams. The stakeholders involved include: end-users (both women and men) in nine selected pilot communities, NGOs, CBOs, government institutions (covering water, irrigation, local government, agriculture, health and environment) and relevant private sector agencies. The national and district processes are facilitated by three to four person teams consisting of national NGO, government, and university partners.

At national level a Steering Committee including line ministries and national research institutes ensures that the approaches being piloted meet national norms and expectations and ensures that results are fed into national policy.

#### Lessons learnt

- Setting up teams and country partnerships is time consuming and requires great care and thought. Issues to consider in setting up the teams and partnerships include:
  - The need to have, in each team, a set of different skills (technical, facilitation, communication)
  - The need to link to existing networks and initiatives.
  - The need to identify national level partner(s) with the potential to become champions of the approaches developed and ensure their being taken to scale
- There is a strong need to develop, particularly at intermediate level, a learning environment which encourages local level experimentation and lesson learning. Again, this is time consuming and requires great care people used to implementing orders from above can be intimidated by the freedom of being asked to innovate.
- Capacity building of partners at all levels is needed in order to develop interest and commitment to the process, and to provide the skills needed to innovate effectively.
- Identifying a long term institutional home for the capacity created, and particularly the capacity to facilitate the planning processes being developed, is crucial to longer term sustainability.
- Breaking down barriers between sectors and levels by facilitating dialogue and information sharing is an empowering process that has led to great excitement in the districts, governorates and villages where the approach is being piloted.
- Involving national government has been essential in making local government and line ministries feel comfortable with innovating and trying new approaches.

# **3.2.** Lessons learnt from existing programmes on the Learning Alliances approach

#### It is not the technology that is important, it is the framework to guide the process

Technological innovations or developmental methodologies that are not scaled up have limited impact in improving water and sanitation services for the poorest. Often the failure to go to scale is related to how the innovation is introduced. There is little chance of success if an innovation deemed to have 'worked' in one context is simply transplanted to another, totally different one. This approach simply sees the technology or methodology as the solution to a problem but ignores the crucial needs of an enabling environment to support it and the time to create local knowledge on how to use it. It is the process of creating this enabling environment through shared learning among different stakeholders that will, in time, increase the impact of interventions in the sector.

#### Learning Alliances take time and resources

The process of making a handful of stakeholders interested in a concept, then inviting several other stakeholders to initiate a process and then keeping the process going whilst building the coalition of stakeholders, takes time and resources. It is a process that cannot be short-circuited. Knowledge is the sum of what individuals and groups of people can do, and it can only be created by learning and doing. No course (or group of courses) can, alone, create new knowledge. People have to try something and adapt it until it works. And they then have to continue to adapting as the world changes.

#### Learning Alliances need an engine

Successful Learning Alliances are those that emerge from existing systems and processes within a country. If they are created solely because an outsider thinks they are a good idea, they are likely to fail. However, they do need champions: stakeholders with the energy, vision and resources to sell the original idea and then keep driving forward the process of innovation and subsequent scaling-up. Ideally these champions should be people for whom the work of the learning alliance is part of their everyday job, and for whom the success of the LA will also bring personal success.

## *Learning, not planning, is the main focus of Learning Alliances – but space must be created for learning*

In practice, during the implementation of a learning alliance, most of the meetings and activities will focus on issues of planning, negotiation and implementation. But it is critical to overall success that space (intellectual and financial) is created to enable learning throughout the process. This means taking time to step back and review the process. It requires honesty and the space to be honest. Failures must be brought into the open and discussed openly. Making the learning component *the* focus of the processes requires good facilitators and committed stakeholders.

## Documentation, reporting and dissemination need a specific budget and time allocation throughout the process

Usually a project or programme takes 2-5 years to complete, reports are compiled and a final workshop for "dissemination" terminates the process. In a Learning Alliance, the learning is done throughout the process, not at the end. For this to happen, documentation, reporting and dissemination should be properly allowed for and should ideally have specific human resources allocated to them. When documentation is everyone's business it quickly becomes no-one's!

## Section 4. Next steps and leading questions

The LA approach is relatively new to the water and sanitation sector. The experiences that do exist are at an early stage and have yet to be properly documented. Nonetheless, it is already possible to identify a number of issues that seem to be of particular importance and deserving of special attention in the future.

Much of the innovation that is carried out in the water sector does not revolve around new (in the sense of 'never seen before') technologies or approaches. Indeed it is arguable that Learning Alliances are not primarily appropriate for the sort of research that leads to absolutely new devices or ideas. LAs are better suited to situations where ideas and approaches that have been tried and found promising in one country or context are to be transported elsewhere. Where we know *what* the innovation is but not *how* best to apply it in a new context or location. The objective then is to pick and mix from existing ideas, tools and hardware to create locally valid approaches.

In this context, key questions for the learning alliance approach revolve around the *how* of introducing new information (books, reports, institutional models) or devices (pumps, irrigation technologies) and guiding the transformation of these initially alien ideas and objects into local knowledge. Which systems and structures facilitate the learning process? These questions lie at the heart of the learning alliance approach.

#### Facilitation is crucial for Learning Alliances – but who should facilitate?

Learning Alliances require skilled facilitators. But who should lead this facilitation process? Can the core members of the learning alliance also be its facilitators or do the inherent conflicts of interest mean that this task must be handed to someone else? Or should there be a mix in the facilitation team between advocates and true facilitators? An external facilitator with a good knowledge of the country context might be more appropriate for dealing with power struggles and conflicting interests. However, an internal advocate/facilitator may better provide the drive necessary to overcome resistance to change, and in the future will be there to continue as champion of the approach and part of the engine necessary to drive the scaling-up process.

## Learning Alliances need an engine but many potentially important stakeholders are currently disempowered – how can they be involved in the effort to gain capacity?

LAs will only work with committed stakeholders but, in a period when the processes of decentralisation and capacity building are in their infancy in many developing countries, uncertainty and fear of change can make it difficult to find the right people in the institutions of national and local government. Since capacity building is central to LA development these shortfalls, particularly at intermediate level, can be a real threat to progress. For the present at least, empowered and dynamic stakeholders are more often to be found in NGOs, CBOs and donor project teams.

## Are learning alliances possible under current modes of project management, delivery and thinking?

Much current development thinking is focussed almost exclusively on outputs and numerical targets, with only cursory and formulaic attention given to either quality or sustainability. This problem starts with the MDGs. For water and sanitation they are particularly problematic. As well as being expressed in purely numerical terms they are effectively disconnected from any poverty target. Implementing agencies, particularly external ones, aggravate the difficulties with their adherence to short term project approaches that limit risk and concentrate on input/output ratios. By and large they are chronically shy of becoming involved in anything that looks like an open ended commitment.

Can learning alliances work in a world of output focus and short term goals? Can project approaches (such as log-frames) be adapted to suit programmatic and long term thinking?

The answer to the first question is *no*, and implies a need for advocacy for funding of more enlightened approaches that take into account the quality of processes. To the second question there is no immediately obvious answer but it is important that one is sought in the coming years.

## Overcoming barriers to vertical and horizontal integration – do the benefits outweigh the costs?

In almost every sector, in developing and developed countries, there is a call for more/better integration. Moves in that direction are impeded partly by the high costs of communication and partly by the need for boundaries to any process. But there are other barriers to progress, arising from the nature of political power, particularly within centralised nation-states. One of the key questions for development generally is to what extent a combination of increased democratisation and decentralisation on the one hand and the IT revolution on the other, will provide the opportunity for genuinely decentralised, demand led and integrated service delivery and resource management.

For now it has to be assumed that progress can be made and in that sense the LA approach should be seen as part of the *how* of bringing about change. Nonetheless, if we are to learn from the lessons of past work on participatory approaches, great care must continue to be exercised in evaluating (and taking seriously) the costs as well as the benefits of greater integration.

#### What is needed in an enabling environment for Learning Alliances?

Learning alliances have evolved from the tradition of bottom-up empowerment and actionresearch. In many ways they seek to extend the undoubted benefits of the empowerment that these approaches have brought to communities and other local level stakeholders through those working at intermediate and national levels. Those experiences have shown that several criteria will be key to making the LA model work effectively. They include: a link between policy, legislation and behaviour; a movement towards decentralisation; a sympathy to empowering people; an acceptance of bottom up and adaptive planning and management.

Codifying the factors that are essential to the effective operation of LAs will be an important part of future work.

## Section 5. References

Alberts, J.H and J.J. van der Zee (2004) A multi sectoral approach to sustainable rural water supply: the role of the rope handpump in Nicaragua. In: Moriarty, P., Butterworth, J. and B. van Koppen (eds.) (2004) *Beyond Domestic; Case studies on poverty and productive uses of water at the household level.* IRC International Water and Sanitation Centre, Delft, the Netherlands. Technical Paper Series 41.

Batchelor, C. and P. Moriarty (forthcoming) *Using Water Resources Assessments within the EMPOWERS IWRM planning cycle*. EMPOWERS Working Paper 5.

Dick, B. (2002) *Action research: action and research*. Paper prepared for the seminar "Doing good action research". Southern Cross University, Australia

EC (2004) Aid Delivery Methods. Volume 1: Project Cycle Management. Brussels, Belgium. http://europa.eu.int/comm/europeaid/gsm/documents/pcm\_manual\_2004\_en.pdf

EMPOWERS (2004) www.empowers.info

Engel, P. (1995) Facilitating innovation: an action-oriented approach and participatory methodology to improve innovative social practice in agriculture. PhD-thesis. Wageningen University, Wageningen, the Netherlands

IDRC (2004) http://web.idrc.ca/en/ev-26586-201-1-DO\_TOPIC.html

IRC (2004a) Overview RCD 18 countries programme http://www.irc.nl/page/3381

IRC (2004b) UN-Habitat-SCP- Basic Urban Services http://www.irc.nl/page/7838

IRC (2004c) Scaling Up http://www.irc.nl/page/111

Groot, A., van Dijk, N., Jiggings, J. and M. Maarleveld (2002) Three challenges in the facilitation of system-wide change. In: Leeuwis, C. and R. Pyburn (2002) *Wheelbarrows full of frogs; social learning in rural resource management*. Koninklijke Van Gorcum; Assen, the Netherlands

James, A.J. (2001) Enhancing the "Assessment" in Participatory Assessments. In: IFAD, ANGOC and IIRR (2001) *Enhancing Ownership and Sustainability: A resource book on participation*. International Fund for Agricultural Development (IFAD), Asian NGO Coalition for Agrarian Reform and Rural Development (ANGOC) and International Institute for Rural Reconstruction (IIRR), Part 3.

Leeuwis, C. and R. Pyburn (2002b) Social learning for rural resource management. In: Leeuwis, C. and R. Pyburn (2002) *Wheelbarrows full of frogs; social learning in rural resource management*. Koninklijke Van Gorcum; Assen, the Netherlands

Lundy and Ashby (2004) *Building multi-stakeholder innovation systems through learning alliances*. ILAC Brief 8.

Moriarty, P. and C. Batchelor (forthcoming). *The EMPOWERS Participatory Planning Cycle for Integrated Water Resource Management*. EMPOWERS working paper No. 3

Moriarty, P. B., Batchelor, C. H., Smits, S. J., Pollard, S., Butterworth, J. A., Reddy, G. V., Renuka, B., James, A. J. and Malla Reddy, Y. V. 2004. Resources, *Infrastructure, Demands and Entitlements (RIDe): a framework for holistic and problem-focussed water resources assessments*. WHIRL Project Working Paper 10. NRI, Chatham

Penning de Vries, F., van Koppen, B. Mintesinot, B., Yoder, B., Scott, C., Boelee, E., Butterworth, J., Moriarty, P. and S. Ruaysoongnern (2004) *Inception Report for Project CPWF-28: Models for Implementing Multiple-use Systems for Enhanced Land and Water Productivity, Rural Livelihoods and Gender Equity.* IWMI, Pretoria, South Africa.

Polak, P., Adhikari, D., Nanes, B., Salter, D. and S. Surywanshi (2004) Transforming access to rural water into profitable business opportunities. In: Moriarty, P., Butterworth, J. and B. van Koppen (eds.) (2004) *Beyond Domestic; Case studies on poverty and productive uses of water at the household level.* IRC International Water and Sanitation Centre, Delft, the Netherlands. Technical Paper Series 41.

Robinson, P., Matthew, B. and D. Proudfoot (2004) Productive water strategies for poverty reduction in Zimbabwe. In: Moriarty, P., Butterworth, J. and B. van Koppen (eds.) (2004) *Beyond Domestic; Case studies on poverty and productive uses of water at the household level.* IRC International Water and Sanitation Centre, Delft, the Netherlands. Technical Paper Series 41.

Röling, N. (1992) The emergence of knowledge systems thinking; a changing perception of relationships among innovation, knowledge process and configuration. *In: Knowledge and Policy: The International Journal of Knowledge Transfer and Utilization, Vol. 5, No 1, pp 42-64* 

Quiroga, E., Garcia, M. and R. Duque (1997) Experience and results of the TRANSCOL programme. In: Visscher, J.T. (ed.) (1997) *Technology Transfer in the Water Supply and Sanitation Sector: a Learning Experience from Colombia*. CINARA – IRC Technical Paper Series 32, the Hague, The Netherlands

Royal Tropical Institute (2004) www.kit.nl/frameset.asp?/specials/html/rk\_kit\_s\_experience.asp&frnr=1&

Shah, Tushaar; Alam, M.: Kumar, Dinesh; Nagar, R. K. ; and Singh, Mahendra. (2000) *Pedaling out of poverty: Social Impact of a manual irrigation technology in South Asia.* Research Report 45. Colombo, Sri Lanka: International Water Management Institute

Warner, J. and A. Verhallen (2004) *Multi-stakeholder platforms for Integrated Catchment Management: towards a comparative typology.* Paper presented at the International Multi-Stakeholder Platform conference, 25 Sept 2004. Wageningen University, Wageningen, The Netherlands

WELL (2004) http://www.lboro.ac.uk/well/

O'Brien, R., (1998) An Overview of the Methodological Approach of Action Research Available at: <u>http://www.web.net/~robrien/papers/arfinal.doc</u> (checked June 2005)