

# **FRAMEWORK FOR PARTICIPATION IN INTEGRATED CATCHMENT MANAGEMENT**

Report to the  
**Water Research Commission**

by

**Mlazi River Catchment Management Programme  
Farmer Support Group**  
with input from the WRC Steering Committee Support Group

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## 1. INTRODUCTION

The National Water Act has introduced a new legal institutional framework for the management of water in South Africa. It recognises the need for integrated management of water resources and, where appropriate, the delegation of management functions in such a way as to enable everyone to participate.

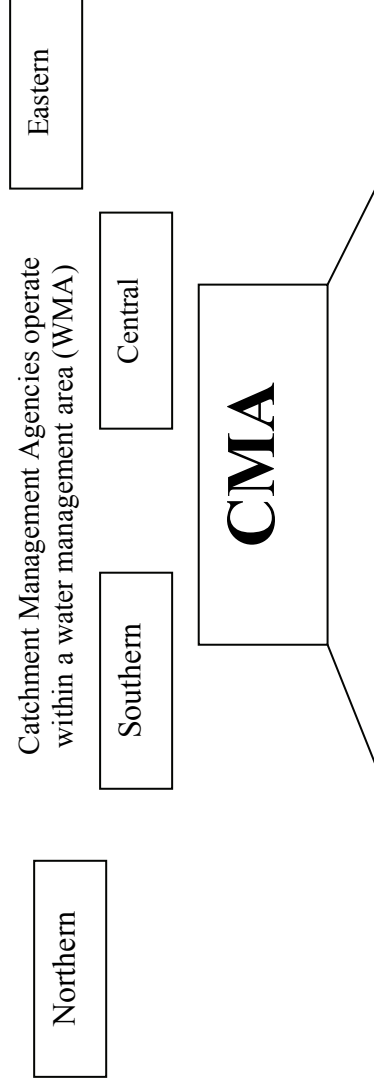
Catchment management programmes should generally operate at all levels, including participation from the bottom upwards. There should always be an emphasis on organizing local communities, building their capacity and liaising among all role players in the catchment. The structures envisioned by the Act are visualized in Figure 1, together with bodies deemed necessary to implement the spirit of the Act.

The Farmer Support Group (FSG), through its Mlazi River Catchment Programme (MRCP), was commissioned by the Water Research Commission to develop a framework for community participation in integrated catchment management (ICM) in South Africa. During a period of seven years, field work and action research was undertaken to organize people in parts of the Mlazi River Catchment. Work done and results achieved are documented in annual reports and a final scientific report submitted to the WRC.

This document presents a draft framework to guide practitioners in facilitating community participation in ICM. The framework has emerged from work in the Mlazi River Catchment, and as such is context specific. However, experiences gained and issues raised may be of relevance to other practitioners.

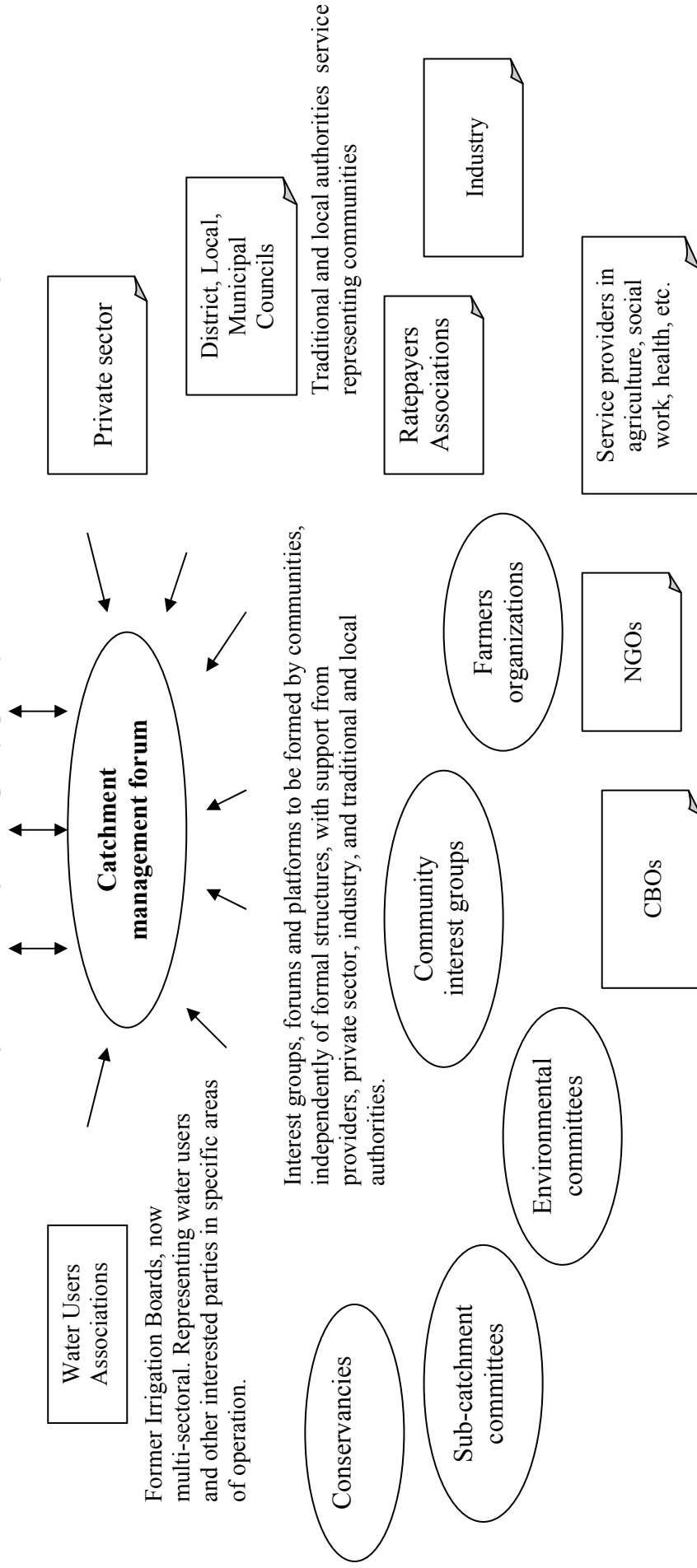
Rather than providing a step-by-step 'recipe' approach, this document seeks to support initiatives in ICM by providing suggestions and encourage discussion on:

- a) main areas of intervention
- b) key-concepts & critical issues
- c) paradigm applied, and
- d) methodologies, tools & techniques used.



**FIGURE 1 BUILDING BRIDGES**

Catchment Management Committees with representation from all relevant stakeholders are formed by a CMA to manage water resources in one or more catchments in a WMA. In this example, the WMA has been divided in four regions with a CMC and a satellite office. Besides geography, catchment committees can be formed around water management issues, e.g. Water quality/quantity, Stream flow reduction, and Licensing assessment.



## **2. CONCEPTUAL FRAMEWORK**

### **2.1 KEY-CONCEPTS**

#### **Integrated catchment management**

is a form of coordinated management of land and water resources within a region, to prevent land degradation, protect the quality of freshwater, and biodiversity, while promoting sustainable resource use within a context of community/government partnerships and recognition of socio-economic objectives. ICM takes the catchment as the logical spatial scale to deal with these issues. Thus, the overarching ICM model has been ‘hydro-determined’ (Doore et al., 1999). This focus on catchments is being challenged. People living and/or working in a region, do not necessarily identify with a catchment. Their interests and perspective determines whether their primary focus is, e.g. belonging to a residential area, clan or tribal area, agro-ecological conditions, and/or potential for economic investments.

#### **Sustainable development**

is a pathway or direction that we need to move along so as to achieve greater balance between the social, economic and ecological environment (Oelofse, 1999).

#### **Community**

refers to individuals and groups who collectively make up the social groupings of a locality, region or nation. Although the term might imply that social cohesion or identity exists, this is not necessarily the case. The term is also generally used to refer to individuals and groups outside the formal structures of government or ‘civil society’ (Dore et al., 1999).

#### **Capacity building**

a process that improves peoples’ capacity to determine their own values and priorities and act on these priorities (Oxfam, 1999).

### **2.2 AREAS OF INTERVENTION**

Community participation in ICM requires the creation of an enabling environment for individual and collective action. This requires the introduction and development of options of what is possible technically, socially and economically, effective communication among catchment residents, and a process of capacity building for a wide range of stakeholders. Four areas of intervention have been identified to achieve improved land management, water quality and quantity in a catchment. The activities in each box, undertaken by the MRCP, serve as examples (Figure 2). Many other project activities may be initiated within each area.

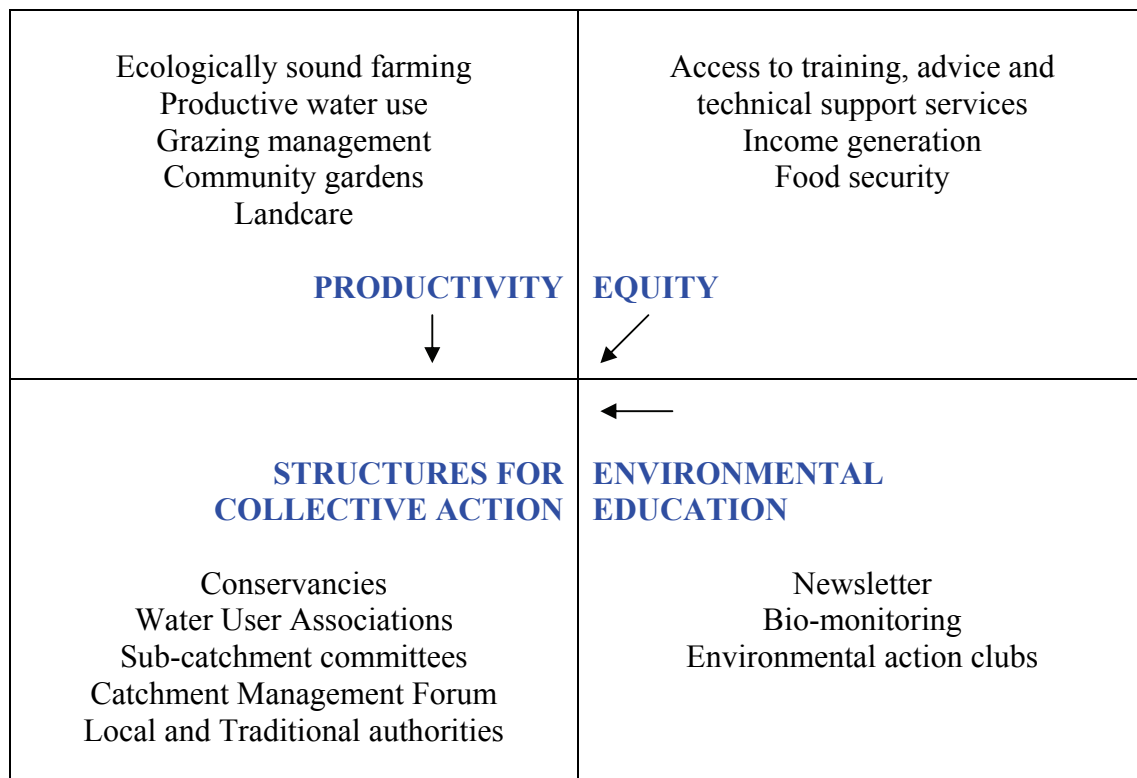
#### **1. Productivity**

Improved water quality and quantity requires interventions not only in water resource management, but also in land use management. Commercial farmers and community gardeners are encouraged and supported to develop more sustainable farming practices. Technologies recommended include rainwater harvesting, using swales, mulches, composting, and wetland management. The Landcare programme, promoted

and funded by the National Department of Agriculture, can become an important vehicle to achieve community-based sustainable natural resource management, including grazing management. Although, the program's main emphasis has been on resource poor land users, Landcare has great potential for supporting large-scale commercial farmers. Participatory Technology Development (PTD) and Prototyping are recommended as methodologies to facilitate interventions to promote productivity.

## 2. Equity

Integrated catchment management requires the ability of individuals, groups and communities to pursue their own development and negotiate (improved) access to training, advice and technical support services. This means addressing injustices from the past, and reducing conflict, but also to enable each person to know and exercise their rights, and to articulate their issues and needs, regardless of race, sex, gender, age, etc. Participatory Learning and Action (PLA) is suggested as methodology to enhance the problem solving capacity among community members, as well as specific tools and techniques from Participatory Rural Appraisal (PRA).



**Figure 2**

## 3. Structures for collective action

Sustainable structures are necessary to sustain project activities in all areas of intervention. These structures are the 'glue' that holds it all together; the energy that makes the vehicle drive. Thus, the arrows from box 1,2 and 4 pointing towards box 3 in Figure 2. Groups are formed around specific interests (e.g. farming, environment,

water use), and collaboration is promoted among individuals, groups and organizations. These diverse stakeholders are brought together into forums and platforms. Forums and platforms provide a space where stakeholders discuss differences and identify commonalities. This is where they begin to understand each other's perspectives, and open the door to finding common ground, and negotiating resource use. Effective linkages between stakeholders are essential to make the structure work, as well as the presence of a champion who can 'move and shake' the stakeholders, keep them focussed and accountable, and 'kick or tickle' them into action. Platform building is recommended as methodology to facilitate collective decision making and action, with tools and techniques from other methodologies such as PRA and Rapid Appraisal of Agricultural Knowledge Systems (RAAKS).

#### 4. Environmental education

As mentioned earlier, people living and/or working in a region, do not necessarily identify themselves with a catchment. Their identity may be centred around their residential area, working environment, and/or social group they belong to. Furthermore, their primary objective may differ from growing food for the household, passing maths in school, or increase net profits. Improving management of the catchment is often very low (or absent) on people's agenda. Environmental education is an important instrument to raise awareness about social, ecological and economic issues, to mobilise collective action, and to develop a catchment identity. Activities may include the establishment of school environmental action clubs, presentations to and discussions with local groups, introducing residents to the riverine environment, and publishing a catchment newsletter. A methodology - developed in action – called Steps in Environmental Education is suggested, with tools and techniques from PRA and RAAKS.

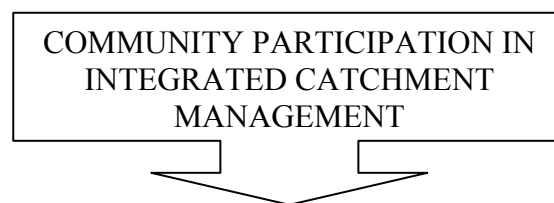
### 3. PARADIGMS, METHODOLOGIES, TOOLS AND TECHNIQUES

To design and facilitate development interventions it is important to distinguish between paradigms, methodologies, tools and techniques.

#### PARADIGM

An overarching framework of beliefs, assumptions and approaches that shape how individuals, organisations or societies behave and respond to problems or opportunities. Paradigms establish the moral and intellectual rational for the design and use of particular methodologies.

*Paradigm followed by the MRCP:*



*Accompanied by the following*

#### VALUES & PRINCIPLES

##### **Sustainability**

Applying the goals and principles of sustainable development to achieve a better quality of life while protecting the integrity of ecosystems. Improving what we are doing while at the same time seeking to transform society, so that the way we live in the world is socially and ecologically just.

##### **Equity**

To create an enabling environment in which individuals, groups and communities can pursue their own development and negotiate (improved) access to training, advice and technical support services. This means addressing injustices from the past, and reducing conflict. It also means, enabling each person to know and exercise their rights, and to articulate their issues and needs, regardless of race, sex, gender, age, etc.

##### **Inclusiveness & participation**

Encouraging a high level of diverse stakeholder representation, involvement and ownership. Employing participatory processes that are clear, genuine, and maintained over time – recognising that ‘participation’ is a highly complex process that requires sound communication and conflict management skills.

##### **Accountability**

A system is in place that enables all participants to account for and to hold each other accountable for decisions taken and actions initiated.

**Effectiveness**

Activities undertaken and processes employed make a difference in such a way that the capacity matches the intent.

**Efficiency**

The outcomes justify the means (costs, trade-offs, time) without creating unnecessary duplication.

**Durability**

Relative to short-lived or ad hoc initiatives, the forum has sufficient longevity to persist, experiment, learn and adapt (Dore et al., 2000)

**METHODOLOGY**

A methodology is a coherent and logical approach or process for undertaking particular types of tasks or solving particular problems. A methodology is made up of a package of specific tools and techniques used in a logical order.

*Methodology applied by the MRCP:*

**TOOLS AND TECHNIQUES**

The specific ways of completing the micro-level tasks that adds up to a methodology.

*Tools & techniques used by the MRCP:*



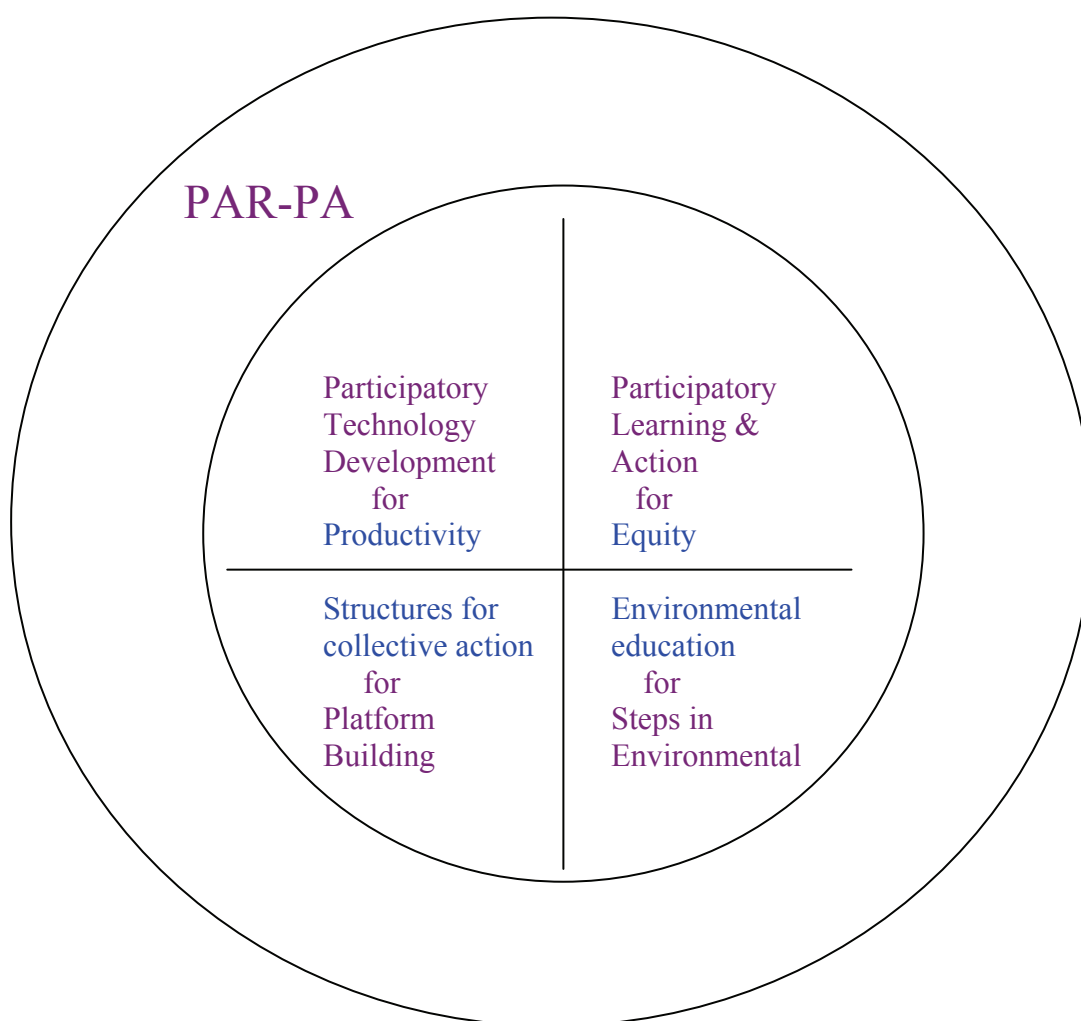
In line with the methodology – Participatory Action Research & Process Approach – applied by the MRCP, tools and techniques are chosen that allow people from different socio-economic, cultural-ethnic, and educational backgrounds to express, share, and learn with and from each other.

#### 4. TOWARDS A FRAMEWORK FOR COMMUNITY PARTICIPATION IN INTEGRATED CATCHMENT MANAGEMENT

Catchment management programs ideally work on two levels:

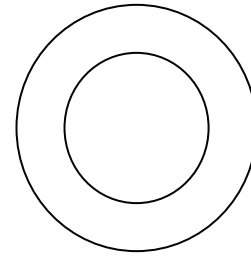
1. Research: Develop or reflect on a framework for community participation in ICM
2. Project: Engage individuals, groups and organizations in activities to enhance sustainable management of the catchment.

Different methodologies can be used to facilitate research and project work, as well as activities within each of the four areas of intervention. The framework that emerged from the work of the MRCP is visualized below (Figure 3). The inner circle of the diagram presents the methodologies used within each area of intervention. The outer circle represents the over-arching methodology – Participatory Action Research and Process Approach - that aims to integrate processes and outcomes within the four areas. In paragraph 3.2 the overarching methodology is presented. In the paragraphs following, critical areas are raised in each area of intervention, and a methodology, tools and techniques presented.



**Figure 3**

## 4.1 THE OVERARCHING METHODOLOGY



Many methodologies facilitate either research or project intervention. However, ICM requires a methodology that can guide both the research as the project component. Participatory Action Research and the Process Approach have been used for this purpose.

### **PARTICIPATORY ACTION RESEARCH - PROCESS APPROACH**

In PAR, researchers and “researched” work together as partners to (re)define problems, act collectively to address these problems and enhance their potential to mobilize for social action (i.e. empowerment). The ultimate outcome of a successful PAR project is (disadvantaged) groups speaking and acting on their own behalf. Thus, PAR poses a serious challenge to conventional researchers, who are used to research but not to the participation of the “researched”. It also challenges social scientists involved in research, who are often more interested in research and participation than in action. The PAR process is outlined below.

#### **Phase 1: Definition of problems**

Research questions are developed through a process of participation with (disadvantaged) groups and communities



#### **Phase 2: Data collection and analysis**

Joint decisions are taken on how data is collected and interpreted. If participants decide to use procedures that require particular skills (e.g. sampling or interviewing), they can opt for advice and training by researchers.



#### **Phase 3: Utilisation of results**

Participants have access to and control over findings, and take joint decisions about dissemination and how to link results to implementation (Bhana, 1999).

## THE PROCESS APPROACH

PAR doesn't provide tools and techniques. Thus, the Process Approach is suggested to 'bring the cycle alive' and to enable practitioners to kick start the process. The Process Approach has been developed to design project interventions in a participatory manner, and consists of five components:

1. **Mobilisation:** A process by which individuals become capable of understanding their own situation and analysing its deeper causes, in order to distinguish one or more problems of development. The program tries to create favourable conditions which will allow these people to discover and develop their analytical capabilities for themselves



2. **Organisation:** Identifying the problem in the manner just described, encourages people to get together for action-research. One of the stages of action-research may be to organise groups to conduct a micro-project. Once groups have been formed, their members should decide to organise themselves with the aim of attaining their common goal.



3. **Training:** The main objective in the training of client groups is to facilitate their access to the information they need.

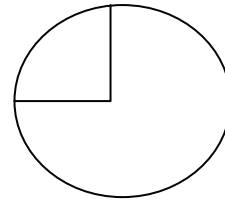


4. **Technical support:** To attain their goals, the groups will need both technical and financial assistance. The program encourages group members to search for this assistance within the appropriate institutions.



5. **Systems management:** This last element allows the four elements above to be put in place, while maintaining a balance between the local level and the institutions, and strengthening local capabilities (Dangbegnon, 1995).

## 4.2 PROMOTING PRODUCTIVITY



Water use can not be separated from land use. In order for catchment management to be sustainable, interventions are required to develop and promote ecologically sound farming and land use practices such as rainwater harvesting using swales, mulches, compost and wetlands. Ways of promoting productivity include

- Participatory Technology Development; and
- Prototyping

PTD is suggested as methodology when dealing with diverse, complex, small-scale farming systems in risk prone areas. Prototyping is suggested for large-scale farmers working under more controlled farm conditions.

### PARTICIPATORY TECHNOLOGY DEVELOPMENT

PTD is aimed at facilitating purposeful and creative interaction among farmers and facilitators to generate technologies. Teams can include community members, as well as development practitioners and scientists. Six steps are distinguished to generate technologies with farmers:

#### 1. Getting started

Several methods and methodologies can be used at this level. For instance, participatory rural appraisal can help describe and clarify problem areas and priorities.



#### 2. Looking for things to try

At this level, a workshop for farmers can be organized to agree on a research agenda and identify options for improvement.



#### 3. Designing experiments

The main output here is to agree on protocols which present shared criteria for monitoring and evaluation.



#### 4. Trying out things

Farmers are involved in the implementation of ideas, observation of the experiments (farmers become experts in the process), monitoring and evaluation.



#### 5. Sharing the results

Key-issues concern the critical analysis of the results and their internalisation of the process is revisited.



#### 6. Keeping up the process

Enhancing multiplier effects and self discovery from other farmers, and stimulating horizontal diffusion of the technology generated.

## **PROMOTING PRODUCTIVITY: COMMUNITY GARDENERS IN NTSHONGWENI**

FSG received a request for assistance from community gardeners. A project was proposed at an informal meeting with gardeners. They suggested that FSG should present and discuss the plans with their local leaders. At that time, the two prominent leading parties were the Inkatha Freedom Party (IFP) and the African National Congress (ANC). For years, the community had fallen victim to a bitter war, which ended in 1989, with the signing of a Peace Accord, a first in KwaZulu-Natal. Informed by these experiences, it was clear that good working relationships needed to be developed with both parties. Eventually leaders from both parties introduced FSG to their garden committees. This process helped to introduce staff to the community, discuss intended program interventions, and learn more about the local structures.

Program staff facilitated a situation analysis with gardeners, using tools and techniques from Participatory Rural Appraisal (PRA). The analysis generated information about farming systems in the area, and type of support needed to develop sustainable and profitable farming enterprises. A timeline was generated understanding of the history of the area, and different interests of crop farmers, gardeners, and livestock owners. A Venn diagram was used to identify groups and organizations providing assistance to local people, and approaches used to manage conflict. A follow up workshop was held with stakeholders in soil and water management, to identify their views on the situation.

The exercise enabled program staff to involve community members in their own planning rather than imposing proposed solutions. Insight was gained in the community's history, and peoples farming systems. Other service providers were identified with whom the program could form partnerships, and avoid duplication.

Rapport was established with community groups and stakeholders. Initiated by one of the partners, Dr. Chris Dickens from Umgeni Water, a proposal was developed to promote community participation in catchment management. The proposal was successfully submitted to the Water Research Commission.

Staff was then recruited based on experience or familiarity with the project area. Gardeners recommended an agricultural/ conservation facilitator. A water development facilitator had experience with community based organizations. And a third staff member was doing Masters research in the area. Staff was then introduced to the gardeners in a formal meeting. Workshops were planned with the gardeners, and training provided in mulching, composting, planting, swales, and water harvesting. There were also trained in committee skills (meeting skills, constitution development, and financial management).

Interest in gardening increased in the community, and more gardens were established. People became aware of the need to produce vegetables in a healthy manner, gardeners gained confidence and independence, their income was raised from garden produce, and they successfully accessed funding from the Government to the amount of R 65.000.

## PROTOTYPING INTEGRATED AND ECOLOGICAL ARABLE FARMING

This approach is directed at helping farmers and advisors to identify some of the elements of future farming systems that can move away from the current agro-technological approach, with its degradation of nature and landscape, pollution of the environment and overproduction of food. It concerns a comprehensive and consistent approach of 5 steps.

**Step 1** is establishing a hierarchy of objectives considering the shortcomings of current farming systems in a region.



**Step 2** is transforming the objectives in a set of multi-objective parameters, to quantify them and establishing a set of multi-objective farming methods to achieve them.



**Step 3** is designing a theoretical prototype by linking parameters to farming methods and designing the methods in this context until they are ready for initial testing.



**Step 4** is laying out the prototype on at least 10 pilot farms in appropriate variants and testing and improving the prototype (variants) until the objectives, as quantified in the set of parameters, have been achieved (after repeated lay-out).



**Step 5** is disseminating the prototype (variants) to other farms with gradual shift in supervision from researchers to extensionists.

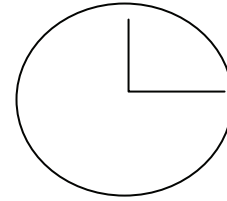
Example:

| Top 10 Objectives                      | Parameters                                                                                                            |
|----------------------------------------|-----------------------------------------------------------------------------------------------------------------------|
| Abiotic environment – Soil             | Environment exposure to pesticides soil                                                                               |
| Nature / Landscape – Flora             | Share of farm area managed as habitats and corridors for wild flora and fauna                                         |
| Food supply – Quality                  |                                                                                                                       |
| Abiotic environment – Water            | Partition coefficient of the pesticide over dry matter and water fractions of the organic matter fraction of the soil |
| Nature / Landscape – Landscape         | Actual N leaching                                                                                                     |
| Basic income / Profit – Farm level     | Total returns minus all costs, including an equal payment of all labour hours                                         |
| Food supply – Quantity                 |                                                                                                                       |
| Health / Well-being – Urban people     |                                                                                                                       |
| Basic income / Profit – Regional level |                                                                                                                       |
| Abiotic environment – Air              |                                                                                                                       |

Example: **Methods**

1. Multifunctional crop rotation
2. Ecological nutrient management
3. Infrastructure for nature and recreation: bird species diversity, plant species diversity and distribution, flower density.
4. Farm structure optimisation (Vereijken, 1999).

### 4.3 PROMOTING EQUITY



Integrated catchment management requires the ability of individuals, groups and communities to pursue their own development and negotiate (improved) access to training, advice and technical support services. This means addressing injustices from the past, and reducing conflict. It also means to enable each person to know and exercise their rights, and to articulate their issues and needs, regardless of race, sex, gender, age, etc. Participatory methodologies are suggested to enhance the problem solving capacity of individuals and groups. However, participatory processes require skilful facilitation.

#### **Facilitation**

Facilitation is much more a matter of skilled listening, asking the right questions of the right people at the right time, than it is of delivery of technical information. This can mean challenging people to open their minds to new possibilities, to new ways of looking at their situation, their resources and the options open to them. Facilitators are often ‘providers of occasions’, and ‘bureaucracy busters’. Good facilitators tend to work themselves out of a job, withdrawing as groups become self-reliant. As facilitator’s performance improves, their interventions become more subtle, and the groups with which they work become more independent (Campbell, 1998).

#### **Facilitators competencies**

Group dynamics, resource use negotiation, and conflict management are part of a facilitator’s standard ‘toolkit’. However, experience suggests that technical appreciation of context is important to create occasions for interaction, learning or synergy among stakeholders. Outside technical assistance can of course be called in. However, it would be helpful if the facilitator has sufficient insight to identify appropriate resource persons (Campbell, 1998).

#### **Empowerment**

Empowerment has to do with structural changes within a community and between the community and the rest of society. Development interventions aimed at structural transformation and improvement of lives of the marginalized will most likely provoke opposition and controversy as shifts in who has access to knowledge and resources will occur (Bhana). A different view is expressed by Karp (1996) who defines power as the ability to get all of what you want from the environment, given what is available. Power is intrapersonal, rather than attached to a person’s position or knowledge. Although various external factors may support or block the full expression of the ability, this view argues that the ability itself is internally determined. Thus, one cannot be empowered or disempowered. Power can only be expressed in the present time, and power that is not expressed is lost! (Stefano, 2002) Both views of power are relevant for development facilitation. For ICM this means that facilitators need to demonstrate in the bridges they help to build and, in their interactions with stakeholders, that all people have a meaningful contribution to make.

## **STEPS IN ESTABLISHING COMMUNITY INTEREST GROUPS**

1. Request



2. Situational Analysis (e.g. tools from PLA)



3. Initial Response



4. Vision Building (e.g. tools from PLA)



5. Participatory Planning (e.g. tools from PLA)



6. Setting up structures



7. Training, advice & technical support



8. Operation and Maintenance



9. Monitoring and Evaluation      ↑

### **PROMOTING EQUITY: CRAFTERS GETTING ORGANIZED**

Gardeners in Ntshongweni expressed an interest in improving craft production. A craft facilitator was appointed to build capacity in craft development and marketing. Since this initiative had emerged from the work in the gardens, introduction to the local authorities was not necessary.

Prospective crafters were identified through gardeners, by placing notices and call meetings. Purpose of the meetings was to identify peoples' interest, and find out whether they were interested in working in groups. Workshops were held for crafters to enhance their skills in making Isithebe (cutting boards), Ilala baskets, sleeping mats, dolls, and bead work. There were also trained in committee skills, marketing, networking and natural resource management.

Interest in craft grew, and more craft groups were formed. Awareness was raised about managing the natural resources. Livelihood of at least twenty-five households increased through sales from craft, which restored peoples' sense of self worth. Marketing increased through more effective networking. The craft groups successfully negotiated the donation of a pottery machine worth R 70.000 by the Department of Economic Development and Tourism.

### **PARTICIPATORY LEARNING & ACTION**

Participatory Learning and Action (PLA) is an umbrella term for a wide range of participatory approaches and methodologies that enable individuals and groups to analyse their situation, articulate interests and needs, and organize themselves for action. Tools and techniques used also allow disadvantaged, less articulate and illiterate people to engage meaningfully in the process. If facilitated effectively, participants can use the tools and techniques to address issues and solve problems in other situations. Thus, PLA poses a challenge to top down approaches of imposed problem analysis and solutions. The responsibility is shifted back to communities whereby outsiders go to an area as learners, conveners, catalysts and facilitators. Furthermore, participatory approaches can bring together different disciplines, such as agriculture, health and community development, to enable an integrated vision of livelihoods and well-being.

### **PARTICIPATORY RURAL APPRAISAL**

Participatory Rural Appraisal (PRA) is a specific methodology within PLA. It involves a set of principles, a process of communication and a menu of tools that encourage participation. Tools in PRA should be used in a creative and flexible manner, keeping the particular purpose in mind. Different tools can be used in many ways. Some examples are given below (PLA Notes, 1997; Participants, 1995; Chambers, 1997).

**Semi structured dialogue**

Semi-structured dialogue is a combination of the facilitator(s) initiating interviews followed by discussions among participants on the topic concerned. These topics can and should be revised as learning takes place. Furthermore, questions raised and answers given depend on the interests and knowledge of both the participants and the facilitators. Semi-structured dialogue is an informal process and it is therefore more appropriate to talk of a dialogue than an interview. Semi-structured dialogue is central to PRA because it is the process whereby trust and rapport are established. Such trust and rapport are essential if reliable and relevant information is to be obtained.

**Transect**

Transect walks are undertaken by facilitators and participants to explore the area. It can be used to understand the topography of an area, combined with information related to the physical environment, land use, agro-ecological zones, problems and potentials of the area. A historical transect shows land use trends over time, and create awareness on changes and identify important events.

**Seasonal analysis**

Calendars and matrices can be drawn indicating seasonal trends and activities, and identification of related aspects of livelihoods such as seasonal variations and their linkages with food, employment, work, labour, etc.

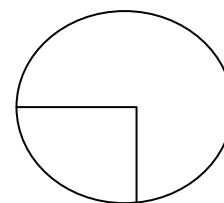
**Maps and models**

Mapping is an important tool to get a starting point for establishing rapport between facilitating team and community participants. Many people can get involved in mapping. Maps can be drawn on different aspects of rural life. Resource maps show natural resources: kind of soils, rivers, ponds, trees, crops, etc. One of the results of a transect walk is a map. Social maps indicating wealth, literacy, social stratification can help identify minority groups and target groups for programs. Literacy maps are helpful in planning adult literacy programs. Models can be built for instance to visualize a catchment and discuss issues and problems facing the catchment. Maps and models are preferable made on the ground, using natural materials collected locally such as soil, stones, leaves and branches. Colored powders and pieces of paper can be used as well to demarcate different areas.

**Matrix ranking**

Ranking exercises help identify peoples' priorities and preferences, their criteria, and give precise information on relationships amongst several different criteria (Chamber, 1997; Neumaier et al., 1997).

#### 4.4 ESTABLISHING STRUCTURES FOR COLLECTIVE ACTION



Sustainable structures are necessary to sustain project activities in all areas of intervention. Groups are formed around specific interests (e.g. farming, environment, water use), and collaboration is promoted among individuals, groups and organizations. Forums and platforms provide a space where stakeholders discuss differences and identify commonalities. Effective linkages between stakeholders are essential in making the structure work. The role of a champion is to ‘move and shake’ the stakeholders, to keep them focussed and accountable, and ‘kick or tickle’ them into action. Platform building is recommended as methodology to facilitate collective decision making and action. Tools and techniques can be used from other methodologies such as PRA and Rapid Appraisal of Agricultural Knowledge Systems (RAAKS).

##### **Building bridges**

In ICM, interfacing is essential between the CMA to be formed and the bodies representing various stakeholders in the catchment. The role of organizations involved in facilitating stakeholder participation in ICM is to help build bridges between ‘natural’ and ‘unnatural’ allies. Such bridges can take different sizes and shapes. These bridges need to link individuals, groups and organizations at local level, regional level, and catchment level.

##### **Platforms**

Platforms can be one-time meetings, elected committees, formally appointed boards or councils or even parastatal or government bodies. The shape a platform will take depends on the context, issues and needs. Sub-catchment forums, for instance, are important to engage individuals and groups, who would be too small to form a Water User Association, and/or whose voices would otherwise not have been heard. Platforms need close monitoring of representation, vision building and decision making.

##### **Finding common ground**

For ICM to be effective in practice, people need to find ways of understanding the different perspectives that exist in their catchment. Shared problem appreciation is a necessary condition for collective action. Building a common vision of the nature of problems affecting shared resources can be done using three primary steps: exploratory analysis, platform building and processes of resource-use strategy design aimed at moving towards a desirable solution (Roling, 1994).

##### **Stakeholder participation**

Platform building as a methodology demands time. Effective and inclusive participation needs to be built through active engagement and capacity building. . Which individuals and groups are included in our definition of ‘the stakeholders’ and

‘the community’? And what do we mean by participation? Different people and groups have more or less confidence, capacity and power. Participation processes are often unclear and questionable. Does your definition of participation mean consultation, tokenism or true empowerment of all stakeholders to participate meaningfully? (Dore et al., 1999). Representation of the key-stakeholders in the resource is essential, as is the accountability to constituencies without bringing the platform to a total impasse of immobile positions (Roling & Jiggins, 1999).

### **Conflict management**

Platforms required to manage a given natural resource, often do not coincide with existing administrative or economic institutions. In fact, it might require collaboration of people who are normally at loggerheads. Where multiple stakeholders come together, animosity is likely to occur. Articulate speakers can dominate discussions, self-appointed leaders presenting themselves a spokesperson for ‘the’ community’, and individuals or groups who are simply serving their own interest rather than those of inhabitants in the catchment. Feelings of betrayal, isolation, and being left behind are not uncommon, and need to be dealt with promptly and appropriately.

### **Capacity building**

Capacity building in platform building requires that people are enabled and empowered to determine their own values and priorities and act on these priorities (Oxfam, 1999).

### **Negotiations**

Three pre-conditions have been identified if a negotiation process is to materialise at all: a) Those involved must feel dependent on one another regarding the solution of a particular problem; b) Possibilities must exist for communication with one another; and c) A conflict of interest must exist to a greater or lesser degree (Leeuwis et al., 1999). Negotiating from explicitly stated interests, instead of from positions, is considered a condition for effective operation (Roling & Jiggins, 1999).

### **Champion**

MRCP’s experience has shown that a champion or ‘mover-and-shaker’ is instrumental in facilitating and supporting involvement of stakeholders in the catchment. The role of a champion has been identified as keeping stakeholders focussed and accountable, and ‘kick or tickle’ them into action.

## PLATFORM BUILDING

1. Identification of stakeholders in the catchment (e.g. tools from RAAKS)



2. Contact making phase



3. Situational Analysis (e.g. tools from RAAKS or PLA)



4. Setting up of structures (e.g. sub-catchment committees, conservancies, forum)
  - Shared problem appreciation
  - Vision building
  - Resource use negotiations



5. Training and capacity building (e.g. catchment issues, hydrology, committee skills, conflict management)



6. Operation and Maintenance



7. Monitoring and evaluation    ↑

## **BUILDING A PLATFORM FOR NEGOTIATIONS AND DEVELOPMENT**

Program staff introduced themselves to Amakosi and Tribal Councils. They met with the Development Committees who referred the team to relevant people in their communities. Meetings were held to introduce the program. A process was facilitated to identify issues, and priority areas for intervention. Tools and techniques from PRA were used to guide the process.

Forest plantations surround the communities, and relationships with the companies managing the plantations were very problematic. Community members experienced problems with impounding cattle, and lack of grazing land. Program staff suggested to establish a forum where both parties could meet to discuss problems and find ways to address these. Companies were consulted about their interest in a forum. After months of workshops, a committee was formed, involving both communities. Relationships between the two communities, and forest plantations improved. As a result issues of conflict decreased. This paved the way to the implementation of several development projects.

## **TOOLS FROM PRA**

A Venn diagram can be used to identify stakeholders from a community perspective. Individuals or groups in a community are asked to draw a picture using circles and lines that visualize their relationships with local groups, individuals and outside organizations. Venn diagrams show information flows, linkages, degree of importance, and importance in decision making.

Matrix ranking can be used to identify what people in the catchment perceive as problems, and prioritise these problems. This can help shape intervention programs, e.g. to raise awareness on specific issues, and form interest groups.

## **RAAKS**

Rapid Appraisal of Agricultural (or Actor) Knowledge Systems is a participatory action oriented methodology aimed to improve joint performance of stakeholders (Salomon & Engel, 1995). RAAKS consists of three phases in which stakeholders (called actors) A: (re)define the problem situation and identify all relevant stakeholders; B: analyse constraints and opportunities; and C: plan actions to improve performance.

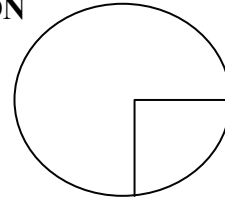
In each phase a range of analytical perspectives (windows and tools) is offered that enables stakeholders to draw and understand 'the bigger picture' of how their interactions - as individuals, groups, organizations and networks - indeed lead to what they aim to achieve as a whole. Thus, contrary to a Venn diagram, RAAKS provides stakeholders with a helicopter view of their interactions, rather than from only one actor's perspective.

When RAAKS is applied to catchment management, relevant questions would be:

- Who are relevant actors? Which individuals, groups and/or organizations are stakeholders, have an interest in or influence the work in the catchment?
- What are their objectives? What do they pursue
- What external factors and which external actors influence what happens in the catchment?
- What linkages exist between actors? What is the content and quality of those linkages?
- To which other networks do (some of the) actors belong, which are relevant to the catchment?
- Make a drawing of that visualizes actors and their relations in the catchment (This is called a knowledge system).
- What constraints and opportunities do you see in joint performance of actors in the catchment?

In RAAKS, constraints and opportunities are related to: peoples perspectives, their vision and mission, the quality of communication, knowledge and information generated and exchanged, power issues, quality and content of linkages, tasks and responsibilities.

## 4.5 PROMOTING ENVIRONMENTAL EDUCATION



For people living and/or working in a region, the catchment is not their primary concern. Environmental education can be used to raise awareness, mobilise action, and develop a catchment identity. MRCP's work focused on school environmental action clubs, interaction with local groups, specifically on the riverine environment, and publishing a catchment newsletter. A methodology has been developed – called Steps in Environmental Education – with additional tools and techniques.

### STEPS IN ENVIRONMENTAL EDUCATION

1. Stakeholder Identification (e.g. tools from RAAKS)



2. Liasing phase



3. Situational Analysis (e.g. tools from PLA, RAAKS)



4. Visioning and planning (e.g. tools from PLA, RAAKS)



5. Curriculum development for school environmental clubs (e.g. school gardens, competition, bio-monitoring, recycling, litter)

Or

Developing a communication strategy (e.g. develop a newsletter, organize events, publish articles, involve media, the Internet)



6. Training and capacity building



7. Implementation



8. Monitoring & Evaluation

## **SCHOOL ENVIRONMENTAL ACTION CLUBS**

Program staff introduced themselves to the local council. Then, the program was introduced to school inspectors who organized a workshop with school principals where the program was introduced. Invitations were then received from the principals to address their staff. Meetings were held with teachers, to raise interest in setting up clubs and become coordinators.

School environmental action clubs were established as follows:

- ❖ Identification of the club members
- ❖ Joining of the Wildlife Society
- ❖ Workshops to capacitate the teachers on environmental issues
- ❖ Cleaning campaigns
- ❖ Starting of school gardens
- ❖ Recycling
- ❖ Tree planning
- ❖ Bio-monitoring with children
- ❖ Competition
- ❖ Workshops for teachers

Most schools in the area have environmental clubs in most of the schools. The level of environmental awareness among children has increased. Schools generate income from sales of vegetables produce from the school gardens. Environmental education is part of the schools curriculum. A coordinating committee has been formed to support and sustain activities of the clubs.

## 5. MONITORING AND EVALUATION

On-going monitoring and evaluation is important to guide development interventions. Monitoring results indicate whether tasks are carried out according to schedule, inputs and outputs are achieving design or 'benchmark' levels, and whether project impact is in accord with project objectives. Conventional M&E is often dominated by the concern of physical and financial measurements and judgements. Carnegie suggests that emphasis must be given to social indicators (?). Qualitative indicators of social development must be discussed and negotiated between participants and project staff. Indicators will be selected which are considered most relevant, and which can be applied by all participants involved in the evaluation exercise.

Examples of indicators in ICM per area of intervention:

### Productivity

- Type and area of land use or management change that has occurred as a result of farmers using farm plans
- Improving level of technical and managerial competence among participants
- Average water use efficiency increase for cropping land

### Equity

- Attendance at group activities
- Signs of commitment among participants to the group's goals and activities
- Evidence of shared leadership among group members

### Structures for collective action

- Signs of solidarity and cohesion among the project group
- Evidence of shared decision making among participants and external support staff
- Collective capacity of the project participants to undertake action in response to problems identified

### Environmental education

- Media coverage
- Level of awareness among youth on catchment issues
- Reduction of litter in public places
- Involvement in public meetings.
- Technical understanding, e.g. about water supply (Woodhill, 1999; Carnegie).

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