Evaluation of the Role of Water User Associations in Water Management in South Africa

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by

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Executive Summary

In 1995 a legislative review process was initiated for water resources management in South Africa, culminating in the 1997 *White Paper on a National Water Policy for South Africa* and the National Water Act (Act 36 of 1998). These provide the imperatives for water resources management (WRM), by defining the purpose and objectives of WRM, as well as certain requirements for performing WRM. The Act creates the framework for fundamental institutional transformation of the water resources management sector, which includes the establishment of water user associations (WUAs).

WUAs are co-operative associations of water users established under the National Water Act to undertake water-related activities for the mutual benefit of all its members. Within the associations, members co-operate and pool resources to address local water related needs and priorities. WUAs are therefore mainly established to manage local water infrastructure, e.g. irrigation water supply schemes, supply water to entitled water users and to implement management decisions agreed upon between the members.

The indication is that WUA are established to provide services to its local members. However in terms of the Act they may be delegated other powers by DWAF and/or the CMA related to local WRM. Furthermore, WUA are shaped by the circumstances within which they exist, which requires them to play other roles, such as performing water services functions or supporting poorly capacitated water user groups.

The legal framework within which WUA's perform their functions is specified within the National Water Act (and in some cases the Water Services Act), which provide significant flexibility in their implementation. However, WUA's are faced by a number of challenges in relation to the policy environment, particularly in relation to their organisation and functions.

The WRC project *"An evaluation of the role of water user associations in water management in South Africa"* was commissioned to highlight some of these challenges. The objective of this report is to present the findings of the study. This includes an overview of the policy and legal environment within which WUA operate, a review of the international experience, lessons synthesised through the analysis of a number of South African Case studies, and recommendations and proposed guidelines for the management of WUA.

Although, WUA may be sectorally or single user group focused, the emphasis on this report is on multi-sectoral WUAs, including those that may be involved in the provision of water services. Multi-sectoral WUA may include different water user groups with specific management requirements and potentially varying capacity. This requires careful consideration on how they are organised structurally as well as the functions that they will perform to the benefit of all the members.

WUA may adopt various institutional-organisational approaches to managing different water user groups, each of which has specific challenges and policy considerations. These may include:

- sub-dividing a single WUA into sub-committees representing different groups;

- ensuring cooperation between independent WUA;
- establishing an umbrella body to coordinate the activities of two or more WUA; or
- establishing nested WUA, with one WUA being represented on another WUA.

WUA management committees may consist of elected and nominated members. Elected members usually represent water user groups with a number of members, such as commercial irrigation farmers with water use entitlements and secure land tenure.

On the local case studies done there was an indication that water use entitlement and secure land tenure are the determinants of being an elected member. The nominated members mostly consist of the emerging farmers, local government, industries, etc. This scenario somehow gives an indication that unless emerging farmers and other groups in the nominated form their own associations they will not be able to influence decisions taken at higher level. At the same time there is need to understand and create a balance between commercial farmers who have investments in farming and the emerging farmers who do not have that level of investment.

In terms of the legislation, WUA members collectively determine the functions to be performed by the association, both the principal functions and the ancillary functions. Generally these should be functions that should address the needs of all members. The legislation further indicates that the ancillary functions may only be performed if they are not to jeopardise the principal functions. Based on the case studies some of the ancillary functions are those that are principal to some members, e.g. capacity building and training. If these are not made principal, the indication is that they may not be performed. While the WUA may not have the capacity and resources to perform these functions, this calls for the clearer role of government on the support of WUA. Currently this role is not clear in terms of capacity building and financial support.

The associations may perform the role of water services provider on behalf of the Water Services Authority, e.g. a municipality. Again the rule is that this function may only be performed if it is not going to jeopardise the performance of the principal functions. In terms of this function the Water Services Act states that the any agreement between the WSP and WSA should be in a form of a contract understood and agreed between them. The WSP should understand all the costs and other implications of being a service provider, e.g. in cases where there is no water supply, the WSP should find an alternative to bring water to communities. The role of water services also come with the requirement providing a Water Services Development Plan and Water Services Charter to be provided by the WSP.

In reality this places much responsibility on the side of the WUA who in most cases are struggling to meet some of the functions for its members. Secondly some of these associations have not grown to the stage of performing such functions. The suggestion would be that associations should move away from taking the role of water services until they have capacity to do so.

The international case studies provides an understanding of why WUA are established and how that reason can be used to play a role in providing local water resource management and build capacity of local communities. Further to this, the kind of relationships that should exist between the associations, the role of government departments and the kind of support that they can provide.

The main conclusion of the research is that there are a number of ways in which WUA can be established and operated, in response to the needs of water users in South Africa. However, DWAF needs to develop policy and guidance on the preferred approaches, rather than this study proposing such guidelines. As such, the guidelines were written in the form of guidance to a DWAF driven policy and guideline process, taking account of the policy review, international experience and case study information. Nevertheless, the following key issues were highlighted through this study:

- This study has indicated that WUA may play a role in water services, but as water services providers contracted by the relevant water services authority. Furthermore, it is recommended that WUA should address bulk water services, and should avoid becoming involved in water services provision to individual customers (or households).

- Although, it is not the model that is recommended by this study, the concept of umbrella WUAs needs to be engaged and a policy position developed.

- Similarly, clarity is needed on the requirements for representation (or membership) by all water users using water resources within an area.

- More research leading to a policy position is needed on the potential role of WUA in managing local water allocation and water markets between members.

- Although a policy process has been initiated on the role of agricultural WUA as vehicles for rural development and poverty eradication, a number of issues remain. In particular, innovative approaches need to be developed (either in the context of WUA or other bodies) to enable integrated departmental initiatives. This may require DWAF to allow water use subsidies (particularly support to emerging farmers) to be channelled through local bodies other than WUA.

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Acronyms

CMA	- catchment management agency
CMS	- catchment management strategy
DPLG	- Department of Provincial and Local Government
DWAF	- Department of Water Affairs and Forestry
HO	- head office (DWAF)
IWRM	- integrated water resources management
LA	- local authority
NWU	- national water utility
NWA	- National Water Act (Act No 36 of 1998)
NWRS	- national water resources strategy
OD	- organisational design
RDM	- resource directed measures
RO	- regional office (DWAF)
RQO	- resources quality objectives
WB	- water board
WMI	- water management institution
WR	- water resources
WRM	- water resources management
WS	- water services
WSA	- water services authority
WSDP	- water services development plan
WSI	- water services institution
WSP	- water services provider
WUA	- water user association

1. INTRODUCTION

1.1 Background

The general review of South Africa's water law culminated in the publication of a *White Paper for a National Water Policy* in 1997, followed by the promulgation of the National Water Act (NWA: Act No. 36 of 1998). The NWA was purposefully formulated as a framework Act, to minimise the complexity of technical details and to achieve economy of drafting time and effort.

The institutional arrangements for water resource management adopted in the new Policy and Act represent one of the significant changes from the previous water law in South Africa. This is based on delegation of many water resource management functions, to institutions within a water management area (WMA), namely catchment management agencies (CMAs) and water user associations (WUAs), and thereby to involve local communities in decisions.

WUAs are intended to operate at a restricted localised level, in order to facilitate cooperative associations of individual water users who wish to undertake water-related activities for their mutual benefit. Although they are water management institutions (WMIs)[1], the Act indicates that their primary purpose is not water management. However, they are likely to be delegated powers to allocate water between water users within specified parameters, as well as be responsible for the operation of certain water resource infrastructure, in order to ensure the sustainable provision of water to their members. Thus, although WUAs primarily have an operational role in water resources management, they may also have a localised water management role.

The NWA does not specify whether WUAs should be sectoral or multi-sectoral. The former may represent the interests of a sector (such as agriculture or forestry); while the latter are likely to be more localised representing all users within a sub-catchment of a WMA. Either alternative has significant consequences for the institutional relationships between a WUA and other WMIs within the WMA (e.g. the CMA), as well as with the water services institutions (WSIs), such as local authorities, in their role as water services authorities defined under the Water Services Act (Act No. 108 of 1997). These considerations will in turn influence the way in which WUAs should operate and the functions that should be assigned or delegated to them.

1.2 Objective of the Study

The WRC project *An evaluation of the role of water user associations in water management in South Africa* was commissioned to highlight some of the institutional and management considerations that are associated with the above mentioned issues. The emphasis being on

[1] *Water management institution* reflects the terminology of the policy and legislation, and has been used in this paper to refer to those organisations performing water resources management functions (under the NWA). Similarly, *water services institutions* refer to the organisations involved in providing water services under the Water Services Act. In all other cases, institutions refer to the set of relationships (rules) between groups, while organisations refer to the structured cooperation (players) between groups.

multi-sectoral WUAs, including those that may be involved in the provision of water services, and the possible complexity that this introduces into the management arrangements within a WMA.

1.3 Objective of this Report

This report provides the background information and investigation for the project, including an overview of the policy and legal environment within which WUA operate, a review of the international experience and lessons synthesised through analysis of a number of South African case studies. This informs the guidelines that are presented in a companion report, entitled "*Guidelines on the Role and Management of Water User Associations in South Africa - Institutional and Management Arrangements*", (WRC, 200)

1.4 Target Audience

This document is intended for use by:

- The Department of Water Affairs and Forestry
- Water User Associations
- Water Resources Management Institutions
- Non Governmental Organisations
- Higher Learning Institutions
- Interested individuals and communities

2. INSTITUTIONAL CONTEXT AND LEGISLATIVE REVIEW

2.1 Introduction

WUA are statutory bodies that are established and operate within a specific legislative and institutional environment. Although the basic institutional framework is outlined in various policies and legislation, there remain areas of uncertainty and lack of clarity. This Chapter provides a review of relevant legislation and policy, and highlights key areas requiring further clarity.

2.2 Policy and Legislative Context for Water Resources Management

2.2.1 National Water Act and Policy

In 1995 a legislative review process was initiated for water resources management (WRM) in South Africa, culminating in the 1997 *White Paper on a National Water Policy for South Africa* and the National Water Act (NWA - Act 36 of 1998). These provide the imperatives for WRM, by defining the purpose and objectives of WRM, as well as certain requirements for performing WRM. WUAs are established under the NWA, and this is therefore the key legislation for the purposes of this report.

The goal of the NWA is to provide for the management of the nation's water resources so as to enable the achievement of sustainable and equitable use of water for the benefit of all water users. The objectives of water resources management may be summarised as sustainable utilisation and protection of water resources, equitable allocation of water and efficient use of water. The NWA and policy, are also based upon a number of principles, which need to be considered for the implementation of WRM. The following are particularly relevant for the establishment and operation of WUA.

- *Integrated water resources management (IWRM)* requires that WUA need to address the needs of all water users from all water resources (surface and ground water) within the localised area of jurisdiction.
- *Participation of stakeholders* requires the establishment and operation of WUA to consult with and take account of the interests all relevant water user (and non-user) groups within its are of jurisdiction.
- *Establishment of suitable and viable water institutions* requires any proposed WUA to be financially and organisationally viable, including the possibility of technical, managerial and/or financial support from DWAF or the relevant CMA.
- *Appropriate representation* on these institutions requires all user groups and relevant stakeholders to be represented in appropriate ways on the WUA.
- *Subsidiarity* implies that WUA should be responsible for those functions that are most effectively and/or efficiently performed at a localised level by an association of water users.
- *Redress of past inequities* is primarily the responsibility of DWAF and the CMA, but WUAs have a responsibility to include and build capacity of disadvantaged and poor communities that are using water within their area.

2.2.2 Water use

WUA are associations of water users within an area, and thus the definition of water use is fundamental to their scope. The definition of water use has been expanded in **Section 21** of the NWA to include all activities that have an impact on the quantity, quality and/or aquatic ecosystem (habitat and biota) of a water resource[2], following the principle of IWRM. These can be grouped into those that are primarily related to water quantity, water quality and instream & riparian zone (albeit with some overlap).

Primarily water quantity related activities:

(a) taking water from a water resource;
(b) storing water;
(d) engaging in a stream flow reduction activity contemplated in section 36;

Primarily water quality related activities:

(e) engaging in a controlled activity identified as such in section 37(1) or declared under section 38(1);
(f) discharging waste or water containing waste into a water resource through a pipe, canal, sewer, sea outfall or other conduit;
(g) disposing of waste in a manner which may detrimentally impact on a water resource;
(h) disposing in any manner of water which contains waste from, or which has been heated in, any industrial or power generation process;
(j) removing, discharging or disposing of water found underground if it is necessary for the efficient continuation of an activity or for the safety of people;

Primarily instream and riparian related activities:

(c) impeding or diverting the flow of water in a watercourse;
(i) altering the bed, banks, course or characteristics of a watercourse;
(k) using water for recreational purposes.

There are four basic categories of entitlement to use water under the NWA, namely:

- *Schedule 1*, which provides for limited use of water resources without authorisation, including for domestic and household agricultural purposes, emergency use, recreational access and discharge of runoff.
- *General authorisations* [**s39**], which permits the use of water without a license (usually at lower levels of use), under specified conditions.
- *Water use licenses* [**s41]**, which have to be applied for on an individual basis or in response to compulsory licensing [**s43**] in a catchment.
- *Existing lawful water use* [**s33**], which recognises use of water that took place two years before the commencement of the NWA, until a water use licence is required.

Based on this definition, any group of water users associated with any of these categories[3] may be members of (or represented on) a WUA or may propose the establishment of a WUA. This implies that representation on a WUA is not necessarily restricted to licensed users. However, the type of representation may differ, because different categories of use may have different financial and management responsibilities.

[2] Section 1(xxvii) of the NWA defines a `water resource'' to include a watercourse, surface water, estuary, or aquifer, where a “watercourse” means a river, spring, natural channel, wetland, lake or dam.
[3] It may be appropriate to exclude Schedule 1 users from membership of the WUA (due to logistical and financial reasons), but they may still be represented on he WUA management committee.

2.2.3 Catchment management strategies

The recognition that WRM should be performed at a catchment scale, with input from all stakeholders, led to the requirement for each CMA to develop a catchment management strategy (CMS) and establish it in law. This CMS must outline a framework for water resource protection, use, development, conservation, management and control within a WMA and the principles for allocating water to existing and prospective water users. The CMS should reflect the water resource management priorities in different parts of a WMA.

The CMS also must set out the water management institutions (WMI) to be established in the WMA and guides these organisations in performing their functions in terms of the Act. Effective implementation of water resources management in a WMA requires the CMS to inform the catchment management functions that must be performed, and therefore the capacity and resources that are required, by the different WMI that already exist or are to be established in the WMA. As such the CMS provides the linkage between priority WRM issues and organisations (including WUA) responsible for their management, as well as providing the framework for coordinating the activities of the various institutions.
Currently DWAF is involved in developing Internal Strategic Perspectives (ISP) which represent a first order strategy for managing water resource priorities. These may be taken as a point of departure for the CMA to establish CMS once it is established.

2.2.4 Water Services

The Water Services Act (Act 108 or 1997) provides the legislative framework for water services, with the primary objective of ensuring access to water supply and sanitation by all South Africans. Unfortunately, the two water Acts are not integrated, which results in some discrepancies in the institutional arrangements around water resources and water services. Water boards may be established under the Water Services Act, to provide bulk water services. On realisation that the provision of Water Services is dependent on availability of an adequate quantity and quality of water resources. This gap between WRM and WS is addressed through Draft White Paper on Water Services. The indication is that the CMA will be responsible for the development and implementation of CMS. The CMS will have take into account the Water Services Development Plans and the Business Plans of Water Services Providers.

While DWAF has the responsibility to provide an enabling environment for water services, through legislation, regulatory oversight and capacity building, local government as the water services authority (WSA) has the constitutional mandate to ensure access to water services within its area of jurisdiction. The WSA may contract a water services provider (WSP) to deliver reticulated and/or bulk water services. The Municipal Structures Act indicates that District and Metro Councils are responsible for bulk water supply and sewerage, but there is still some debate about whether they or Local Councils should be the WSA.

What is clear though is that CMAs and WUAs, do not have primary responsibility for regulating or delivering water services. However, a WUA may be ***contracted*** by a WSA to provide water services, and in fact this is specified as one of their ancillary functions (see below). However, even under this circumstance, the primary responsibility remains with the WSA. The Draft White Paper on Water Services provides the conditions and implications for WUA taking the water services function. See 2.3.2

2.2.5 Cooperative Governance

Although WUA are primarily water sector institutions, they represent the interests of water users, and as such potentially represent an important interface between a range of sectors (under the mandate of other government departments and spheres of government). This relates to other policies and legislation, as well as coherent development planing, with water as only one consideration (or input to production). Apart from the water services interfaces discussed above, WUA may need to consider cooperation with amongst others Land Affairs (for access to land for poor communities), Agriculture (for extension services), District Councils (for integrated rural development).

2.3 Water User Associations within this Context

2.3.1 Role of a WUA

Water User Associations (WUAs) are statutory bodies established by the Minister of DWAF under **Section 92** of the NWA. The are cooperative associations of water users who wish to undertake water related activities for their mutual benefit. Irrigation boards and certain stock watering related water boards are required to transform into WUA, while other groups of users may join together in a proposal to the Minister for establishment according to a WUA constitution, as outlined in **Schedule 5** of the NWA.

WUAs allow members to pool their resources to address local needs and priorities, particularly concerning the various categories of water use (see page 2.2.2). They also provide a statutory body that can perform functions at a local level, which have been delegated by a CMA (or the Minister). WUAs may be established for a single purpose, representing similar users, such as controlling recreational use or irrigation. However, WUAs may also be multi-sectoral, dealing with a number of water uses within a localised area, such as recreation, irrigation and effluent discharge.

A fundamental change between a WUA and the former Irrigation Boards (established under the 1956 Act) is that the WUA should incorporate all water users of any water resource within its local area of jurisdiction. It is not appropriate for multiple WUA to be operating for different users within the same area. This implies that depending upon the definition of the WUA area, users of surface and ground water may need to be considered, as well as recreational, waste discharge and domestic-industrial abstractors. In terms of the principles of redress, the needs of community subsistence agriculture and emerging farmers require particular attention, where these are relevant.

2.3.2 Possible Functions of a WUA

While a WUA has the powers of a natural person, it is important to note that it has no inherent functions. Any proposed primary and ancillary functions need to be specified in the proposal for establishment of the WUA [**s91**] and in the WUA Constitution [**s93 & Schedule 5**]. If accepted these need to be delegated to the WUA by DWAF or the relevant CMA. The following are listed as possible principle functions of a WUA (**Schedule 5:s4**).

- *To prevent water from any water resource being wasted.*
- *To protect water resources.*
- *To prevent any unlawful water use.*
- *To remove or arrange to remove any obstruction unlawfully placed in a watercourse.*

- *To prevent any unlawful act likely to reduce the quality of water in any water resource.*
- *To exercise general supervision over water resources.*
- *To regulate the flow of any watercourse by -*
  - *clearing its channel;*
  - *reducing the risk of damage to the land in the event of floods;*
  - *changing a watercourse back to its previous course where it has been altered through natural causes.*
- *To investigate and record -*
  - *the quantity of water at different levels of flow in a watercourse;*
  - *the times when; and*
  - *the places where water may be used by any person entitled to use water from a water resource.*
- *To construct, purchase or otherwise acquire, control, operate and maintain waterworks considered to be necessary for -*
  - *draining land; and*
  - *supplying water to land for irrigation or other purposes.*
- *To supervise and regulate the distribution and use of water from a water resource according to the relevant water use entitlements, by erecting and maintaining devices for -*
  - *measuring and dividing; or*
  - *controlling the diversion of the flow of water.*

Apart from the first few general functions, these functions are oriented towards the management of infrastructure and resources for water users. In addition, the following ancillary functions are also listed (**Schedule 5:s5**).

- *Providing management services, training and other support services to -*
  (a) water services institutions; and
  (b) rural communities.
- *Providing catchment management services to or on behalf of responsible authorities.*

This introduces the possibility of the WUA performing water services functions (particularly in rural areas), as well as certain catchment management functions on behalf of the CMA. However, it should be emphasised that **these are not the primary role of a WUA. They should only be performed by a WUA that has capacity and is performing its primary functions adequately, and taking on these functions will not limit its ability to perform its principle functions, jeopardise the financial viability of the WUA or prejudice the interests of its members.**
Water User Associations should consider the risks of performing Water Services functions before accepting this role. It is also important to note that where a Water User Association is involved in Water Services delivery function rather than support, i.e. acting as a Water Services Provider, this must be done in accordance with the requirements of the Water Services Authorities. This introduces a complexity in the accountability of the Water User Association.

On the other hand, WUAs with capacity have a duty to address the water needs of rural communities within their area of jurisdiction, both in terms of these communities' requirements as water users and to meet the needs for redress of past inequities. This raises an important issue around WUA responsibility for redress, particularly since this is the role of DWAF and the relevant CMA.

In practice, the WUA should be seen as a local vehicle for implementing certain of DWAF or CMA policies to support local poor communities within a broader framework (possibly with financial support), rather than being solely and independently responsible. Equitable access to water and reallocation of water entitlements is a fundamental element of redress, which is the

role of the CMA. The WUA can only work within the context of and support water use entitlements.

2.3.3 Establishment of a WUA

As highlighted above, WUA are designed to be voluntary associations of water users that undertake activities cooperatively on behalf of their members. Water users' (members) needs will vary according to the local circumstances, and therefore a WUA should be established (and designed) in response to the aspirations and needs of the local water users. There are three generic ways in which a WUA would be established.

- Firstly, existing irrigation boards are required to transform into WUA [**s98**] and in so doing expand their membership to include all water users of all water resources within the (possibly extended) area of jurisdiction, and in some cases propose to broaden their primary and/or ancillary functions and activities.

- Secondly, the Minister through DWAF may initiate the process of establishing a new WUA [**s92(1)**], which is most likely where there is a need to transfer responsibility for a government water (irrigation) scheme to the users (beneficiaries), including those developed in the former homelands.

- Thirdly, a group of users may propose the establishment of a new WUA [**s91**] in order to conduct activities collaboratively, which may range from irrigators developing a scheme, through waste dischargers cooperating for regional treatment, to groups managing a water resource for recreation.

In all cases, a consultation process is required to ensure all water users and stakeholders with an interest in utilisation of the relevant water resources have the opportunity to provide input and/or become involved in the WUA.

Many WUA are specifically established to take responsibility (and potentially the associated staff) for waterworks, ranging from irrigation canal systems through to small dams. Where these are currently owned and/or operated by DWAF, a transfer process needs to take place after WUA establishment. Currently, DWAF is transferring the entire asset for canal systems to WUA, but only the operation and maintenance responsibility for water resources infrastructure (such as dams). A clear policy position on this later point is still required from DWAF, particularly as ownership of dams has dam safety implications.

2.3.4 Legal Requirements of a WUA

A WUA is required to have a Constitution, based on Schedule 5, specifying at least [**s93(2)**]:

> *(a) details of the principal and ancillary functions of the association;*
> *(b) the procedures and requirements for admitting new members to the association;*
> *(c) the voting powers of members;*
> *(d) procedures for terminating membership;*
> *(e) procedures for electing the management committee of the association;*
> *(f) procedural requirements for appointment of employees of the association;*
> *(g) procedural requirements for obtaining loans; and*
> *(h) the financial obligations of members towards the association.*

Establishing and managing a WUA also imposes various statutory requirements terms of annual business planning, monitoring/recording and reporting [**Schedule 4**]. In general terms, the business plan at least [**Schedule 4:s22**]:

> *(a) must set out the objectives of the institution;*
> *(b) must outline the overall strategies and policies that the institution is to follow to achieve the objectives;*
> *(c) must include a statement of the services which the institution expects to provide and the standards expected to be achieved in providing those services;*
> *(d) must include the financial and performance indicators and targets considered by the board to be* appropriate;

In financial terms, the business plan at least [**Schedule 4:s23**]:

> *(a) must include a financial target;*
> *(b) must outline the overall financial strategies for the institution including the setting of charges, borrowing, investment and purchasing and disposal strategies;*
> *(c) must include a forecast of the revenue and expenditure of the institution, including a forecast of capital expenditure and borrowings;*
> *(d) must provide for capacity building amongst its board members and officials;*

Therefore, a WUA should only be established where a clear need and functions have been identified in terms of undertaking local water related activities for the mutual benefit of the member water users, and there are no existing organisations that may perform the functions. Furthermore, the users should have access to adequate resources to maintain the WUA. An important issue in this regard is the simplicity of the Constitution and Business Plan, in order that all members can understand and implement their terms. This is critical for disadvantaged and poor communities, but applies equally to members who are not familiar with legal and business jargon.

2.3.5 Membership of a WUA

The membership of a WUA is specified in the Constitution, based on entitlement to water use under the NWA [**s21**]. The Constitution also indicates the basis upon which members vote for the WUA management committee. There may be different categories of membership, reflecting the different involvement and responsibilities of various categories of water users. For example, those users that are financially responsible for the development and operation of specific infrastructure may be represented by a dedicated management sub-committee and pay higher charge than other members. On the other hand, where the area of the UWA has been geographically divided, the members associated with the different areas may have different representation and responsibilities.

However, the NWA indicates a WUA should accept any water user that wishes to apply for membership with the responsibilities that that entails [**Schedule 5:s7**], or a user that the Minister requires the WUA to admit for membership [**s95(1)**].

2.3.6 Management Structure

The management committee is responsible for the operation of the WUA, and largely consists of members of the WUA who are elected by the members according to the conditions specified in the Constitution. In some cases, different sub-areas (or categories of users) of the WUA may be sub-divided to reflect differences in responsibilities and/or conditions (such as infrastructure). In this case, each area (or category) may have a management sub-committee with representation on the WUA management committee.

It may be appropriate to allocate seat/s on the management committee to nominated representatives of groups that are not necessarily members of the WUA, but have an interest in water use within the area. This partially addresses the requirement for representative institutions, particularly before broader water sector transformation has occurred, by including:

- local government with an interest in water supply;
- domestic and subsistence agricultural users (generally using water under Schedule 1);
- potential emerging farmers before land and water entitlements have been finalised; or
- recreational users.

2.3.7 Financing

A WUA may recover the costs of its operation through charges on its members. A portion of these charges may be associated with the water use charge for water resources management or infrastructure development and operation under the Pricing Strategy, particularly where the WUA is performing WRM or infrastructure management functions. In this situation it is appropriate for the WUA to collect all water use charges from its member water users, and transfer the relevant portions to the CMA and DWAF. Obviously, it is in the WUA interests to minimise the costs of its operation, so as to minimise the charges on its users. However, where it is performing functions on behalf of the CMA or DWAF, these institutions must ensure that the functions are being performed adequately. Maintenance on WR infrastructure is an area that is typically under resourced, but has serious long-term implications.

Similarly, where a WUA is providing water services on behalf of a local government, these costs should be funded by the local government through the collection of tariffs or the equitable share. A WUA would be advised to avoid being responsible for collecting water services tariffs from consumers and/or communities that it supplies, because this requires an infrastructure and customer services approach that few WUA are suited to develop.

The CMA or DWAF may pay a WUA that is performing functions on its behalf or may provide financial support to a WUA to use as a subsidy for emerging farmers.

2.4 Roles of Other Water Management and Services Institutions

2.4.1 Department of Water Affairs and Forestry

DWAF is currently undergoing a significant institutional and organisational restructuring process, in order to bring it in line with the requirements of the NWA (amongst other legislation and policies). In the future, DWAF will be primarily responsible for policy, legislation and national strategy formulation; institutional development, coordination and support; monitoring and auditing water resources management; and ensuring appropriate implementation of WRM by other institutions.

DWAFs role in the authorisation of water use will be significantly reduced, as CMAs become functional and take on responsible authority functions. DWAF is also unlikely to be directly involved in the financing, development and operation of water resources infrastructure, which

should be done by other appropriate organisations, such as WUAs, water boards, WSAs, and a possible national water utility[4].

On the other hand, the South African Constitution and Division of Revenue Act require the responsibility that local government (in their capacity as WSA) takes financial and management responsibility for the development and operation of water services, and therefore existing water services infrastructure will be transferred to local government.

DWAF is ultimately responsible for ensuring that WUA are established and operate in accordance with the NWA. As such, DWAF has an institutional and organisational oversight function for a WUA (preferably together with the relevant CMA). Until a CMA is established, the DWAF Regional Office acts as the CMA.

2.4.2 Catchment Management Agency

Catchment management agencies (CMAs) are statutory bodies established by and accountable to the Minister of DWAF, the under **Chapter 7** of the NWA. It is expected that over the next five to ten years, one CMA will be established in each of the19 water management areas (WMAs) that have been defined as part of the progressive development of the national water resources strategy (NWRS). The CMA is governed by a board that is appointed by the Minister, representing the interests of water users, stakeholders and government (and should include WUA representation where appropriate).

Each CMA is responsible for those water resources management functions that have been assigned or delegated to it within a WMA, as well as coordinating the management of other local water management institutions. Once a CMA is fully functional, it should be responsible for all regional (intra-WMA) water resources management (WRM) implementation functions, including the authorisation of water use. The CMA must develop and give effect to a catchment management strategy (CMS), which provides the framework for management of water resources in a WMA and that is consistent with the NWRS. The CMS should also indicate the institutions that are to be established for WRM within the WMA. WRM activities by any water management institution within a WMA must also be in accordance with this strategy. Therefore, the CMA will have an institutional and organisational oversight responsibility with respect to the WUA (in collaboration with DWAF).

A WUA should not be established in competition with a CMA (i.e. as a WMA scale), but rather to support water management at a local level. The CMA is the river basin level organisation that will be established to represent stakeholders interests and ensure the equitable, sustainable and efficient use of water within a WMA. Therefore, WUAs are not necessary for the resolution of conflicts and allocation of scarce water resources between sectors and user groups. A CMA may contract or delegate functions to another body (**S82)**, and powers, **(S86)**

2.4.3 Catchment Management Committee

The NWA provides for the formal establishment of committees by the CMA, in order to advise it

[4] Issues around DWAF raising capital to finance the development and maintenance of large water resources infrastructure, as well as a potential conflict between the regulatory and developer functions, have led to the possibility of establishing a national water utility for managing large-scale infrastructure in the national interest. Alternatively, DWAF or special purpose vehicles will take this responsibility.

or to perform any of its functions within a specified area[5]. Catchment management committees (CMCs) should have representation from the CMA governing board and/or employees, but may include other specialists and/or stakeholders. Although a CMC is part of the CMA institution, it is a statutory body and as such is different to a sub-committee of the CMA governing board.

A geographically based CMC would focus on key WRM issues within a specified sub-catchment area of the WMA. Stakeholder representatives (including WUA) from that area may be included on the committee, which may be either advisory or perform delegated functions. Area-based CMCs provide a mechanism for communication, cooperation and decision making between stakeholders and the CMA governing board, while the CMA executive performs the associated functions or implements any required actions. Where a sub-area CMC exists, it is the appropriate body for coordinating the activities of different WUA within a catchment. The important distinction between a CMC and a WUA is that it is primarily intended as a WRM body and is accountable to the CMA, rather than its members.

2.4.4 Catchment Forum

Catchment forums are voluntary (and generally open) associations of stakeholders, with an interest in a particular water resource-related concern and/or a particular sub-catchment area. They provide an important mechanism for stakeholder communication, participation and consultation with DWAF and/or a CMA. Like WUA they generally operate at a local level and should have representation on the CMA governing board (or at least a CMC). However unlike WUA, catchment forums are not formally established under the NWA, do not primarily represent only water users, and are not typically designed to perform significant WRM functions. As important WRM stakeholders, WUA should be active participants in catchment forums, and having capacity should potentially contribute to their functioning.

2.4.5 Water Services Authority

Local government is constitutionally responsible for ensuring access to water supply and sanitation services to people within its are of jurisdiction, and is therefore defined as the water services authority (WSA) under the Water Services Act. The WSA may contract another organisation (possibly including a WUA) to provide bulk and/or household (reticulated) water services on its behalf.

The local government demarcation process (given effect through the Municipal Structures and Municipal Systems Acts) has changed the boundaries of local authorities and has incorporated rural areas with traditionally urban areas. Although there is still some uncertainty about whether District Councils or Local Councils should be the WSA, this does not have major implications for WUA. However, a more fundamental issues is local government's role in bulk water services (possibly including water resources infrastructure). This has become a significant issue between the larger capacitated councils and water boards, with local government requesting management of local water resources infrastructure.

This may also have an impact on the establishment WUAs, particularly in areas with large urban populations (and water use). If water services use predominates in the catchment, it may not be appropriate to establish a WUA, but rather allow local government (or water boards where these

[5] There is a legal opinion that a CMC may not be a statutory body distinct from the CMA. However this should not prevent the establishment of a CMC to perform specific functions.

exist) to operate the infrastructure as part of their bulk water services function. In this situation, the CMA would ensure the allocation and operation of infrastructure for other water users.

2.4.6 Water Services Provider

A water service provider (WSP) is the organisation responsible for providing water services to the consumer. This may be the local authority itself, or another organisation established or contracted by the WSA. In rural areas, water services intermediaries may be responsible for providing water services to communities or farm labourers.

Where a WUA is operating infrastructure for multiple users and has capacity, it may also be suited to providing bulk (and in some cases reticulated) water services on behalf of a WSA, and therefore, the WUA would be acting as the WSP.

Implications of being a Water Services Provider:

Extract from Draft White Paper on Water Services:

Responsibility and risk: The defining characteristic of a retail WSP is that the WSP has *responsibility* both to provide the water and or sanitation services physically (even if it does not do so itself) and to manage the consumer interface related to that services. The collection of income may be done by somebody else, but a retail WSP is the agency that assumes the *financial risk* related to the provision of the services and the collection of fees.
Duties of water services providers

The main duty of water services providers is to provide water services in accordance with the Constitution, the Water Services Act and the by-laws of the water services authority, and in terms of any specific conditions set by the water services authority in a contract.
A water services provider must publish a consumer charter which is consistent with by-laws and other regulations, is approved by the water services authority, and includes the duties and responsibilities of both the water services provider and the consumer, including conditions of supply of water services and payment conditions.

Co-ordination between water services and water resources management

The provision of water services is dependent on the availability of an adequate quantity and quality of water resources. They must therefore be provided in a manner that is consistent with the broader goals of integrated water resource management.
The catchment management agency will be responsible for the development and implementation of a catchment management strategy. This catchment management strategy must take into account the ***water services development plans and the business plans of water services providers and it will be important for water services authorities to give early warning of their requirements.*** The water services development and business plans must be informed by the catchment management strategy.
Where a water resource is shared between different users, co-ordination of the management, allocation and development of the resource will be achieved through the implementation of the catchment management strategy.

Implications for WUA

The above extract indicates an added accountability on WUA whom, some are already overloaded with their primary functions. The cost implications is another factor that should be considered, e.g. preparation of Water Services Development Plans has its own costs which might prove to be difficult for some WUA. Besides these policy requirements, the kind of contracts entered between the WSA and the WUA as WSP indicates other complexities, e.g. dealing with emergencies in cases where cannot be provided. The reality is that most of these WUA have not grown to a point of being fully fledged WSP's. The recommendation would be that WUA should avoid as far as possible getting into the customer services delivery.

2.4.7 Water Board

Water boards are established under the Water Services Act, with a board appointed by the Minister, primarily for the provision of bulk water services in a specified area. They may be involved in the financing, development and/or management of water resources infrastructure, as well as the provision of water services to communities, on behalf of local government in its capacity as the water services authority. Although water boards may perform similar functions to WUA, they are primarily bulk WSP and as such are intended to operate in the water services sector, whereas WUA are primarily intended to operate in the WRM arena.

2.4.8 Municipal Utility

The Municipal Structures Act enables one or more local authorities to establish a municipal utility to provide services within their area of jurisdiction. This then provides a vehicle for local government to create a water services provider that is entirely accountable to themselves (unlike a water board), and is a more appropriate vehicle than a WUA for managing water services related infrastructure on behalf of local government.

2.4.9 International water management bodies

The Minister may establish bodies to implement international agreements for water resources management [**s102**]. These bodies may be involved in managing, monitoring, protecting or facilitating international cooperation on water resources, developing infrastructure and/or allocation, use and supply of water. As such they may include international river basin organisations[6], as well as international water user associations, and should give effect to the principles outlined in the *SADC Protocol on Shared Watercourses*. They are particularly relevant for WUA on trans-boundary water resources (either river basins or aquifers). They be entirely South African WUA and therefore should interact with the relevant international river basin organisation through DWAF of the CMA, or may be established as international WUA through inter-government agreement.

Figure 2.1 highlights the institutional relationships between these water sector institutions, differentiating between statutory accountability, contractual, representative and cooperative-consultation relationships. Although most of these institutions have some relationship with all the others and these are not simply one-dimensional, the only the primary relationships are indicated.

[6] The river basin organisations would include the international river basin commissions and technical committees, such as LIMCOM and ORACOM, the TCTA and LOBWA represent bodies for managing international infrastructure, and Vioolsdrif Noordoewer Joint Irrigation Board is an international WUA.

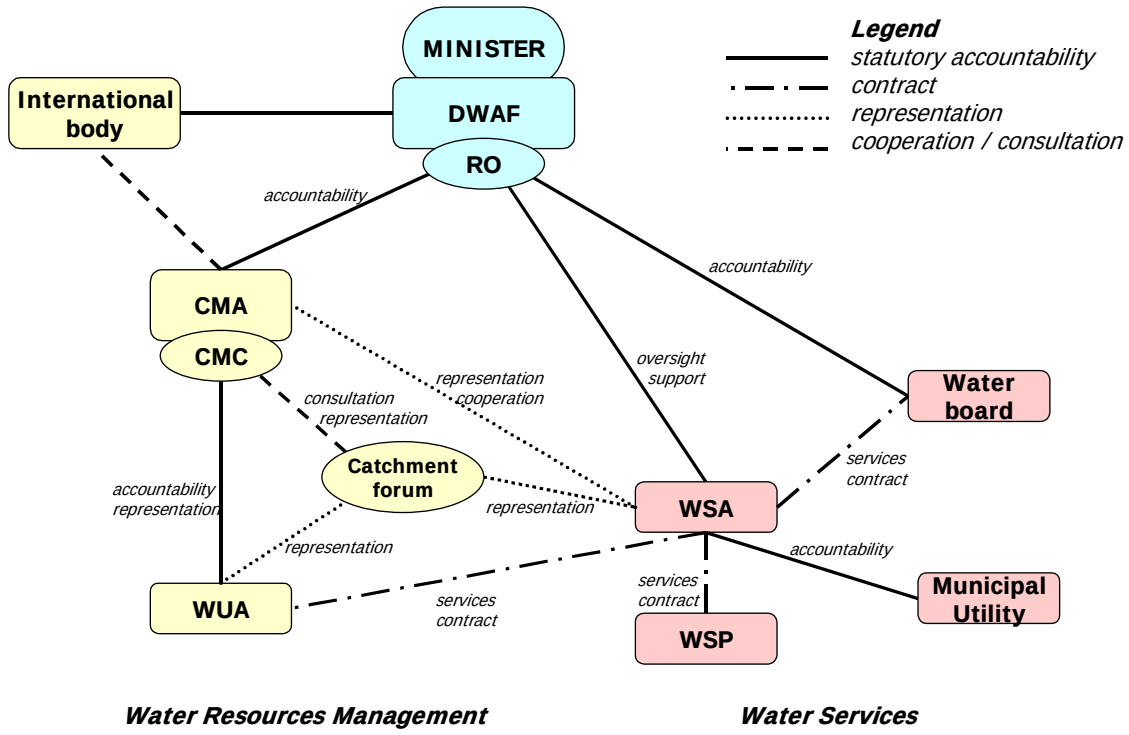


Figure 2.1. Primary institutional relationships between various water sector institutions

2.5 Scenarios for WUA

There are a wide range of possibly institutional scenarios within which a WUA can operate, depending upon the types of users, the local conditions (including infrastructure) and the local institutional capacity in the water sector. However, for the purposes of this report and simplicity in engaging WUA roles in water services, five qualitatively different types of scenario have bee considered (noting some finer distinction within each), based on the range of user sectors and involvement in water services. No distinction is made between the involvement in infrastructure and/or the water resource, as this is a primarily a management issue and should be addressed through institutional models and management structure (as is discussed in section 2.6 below).

2.5.1 Single-sector WUA

The first scenario is the simplest of the four, where the WUA represents a group of users from a single sector in a localised area, but not domestic and industrial water users provided with water services by a local authority (in its capacity as WSA). It is most likely that the activities would be oriented around the coordinated management of infrastructure (and water works), but there is scope for a more management coordination role (as outlined below). Four slightly different situations may be identified.

- The first is the most likely scenario, where the WUA represents irrigation, stock watering and/or aquaculture in an area, using surface and/or ground water resources. The transformed irrigation boards fit into this category (including the emerging farmers in the

area)[7]. This may also include new irrigation WUAs that are established, particularly for the transfer of government water schemes and former homeland irrigation schemes[8], or the development of commercial and/or emerging farmer schemes.

- It is useful to distinguish certain WUA established solely for the purposes of emerging and/or subsistence farmers, particularly where these are designed to empower the rural poor. This type of WUA may be linked to the operation of a new or existing irrigation scheme, but will generally be focused on one or more relatively identifiable communities with relatively high levels of social organisation and/or cohesion (around both water and non-water issues). However, these WUA may have limited formal technical, managerial and/or legal capacity, and therefore require significant support both during and after establishment, with linkages into other water sector institutions, the Integrated Rural Development Strategy, and other sector institutions (particularly Agriculture, Trade and Industry, and District Councils).

- With the definition of forestry (and potentially other dryland agricultural crops such as sugar cane) as water use under streamflow reduction activities (SRAs), there is a possibility of WUAs for SRAs in a catchment. This would not be infrastructure management related, but may involve the management (coordination and monitoring) of water allocations within existing entitlements to that sector, as well as the control of impacts on local water resources. However, there may not be any direct benefit to forestry in establishing a WUA, unless this is to be delegated functions from the relevant CMA, and therefore this option is unlikely, as a CMC may be a more appropriate body.

- Various groups of non-agricultural water users that may require coordinated management of infrastructure (or water works) in order to use surface or ground water resources directly, include industry, mining and power generation, as well as recreational users and those involved in the disposal of waste. Any one of these groups may request the establishment of a WUA, where there is a group of these users in a catchment area that need to coordinate their activities for mutual benefit, either in terms of managing infrastructure for abstraction or waste discharge/disposal. These are more likely in rural catchments, as local authorities (or their water services providers) generally provide water in urban areas.

2.5.2 Multi-user group WUA

This scenario represents an extension of those described above, where users from different sectors or user groups establish a WUA to perform activities for their mutual benefit, excluding WS related activities for domestic or industrial users. This is most likely in rural catchments with intensive water use, particularly where the different groups are dependent upon the same water resources infrastructure in a local catchment area. It is also likely that these WUA would cover a larger catchment area than single sector WUAs, with highly utilised water resources, multiple users (and purposes) and more complex water resources infrastructure[9]. It is useful to distinguish the following four situations.

[7] The Greater Fish WUA case study highlights issues associated with this situation.
[8] The Great Letaba WUA case study represents this situation.
[9] Although single sector WUA are possibly, and in many cases a sector may dominate the WUA, there will generally be other water users within the area that must be represented on the WUA. However, although this may be defined as a multi-user WUA, the membership and management structure of the WUA will resemble a single-sector WUA with minority representation (particularly where the dominant sector is largely responsible for financing and managing infrastructure).

- The grouping of different types of agricultural and SRA (eg. forestry) users in a rural catchment is likely to be focussed on infrastructure management (for agriculture), but may include water use control and monitoring activities if SRAs were included. Industrial and domestic uses may also be represented on the WUA, even though their level of use is relatively small compered with agriculture.

- A WUA representing multiple industrial-mining-power generation oriented water user groups may be focussed on infrastructure management for supply or waste discharge purposes. Under certain circumstances, this type of WUA may also have a management role for water allocation and/or waste disposal (within the context of existing entitlements between users within a user group). However, this introduces the possibilities for inter-sectoral conflict, which should be the role of the CMA where possible, and therefore this type of function should be avoided.

- In certain catchments it may be appropriate to establish a multi-sectoral WUA, representing significant users from agricultural, domestic and/or industrial user groups, particularly where common water resources infrastructure supplies the various groups[10]. This would be similar to the preceding situation, but introduces additional complexities and potential inter-sectoral conflicts, which may be better managed at the CMA level. Care should be taken in establishing such a broad based WUA, and if it is necessary, it seems appropriate that it should primarily undertake infrastructure management activities.

- Finally, it may be appropriate for different user groups (or more likely a number of WUAs) to form an "umbrella" WUA to perform management and coordination functions around water use control and/or allocation. However, although this seems like a pragmatic solution, there are number of problems that might be experienced within this model. There are questions around the roles and functions of the umbrella body in relation to the associations it represents as well as in relation to the CMC that oversee the WUA. The second question is around the powers that the umbrella body should have over WUA below it. There is another argument that this scenario may lead to smaller WUA being swamped by the bigger WUA.

2.5.3 WUA providing bulk water services

This scenario introduces the possibility of a single or multi-sector WUA performing bulk water services activities (as part of its water resources management activities) for a local authority[11]. This scenario is most likely in rural catchments, where municipal domestic and industrial use is relatively small compared to other agricultural and industrial use and the WUA represents the major water sector management capacity within the area. Water would be supplied (possibly after treatment) to the relevant WSP, which would be responsible for providing local reticulated water services to the community and/or industry. Two situations should be considered.

- The first option is that the WUA is contracted to provide bulk water services to a WSA (and paid either through capital to develop the water works or for water supplied), with limited representation on the WUA. This is most likely where domestic use is relatively small, the

[10] The Breede WUA case study represents this situation.
[11] The Impala WUA case study represents this situation. Other WUA were often reluctant to become WSP, but would do this function as an interim measure. Many were proposing being WS intermediaries, but this is not a correct interpretation of their role. The problem is that this WSP function tends to become a permanent function.

WUA has largely funded the infrastructure development and/or operation, the allocation has been clearly specified by the CMA and the infrastructure operating rules are defined.

- On the other hand, where municipal use is relatively greater, the local government has provided funding for WR infrastructure and/or a number of local authorities are involved, it is appropriate for the municipal use to be significantly represented on the WUA, with the associated rights and responsibilities. Whatever the case might be, it should be clear who is responsible for which part of the WS infrastructure, repairing pumps, etc. However, the provision of bulk water services will still need to be under contract to the WSA.

3.5.4 WUA acting as water services provider

This scenario takes the water services function of a single or multi-sector WUA to its extreme, with the WUA actually providing water services to the customers[12]. This situation should be avoided where possible, as a WUA is not designed to be a WSP and it may complicate the ability of the WUA to perform its functions effectively. The only probable exception is for rural communities (particularly farm labourers on WUA members' properties[13]), where there is weak local government and no effective local capacity for water services.

- The most likely situation is that the WUA provides the water services in terms of a contract with the WSA, preferably only to (or on behalf of) its members. The WSA as well as the recipient communities would be represented on the WUA. A WUA should resist the situation where it provides water services to its members without a contract from the WSA, as this will complicate lines of responsibility and particularly cost recovery. Refer to 2.4.6 for context of being a WSP.

2.5.5 WUA on international trans-boundary catchments

The final institutional scenario is where an international WUA is established on a trans-boundary water resource. Although this is not likely to be a common situation, it is most likely to be for controlling irrigation on a river that two countries and riparian to or on a shared aquifer[14]. From the South African perspective, the WUA would have to be established by the Minister as a body for international water management (not as a WUA). This body would be accountable to DWAF (as the South African government representative) and the other country's Department of Water, but would also have to coordinate is activities with the relevant CMA.

2.5.6 Other scenarios that are not considered

The above scenarios explicitly ignore the following situations, which are not appropriate for a WUA:

- *WUA established for WS*: is not appropriate for a WUA to be established only to provide water services, as there are more appropriate bodies for these activities.
- *WUA on a WMA, regional or national scale*: should not be encouraged, as WUA are designed for local level management and should not compete with or duplicate the CMA.
- *WUA for non-water user interests*: is not appropriate, because WUAs are designed to represent water users, while CMCs and catchment forums are more appropriate for management functions and stakeholder representation.

[12] The Boegoeberg WUA case study illustrates this situation.
[13] In this case, the WUA is supporting the member in fulfilling their water services intermediary role.
[14] The situation of an upstream and downstream trans-boundary river would be dealt with through a bi-lateral (on multilateral) River Basin Commission and a WUA established solely for the South African portions of the use.

2.6 Institutional Models for WUA Management

In most of the preceding scenarios, it is possible (and in fact likely) that there will be different groups of users (area-based, infrastructure-related, resource-oriented or user-categories) that wish to be part of a WUA, but manage their affairs separately. Possible distinctions include:

- Irrigators receiving water from a dam and canal system, direct abstraction from a river and pumping from groundwater.
- Commercial farmers and emerging farmers receiving subsidies.
- Agricultural, industrial-mining, municipal-domestic and recreational users.

Three basic WUA institutional models can facilitate the coordination and management of different groups that can be distinguished on an area basis (as illustrated in Figure 2.2). However, the fundamental principle that only one WUA should be established for particular area excludes the second and third models for distinguishing groups within a particular area. Furthermore, these two options may lead to a proliferation of WUA that need to be regulated and supported by the CMA and/or DWAF, which imposes greater capacity requirements on these organisations. Therefore, the first model is generally more appropriate than the second two.

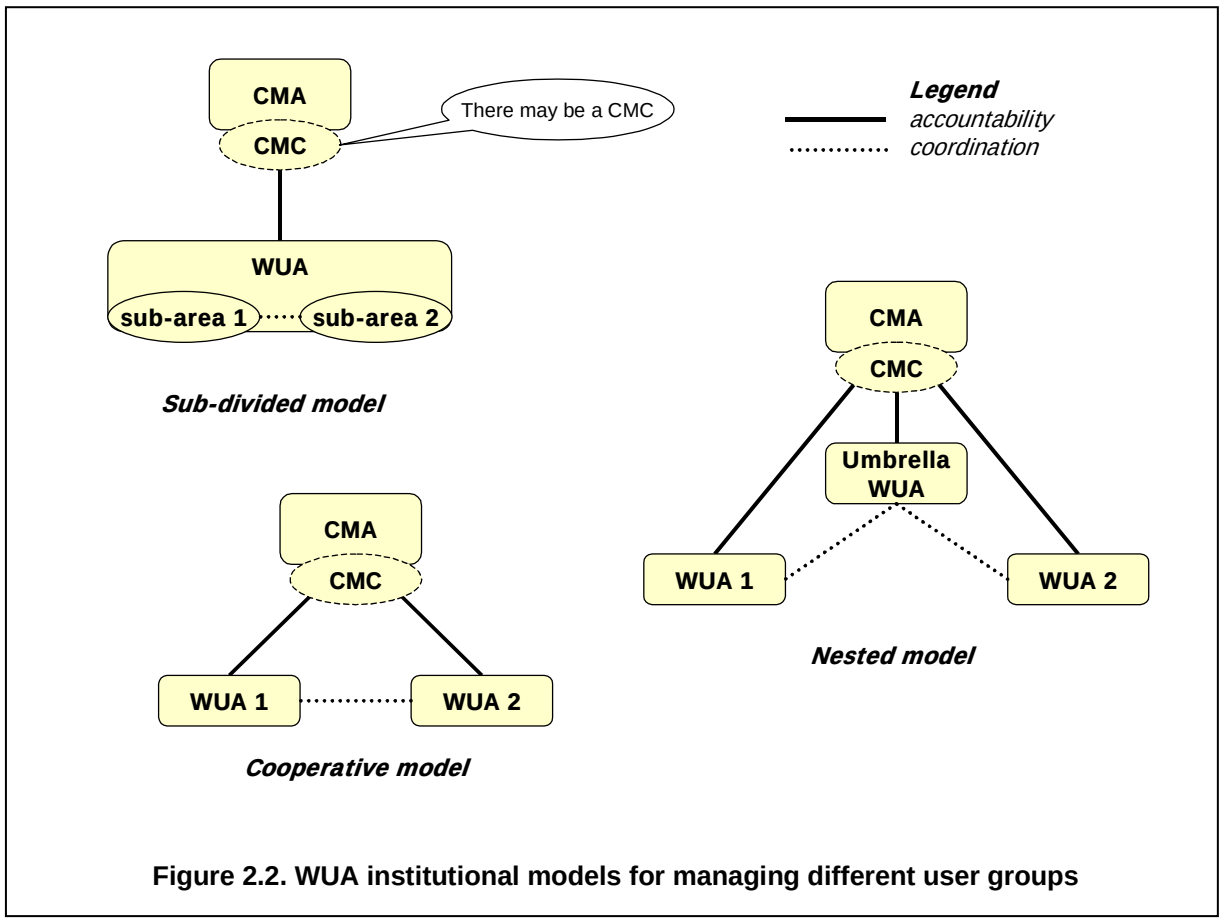


Figure 2.2. WUA institutional models for managing different user groups

2.6.1 Sub-divided (or federated) WUA

This model is based on an internal distinction between groups or areas within the WUA, with management sub-committees that are established for each group being represented on the WUA management committee. The management committee would play a strategy and

coordination role between the sub-committees, which would have their own functions, membership and responsibilities reflecting the water resources, water users and/or infrastructure under their control / management.

The advantage of this model is that management of all water use in an area can be coordinated, while allowing the sub-committees to maintain their focus on specific activities. Similarly, capacity and resources can be shared between groups, while maintaining financial and management autonomy, where appropriate. A drawback of this model is that smaller, potentially less capacitated groups may be dominated by the more powerful established groups.

2.6.2 Cooperative WUA

Separate WUA may be established for groups or water users in adjacent areas, with possible agreements between the WUA in terms of coordinating management and sharing capacity. Although this model seems to facilitate autonomy between the groups, impacts that the groups may have on each other are more difficult to manage and are dependent upon inter-WUA cooperation (which can be difficult to maintain). This model can easily lead to a proliferation of small WUA, which can work against the principles of IWRM and institutional viability, and places significant coordination requirements on the CMA.

2.6.3 Nested WUA

A model that has been proposed to address inter-WUA cooperation and management is for the establishment of an umbrella WUA to coordinate lower level WUAs. This model is based on the establishment of a Primary WUA with a core membership, as well as representation of other WUAs on its Management Committee. This is particularly applicable where another (possibly downstream) WUA is affected by the operations of the Primary WUA or a group of small-scale farmers needs a separate developmentally oriented WUA for other purposes (such as crop marketing), but are operationally dependent upon the Primary WUA.

Roles and Functions

The roles and functions of the associations in this model are as stipulated in their constitutions as well as the NWA. The key distinction is that the members of the secondary WUA would be represented on the Primary WUA. Decisions made by the later would affect the other WUAs in terms of the operation of the water resources, but would not be binding in terms of the management of the other WUAs. Similarly, decisions taken by the other associations are only binding to the members affiliated to that WUA and not the broader membership of the Primary WUA.

However, the Primarly WUA should facilitate coordination and conflict resolution between its membership and the other WUAs that are represented, as well as negotiate and advocate on behalf of the developmental WUA that it represents.

3 INTERNATIONAL EXPERIENCE

3.1 Motivation for Water User Associations

3.1.1 Introduction

There has been a considerable quantity of research and study done on the establishment and functioning of water sector user organisations over the past decade, including the requirements for their sustainability and effectiveness. This has been comprehensively synthesised by Subramanian *et al* (1997) and the following analysis is largely based on this report. The analysis of WUA has largely focused on the irrigation sector, but many of the lessons can be generalised to WUA that include other categories of use.

The local management of water resources for use requires mechanisms for allocation and physical systems for provision. The latter requires efficient operation of the system to regulate flow and regular maintenance for the facilities. These characteristics require collaborative management of collective systems.

Historically, governments (and their agencies[15]) have been fully responsible for managing local schemes and systems for water supply, to both the irrigation and the municipal sectors. This is based on the perspective that water is a "common pool" resource (it is difficult to exclude individuals from using the resource, but at the same time they compete with each other for a limited quantity) and therefore requires central regulation. It is further supported by the natural monopoly nature of these systems, the large investment costs and strategic importance of water and its products (particularly for agricultural and domestic use).

However, a number of problems have been observed with the central state owned model (particularly for irrigation systems), including:

- Over-dependence on ***technical solutions***, without supporting institutional arrangements and stakeholder participation.

- Ineffective ***state management***, due to inadequate local cooperation-participation, knowledge of local conditions and incentives for successful systems.

- Failure of ***markets*** (where these exist), due to the complex and variable nature of water supply, large investment requirements for infrastructure and significant enforcement costs.

- High ***transaction costs*** for coordination between users and user groups, associated with negotiations around system operation and individual actions.

All of these problems indicate a need for decentralised management, based on stakeholder (user) participation, through local institutions, that facilitate cooperation and coordination. Not by accident, these solutions are entirely consistent with the principles of IWRM that has been broadly adopted for water resources management internationally.

[15] Agent refer to parastatals that are established to support government objectives and are accountable to government, and in this case include national bodies and river basin organisations.

3.1.2 Irrigation Management Transfer

In response to the preceding issues during the early 1990's, developed countries and some of the developing countries began the process of transferring some of water management activities to private cooperatives, which included water users associations. This was seen as some of the government initiatives in public investment as well as initiatives of making public responsible for maintenance and sustainability of water resources. However it should be stated that the transfer of authority depended on various governments, as some transferred all powers and in some cases it was joint administration. Irrigation Transfer Management (IMT) was initiated for a number of reasons, the major ones being:

- Poor performance of government operated irrigation systems.
- Lack of finances available to manage irrigation systems by government.
- Direct involvement of local people in water resource management.
- Encouragement of individuals to take responsibility of management for water resources with limited government assistance.
- Improved agricultural yields.

IMT is described as the "turning over of authority and responsibility to manage irrigation systems from government agencies to water users associations (WUA)" (Vermillion, 1997). The IMT programme has got specific factors that countries need to embark on, for good transfer. These factors are:

- A favourable environment.
- Strong political will and commitment; including the existence of champions for change and the involvement of stakeholders in formulating the policy and programme.
- A clearly defined vision.
- Development of a supportive legal framework.
- A simple and transparent implementation process.
- Incentives aligned with the reform programme.
- Adequate training and capacity building.
- Constant monitoring, evaluation and adjustment.

According to Vermillion (1997), IMT involves two key important roles of the WUA, namely:

- The authority to define what services will be provided by WUA.
- The authority to arrange for the provision of those services.

The main objective of the WUA in general terms is the provision of water to users and the maintenance of the infrastructure. However as the associations grow functions may increase beyond the supply of water to include providing services, such as training, consulting on water related issues, licence transfers, etc. However these activities solely depend on the capacity of the associations themselves as well as authority given to them by the government.

It was within this concept that many countries began the process of transfer of water resource management to independent associations. In recent years they have proved to be working, as there are countries where notable successes have been achieved. Various case studies of countries where IMT has been a success are described later in this Chapter.

3.1.3 Background to the International WUA Experience

WUA are effective where local participation is more advantageous than central management by

a public agency, and where they provide greater benefits than the uncoordinated activities of individuals. This has been observed to result in improvements in the following areas (Subramanian *et al*, 1997):

- Improved water delivery services, through incentives to cooperate and improved information
- Improved system maintenance, due to members "stake" in the system and responsibility
- Expansion of irrigated area, through improved system and water use efficiency
- Increased agricultural productivity, through increased system efficiency
- Reduced environmental externalities, through improved management
- Reduced costs of the systems, due to efficiencies and cost recovery
- Facilitation of social goals, such as democratisation and empowerment

What is clear through the international experience is that the success and sustainability of WUA are dependent upon a combination of the local physical and technical conditions, the internal organisation (structure) of the WUA and the external environment within which the WUA operates. The following sections highlight the key lessons, distinguishing between internal organisational considerations and external conditions. In particular, sustainability of a WUA should not be seen as requiring independence and self-sustainability, as WUA require some degree of external support and interaction. This highlights the importance of the WUA within an institutional environment as one component (usually the base level organisation) of the broader water resources management hierarchy.

In this context, Subramanian *et al* (1997) make a useful distinction between two broad models of WUA, based on the international experience:

- *American model*: which are larger, specialised irrigation focused organisations based on hydraulic boundaries and functioning according to rules and management bodies. They tend to be more appropriate for larger land-holdings and more sophisticated technology. This is currently the typical South African model of a WUA, particularly those transformed from irrigation boards with commercial farmers, and is likely to be replicated in many new WUA serving other non-agricultural users.
- *Asian model*: which are socially-based, multi-purpose organisations based on direct member participation through daily interactions and knowledge for the associations functioning. It is more appropriate for socially cohesive communities with smaller land-holdings and simpler technology. From the South African perspective, this most closely resembles the situation of small scale emerging or subsistence farmers, possibly associated with land reform projects or schemes in the former homelands.

Although they are not directly the focus of this project, certain relevant lessons may be learned from the international experience with water supply and sanitation associations (Subramanian *et al*, 1997). These have parallels for WUA (as described above), in particular:

- The role of public sector agencies needs to adapt to facilitating, coordinating and supporting these associations to provide services in a participatory manner.
- The appropriate type of organisation is locally specific, but must enable local participation, mechanisms to establish financial arrangements and advocacy on behalf of its members.
- The role of the organisation must reflect the local conditions and institutional context, but may range considerably in its scope and functions.
- There is important ongoing role for government and particularly the civil (NGO) and private

sector, regardless of the association's functions.

3.2 Organisational Considerations (Internal Structure)

The way in which a WUA is internally organised and operates has a fundamental impact on its effectiveness and sustainability. At heart, a WUA is a voluntary cooperative organisation that will only be successful if members perceive the benefits of participating and cooperating to outweigh the financial and other costs of being a member. In some cases this will require a member not to act in their short-term interest, in order to ensure continued cooperation in the long-term. Amongst others, this will depend upon the level of leadership and awareness, incentives to cooperate, size and sanctions that can be imposed by the WUA.

Given this, the following five considerations have been found to be important factors in the success of WUA internationally. The implications for South African WUA are highlighted where appropriate.

3.2.1 Origin

The age of an organisation tends to indicate its stability and support by its members, with members of new WUA not being clear about the benefits. Stability does not necessarily imply inability to change (particularly in response to a changing external environment), and the ability to adapt and change in a robust way is likely to be a key indicator of sustainability. This is a critical issue for the transformation of irrigation boards, which are often relatively stable and have established patterns of operation, but will require significant change in their objectives and modes of operation to meet the requirements of the NWA and to respond to new water use entitlements.

On the other hand, WUA that originate from internal member-driven initiatives (typically small-scale) are more likely to have immediate buy-in from members (with an understanding of the benefits of cooperation). However, this does not imply that externally initiated (larger) processes are unsustainable, but rather than greater effort is required (particularly during and immediately after establishment) to ensure that the objectives and structure of the WUA reflects local needs and aspirations and that members identify with these. Building on existing organisations (even outside the water sector) provides a means of building on existing patterns of cooperation.

The South African Context:

In South Africa, larger new WUA are likely to be internally initiated and therefore have buy-in from the members. However, a distinction must be made between capacitated industrial, mining and commercial agriculture (that would tend to be founding members) and local government, emerging farmers and communities in rural areas (that may not initially recognise the benefits of involvement). On the other hand, new WUA associated with the transfer of government water schemes and other irrigation infrastructure, as well as those associated with land reform projects or the empowerment of rural poor communities, will generally be externally driven. Therefore, the driver (most likely DWAF or another government department) must be aware of and ensure adequate consultation and "marketing" of these initiatives, both during and after establishment.

Regardless of the origin, WUA should be designed to suit the local conditions, including physical

infrastructure, water resources, maintenance needs, social systems and economic conditions. However, some degree of standardisation is required, particularly where the WUA needs to be legalised and/or it interacts significantly with other organisations (including other WUA in a federated structure). This is the case in the South African situation, where WUA are established by the Minister, take on delegated functions and interact with the CMA and other bodies. Although the model constitution of a WUA is outlined in the NWA, there is some flexibility in adapting it to local conditions. As highlighted in DWAF (2002) flexibility is also important to enable WUA to effectively serve the interests of poor rural communities (and other groups) that are not necessarily legally or organisationally literate (or empowered).

3.2.2 Membership definition

Unambiguous definition of membership together with associated rights and responsibilities is critical to effective and sustainable WUA functioning. This requires a clear description of the boundaries for the WUA, both in terms of its geographic area and the groups that may be members by virtue of their water use. Important considerations include:

- Maximising common interests, which needs to consider the hydraulic and water resources boundaries (as water supply is obviously common), but should take account of social and community ties.
- Linking people with a homogeneous social background, facilitates cooperation and the development of common goals, but requires an understanding of the existing social dynamics around water as well as other non-water related activities.
- Incorporation of disadvantaged groups (particularly the rural poor and women[16]) and other stakeholders that may not clear water entitlements can promote equity objectives and reduce inter-sectoral conflict in working towards a common goal.
- Depoliticising membership and WUA functioning (by limiting the involvement of politicians) is critical for reducing factionalisation, increasing cooperation, reducing tensions in the WUA-state relationship and promoting an internal environment that is conducive to sustainability.

The South African Context

In the South African context, the need to combine water users within an area (with a common interest in a particular water resource or supply system) may lead to the amalgamation of non-homogeneous groups. However, this can be addressed through the organisational structure, by sub-dividing the management of the WUA. On the other hand, the concept of developing WUA based on homogeneous groups with common interests, and including disadvantaged groups, needs to be actively pursued for developmental WUAs, and is particularly relevant for groups on communal land with a group entitlement to use water[17].

[16] The implications of having one member per water user is that the male "head of household" will generally be the member, resulting in significant gender bias in membership and probably management structures. This has consequences for representivity, as well as marginalising the role that women play in domestic and subsistence agricultural water use, which is particularly important for WUA representing small scale farmers and promoting empowerment of rural communities.

[17] This may include WUA in the former homelands or linked to land reform projects.

3.2.3 Size

The size of a WUA needs to consider the geographic area and the number of users. Internationally, WUA size varies from a few hectares and/or members to thousands of hectares and/or members. Furthermore, large areas do not necessarily imply large numbers of members and *visa verse*. The central consideration around size is that coordination is relatively easier for smaller WUA (particularly were members are relatively close together), while larger WUA are generally more financial viable. Once again, a sub-divided (or federated) structure can benefit from smaller sub-groups for cooperation, but a larger organisation for financial purposes.

The South African Context

In terms of the South African situation, the potential geographic and membership size of WUAs varies significantly between the relatively high-rainfall eastern (KwaZulu Natal) or southern (Western Cape) regions and the arid western interior (Karoo and Northern Cape). No specific size will be appropriate throughout the country, but the preceding considerations need to be engaged.

3.2.4 Federation

Small base level WUA to take on additional responsibilities and achieve economies of scale, by federating with other base level WUA to form sequentially higher level WUA for an entire system. Each level in the federated structure would be responsible for specific activities, with the highest level being an organised forum that is able to facilitate interaction and advocacy between the water users and government agencies (and other institutions). In some countries the apex WUA has the responsibility to allocate water and negotiate inter-sectoral allocations.

The sub-divided model provides a federated structure within one WUA (which is supported by the NWA), while the umbrella WUA provides a more typical federated structure with multiple WUAs[18]. However, the NWA provides for CMCs, which may be more appropriate to play the role of the coordinating apex organisation, particularly as the CMA is responsible for water allocation (which can be delegated to a CMC).

3.2.5 Leadership roles and specialisation

As WUA increase in size and physical system complexity, there is a greater need for specialisation in organisational (leadership) roles and technical (system operation) roles. The former are usually selected from the members into relevant management structures, while the later are employees appointed by the WUA leadership. The first implication of this specialisation is the development of mechanisms to ensure that the leaders and employees are accountable to the members. This generally requires structures and systems to monitor the performance of staff and leaders on behalf of the members (often in terms of legislated requirements), including financial management systems. This raises the second implication of specialisation, which relates to the members' and leaders' organisational management and financial skills. Training of leaders in management and financing is critical in this regard, while awareness creation aimed at the members is valuable.

[18] DWAF has not espoused a policy position on the acceptability of the umbrella WUA concept.

The South African Context

In South Africa most WUA are highly specialised, and the huge discrepancy in legal, organisational and financial knowledge and capacity between commercial water users (agriculture, industry and mining) and previously disadvantaged groups requires intensive training and awareness aimed at the later groups. Otherwise, the possibilities for development of marginalised groups based on access to water through WUA will not be realised.

3.3 External Conditions

In addition to the characteristics of the WUA as an organisation, WUA are affected by the environment within which they operate. In this context, it is not particularly useful to address the factors that will ensure self-sustainability, but rather what are the requirements for support and interrelationships that will promote sustainability, given the institutional, social, economic and physical conditions. The following discussion highlights the international experience within five general areas, with an assessment of the relevance and applicability to South Africa.

3.3.1 Physical and technical factors

The characteristics of the water resources and physical infrastructure may influence the nature of the WUA organisation. Two important considerations are the water scarcity and the type of technology used to manage supply. As water resources become more stressed, the need for cooperation (and therefore a WUA) generally increases, while more sophisticated water supply infrastructure requires greater cooperation and more specialisation.

The entire range of water stress and infrastructure complexity exists in South Africa, with WUA generally existing or being proposed in areas that are stressed and/or have schemes for water supply. The need for non-fiscal funding of water supply schemes may provide another driver for the establishment of WUA.

3.3.2 Social and economic conditions

Similarly, the social and economic conditions in which the WUA is established has an important influence on the appropriate organisation and the likelihood for cooperation between members. Key considerations include:

- local social organisation and community cohesion
- market penetration and the degree of commercialisation of production
- farmer incentives to cooperate and to initially become involved in the WUA
- financial viability of WUA, particularly in terms of cashflow over the first few years

The South African Context

In this context, the duality of the South African society and economy is particularly important, as both extremes are apparent. On the one hand, there are the generally capacitated commercial agricultural, industrial and municipal (urban) water users that have existing water use entitlements, with business rather than community cohesion, and access to financial resources.

On the other hand, are the relatively cohesive rural and poor communities requiring water for domestic and small-scale (or subsistence) agricultural production, with limited water use entitlements, capacity or access to finance. One WUA model (reflecting functions, structure and required institutional support) may suit the former, while another possibly suits the later situation.

The past social and economic development patterns have resulted in these situations evolving side by side, with little or no meaningful social and/or economic interaction, and often a sense of mutual mistrust. This challenge is even greater where there is a need for cooperation between these situations, in terms of sharing resources and capacity, without entrenching existing patterns, particularly where they access water from the same resource. The key question is whether one sub-divided WUA or two cooperative WUA provide the most appropriate arrangement. The conclusion of this study is that the former joint arrangement is preferable, given the legal and capacity environment, but premised on the catchment level reform of water use entitlements (possibly through compulsory licencing) to ensure equitable membership representation on the WUA.

Although authorisation of water use should not be a South African WUA responsibility (given the existence of the CMA), an area that requires further policy development is the possible role of WUA in managing an inter-user (or even inter-sectoral) water market between its members. This would need to be linked to the establishment of a clear regulatory framework for such markets.

3.3.3 Policy and legal environment

The nature and legitimacy of WUAs as institutions are dependent upon an appropriate and facilitating policy environment and legal framework, but with adequate regulatory control. This ensures adequate recognition of the WUA in performing its functions, particularly in governing its relationship with the state and other institutions. Critical issues include:

- the level of functional and financial decentralisation
- water pricing
- land, agricultural and/or industrial development and support
- legal standing and mandate of the WUA
- responsibilities for and ownership of infrastructure

Fortunately, South African has established a progressive and comprehensive water legislation, with a relatively clear institutional framework in the WRM sector. WUA are a legally recognised base-level organisation with flexibility in the development of Constitutions and business plans. Water pricing is being developed and implemented through the Pricing Strategy.

Areas requiring further clarity are the coordination of policy and support by other sectors and the issues around transfer of ownership of infrastructure. On the later point, it is clear that WUA that develop infrastructure would own it, and therefore be responsible for its maintenance and any public safety requirements. Currently, transfer of ownership is also being associated with canal

systems (particularly for irrigation), even though there are some debates around the transfer of personnel with these schemes[19].

A question remains around the transfer of ownership for DWAF water resources infrastructure for which operation and maintenance responsibility has been delegated. On the one hand, ownership implies public (dam) safety responsibility, and this remains with DWAF in the public interest if the asset is not transferred. On the other hand, there is a possibility that a WUA will not adequately maintain an asset that they do not own, resulting in deterioration and costly rehabilitation.

A number of considerations are important in this regard and clear policy is needed, but this requires a comprehensive analysis that is out of the scope of this study. However, one consideration of relevance is that where water resources infrastructure is more regional (larger) in scale and serves multiple user groups, DWAF should maintain greater operational and/or intervention control (and in fact may have to fund certain new developments). This indicates continued DWAF ownership (even where the various groups are represented on the WUA). On the other hand, where the infrastructure is local and serves a particular user group that is represented in the WUA, there is no reason for DWAF to maintain ownership. This indicates that a flexible policy should be adopted within clear guidelines to inform asset transfer on a case by case basis.

3.3.4 Agency structure and incentives

The role and structure of the agencies interacting with and supporting WUA influences WUA sustainability, as is the incentive structure of the staff that are interacting with these WUA. This is particularly important for WUA that require initial and ongoing support, within a concept of regulation that includes leadership and capacity building, as well as monitoring and intervention.

The South African Context

This implies that both DWAF and the CMA needs to seriously engage, structure (including performance contracts) and resource their responsibilities for WUA institutional development, support and oversight. There is currently a significant opportunity to do this through the DWAF restructuring and CMA establishment process.

3.3.5 Joint management arrangements

Ultimately, WUA are only one part of a set of institutions that manage water resources and supply, and some degree of joint management between the agencies and WUA is necessary. However, the relative responsibilities vary considerably from WUA only being responsible for operation and maintenance, through to WUA being responsible for water allocation.

[19] DWAF has an interest in transfer of all relevant staff, at the same or better conditions of employment (according to Public Service requirements). However, WUA members are resisting taking all staff and remunerating them at public service levels, in order to cut costs (and increase “efficiencies”). There are fundamental equity considerations associated with these issues that require further attention, particularly considering the limited medium-term (post 2 year) influence that DWAF has over the WUA organisation once assets and staff are transferred.

South African institutional arrangements for WRM indicate that CMAs are primarily responsible for allocation and authorisation, while WUA would be primarily responsible for provision of services to their members. Therefore, although there will be blurring of these responsibilities, care should be exercised in deviating to far, because this may introduce duplication and role confusion. It should be highlighted that WUA are an important, but not the only institutional "building block" for CMAs and are not likely to be "wall-to-wall" or represent all WRM stakeholders within a WMA, for at least the next decade.

3.4 Selected Case Studies

The central business of WUA is the management of water resources and the equitable supply to its members. However, these organisations take various forms in terms of establishment. This section looks at the legislation leading up to the formation of WUA, including purpose of the associations, legal status and capacity, membership, internal structures of the associations, functions and powers, government role, etc.

3.4.1 WUA in Morocco

Constitutionally the management of water resources is the responsibility of the national government. The main purpose of WUA is the management of agricultural water. The association cannot have other purposes other than those agreed upon between the general assembly of the association and the Government.

The establishment WUA is voluntary. It can be done at the initiative of the government or at the initiative of two thirds of owners or tenants of lands served by the same irrigation system. The initiative by the government has its own procedure as well as the one by the owners or tenants. In the initiative by government all owners and tenants of the interested area meet in the general constituent assembly by the local authorities. The government presents a proposed programme of action for the establishment of WUA and its functioning. The association is legally established once the government proposal has been adopted by the constituent assembly. There should be sufficient quorum for the deliberations. In the cases of an initiative by the interested owners and tenants, the general constituent assembly submits a proposal to the Government. The association will be legally established once the government approves the proposal. The country has the existing agricultural associations involved in water management. These associations will be transformed into WUA using establishment procedure by government.

Membership to the association is voluntary and is open to all members who meet the criteria. The members are accepted based on approval by the association's council elected by the General Assembly. Membership is eligible to owners and tenants of the land served by the same irrigation system.

The association has a general assembly that is composed of all members of the association. The assembly elects people who will be members of the Council. The Council has 7 members, six from the general assembly and one from the government. Members of the Council are elected for a term of two years. In between themselves the Council elects a chairman, vice - chairman and the treasurer. The council meet twice a year unless summoned by members.

The general assembly meets once a year and can be convinced at the initiative of the Council. The assembly has the decision-making powers where one member has one vote. Final decisions are taken on majority votes. The assembly has the following functions:

- Approve the annual budget of the association.
- Determine the bases of the membership dues
- Decide on the dissolution of the association
- Decide on any changes of the statute.

The functions of the associations are determined from the agreements entered into between Government and that particular water user association. On the agreements entered into between the parties, there should be an indication on the following:

- The area of jurisdiction of the association
- Works to be carried out and related studies
- Funds necessary for implementation of maintenance and repair works
- Resources required for financing the works
- Rates of contributions of WUA and government to cover the costs of maintenance and repair works.
- Responsibilities of the association to carry out all works and to cover all costs related to delivery of irrigation water and operation and maintenance of canals.
- Dispute settlement

The associations have powers of levying and the collection thereof from its members. The association has powers to impose dues on its members and special contributions to the association. Members dues are in proportion to the water rights they have. The payments are established by the general assembly.

In terms of finances, the associations receive their revenue from the collection of annual dues from members. Other sources can be government subsidies.

In Morocco the government does not have much role after the association has been established as well as the functioning thereof. However there is one government representative on the Councils of the associations. The member represents the government interests.

3.4.2 WUA in Tunisia

In terms of the constitution of Tunisia, water resource management is the responsibility of the national government and has local government structures participating in the management of some of the resources.

WUA in Tunisia are legal entities, mainly established for the purposes of irrigation, drainage, potable water supply and sanitation. Beyond these provisions, there should be consent from the national department.

The associations are established by the department of agriculture based on the application by interested local parties /individuals. The interested parties make a submission to the department specifying the purpose of the association, proposed functions to be performed as well as the list

of users who would form part of the association. The application is a public exercise where interested or affected parties will have the opportunity to make comments on the establishment. In cases where there is no objection to the establishment, it is agreed in principle for the establishment and the feasibility study is done for the establishment. Comments and feasibility studies are submitted to the Hydraulic Interest Group of the particular area, which in turn formulates an opinion that is submitted to the Department of Agriculture.

Membership to the association is voluntary and is open to all interested members meeting the prescribed criteria. The board of directors is responsible for the admission of the association. Eligible groups to become members of the association as listed by the legislation include owners and tenants of agricultural lands, assignees of public land, councils managing collective lands, co-operatives, user's of collective water development systems, local or regional public bodies, and user's of public domain waters.

The WUA has the General assembly composed of all members of the association as the overall decision-making body for the association. The decisions taken by the association are binding on all members.

The associations are managed by a board of directors composed of three, six or nine members elected from the general assembly for a period of three years. The board of directors elects in between themselves the chairman of the board. The managing director who supervises the activities of the Board assists the Board of directors. The managing director is elected through the proposal by government and the Board of directors approves the appointment.

The accounting officer who is nominated by the board of directors and the local governor manages the financial matters of the association. The officer submits the financial records to the local governor. The associations in Tunisia have specific legislation prescribed in the statutes, however they still have the powers to make other regulations as they see fit, in order to meet the specific situations of a particular association. Any additions or changes in the association's legislation have to be approved by the general assembly of the association.

Functions of WUA include:

- Delivery of irrigation water and operation and maintenance of canals.
- Conflict resolution, the Board of directors is responsible for the settlement of disputes between members of the association. In cases where no solutions are reached, the case can be referred to ordinary courts of law.
- Other representatives of the association are members of the Hydraulic Interest Group in the area of operation of WUA.
- The association can perform other functions, however it all depends on the availability of resources for those functions.

In terms of financing, the association has powers of levying and collection thereof from its members. The accounting officer is responsible for the collection of that levy. The associations also have the powers to impose fines on users who do not pay for services performed.

The finances of the association mainly come from the collection of levy from members, sale of water to other institutions, loans and subsidies obtained from the government and local administrators.

Although water users associations' work as semi-independent entities, the government still has a role that it plays on their establishment. The associations are established by the decision of the department of agriculture with the help of the Hydraulic Interest Group ([20]HIG) of the area.

Secondly the association is under supervision of the Local Governor (administrator). Each year the association has to submit their budget to the local governor. The local governor can adopt recommendations that shall be discussed in the Association's general assembly

In cases where the association is malfunctioning, the local governor with help of the HIG can summon a special meeting of the General assembly to deal with the problems. In cases where the intervention is ineffective, local governor can suspend the Board of Directors and appoint a Managing Committee for a period not exceeding six months to manage the WUA until the General Assembly has appointed a new Board of Directors

The Ministry of agriculture with the advise of the HIG of the area has the authority to dissolve a WUA. Otherwise the WUA are established for a period of 99 years or in cases where the initial purpose ceases to exist, and then it shall be dissolved.

3.4.3 The establishment of WUA in Mexico

Mexico is a federal state and the management of national water resources is a responsibility of the Federal Government. The economic crisis of 1982 not only reduced the availability of funds for new irrigation investment; it also significantly constrained government funds available for maintenance. In 1989, as part of the National Development Plan (1989-1994), the government created the National Water Commission (C.N.A) with a mandate to define a new policy for the management of the waters of the country.

This led to the development of the National Program for Decentralization of the Irrigation Districts under the National Development Plan. The National Program for Decentralization of the Irrigation Districts (or the transfer program) was designed to establish a system of co-responsibility between C.N.A and the water users where the 80 public irrigation systems would become financially self sufficient.

The transfer program was put into 2 phases. Phase 1 of the transfer program shifted government managed irrigation districts to the water users associations, with each of the water users associations being responsible for operation and maintenance (O&M) within a module that starts at the secondary canal intake and extends to the individual for intakes. C.N.A retains responsibility for managing the water source and the main canal. This program was designed to reduce government subsides to the transferred canals to zero. Phase 2 of the transfer program creates Limited Responsibility Societies (SLR's), which are federations of the individual modules. SLR's are responsible for operating all the main canals, drains, and roads of the irrigation district. C.N.A's are currently responsible for managing the water source.

The Mexico transfer program is built around the creation of irrigation modules, which are operated by water users associations – legal civil associations under Mexican Law. Modules

[20] HIG - "*Administrative bodies entrusted with the preparation of studies for the implementation of waterworks as well as the monitoring of the WUA in their area of jurisdiction".*

cover a specified service area. Another unique aspect of the Mexican model is that the water concession grant by the government is part of the legal agreement between the government and the WUA's. As such, the users do not have individual water rights but instead each association has proportional right (the proportion is based on area) to the supply of water available to the district for that season. Concessions are for a fixed timeframe, 5 to 50 years, and can be taken away if an association does not fulfil its agreement with the government.

The decision to implement the transfer program was made in the Office of the President at the time. In general, this decision was strongly supported by the farmers in the more commercial irrigation areas in the country. Farmers' support was based on the recognition that the irrigation systems were only going to get worse as the government did not have the funds to properly operate and maintain them.

The law specifies that, in order to be granted water rights, WUA's must adopt an internal statute that indicates, among others: conditions for water distribution and management, internal organizations of the WUA, rights and duties of members, provision on financial management (income and expenditure), provisions for transfer of water rights among members and provisions on dissolution of the WUA. The General Assembly of water users must adopt the statute and changes to it. The statute is then subject to government approval.

As a rule, the internal organization comprises a General Assembly, Governing Council and an Oversight Commission. There are no specific provisions about the composition and terms of office for these bodies.

The functions of the WUA are delivery of irrigation water and operation and maintenance of canals, dispute settlement. WUA's can construct their own infrastructure or participate in government financed construction projects.

The powers of WUA are levying and collection of assessments which are subject to government approval. WUA's set the charges for the services provided to their members, they also collect the charges. Imposition of fines, WUA's can sanction and fine their members, the procedure for imposing sanctions and amounts on fines have to be specified in the internal statute of each WUA. WUA can suspend the water supply to members who do not pay their charges or violate guidelines for use of water and irrigation services.

WUA's can be granted with water rights, the rights can be transferred among members of the same WUA. If a WUA is established for the provision of irrigation services to several users, a water right concession is granted to the WUA, which will administer it.

Rights of Infrastructure: Irrigation infrastructure can be transferred to WUA's. The law does not spell out under what kind of title WUA's can hold infrastructure. The source of income for the WUA's is generated through collection of revenue from service charges and membership dues.

The Government is responsible for supervising the operation, maintenance and management of the infrastructure, which has been transferred to WUA's. It also provides technical assistance to WUA in carrying out their activities.

The number of C.N.A staff has been reduced significantly and, in most districts the systems are

being operated with less staff, although in many cases the modules have recruited staff with higher levels of training. The elimination of unionised staff controlling O&M activity has removed one of the major complaints of farmers. With increased O&M budgets, including more funds for maintenance, and more responsive staff, the transfer program has created a situation that is much more sustainable than the situation in the irrigated sector prior to transfer.

However, there are additional changes that are required to ensure the program is sustainable over time. The system of water tariffs needs to be changed so that the districts develop a reserve fund for emergencies, future replacement, and rehabilitation. They also need to shift to a system where the module collects a fixed amount to pay the cost of the staff and other facilities of the modules as well as a volumetric fee to cover the variable costs of delivery water.

With its population growth rate as well as the structural transformation from an agricultural society to an industrial nation, the competition for water is increasing. Yet, Mexico's legal system does not clearly specify what rights exist for irrigated agriculture and how those rights can be protected against demands for water from municipal as well as industrial users.

3.4.4 The establishment of WUA in Turkey

There are two government agencies responsible for water and soil resources development and management in Turkey. The two are the State Hydraulic Works (DSI) and the General Directorate of Rural Services (GDRS).

State Hydraulic Works (DSI), established in 1954 under the Ministry of Energy and Natural Resources, is the main investment agency responsible for the planning, development and management of water and soil resources in general. Its responsibility is therefore in the field of water supply and irrigation for large schemes, which include construction of dams for flood control, irrigation, power generation, water supply and ground water development.

General Directorate of Rural Services (GDRS) was established in 1985 by the reorganization of the General Directorate of Soil and Water, the General Directorate of Roads, Water and Electricity and the General Directorate of Soil and Resettlement. The responsibility of GDRS consists of mainly on-farm development and small irrigation works; one of the main challenges it faces is to handle the growing on - farm development (OFD) requirements of large-scale schemes equipped with irrigation infrastructure by DSI.

The agriculture sector is the major water consuming sectors in the Mediterranean with a ratio of more that 70% of the total water consumption on the average. Water scarcity has become one of the major concerns since the 1960's and efforts have been made to better manage and ensure the efficient use of water for sustainable agricultural development.

In Turkey, similar to other countries there are two practices to operate the irrigation schemes developed by the Government:

1. Irrigation Management by the Central Government
2. Irrigation Management by the local authorities and Water Users Organizations (WUO's)

As a matter of fact the centralized approach that had been adopted so far for the O&M issues constituted an institutional and functional burden or the government i.e. very low ration of billing

and collection rates or no collection at all, very high water consumption, even wastage, no cost recovery of investment, no local interest by the farmers to protect the infrastructure.

Transfer of irrigation systems to users started at a slow pace in the early 1950's. Until 1993 each year small schemes have been gradually transferred to users with an average annual area of about 2000 ha. DSI was also encouraging participatory approach through establishing Irrigation Groups (IG's) or Water Users Groups (WUG's) with limited responsibility for O&M. But generally, the central government officials were reluctant to adopt a decentralized approach with the main concern of loosing power and control on the management of the facilities.

The Turkish government adopted 3 forms in which the transfer process was to take place.

- **Full Transfer:** All O&M activities on irrigation projects developed by DSI are taken over by WUO's. The Ministry of Energy and Natural Resources (MENR) transfer the responsibility of O&M to WUO's on an agreement that is signed by WUO's and DSI and approved subsequently.

- **Participation through Joint Management:** This type of transfer has been experienced in the irrigation projects developed and operated by DSI. Limited responsibility in O&M is taken over by the so-called Water Users Groups (WUG's) with and agreement signed between water users and GDRS.

- **Informal Transfer:** In this system all O&M activities in irrigation projects developed by GDRS that are generally of small scale and serve generally on village are managed by the farmers. No agreement is signed between water users and GDRS.

Among the three systems explained above, the full transfer has been the preferred one.

Before 1993 the main objective of DSI was to transfer the small and isolated schemes since these were difficult and uneconomical to manage. But this approach was limited to small schemes and DSI was reluctant to hand over the O&M of large ones to farmers.

On the other hand, raising governmental awareness and difficulties encountered in the management of irrigation systems by central agencies and persuasion of the World Bank on the other, led the decision makers to adopt a new system that was the accelerated transfer of irrigation schemes to water user organizations. Following national working group meetings in 1993, DSI's policy shifted from limited transfer of small schemes to large ones.

Finally, starting from 1993 DSI took the decision of launching a pilot program of accelerated transfer where water user groups were already existing and operating efficiently. The timely decision was based on the following issues:

- Financial burden awareness on DSI and the government created by the O&M costs (the recovery of O&M was about 40%)
- Political awareness (the government's general policy of decentralized approach was an important contributing factor to speed up the process)
- Satisfactory O&M results of transferred schemes (these positive results had an important role as convincing factor)

Four provinces namely Antalya, Adana, Konya and Izmir were selected for the pilot program of accelerated transfer mainly because the officials of these provinces had shown interest and dedication and the farmers were more receptive there. The transfer was supported with enhanced internal training, including seminars and workshops

As a pilot case, the DSI Antalya Regional Directorate carried out a comprehensive study for the so-called “tenth transfer”. The results are as follows:

- The participatory approach by the users generated the sense of responsibility that had not existed before to better use the resources and the facilities and protect them
- The water use is more reliable and equitable, the plots situated at the upstream or down stream of the irrigated land are equally served
- Studies to increase the irrigation efficiency by using modern techniques are being investigated, e.g. a pilot project to compare drip irrigation, sprinkler and the California systems are being implemented with the assistance of DSI
- The user pays approach has increased awareness in water savings. The WUO”S charge an interest on the market rate for non-payment (12%) and charge fines for illegal connections and for misuse or wastage of water (40 times the regular rate) and/or damage caused to the infrastructure (80 times the regular rate). There is a mutual supervision mechanism between farmers which brings social pressure thus efficiency in this process.
- The chairman of the WUA’s are obliged to provide services regardless of the political tendency of the communities that fall under the service area of the associations. There is no political influence in water distribution.
- The collection rate increased from 42 % (in 1993: irrigation by DSI) to more than 80% (in 1997: irrigation management transferred to WUO’s)
- Energy consumption decreased after the transfer, the saving in energy cost is approximately 25%

The results of the monitoring of the WUA’s proved that the transfer process has performed successfully but DSI considers not having the required time span for post-evaluation at each of the transferred facilities.

So far DSI has given technical assistance to WUO’s that consists of repairs and maintenance of water structures with equipment, training support and guidance on technical and administrative issues. This support is still continuing but on a decreasing way over the years. Unless the WUO’s are strengthened institutionally and technically, they will need to be supported by the central government. It has been experienced that the transferred schemes cannot keep on performing satisfactorily and contributing to an increased production in irrigated land and this in particular during the initial years of the transfer without a sound assistance program by the government. This is a crucial issue since especially the small organizations may face difficulties and fail to fulfil their task properly in which case the sustainability of the participatory irrigation management concept would be put in doubt for replication

In Turkey, the WUO’s have at a great percentage demonstrated their ability to operate and maintain the facilities satisfactorily by recruiting the required staff, purchasing urgently transportation and communication equipment, assessing and collecting water fees, improving water distribution at a cost generally less than the rate set by DSI.

3.4.5 Summery of International Experience

- The common theme for establishment of WUA is for the management of water and equitable supply thereof to all permitted users.
  In other countries the purpose go beyond water supply, e.g. in Tunisia the associations play a role in sanitation. Secondly the supply of water is not limited to agricultural / irrigation use. Urban areas and industries in USA, Australia etc. still have associations responsible for water supply and related issues.

- The establishment of WUA caters the concerns for all who are affected:

The purpose of WUA as expressed above clearly shows that they are mainly for water management and related issues. But at the same time it looks at who is affected by the purpose and how are they affected. The outcome of these questions is the planning, that will look at establishment of associations that will cater for everybody who is affected, including emerging farmers, rural communities around the resource area.

- The circumstances within which the associations exist define the functions to be performed.

Specific functions were common across all WUA. These functions were:

- Delivery of irrigation water and operation and maintenance of water infrastructure.
- Collection of all water levy from users dispute settlement (different procedures.
- Provide water to communities

Besides these functions, other countries (such as in Morocco) government enters into an agreement with the association in providing other functions. These functions are triggered by the circumstances that exist in that particular area. Some of these functions extend to sanitation. The indication here is that WUAs are not established to perform one specific function. Instead the government can use them to manage and implement projects at local level. Therefore the other major role would be to act as the implementing agencies for the government. In relation to South Africa this function is crucial in relation to emerging farmers, Rural Development Strategies, Poverty alleviation projects, etc. The WUA can be used as a vehicle to deliver the objectives.

- Clear Government role

The Functions stated above, may prove to be difficult for association to implement due to e.g. lack of finance, lack of capacity, etc. For these reasons the Governments in respective countries have played defined roles on how they would play part in the functioning of the associations. On the countries looked at in this report the following appeared to be the role of Government:

- Provide a regulatory framework that would safeguard the interests of all stakeholders;
- Regulate use of water in most sensitive water areas, e.g. ground water areas, polluted areas, etc.
- Ensure equitable deliveries by establishing clearly defined water rights and licences.
- Finance new irrigation infrastructure
- Control water quality
- Assist in development of communities around water resource areas.

- Both internal arrangements and external arrangements must suitable for sustainable WUA.

- The establishment and functions of Water User's Associations are determined by the conditions and circumstances that they are established for. Internationally they are mostly used for water functions as well as functions that governments see fit for implementation by them, e.g. water supply function to ordinary water user's in the rural areas, implementation of government programmes in rural areas, etc. Therefore WUA are seen as bodies creating sustainability and efficiency in water resource management and other development initiatives. While this is the case, they are also democratically established institutions on which all stakeholders affected by water resources participate fully.

4. CASE STUDIES

4.1 Introduction

The preceding discussion has provided an institutional and international context for WUA. This Chapter presents findings of an investigation on the role of WUA's in water management in South Africa through a number of case studies. In particular, it explores the following issues:

- What processes where followed in the establishment of the WUA?
- What functions established Associations perform as compared to the expected functions as currently undertaken and as laid out in the Act?
- What types of organisational structures have been developed to assist the WUA in achieving its mission?
- What institutional arrangements are there, locally to enhance the work of the Association?
- What are the resource needs and what strategies are in place to mobilise resources for the Association?

It should be indicated that the case studies indicated below is a combination of WUA that were visited from the first round of the research as well as the ones that that were identified after the initial research. Although all the associations were visited at different intervals and are also established for various reasons, they all have the same common theme, which is the supply of water to licensed users. Certain associations were visited twice as some had just been approved therefore a second visit was necessary in order to achieve the objectives of the research. The second visit to the associations was based on the progress that the associations have achieved since the approval of their constitution. Not all associations had made considerable progress since the approval, therefore the findings and discussions are based on what is found currently.

4.2 Methodology

The approach to this study was a case study method. Within this, specific case study techniques were used to collect data from the selected WUA's.

4.2.1 The process of selecting case studies

For the purposes of this exercise, a number of Water Users Associations were identified and six WUAs were selected across the country for study. The six associations were:

- Boegoeberg WUA – Northern Cape
- Central Breede River WUA – Western Cape
- Impala WUA – KwaZulu Natal
- Great Letaba WUA – Northern Province
- Fish River WUA - Eastern Cape
- Lebalelo WUA – Mpumalanga /Northern Province

The following criteria were used to select the WUA's for research purposes, with each case study representing one or more of the following:

- Each case study had to reflect a different institutional situation with the involvement of different types of organizations.
- The case studies selected had to be located in different parts of South Africa
- The case studies had to involve emerging farmers, possibly as part of a transformed irrigation board.
- The case studies had to involve domestic and /or industrial use, preferably in terms of bulk water services.
- Case studies should involve significant ground water abstraction.
- An evaluation of a multi sectional WUA's had to be included.

It was a bit difficult to get WUAs that fit exactly to the criteria used, as some of the WUA's have not yet been established and the majority are transforming from being irrigation boards and their function had mainly been to provide irrigation water to the commercial farmers. As a result no WUA with ground water was found as some of the Associations did not respond positively to our request.

4.2.2 Document Review

Key documents were collected from the WUAs and from DWAF. In-depth document review was done. The documents collected included copies of proposals submitted the Minister of Water Affairs and Forestry for approval or in some cases already approved proposals. The documents included in the submission are the constitution of the proposed association, proposed functions, election of management committee members, composition of the association, boundaries, and expenditures as well as the process of consultation leading to the establishment of the association.

4.2.3 Interviews

A semi-structured questionnaire was developed by the project team and was used for collecting data. In-depth individual and focus group interviews were held with managers of the WUAs, chairpersons of committees as well as other committee members.

Notably, based on the current patterns of water entitlements most of the people who occupied these positions were elected from the old Irrigation Boards, often with minimal inclusion of other key stakeholders, such as small-scale farmers, local communities, women etc.

Interviews with some key DWAF staff were also conducted to clarify and verify certain information gathered from the WUAs.

4.2.4 Observations

The project team also conducted some observations in the area. The WUAs members were often very helpful in taking the team around. This assisted the team to get a better understanding of some of the issues that could not necessarily be gathered in the interviews or from the document review.

4.2.5 Data Analysis

The analysis of the findings in this report was conducted using both the data gathered as well as the theoretical frameworks provided in phase one of this project.

4.2.6 Limitations of the study

- Delays in establishment of WUAs - impacting on selection of case studies.
- Within the transforming irrigation boards there were associations who had a problem with research, having an idea that the research was more of an investigation by the Minister on former irrigation boards. Therefore they were reluctant to take part or give any information.
- Unavailability of other stakeholders during interviews in certain WUAs, e.g. emerging farmers.

4.3 Contextualising the Case Studies

The promulgation of the new National Water Act resulted in the establishment of the new Water Management Institutios, one of them is WUA. The WUAs are meant to replace the old Irrigation Boards that have been doing water management at local level

4.3.1 Transforming Irrigation Boards

The historical establishment of the Irrigation Boards has been the equitable distribution of water to licensed individuals for irrigation. The composition of the Boards has mainly been the commercial farmers to the exclusion of all other water users. Even though there were other types of water users, however, it was mainly irrigation. In the context of Irrigation Boards, their transformation has been about the inclusion of new members from sectors that have previously been excluded. The new sectors included are, local government institution, ordinary water users association (household), industries, emerging farmers, small scale farmers, etc. All of these sectors have to be represented in the management committee of the Association.

4.3.2 Composition of Management Committees

The current arrangement is that a management committee would consist of elected and nominated members.

- *Elected members*: individual elected from the former e.g. Irrigation Boards along the resource area. These boards elect individuals to represent them in the management committee.

- *Nominated members*: individuals nominated from the new institutions that now form part of the new associations Associations.

Representativity

There should be an understanding that representativity within the management committee cannot be equal, taking into account the number of representatives from associations around the resource area. Secondly given the history of the Boards, it will take time to transform them from being white male dominated institutions. Gender and race representativity are still the major challenges faced by the transorming boards. Low number of women in the farming sector

might be the reason for this as well as the fact that emerging farmers are still a developing concept within the context of transforming boards.

4.3.3 Functions

The functions of the former board had mainly been the equitable distribution of water to users as well as to assist farmers where possible. It has never been more than that. The Act provides for principal and ancilliary functions to be performed. The transformed Irrigation Boards as they stand currently cannot perform all of the functions stated, however, it is a possibility if supported with the right resources. There should be an understanding that some of the functions are still new and there are no resources to perform them e.g. support to emerging farmers. Therefore it will be prejudicial to expect the Association to perform these functions. The Act does not force the Associations to perform these functions but they can only be performed when there are resources.

4.3.4 New Dispensation WUA

The old Irrigation Boards as they stand, it is difficult to put the scenario of WUA as presented by the NWA because of their history. It is WUA established recently after the Act that will be ideal as prescribed. Certain water schemes are already in process of establishing “ideal” WUA within the new dispensation, such as the Lebalelo Water User’s Association (see below).

4.4 Great Letaba Water User Association

4.4.1 Background

The Great Letaba Water User Association (GLWUA) is a proposed new association, which is still in a process of transforming from the old Great Letaba Main Irrigation Board. This WMI covers commercial farming areas around the Letaba River as well as some Trust land of the former Gazankulu homeland. Other sector is business (Game reserve only).

Historically the irrigation board was responsible for irrigation water supply to farmers around the Tzaneen Dam and Ebenezer Dam, which are fed by the Great Letaba River. This covers an area of about 12000 ha of land, approximately 9000 ha of white owned and approximately 3000ha of black owned land.

Currently the proposed Association comprises of commercial farmers from the old Irrigation Board and new members from the former homeland areas, which includes small-scale farmers and individual water users. The other sectors that use water in the same area, viz. industry and local municipality are not represented in the WUA

While still pursuing the transformation process the proposed association continues to function as an irrigation board. The application for transformation to become a WUA was lodged in March 1999. The initial application was rejected and the Irrigation Board made a resubmission however no response has been received yet. A DWAF representative indicated that the delay could be due to the fact that DWAF is questioning the inclusively of the proposed association and also concerned about the benefit for the small-scale farmers in this Association.

4.4.2 The establishment process

The establishment came as a result of consultation with all the relevant stakeholders dependent on a common water resource within the area. Consultation was done with the commercial farmers around the area who mostly were falling under the Irrigation Board. New to the establishment were the emerging farmers and communities in the trust lands. Meetings were held with them and inputs were made on the proposed Association.

The other groups that were consulted were the municipalities and industries using the water resource, however there were problems experienced. Based on the composition of the management committee of the association the two stakeholders are not represented. The explanation received during the interviews, from the manager, was that they did not want to be part of the association, as they wanted to have their own association that will best represent their needs. An investigation was made and the explanation of the relevant organisations was that they were not aware of such an establishment and they were not formally invited to either participate or become members of the association.

It is therefore not clear as to what was the main reason why these groups were not part of the process, including the communities. The establishment process for this association needs to be investigated further.

4.4.3 The Functions of the Association

The functions of the Association are based on guidelines stipulated in The National Water Act. However since the application has not yet been approved it is difficult to check if these functions are performed as they are stipulated.

Principal functions

Currently the proposed Association still performs the functions of an Irrigation Board. Most of these functions are centred on taking care of the irrigation needs of the commercial farmers.

Ancillary Functions

When established, the new challenge for the Association in terms of functions is taking on the new ancillary functions, which they did not perform as an Irrigation Board. These functions imply for them, the upliftment of emerging farmers as well as engaging in functions that are not water supply related.

4.4.4 Proposed Structure

The association is currently using the old irrigation board structure. The committee indicated that they would continue to use the old structure until their application has been approved. They also indicated that the current management committee should, for the purposes of establishing the WUA, remain in power until the new committee has been established.

The association has proposed a structure that is based on area representation. The area is divided into 5 sub-areas (mainly white farmers) represented in the structure. From the sub-areas an 18 member management committee will be elected as follows:

- 14 members elected from the 5 sub-areas voted by members in the sub area. (3 year term)
- 1 member from individual water users receiving water not from any local municipality. (1 year)
- 1 member from the Tribal Authorities (1 year)
- 1 member from Local Authority with an interest of water supply by the association. (1year)
- 1 member from recreational Institutions (1 year)

The new structure proposes a wide representation of sectors with an exception of the industrial sector. Of the 18 member committee 2 are black and one is a woman.

4.4.5 Institutional Arrangements

Strong working relationships have been forged with DWAF (regional office office), however with the national office it is not that strong. A poor relationship could be attributed to the application that the association does not understand why it has not yet been approved.

The relationship with the municipality of Tzaneen was described as weak. This is indicated by the fact that the Local Authority is one the stakeholders that “refused”to be part of the association. There are conflicting stories within the two parties in relation to the establishment of new association. The Local authority says it was not aware of the process and was not contacted, while the association says it contacted all the relevant stakeholders including Local Authorities.

The association is in a process of building meaningful relationships with other institutions in the area, e.g. Catchment Fora, traditional authorities, and other community areas that were formerly Gazankulu areas. There are only good relations with the private game reserves and recreational institutions.

4.4.6 Resources

The association is currently using the same staff members operating as Great Letaba Irrigation Board. The arrangement is that once the transformation has been effected, the same staff would go to the new association with the addition of new staff members depending on the demand. Currently the association is operating with following staff complement:

- 1 Manager cum accountant, (part time)
- 1 Assistant secretary,
- 1 IT person,
- 2 Guards,
- 2 part-time typists and
- 2 part-time messengers

Most of the staff are part time employees whose status will be changed when the new association has been formed. It is not clear at the moment whether the staff have the capacity to deliver services as expected.

Since association has not yet been fully established, the financial resources of the association has not yet been changed. The income is still from levies to its members as well investments that were made whilst being an irrigation board

4.4.7 Conclusion

Critical issues that still need to be addressed include:

- Consultation processes (see establishment process).
- Relations with other stakeholders, e.g. municipality, industry, game reserves, etc.
- Understanding the role of the association with regards specifically to the emerging farmers' assistance.

The current situation of the association's application not being approved needs to be looked at. Further investigations into the relations of the association with other sectors within the area as this could have implications once the application has been approved.

The extent of involvement and benefits envisaged from being part of the association by the small–scale farmers are not clear. It is apparent that the emerging farmers will need the assistance from the experienced farmers, however it is not clear whether this would be the case with new emerging farmers registered within the association. The association indicated that they do not see or want to see themselves performing other functions other than the ones indicated in their constitution, which is what they are operating currently as an Irrigation Board.

4.5 Impala Water User Association

4.5.1 Background

The IMPALA Water User's Association is a multi - sectoral, newly promulgated association under the new NWA and it was promulgated in January 2001. An Irrigation Board established in June 1992 to manage water supply schemes preceded this Association.

In terms of its establishment and its constitution, the Association has agreed to supply water from the Bivane Dam and take care of water management issues related to the dam as well as the balance of the catchment area of Pongola River within the RSA boundaries.

The Bivane Dam is the main source of water supply to the majority of water users. It supplies water to commercial farmers, industries; small-scale farmers, TLC as well as independent rural communities. It is a new storage dam established at a cost of about 115 million. Through help from government and financing institutions, the association was able to raise funds to own and manage the Dam.

The association, as indicated before, is not a new institution but a transformation of the old Irrigation Board established under the 1956 Water Act. The founding members of the association are still members of the old irrigation board until new members are elected. The new management committee members will come from the various sectors represented within the Association, i.e. industry, commercial farmers, emerging farmers, TLC's as well as the independent rural communities.

4.5.2 Establishment process

The establishment of the Association came as a result of the resolution passed by the Irrigation Board to engage in a process to be transformed into a WUA. The establishment meant the inclusion of new stakeholders and the extension of the borders of the Association. This was also necessitated by the completion of the Bivane Dam (Paris Dam), which was to supply water to many communities and farmers. Therefore the area of operation could not only the be traditional

Pongola Government Water Scheme but also the areas affected by the new day Informal / formal meeting were held with a number of stakeholders that were relevant to the process engaged upon. Meetings/workshops were held with the following groups:

- The Pongola TLC.
- Illovo Sugar Company.
- Officials of Zululand Regional Council.
- Commondale Stakeholders
- All Tribal Authorities.
- Stakeholders involved in previous Irrigation Board.
- All stakeholders on the transformation process and the principles to be adopted.
- The Ntshangase and Simelane Tribal Authorities.

Notices were posted for public comment at all public places and Draft documentation on transformation were made available to key stakeholders for comment. This was followed by a public meeting that was attended by all members / stakeholders to reach concensus on the establishment of the association.

Based on the interviews held and documents, the association did not experience any problems during and after the process. All the stakeholders were consulted.

4.5.3 Functions of the Association

Principal Functions

The association currently provides water to approximately 14000 ha of land including the small-scale farmers and most of its functions are based on making sure that these areas are provided with water.

Other issues looked at are reading water meters and water usage, issues of water supply, sale of water and maintenance of infrastructure. Setting up new accounts for new water users is underway.

Ancillary Functions

Capacity building: The Association is currently busy with capacity building for new members of its Association. Capacity building is based on training new members and staff on procedures of the Association.

4.5.4 The Structure

The Association is currently functioning under the Old Irrigation Board's Committee which is overseeing the establishment / transformation into the new board. The New Management Committee has its members coming from all the sectors forming part of the Association. The New committee is organised in the following manner:

The area is divided into two sub areas, sub area 1: areas receiving water from Paris Dam and its tributaries as well as ground water within the area of operation. Sub area 2 is the remainder of the Association's area of operation. The management committee will compose of the following:

- 6 persons elected from sub area one, (3-year term)
- 2 persons nominated from commerce, industry and mining, one of which is from the Sugar Mill industry. (1 year term)

- 1 person from individual water users for domestic purposes. (1year term)
- 1 person from Local Authorities (1-year term)
- 1 person from Tribal Authorities (Simdlangetshana Region) (1 year term)
- 1 person from classified emerging farmers. (1 year term)

The executive management committee is vested with certain powers and functions. (See 13.5 of the Impala constitution):

- Elected members from sub area 1
- Nominated representative from Cane Sugar Mill Industry
- Nominated representative from emerging farmers.

4.5.5 Institutional Arrangements

Since the Association is not a new establishment but a transformation of another institution, it has long standing relationship with a number of institutions including government. The Association has relations with the following institutions:

- **DWAF:** It is mainly support on the functions performed by the association,
- **AGRICULTURE AND ENVIRONMENT (Provincial):** implementation of projects for small scale farmers as well as support the emerging farmers.
- **MHLATHUZI WATER:** Implementing Agent for the Association.
- **PONGOLA Municipality:** Client to the Association for water supply to areas under its jurisdiction.
- **HOUSING DEPARTMENT:** Water supply to new housing establishment
- **ILLOVO SUGAR MILLS:** Client , water supply
- **TRADITIONAL AUTHORITIES:** Water supply

4.5.6 Resources

The Association has a staff complement of 68 permanent and temporary individuals. Most of the staff currently employed are members that had been recruited under the old Irrigation Board and they have been transferred into the new association. The Association has the following staff positions: 3 office people i.e. Manager, Administrator and Secretary, 3 Water Control Officers, 1 Foreman, 1 Mechanic, 2 Supervisors, Grass cutting team, Construction team, Operators, Slashes, Weed killer teams, Messengers (2). 8 Canal Guards, Admin for small farmers, 1 Dam Manager, 1 Manager Water Purification, Farm Manager (plant), 4 Dam Guards, 1 Assistant Manager and 1 GuestHouse Cleaner.

Most of the Association's income is from water sales to the people who use it around the area. These include the commercial farmers, emerging farmers, industries (sugar mills), municipality and independent rural communities. The dam owned by the Association is the major source of income. The other income is gained from investments made by the association as well as property owned, e.g. the guesthouse.

4.5.7 Conclusion

The Impala Water User Association is a well-established Association having responsibility for water supply to most areas of Pongola. This gives it a resource base to operate without any problems. Based on current status of the Association, it can have some of the functions of the Department delegated to it.

The following discussion is based on a follow up visit from the previous research that was done with the association in 2001. The meeting with the association focused on three specific issues, which, on the initial visit could not be clearly pursued as the association had just been transformed into the new Water User's Association. These issues bare emerging farmers, sharing water infrastructure with other institutions and the provision of water to the communities.

Sharing of water infrastructure with other institutions

Currently the arrangement is that the association provides raw water to local government institutions. A water purification system was set up by local government to provide clean water to communities around the area.

In order to ensure participation in the agreements that are there with local government institutions, there is one representative from local government sitting on the board of the association. Currently there are no problems that are experienced between the two parties.

The association also supplies water to the tribal Authorities around the area. The Tribal Authorities are: Ntshangase and Simelane Tribal Authorities. The Currently the association faces a problem of water supply to the communities.

The Association has been providing water to the association for sometime and at a very cheaper rate. However DWAF has recently appointed a private company to provide water through the mobile trucks that goes to the community areas. This has created concerns in that the associations still continues to provide water to the communities while the new company does as well. It is now not clear where is the association standing on water provision to the communities.

The issue in this case, is that DWAF has got structures specifically established to ensure efficiency in water provision however they are not used. This in turn makes the department pay twice for a service that could be done by one body.

Secondly it was suggested that, there should at least be a procedure on how to appoint service providers in areas where there is already service providers providing water to larger number of the community.

Emerging Farmers

The second issue that meeting looked at, was the issue of emerging farmers, which in many water user's associations still remains an issue. From the previous meeting it was indicated that the association was prepared to assist the emerging farmers in developing them, however it all depended on the availability of resources. Secondly it was not clear what kind of support the association would provide to the emerging farmers.

In understanding the issue of support to the emerging farmers, the association indicated the importance of understanding the key function that they do as well as their capacity. More to this, is the understanding of the kind of support that the association will give to the farmers?

In terms of their understanding, the Water User's are about providing water to all licensed users. The association is self-sustaining itself from the payments of services provided. This means that

the association does not get extra resources to provide support to for other services. This compels the association to provide support only on availability of resources.

In terms of the legislation the Act provides for two types of functions, the core functions and the ancillary functions. The provision of support to the emerging farmers falls on the ancillary functions. In terms of the Act most ancillary functions are provided on availability of resources. As it stands currently the association cannot provide most of support to the emerging farmers.

The support that the Association gives to the emerging farmers is the supply of water. The association has what it calls "bridging finance"; through this support emerging farmers are provided a particular amount of water free and at lower rate for a particular period. The time given to the emerging farmers allows for him to become a well-established commercial farmer and starts paying for water after that period. This scenario indicates that the kind of support that the association can give to emerging farmers is centred on water supply. As indicated earlier this does not mean that the association will not provide other support, but it is only the availability of resources that will determine the provision of that support.

The support that the Association gives to emerging farmers is coupled with other support provided by other institutions. Firstly, it should be indicated the area is mostly characterised by sugar-cane as the commercial farming product, other products are very limited. Therefore most support given to emerging farmers is based on sugar cane. The group of emerging farmers (Phumelela Farmer Association) falling under Impala are also affiliated to Cane Growers Association. The Association act as a coordination unit for the emerging farmers. The Cane Growers Association provides support to the emerging farmers in preparing them to become commercial farmers. The emerging farmers also have support from FAF, which is a support group providing experience to the emerging farmers. Three forms of training is provided by this group, viz. training, business management and financial administration. The farmers are supported to the point of self-sustenance and a particular percentage is paid to the company once the farmer is making profit.

From the above it appears that the kind of support given by the association to the emerging farmers is somehow specific and centered around water supply. This gives an indication that the association does not have the capacity to provide other support. It was indicated that resources, e.g. finance and training, should accompany any other form of support that might be given to emerging farmers through the association.

4.6 Boegoeberg Water User Association.

4.6.1 Background

The Boegoeberg Water User Association is a proposed multi-sectoral Water User Association willing to take responsibility of water related issues along the Boegoeberg Dam and the Canal up until the off-take of the Noord Oranje canal. The proposed Association is an amalgamation of the former Irrigation Boards around the area and the areas formerly under the Government Water Scheme, viz.

- **Noord Oranje and Gariep Irrigation Board.**
- **Karos – Geelkoppan Water Board**
- **The River abstractions**
- **Boegoeberg Government Water Scheme**

An application for transformation into a Water User Association has been made to the Minister but has not yet been approved. Until the application has been approved it is a little difficult to

indicate exactly as to how the Association will be run and able to perform the proposed functions. This report is a presentation of the current situation around the area as well as the proposed functions whose assessment will be possible once the application has been approved.

4.6.2 Establishment process

The Boegoeberg Water User Association is an amalgamation of former Irrigation Boards as well as former Government Water Schemes. Through the process of consultation with all the relevant stakeholders, around November 23rd 2002 an application for transformation was lodged with the Minister. In the interim, a steering committee has been established to oversee the whole process as well as the establishment of the Association. The Committee comprises of representatives from all relevant stakeholders. It has representatives from the former Irrigation Boards, private river abstractors, small-scale farmers, District Councils and DWAF. Consultation meetings were held with all the relevant stakeholders and they were informed on the process, and their inputs were requested and incorporated. As an indication to the public, notices were put in public places for awareness of the process and for all members to participate. No opposition was expressed to the establishment process and the transformation of the former Irrigation Boards.

4.6.3 Functions of the Association

The proposed functions of the Association are purely determined by the activities around the concerned area. The Association has principal functions as well as the ancillary functions that will be performed based on the availability of resources and capacity to perform them.

Principal Functions

It is not clear yet as to which of the principal functions will be performed by the Association as they indicated this will only be cleared once the proposal has been approved by the Minister. A revisit to the area is a necessity to discover the changes once the application has been approved.

Ancillary Functions

While it is also not clear yet, which of these functions will be preferred, there seems to be willingness on the part of the Committee to perform ancillary functions. The challenge will, however, be whether they have capacity to do so. As an example, the rural communities around the farms have currently a problem of water supply whereby the infrastructure is incompatible with the demands of the community. The communities sometimes see themselves going for almost a week without water. It is currently a bit difficult to locate assistance for such need.

4.6.4 Structure

The structure is organised in a manner that everybody is represented in the Committee. To ensure equal representation the Association has a Management Committee, which comprises of representatives from the organisations that, amalgamated to form the Boegoeberg Water User Association. The structure has got two interest groups that are divided according to their water use.

Group A:

- Industries
- Municipality
- Community Committees

- Beginner Farmers / Small Scale Farmers
- Drink and Household water users
- Representative of the District Council
- Recreational water users
- Representative of DWAF or Catchment Agency

Group B:

- Group of farmers along the various water supply points. About 9 sub-regions along the water supply points. The group includes farmers who use water for irrigation as well as stock farming.

The individual groups falling either under interest group A or B have a degree of autonomy to perform their own functions as a group in their own regions but will still fall under a bigger group represented within the Management Committee. Within all the individual groups, each group will nominate a possible candidate to represent them and then vote for one to represent the sector group in the Management Committee.

The Management Committee must appoint a chairperson and some of the committee members perform certain functions related to water users. It is believed that clearer roles will be visible once the Association has been fully established. The Association has no staff as yet. One of the proposals was that an application would be made with DWAF to transfer its staff members to the Association as well as resources to cater for them.

4.6.5 Institutional Arrangements

The Association currently has relationship with DWAF. It still needs to strengthen its relationship with local government institutions within the area. It has to a large extent developed relationships with communities during the consultation phase.

4.6.6 Resources

DWAF currently provides the proposed Association with administrative support. It is anticipated that once the Association has been fully established an application would be made to DWAF for the transfer of staff to the Association. The transfer would include equipment. The only people doing preparatory functions for the Association is the Steering Committee.

Currently the Association has no financial base from which it will operate. It will need complete financial backing from the government (Department). As indicated earlier, the plan is that the Department will give some of its functions to the Association together with resources and be managed on behalf of the Department. So far the relations with other institutions are not fully established and some has been forged as a result of the proposed establishment of the Association. Therefore there is still a great need for improved relations to complement the Association. Other than the support expected from DWAF the Association also depends on levies to its members.

4.6.7 Conclusion

Critical issues that need to be addressed:

- At the time of field visit nothing was operational however the organisational model adopted would be an interesting one to follow up once implemented.

- Resource issue could be a problem for operation.

Most of the plans in respect of this Association depend on the response of the Minister to the application. The plans also depend on the negotiations with DWAF. The Association is a multi-sectoral institution and some of the anticipated functions have a lot of implications, which make it an interesting case to follow-up. This opens a proposal of a second phase where progress will be monitored as well as the implementation of possible recommendations developed during the research.

4.7 Central Breede River Water User Association

4.7.1 Background

The institution initially started as an Irrigation Board in 1898**.** A new Board was established again in 1910 under the new South African Union Government. It changed into a Water Conservation Board in 1913 until 1917 when it went back again to become an Irrigation Board. In 1920 the Board built a dam costing about R112 000, to provide water from the Breederiver, Small Blaaer and Holsloot to the farmers. The Dam is currently under the control and management of the State.

The association is a multi-sectoral institution that came as a result of the amalgamation of Irrigation Boards representing canal water users, former Water Conservation Board, municipal, recreation, emerging farmers, wine industries and ordinary water users.

Canal water users are:

- **Robertson Canal**
- **Le Chasseur and Gorree**
- **Angora**

About 6 -10 more canals users, have seats within the management committee of the Association, however they are not members of the association. Water is fed from the Brandvlei Dam through Breede to the entitled individuals.

The Association is already operating as a WUA, the application was approved on the 15th of September 2000.

4.7.2 The establishment process

The membership of the Association is characterised by three sectors using water for different purposes, viz. commercial farmers i.e. grape farmers, fruit farming and dairy farming, Municipality of Robertson, Aston, Bonnievale and Montegue who amalgamated to form Breederivier Municipality and finally the communities living around the area constituting mostly ordinary water users, small scale farmers and emerging farmers. According to the Association's Manager and Chairman, there are no emerging farmers or small-scale farmers well organised to fall in this category.

Membership of the Association came as a result of a consultation process with all stakeholders. The process included meetings with various associations, local government and DWAF. For awareness of all people, notices were put in newspapers. For farmers to become legitimate members of the Association they have to comply with particular requirements i.e. have

legitimate water licences.

4.7.3 Functions of the Association

The main function of the Association is the general control of water supply, use of water and equitable share of water to all users.

Principal functions

The current function of the Association is mainly based on supplying water to qualifying users and the collection of revenue thereof. The Association makes sure that water is equitably distributed to all users and that the whole water resource area is well maintained.

Ancillary functions

- Providing catchment services to / or on behalf of the responsible authority.
- Currently the Association has no emerging farmers, but communities who do subsistence farming are assisted in the process of organising into emerging farmer associations.
- There is capacity to perform other functions that might be delegated by government.

With regards to the ancillary functions, the Association believes that, it is in a position to help emerging farmers and small - scale farmers. There is however a need for support from DWAF and other institutions. The Association is in a position to look into the needs of emerging farmers. However there are certain problems that still need to be looked into. These problems are:

- Need to identify land for farming, as it is currently not available.
- What kind of training is required?
- Financial assistance
- Capacity support from other departments and NGO's e.g. Dpt. Of Agriculture.
- Guidelines for support to emerging farmers.

There are concerns about certain functions that the Association believes can be dealt with better when done locally, e.g. the transfer of water rights from one association to another. Currently there is a backlog of transfers at the regional DWAF office. It is believed that Associations are in a better position to deal with the process. The Association believes can perform certain delegated functions if delegated by Department; however this would all depend on finance and the need to employ more people.

4.7.4 Structure

The Association is currently functioning with the staff from the old Irrigation Board with potential of employing more people when the need arises. The Association currently employs a part time secretary, full time Administrative Secretary, and Water Bailiffs who also assist farm workers in the maintenance of water canals. There is an Office Manager that takes care of the day-to-day work of the office.

The management committee of the association consists of 27 members and are assembled as follows:

- Persons elected by the members of sub-area 1. This sub-area is divided into 3 sub-sub-area

as set out in Annexure 4 and one member shall be elected for each of the sub-sub-areas by the members whose names appear on the voters list for the sub-sub-area of sub-area 1.

- Persons nominated for each of the sub-areas 2,3 and 4. Nominations will e done by the elected members of the Executive committee of each of the sub-areas as set out in Annexure 4.
- 2 persons nominated by each of the following water users associations:
    a) The association that will replace the Worcester-east irrigation board
    b) The Association that will replace the Cogmanskloof Irrigation Board.
- 3 persons nominated by the Water users Association that will replace the Zanddrift Irrigation Board.
- 1 person nominated by the Associations that will replace the Klaasvoogds-, Uitnood-, Agterkliphoogte- and Noree Irrigation Boards.
- 2 Persons nominated by the Local Authorities that has an interest in the usage of water from water resources and/or works under the control of the Association.
- 1 person nominated by the individual water users that is not a member of the Association in terms of item 7 of the Constitution, but whom has an interest in the water provided by the Association.
- 2 persons nominated by small beginner-farmers who have an interest or a relatively good prospect of having an interest in the near future in the water provided by the Association. With the term “small beginner-farmer” it refers to a person:
    a) who comes from a previous disadvantaged community; and
    b) who farms on a small scale with the water.
- 1 person nominated by the organised users of water for recreational purposes.
- 1 person nominated by Industries who have an interest in the usage of water from the water recourses and/or works under the control of the Society.

4.7.5 Institutional Arrangements:

The association has not yet established a lot of relations with other institutions except the relations that were established during the consultation process. The association has established relations with the following:

(a) **DWAF** – institutional support and water related issues.
(b) **Local Authorities** – water supply

4.7.6 Resources

In terms of staff complement the Association is headed by a Manager (chairman) who is assisted by the Secretary of the Association who does the day-to-day running of the Association. One permanent staff member assists the Secretary of the Association. The Association does not have a big staff complement but most of the staff is on the sub associations forming the Breede River Association.

In terms of finance the Association gets its revenue from levies on water supply to the farmers using water, the municipalities whom uses about 1000 ha. The other is from investments made by the Association. There is no other financial support from other institutions.

It was indicated that sometimes it is a bit difficult to collect the levy as there are cases of non-

payment and water supply has to be cut to such individuals.

4.7.7 Conclusion

Critical issues that need to be addressed:

- Extent of assistance by the Association to emerging farmers.
- Guidance on agricultural issues.
- Identification of land for emerging farmers.
- Domination of committee by commercial farmers.
- Financial issues.

Looking at the face value the Association appears competent to perform and operate as stipulated in its constitution.

4.8 Great Fish River Water User Association

4.8.1 Background

The Association is an amalgamation of transformed Irrigation Boards established in 1928. The board has since its establishment remained a single sector entity providing irrigation water to commercial farmers along the Great Fish River and its tributaries.

In November 2000 new Water User Association was established as prescribed by the NWA. The Association is a combination of about 16 sub areas affiliated to the main body, i.e. the Great Fish Association.

4.8.2 The establishment process

The Association was established through a process of consultation that took about a year to complete. A series of meetings were held with the Irrigation Boards along the Great Fish River. The other groups included municipalities and small garden plot owners. Consultation was mostly done with the commercial farmers and the municipality. Although all the stakeholders were consulted through newspapers and announcements, there were groups that were not interested to take part in the process. Such groups included emerging farmers and communities living around the water resource. The reason for non-participation is not clear but it was indicated that there are groups that did not see the importance / benefits of becoming members of the Association.

4.8.3 Functions of the Association

Currently the functions of the Association have not changed from those they performed as an Irrigation Board. The main functions of the Association are:

<u>Principal Functions</u>

- Distribute water equally to all registered and licensed farmers. This does not include the municipal water supply to the communities.
- Manage and maintain water resources

The Association has a new function as a result of the interests of the new emerging farmers. It provides support through training and management to the new farmers. This is a group of communal plots that are considered as emerging farmers. However this kind of support is limited due to lack of resources.

Ancillary functions

Other than functions currently performed the Association would like in terms of the NWA to perform the following new functions:

- Manage the whole of Fish – Sundays, Government Water Scheme on behalf of the government. This initiative had once been tried but refused by government, one of the reasons being capacity. There is a strong belief that if capacity is not there, then DWAF should provide it.
- Issuing of water licences. The current system takes long and it is not at all efficient.
- The transfer of water rights. It is believed that the transfer of water rights is a transaction that could be done locally as it takes long if it has to go through the DWAF Regional Office and Head Office.

4.8.4 Structure

Two groups are in charge of the functioning of the Association, i.e. the staff in charge of the day-to-day running of the Association and the Management Committee comprising of representatives of the Associations along the water resource and is responsible for the governance of the Association.

The Association consists of an 18-member committee of which 16 are elected from the Sub-area Committees of commercial farmers and the others are from ordinary water users and the municipality. The Sub-area Committees conduct their own elections where they appoint one member to represent them in the bigger Management Committee.

The decisions of the Association are taken through the consultative process and preferably on a consensus basis. In cases of a deadlock, the voting system is used but it is hardly used, as there are seldom disagreements within the association. Decisions taken are communicated through by the representatives back to the sub-areas for implementation, e.g. the changes in water tariffs.

Based on the observation in terms of composition of the Management Committee and representation of stakeholders. Commercial farmers largely dominate the Committee because the other water users have got lesser representation. This will have implications on the decisions taken in that they will always be overpowered and will have to accept decisions even if they are not satisfied with them.

4.8.5 Institutional Arrangements

The Association does not deal with a lot of institutions but it's only those that provides assistance and those obtaining resources from the Association. It mainly has working relations with the following institutions:

- DWAF – management and support
- Municipality – water supply

Based on the observations, it is not yet clear as to what role will the other institutions play in the Association. There is still a need to explore more and try and identify other institutions that can play a major role in the development of the Association, e.g. Department of Agriculture on small scale farming, etc.

4.8.6 Resources

The Association has about four staff members (fulltime) that do day-to-day running of the office. These are the Chief Executive Officer, Secretary, Clerk and the General Assistant. The Association also has fulltime guards stationed at various points to make sure that water is used legally and is distributed to rightful people. The staff that the Association currently operates with, is enough to cover for the current functions. Again, the number is likely to increase as the functions of the Association increase.

The Association gets its resources mostly from the payment of services and from property owned by the Association. The other source is the revenue from the two Dams managed by the association

4.8.7 Conclusion

Critical issues that need to be addressed include:

- Role played by other institutions especially to the development of small-scale farmers.
- Water Debts by plot owners
- Sustainability of small scale farming sector
- The interview was a bit limited as there were no representatives of the other stakeholders.

Great Fish River Water User Association is still a newly transformed association and most of the functioning still has a bearing of the old Irrigation Board. Challenges within the newly established Association are yet to be seen with the addition of other groups that never formed part of the Association's structures.

4.9 Lebalelo Water User's Association

4.9.1 Background

The association is a newly established independent body, mainly for the purposes of mining and domestic water supply. The area is situated between the Northern Province and Mpumalanga, in the town of Burgersfort. The resource area is the Orabie Dam, now known as the Flagbochielo Dam.

4.9.2 Establishment

The establishment of the association was prompted by the need for the establishment of a water scheme that is going to supply water to the platinum mines around the area. The mining group interested in the establishment of the water scheme is Anglo Platinum, Impala, Simencor, and Northern Province development Corporation, Samrec and ASA metals. The process of establishing a scheme started in May 2000 with DWAF. The advise from the Department was to establish a new Water Users Association. As part of the process, in May 2000 the team engaged in the public participation process with the communities living around the area with a population of about 162 000. The area also has about 13 Tribal Authorities.

The process for the establishment of the Association and the intentions of the mines as well as how the communities were going to benefit was explained to all relevant stakeholders. The proposed establishment was also advertised to the public for comment and there were no objections to the proposal.

4.9.3 Membership and management

The founding members of the association are the mining companies in consultation with the communities in the surrounding villages, including the traditional authorities. A management committee comprises of 5 members that manage the Association. Three (3) members are from the Mining sector, 1 member from Local Government and 1 member for communities.

The consultant who has been working on the establishment of the Association currently manages the Association since the approval of the application by the DWAF. The Association is working on transforming the institution into various departments, which will manage the day-to-day functioning. It is anticipated that within a six-moth period, the consultant will handover the management to the Association which still has to appoint new staff members.

4.9.4 Functions

The functions of the association are as stipulated in the Water Act. However, they are prepared to go further than just providing water to mines and the communities. The Association sees an opportunity of working together with the local government structures. The arrangement is that local government institutions will provide infrastructure for water supply and the association will provide water.

Currently there is a producer's forum, which comprises of mining officials and local government officials. One of the roles of the forum is provide working relations on how water will be equitably used in between the stakeholders.

4.9.5 Institutional Arrangements

The Association has increased its base of relations with other institutions. However it is growing as they have established relations with local government and the department of agriculture. The association also indicated no problems of functioning as the implementing agency for the certain departments.

The association is currently in negations with the Department of Agriculture for the upliftment of emerging farmers. The agreement has been that the mines will buy water rights from the emerging farmers. Capital established from the transaction will be used to establish a trust that will help provide necessary infrastructure for the farmers.

4.9.6 Conclusion

Lebalelo represents a new dispensation association with all members anticipated to be playing clear roles and knowing their contributions within the association. It should further be investigated once the association management has been transferred from the establishment consultants.

4.10 Summary of the Case Study Findings

The following are the issues that needs further investigation on each of the associations as well as the progress made since the approval of the constitution:

Boegoeberg WUA

The main issues that emerged are:

- Water provision to the communities and maintenance of water infrastructure;
- The transfer of DWAF staff into the association;
- The role of local government in water provision;.
- The issue of emerging farmers.

Since the approval of the association's constitution, the process of change has been a bit slow. The association has targeted the date of the 31st of July 2002 as the final date for finalising the process of change. By this date the association plans to have achieved the following:

- Transfer of water schemes and management of certain water schemes to the association;
- Have a clear position on the issue of transfer of staff from DWAF. Some of the implications of this move has been the increase of water tariffs to meet the demand of new staff. This however has not gone down well with some of the farmers.
- Completed the emerging farmer support policy.

Great Fish WUA

The main issues that emerged are:

- No participation of communities into the association.
- No payment of water services especially by the emerging farmers.

According to the association manager there has not been any improvement on the situation since the approval of the association's constitution. The association is still having a problem of payment for water services. A total of R 256 000 is still outstanding from the emerging framer associations that have not yet paid. Some of the problems have been attributed to the following:

- Lack of experience on the emerging farmers. There is a need of a commercial farmer who would help the merging farmers
- Certain plots of emerging farmers are not productive enough to cover for irrigation costs and still make profit.

Impala WUA

This is the association where there has been improvement since the approval of the constitution (see the case study description).

Central Breede River WUA

The main issue on the association was land availability for the emerging farmers. Currently there is no land that has been made available for the emerging farmers. Therefore the problem has not changed since our last visit.

4.11 Similarities within the Associations

From the study of these existing WUAs, the findings indicate many similarities, with the differences being on the specific functions and the reasons for the establishment of the Association. The research indicated that WUAs as entities can be established within a number of sectors but with one primary objective, which is regulation and equitable supply of water to entitled users. The sectors include agriculture, mining, domestic water, etc.

4.11.1 Establishment Process

In terms of establishment, the associations indicate a public process that includes all the stakeholders that are affected by the establishment of a new association. Meetings are held and all stakeholders are given the opportunity to express their opinions on the establishment. While the establishment of these associations is an open process that includes everybody, the findings indicated that that there were cases where the new associations were established but not all stakeholders were aware and know exactly why are they part of the process, what is their contribution and finally how are they going to benefit from this process? This confusion led to some stakeholders in some of the associations not taking part in the establishment process. This point indicates the importance of making sure that all stakeholders are part of the establishment process and again they know exactly what is expected of them and how are they going to benefit by taking part in the process.

4.11.2 Functions

The functions of the associations were all uniform as indicated in the act. They are divided in terms principal functions and ancillary functions. The principal functions are mainly the functions that form part of the core business of the association. The ancillary functions are those functions that the associations would only perform on availability of resources. Very few of the associations are performing the ancillary functions due to lack of resources. Some of the associations indicated lack of interest in performing other functions except the supply of water to licensed users. This highlights a problem that could be faced by some of the members especially the emerging farmers who still need support. The NWA provides for support by the association only if there is support or resources available. However there are associations who have made it a priority that emerging farmers within their association receive necessary support that they need, (see Impala Water User's Association).

4.11.3 Representative structures

Two body structures are responsible for the management of the association. There is the management structure that deals with the day to day running of the association and the management committee, which manages the whole association. The management committee comprises of elected and nominated members from the bodies forming the association. The elected members are individuals elected from, e.g. the farmer irrigation boards along the resource area. These boards elect one member that will represent them in the management committee of the bigger association. The nominated members are individuals that are selected from the new institutions that are now part of the water user's association. The new institutions include the municipalities, industries, domestic water users, emerging farmers, etc. Some associations have executive committees that comprise mostly of elected members who the majority are white male commercial farmers. This was in other places expressed as a concern especially for new institutions, to have their members influence some of the committee

decisions. While this might be a concern for some members of these associations, there is a need to understand the background of these new water users associations. Most of them are transformed irrigation boards, which in the past were white male dominated, and this will still be the case until the transformation process is complete.

The change in the structural organisation of water user's association is expected in the new associations that will be formed after the new act. This is already the case with one new association that we researched. Although the process is not yet complete there was an expression that composition of the management committees and the executive committees would be equal and would representative of all member groups. (See Lebalelo WUA)

4.11.4 Institutional Arrangements

The objective was to find the relationships that the associations have with other institutions for effective delivery of services. The relations differed in between the associations. Most associations had relationships with DWAF specific for water related matters, e.g. water licences, etc. The relations did no go beyond this point. On the contrary there are associations that have already created relations with other institutions for effective service delivery and assistance to new members of their association. Some associations have acted as implementing agencies for the government departments; secondly they have acted as support to functions performed by DWAF. The fact that some of the associations have acted as implementing agencies, indicates that there are good relations that have been created and there is a possibility of these associations becoming a vehicle for implementation of development initiatives. However this is possible based on continued support with necessary resource.

5. CONCLUSIONS

The main conclusion of the research is that there are a number of ways in which WUA can be established and operated, in response to the needs of water users in South Africa. However, DWAF needs to develop policy and guidance on the preferred approaches, rather than this study proposing such guidelines. As such, the output of this project should be guidance to a DWAF driven policy and guideline process, taking account of the policy review, international experience and case study information.

5.1 Overview

The establishment of WUA varies from country to country depending on the purpose they are established for. While the associations may vary, there is one theme that they all have in common, i.e. the management of water and equitable supply thereof to all permitted users. In other countries the purpose goes beyond water supply, e.g. in Tunisia the associations play a role in sanitation. Secondly the supply of water is not limited to agricultural / irrigation use. Urban areas and industries in USA, Australia etc. still have associations responsible for water supply and related issues.

The purpose of WUA as expressed above clearly shows that they are mainly for water management and related issues. But at the same time it looks at who is affected by the purpose and how they are affected. The outcome of these questions is the planning, that will look at establishment of associations that will cater for everybody who is affected, including emerging farmers, rural communities around the resource area. This is the case in most developing countries. Therefore it is important that the purpose of the associations caters for all who is affected by it.

The case of South Africa is different when looking at the background of the new water users associations that have been established. The majority of them are transformed irrigations boards as indicated earlier, and it is well known that they were specifically for irrigation but at the same time it cannot be denied that that their inception omitted a lot of issues that could have been addressed, e.g. water supply to farm dwellers, support to emerging farmers. Therefore the irrigation boards were not created to cater for all who are affected. It is therefore important that all the associations established, explicitly spell out the purpose and everybody affected is made part of it. ***The research indicates that, some of the associations would like to retain their initial purpose. If this is the case, there is no solution, as the same issues omitted during Irrigation Board time are still not yet addressed.***

The indication here is that WUA associations are not established to perform one specific function. Instead the government can use them to manage and implement projects at local level. Therefore the other major role would be to act as the implementing agencies for the government. In South Africa this function is crucial in relation to emerging farmers, Rural Development Strategies, Poverty alleviation projects, etc. The WUA can be used as a vehicle to deliver these objectives. In terms of functions most associations did not see themselves performing any other functions besides water supply and the maintenance of facilities.

Government as well has a role to play within the provision of these functions. It is not that that the government will not provide any help. On the countries studied the following appeared to be the role of Government:

- Provide a regulatory framework that would safeguard the interests of all stakeholders;
- Regulate use of water in most sensitive water areas, e.g. ground water areas, polluted areas, etc.
- Ensure equitable deliveries by establishing clearly defined water rights and licenses.
- Finance new irrigation infrastructure
- Control water quality
- Assist in development of communities around water resource areas.

Therefore there is assurance that the government would definitely play a role in improving the conditions of associations and its members. In South Africa currently there is no clear indication of what kind of assistance would be provided by the government except the regulatory frameworks through the statutes. There is a need from the government side to indicated specific support that it would provide to associations especially now that the scope of membership have been increased to include communities that needs support from government.

5.2 Summary of the South African Experience

The South African experience on the establishment of WUAs includes transformed irrigation boards, as well as newly established associations.

When looking at the newly established associations, there are no problems experienced in that the associations are established from scratch with all members taking part and knowing exactly what is the purpose and what will be their contribution in the association. The new Lebalelo water users association presents a scenario where it is a combination of mining companies, domestic users and emerging farmers but members know what is expected of them and they serve in all representative bodies. The following are the critical issues.

5.2.1 Functions

The principal functions of the associations are a bit narrow when one compares it with the environment at which these associations are established. One of the associations' functions is the supply of water to all members, however there are people who are members but they do not get this service. This group would include emerging farmers, domestic users, etc. This in turn makes it difficult for this group of people to be part of the association where it is evident for them they would not get any support. Therefore there is a need to broaden the scope of functions in order to accommodate the circumstances in which these associations exist. As indicated before this also calls for government to make explicit terms of support they would provide to make these associations work for every body as currently not all members benefit from the establishment.

5.2.2 Institutional arrangements

The relationships established by associations with other institutions are very important as they open possibilities of support for the functions that they perform. Secondly there are other water management institutions that are in existence and some in the process of being established e.g.

CMA. There is a need by the associations to understand their functions as well as how can the associations position themselves within the bigger picture of water management initiatives by DWAF.

When looking at the associations' relations with other institutions, it was not strong on some of the associations. The majority only indicated DWAF as the main partner as it is the vital department for associations' existence. Most association did not see the importance of having relations with e.g. the department of agriculture. However other associations indicated strong relations with a number of departments and associations where they acted as implementing agencies, providing water, etc. This is an indication that new era in which these associations exist does not confine them to deal with water related matters only but other issues affecting their members. The guidelines should therefore emphasise the importance of establishing relations with other institutions.

5.2.3 Structure

The structure is a very much debatable issue when one looks at it from the point of transformed irrigation boards. The current arrangement is that there are nominated members as well as elected member, and then there is the executive committee. The elected members are mostly commercial farmers who served in the formers irrigation boards while the nominated members are members from the new institutions that have been part of the new water users association, these include, local government, emerging farmers, domestic users, industries, etc.

This current arrangement makes it difficult for the new members especially from the nominated pool to influence decisions taken by the association in that their number is limited, thus making them a bit powerless. However at the same time one cannot take away the fact that the commercial are running a business, they have investments at stake then somebody who only uses water for domestic purposes. The guidelines should therefore look at trying to find a balance of representation where all members would feel equally important and fully represented in the association. Currently there is still a feeling that nothing has changed; one will still find white male domination within the structures of these associations.

6. RECOMMENDATIONS

6.1 Introduction

The main conclusion of the research is that there are a number of ways in which WUA can be established and operated, in response to the needs of water users in South Africa. However, DWAF needs to develop policy and guidance on the preferred approaches, rather than this study proposing such guidelines. As such, this report has been written in the form of guidance to a DWAF driven policy and guideline process, taking account of the policy review, international experience and case study information[21].

This chapter begins with an outline of the various roles that WUA can play in different situations in section 6.2.This is followed by organisational and structural considerations for WUA, playing these roles in section 6.3. Thereafter, the institutional arrangements and requirements to support effective functioning are outlined in section 6.4. Finally, the key areas requiring further study and/or policy guidance are highlighted in Chapter 7.

6.2 Nature of Water User Associations

6.2.1 Role of a Water User Association

6.2.1.1 Purpose of a WUA

WUA are primarily designed as voluntary, cooperative associations of water users who wish to undertake water related activities for their mutual benefit, but established under the National Water Act (NWA)[22]. WUAs allow members to cooperate and pool their resources to address local water use related needs and priorities that are more appropriately managed collectively. They are particularly suited to managing infrastructure (schemes) and implementing local management activities. However, WUA may provide an appropriate vehicle to perform other water resources management (WRM) and/or water service (WS) functions at a local level.

With the adoption of integrated water resources management (IWRM), which implies decentralised and participatory management at the most appropriate level, WUA need to address all water users that may be affected by their management role within their area of jurisdiction. Depending upon the local situation, this implies the potential inclusion of users or both surface and ground water, whether they are agricultural, industrial, mining, municipal, domestic or recreational users involved in abstraction and/or waste discharge. In some cases this will require a revision or adaptation of the definition of the WUA area of jurisdiction to facilitate a more integrated and/or inclusive approach.

> *WUA need to broaden their scope to address all relevant water users of any resources that are affected by the proposed functions of the WUA in the relevant area.*

[21] Where DWAF policies or guidelines have already been developed, these are referenced and are not duplicated.

[22] Clarity on many issues around the roles and establishment of WUA are presented in DWAF (2001) *Guide 3 in the CMA/ WUA guide series: Establishing a Water User Association (WUA)*.

It is important to note that as an association of water users (as defined under the NWA) a WUA operates within the context of existing or planned water use entitlements. WUA membership will reflect the pattern of water use entitlement within the local area, although representation of other groups on the WUA is appropriate. It is not the responsibility of the WUA to change these patterns, but rather it is the responsibility of DWAF and/or the relevant catchment management agency (CMA) through the water use authorisation and/or compulsory licensing.

Effective transformation and establishment of WUA must be linked to reform in the allocation and authorisation of water use entitlements by the CMA and DWAF.

Nevertheless, as statutory bodies established under the NWA, WUA must give effect to the purpose of the NWA, which includes promoting the principles of sustainability, equity, efficiency, redress and representivity. As such, they do have a broader social responsibility to support the empowerment and in some cases access to water by previously disadvantaged local communities and water users[23]. However, this must be in the context of strategies and initiatives by the CMA and/or DWAF, as well as other relevant government bodies involved in social and rural development, as these institutions are primarily responsible for development and redress.

The role of WUA in local development and empowerment should be facilitated and supported by DWAF or the CMA to meet broader objectives.

6.2.1.2 Functions of a WUA

A WUA has not inherent powers of functions, but rather may perform those functions that are outlined in the Association's Constitution and have been delegated or contracted by the relevant authority. This should distinguish between the primary functions that are related to managing local schemes or resources for the members, and ancillary functions, which may include:

- performing WRM (catchment management) functions at a local level, delegated by a CMA.
- providing bulk (and possibly reticulated) WS, through contract with a water services authority.
- providing capacity building and/or management support to other bodies, local communities or groups of water users, particularly in response to a request by a responsible body.

WUA should only perform ancillary functions if this will not jeopardise its primary functions or the interests of its members, and this should be in response to a delegation, contract or formal request from the relevant responsible body (generally a CMA or WSA).

6.2.1.3 Distinction with respect to other bodies

WUA represent on component of the water sector institutional environment. There are a range of other bodies that have different roles and scales (levels) of operation, and are therefore suited to specific functions. WUA differ with the following bodies:

- *Catchment management agency* (CMA)[24] will be responsible for planing and implementing WRM within a water management area (WMA), and is particularly responsible for coordinating the activities of WMI within the WMA and authorising water use. The CMA is the apex WRM body within the WMA, while WUA are local bodies.

[23] Section 24 of Schedule 4 of the NWA requires WUA to financially consider corrective action for redress.
[24] The DWAF Regional Office acts as the CMA until a functional CMA is in place.

- *Catchment management committees* (CMC) may be established by a CMA to perform functions and represent all stakeholders at a catchment level. They are therefore more appropriate bodies than "umbrella WUA" for the coordination of WUA and allocation of water.

- *Catchment forums* are voluntary (and generally open) associations of stakeholders that are particularly suited to stakeholder communication, participation and consultation at a local catchment level. They differ from WUA in that they are not formally established under the NWA, do not primarily represent only water users, and are not typically designed to perform WRM functions.

- *Water services authorities* (WSA - local government) are responsible for ensuring access to water services (water supply and sanitation) to all residents within there are of jurisdiction. They may contract a water services provider to deliver services, which may include WUA in certain situations.

- *Bulk water services providers* (water boards and municipal utilities) may be established to manage infrastructure and supply treated raw water to a local water services provider (WSP) that then provides consumers directly with water services. A WUA may act as a bulk WSP where it is contracted to do so by the WSA.

6.2.1.4 Motivation to establish a WUA

It is advisable that WUA only be established where there is a real need for water users to pool resources and act cooperatively, which implies that it should be orientated around the management (control) of particular schemes, waterworks or local water resources. Then, if another more appropriate body has not yet been established, they may take on other roles and functions. This implies that a WUA should not be established to primarily address WRM priorities and allocation, provide WS, operate at a WMA, regional or national scale or to represent non-water user (general stakeholder interests).

> *WUA should not be established to primarily perform functions or activities for which other bodies are more appropriate.*

There are three generic ways in which a WUA would be established:

- Existing irrigation boards are required to transform into WUA[25].
- The Minister through DWAF may initiate the process of establishing a new WUA, which is most likely where there is a need to transfer responsibility for a government water scheme to the beneficiaries.
- A group of users may propose the establishment of a new WUA in order to conduct activities collaboratively.

In all cases, a consultation process is required to ensure all water users and stakeholders with an interest in utilisation of the relevant water resources have the opportunity to provide input and/or become involved in the WUA.

> *It is critical to the sustainability of the WUA that its objectives and functions reflect the needs and aspirations of its members, which requires active involvement of all water users in the development of its Constitution.*

[25] Further detailed information on this process is presented in the DWAF (2001) *Guide on transformation of Irrigation Boards into Water User Associations*.

6.2.1.5 Delegation of functions

While the WUA Constitution may indicate the WRM functions that the WUA intends to perform, actual responsibility for these functions needs to be delegated by DWAF (or the relevant CMA). This delegation may be associated with the transfer of staff (and possibly funds) to the WUA. Delegation may also be conditional, with the possibility for DWF (or the CMA) to intervene or retract the delegation if the WUA does not perform the functions adequately.

6.2.2 Characterisation of Water User Associations

6.2.2.1 Distinguishing WUA characteristics

The potentially wide-ranging roles and (primary or ancillary) functions of WUA in South Africa imply a diverse range of WUA. The following characteristics are useful in distinguishing different types of WUA, each with their own institutional arrangements and organisational challenges (as described in the remainder of this section):

- *Objectives*: whether this based on the management of physical infrastructure, control of the use of a water resources or local rural economic development.
- *Origins*: whether establishment was driven by irrigation board transformation, external pressures or internal membership needs.
- *Water user groups*: whether these are primarily agricultural, industrial-mining[26], recreational or waste discharge oriented.
- *Water resource*: whether this is international trans-boundary river basin or covers use of South African surface and/or ground water.
- *Physical system*: whether this is a relatively localised simple system or is a larger more complex system requiring more specialisation in management.
- *Social conditions*: whether the members are relatively homogeneous and have some degree of community cohesion or consist of various social groupings.
- *Commercial orientation*: whether the water use is primarily for commercial production or local consumption, which is related to the available financial and management resources.

6.2.2.2 Transformed Irrigation Boards

Irrigation boards tend to be focused on the management of an irrigation scheme (canal system and possibly associated WR infrastructure) may have been operating for many years and will usually have established modes of operation, supported by their usually “white” commercial farmer members. Although these WUA are likely to remain agriculturally (irrigation) dominated, the major challenge lies in expanding their representation to include other groups of users (possibly including emerging farmers and community interests), which may require a redefinition of the area of jurisdiction. This implies the need for a change in the WUA structure (particularly the management committee), management systems and institutional relationships, with the move from a relatively homogeneous association to a potentially less socially cohesive membership group. In the short to medium term, fundamental transformation of the WUA will be hampered by the limited reform in water use entitlements (and land reform). However, DWAF should ensure that existing and potential water user groups are represented in the management of the WUA, even before this reform has taken place.

[26] This assumes that a WUA will not be established primarily for municipal or domestic use, because there are more appropriate water services institutions to serve this purpose.

Although DWAF must ensure adequate transformation of irrigation boards, this should not be delayed due to inequitable water use entitlements, but rather controlled through a phased (conditional) delegation of functions and expansion of the membership base.

6.2.2.3 New Generation Commercially Based WUA

As the institutional transformation of the water sector is rolled-out and the role and advantages of WUAs become clearer, WUA will be established to facilitate cooperative management by a range of commercial-productive water users (most likely agricultural, industrial and/or mining). In most cases, they are likely to be oriented around the development and/or management of a scheme or waterworks required for abstraction, waste discharge and/or possibly recreation. Once again, these are likely to be larger, commercially oriented and relatively heterogeneous WUA, requiring the appointment of specialised operating capacity. Although, these WUA are likely to have access to resources, they are more vulnerable in terms of membership support and cooperation until the benefits and cooperative systems are in place (particularly it this coincides with times of water stress). This may require additional oversight by DWAF to prevent stronger members from dominating the WUA or acting independently (or illegally). Membership and representation of these WUA must also be based on existing or proposed water use entitlements. However, DWAF is likely to have more flexibility in cooperatively changing water use entitlements to include previously disadvantaged groups, particularly where the WUA is dependent upon an authorisation to develop new WR infrastructure (with associated increases in yield).

6.2.2.4 Developmental WUA

A WUA may be established to facilitate the management (including access) of water use (generally associated with a supply scheme) and associated support by poor rural communities[27], primarily for productive activities. In most cases, this will be a relatively homogeneous and socially cohesive community with access to communal land (and possibly an existing scheme) or a land reform project, but with limited internal resources. Therefore, the external financial, technical and managerial support is critical over the short to medium term, as is the selection of technology for upgrading or developing associated schemes (with preference for robust infrastructure that can be managed by the members). Where this support is available, it provides an incentive to cooperate, but the WUA will be particularly vulnerable to non-participation by members, particularly if establishment coincides with hydrological, social, economic or institutional conditions that present difficulties. Although DWAF has a key role in these WUA, support from other departments and particularly local government is critical to the success and sustainability of developmental WUA.

Developmental WUA have specific requirements for support from DWAF (and the CMA), as well as other departments and local government involved in rural development.

6.2.2.5 International WUA

WUAs representing water users from both South Africa and another country have specific challenges, not least of which is the need to manage these through international agreements. While the preceding WUA are primarily accountable to their members, with the CMA (or DWAF) responsible for oversight and support, the major challenge of these international WUA is that they must operate in a more complex institutional environment[28]. They are most likely to

[27] DWAF (2002) is in the process of developing a draft policy on the *Empowerment of the poor through Agricultural WUA*.

[28] The SADC Protocol on shared watercourses provides a further policy framework within which these WUA must operate.

manage large complex systems for commercial agriculture based, with access to resources and the need for specialised operators, but with little social cohesion. Cooperation will have to be through clearly defined organisational management systems and system operating rules (based on agreed international allocations). DWAF has less flexibility to reform water use entitlements, unless this is explicitly incorporated in the agreement and

6.3 Organisational Considerations

6.3.1 Constitution

The WUA Constitution outlines the organisational basis upon which the WUA is founded, indicating the functions, membership, management and financing of the organisation[29]. This, together with the annual business plan (which gives it substance), outlines the way in which the WUA is proposed to function operationally and financially. The Constitution must be approved by the Minister prior to establishment of the WUA (or the transformation of an irrigation board). The Schedule 5 model Constitution is appropriate for commercially based WUA as these tend to be relatively sophisticated organisations requiring accountability between members, management and staff.

> *Developmental WUA will tend to be more locally based member operated associations, potentially consisting of semi-literate members with little legal knowledge, and therefore a more simplified Constitution may be appropriate.*

6.3.2 Membership

The WUA Constitution should specify the requirements for membership, which should be based on water use entitlement under Section 21 of the NWA. Not all water users in the WUA area will necessarily need to wish to be members. A distinction must be made between membership of the WUA and representation on the WUA management committee (see the next section). It is not necessary or appropriate for all people using water under Schedule 1 of the NWA to be members of the association (and in most cases the WUA Constitution specifically excludes this group). Similarly, it may not be necessary for waste dischargers or even a municipality abstracting from a resource to be actual members of a agriculturally oriented WUA (even though they all use the same resource) with the objective of managing an irrigation scheme.

Membership of the WUA is also voluntary, so an entitled user may not wish to be a member. However, all water users are liable to pay the relevant water use charges according to the *Pricing Strategy for Raw Water Use Charges*, some of which may be used to fund activities of the WUA (including the management of schemes). This may motivate users to become members of the association, in order to influence the way in which functions that affect them are performed and their charges are spent.

Different categories of membership may be defined according to water use type (or sector), supply scheme, water resource used and/or support requirements. Each membership group would have its own rights and responsibilities, particularly in funding and managing infrastructure. The following examples illustrate situations where sub-division may be appropriate:

[29] Schedule 5 of the NWA provides a fairly clear model Constitution, and therefore the detailed requirements are not dealt with in detail here (except where it has an impact on organisational considerations).

- Farmers abstracting from groundwater resource using their own pumping facilities and farmers supplied by a surface water scheme.
- Irrigators supplied by independent distribution schemes (canal network), but abstracting from the same resource supplied by a local dam.
- Individual mines abstracting directly from a river supplied from a dam and irrigators supplied via a scheme supplied from the same dam.
- Emerging farmers to whom a subsidy and specific support must be channelled and commercial farmers.
- Irrigators abstracting from a tributary and irrigators abstracting from the main river supplied from an upstream dam.

6.3.3 Management Structure

A management committee is responsible for representing the members' interests in the strategic and operational management of the WUA, in terms of the powers and functions specified in the WUA Constitution and the WUA business plan. The composition of the management committee and their terms of office must be specified in the WUA Constitution and may consist of:

- *Elected* members of the WUA, possibly distinguishing between representatives of the different categories of members (see below) and/or elected members of a sub-area executive committee. The voting powers (number of votes) of members must also be defined in the WUA Constitution, based on a proxy for water use (such as an entitlement, volume of authorised use or land area).

- *Nominated* representatives of other water user interests in the WUA area (that are not members of the WUA), possibly including emerging farmers (before they have water use entitlements), municipal, industrial, mining, rural households and/or recreational users. They may also be representatives of related interests, including local "downstream" industries of the primary production (such as sugar mills). The groups (particularly organisations) and rules for nominating (or electing) these representative should also be indicated in the WUA Constitution.

  The number of seats on the management committee allocated to elected members should equal or exceed the seats allocated to nominated representatives, as the WUA should primarily represent its members interests.

It may also be appropriate to establish an executive committee with relevant functions and responsibilities to manage the affairs of a sub-area (as defined in the WUA Constitution) representing one or more categories of members. As with the management committee, the composition of the executive committee must be defined in the WUA Constitution and may consist of elected members and nominated representatives, as well as coopted members of the management committee whose interests may be affected or their expertise required for specific decisions.

Water use and community representation is largely addressed by the preceding considerations, but these do not necessarily address racial and gender representation on the management committee (as required of WMI in the purpose of the NWA), except for nominated seats.

Although racial and gender representivity can be specified in the WUA Constitution as a principle, giving effect to racial representation is largely premised upon reform of water use entitlements, while gender representation needs to overcome the common practice of the male "head of household" being the WUA member.

6.3.4 Organisational Planning and Management

6.3.4.1 Annual business plans and reports

As a WMI, a WUA is required to develop an annual business plan (including financial matters) and submit it to the Minister for comment[30]. It is also required to prepare an annual report on its operations and finances and submit these to the Minister and the Secretary to Parliament.

This planning and reporting places a considerable organisational and financial burden on the WUA and its management committee. Nevertheless, is necessary for the protection of both the public interest (in terms of delegated functions) and members' interests (in terms of activities performed and money spent) and provides an important mechanism to clearly establish the organisational priorities and operational intent of the WUA. This is particularly important in larger more complex and heterogeneous organisations, where the members do not interact regularly with each other, the management committee or the staff. The WUA must comply with the requirements of the Public Finance Management Act. Together these requirements emphasise the importance of establishing a WUA only where it is necessary to serve the cooperative requirements of water users, and to create or use other bodies where appropriate.

The annual business planning and reporting requirements may be too complex and resource intensive for a developmental WUA. Either the requirements should be relaxed in line with its nature as a community organisation, or other institutional vehicles should be adopted[31].

6.3.4.2 Staffing requirements

The appointment of staff depends upon the functions to be performed and the complexity of the systems to be managed. This may vary from a few part-time personnel (including a manager) for WUA in which members perform most of the functions, up about 50 staff for WUA that are responsible for the operation and maintenance of significant physical infrastructure and the monitoring and control of water use. A key imperative of user based associations is that the costs and therefore the organisational staffing should be kept to a minimum.

This raises important issues around the WUA role in the maintenance of infrastructure, as this is an ongoing cost that can be avoided in the short term (potentially resulting in public safety threats and costly rehabilitation in the longer term). Although this needs to be monitored for WUA developed and owned schemes, it has significant policy implications for the transfer of management responsibility and/or ownership of DWAF infrastructure to WUA[32]. This is particularly relevant for the conditions of transfer for operational staff associated with a scheme, in terms of the conditions and long-term stability of employment.

The employment conditions of staff transferred from DWAF to WUA need to be weighted against

[30] Schedule 4:Part 4 provides the statutory requirements for the business plan, and these have been further developed in DWAF *Guidelines for Business Plans*. The requirements and form of the business plan and annual report are therefore not expanded upon on this document.

[31] The use of other institutional vehicles (possibly established by other departments or as private entities) may require a relaxation of the DWAF requirement for financial support to emerging farmers to be channelled only through a WUA.

[32] This is a policy issue that DWAF needs to address, namely under what conditions is it better for DWAF to maintain or transfer ownership for water resources infrastructure if operation and maintenance responsibility is transferred.

the efficiency requirements of a user based organisation, with the onus on DWAF not to transfer people that are not required to cost-effectively perform the functions.

6.3.4.3 Financial management

The financial planning, monitoring (including annual independent audits) and reporting requirements of Schedule 4 of the NWA should ensure protection of the interest of the WUA members as well as government. It is important that the WUA transparently indicates the way in which charges are assessed on its members (under the Pricing Strategy). Transparent financial management is also required of these charges, together with any financial support, payment for services rendered to other organisations and/or transfers of other charges collected by the WUA to a CMA (or other body).

The management committee must fulfil its fiduciary duty in planning and managing the WUA finances, taking account of the need for financial viability of the WUA. Although there is no compulsory reserve fund (unlike irrigation boards), there is a need to maintain reasonable financial reserves[33]. Section 24(b)(i) indicates that these reserves need to provide for "corrective action to redress the results of past racial and gender discrimination in the use of water resources". However, this is a general clause for WMI and is probably more applicable to CMAs in implementing their responsibility for reform of water use entitlements.

6.4 Institutional Requirements

6.4.1 Institutional Arrangements

6.4.1.1 External Implications for WUA Sustainability

The success and sustainability of a WUA is dependent upon a combination of the local physical and technical conditions, the internal organisation and management of the WUA and the external institutional environment within which the WUA operates. WUA are an important component (local "building block") of the institutional arrangements within the water sector and as such both DWAF and the relevant CMA have an interest and responsibility to promote their sustainability.

Although it may be possible for certain large, capacitated WUA to be relatively independent and self-sustaining, most WUA will require some support and interaction with other institutions. This may range from networking, information sharing or training, to financial, technical or managerial assistance. Furthermore, a clear policy environment and effective regulatory oversight is necessary to facilitate the stable and appropriate establishment and operation of WUA.

WUA success and sustainability should not interpreted as self-sufficiency, but rather what are the requirements for support and interrelationships that will promote sustainability.

6.4.1.2 Policy and legislative context

Clear, appropriate, facilitating and supportive policies and legislation are required for effective and sustainable WUA. The NWA provides the framework legislation for WUA, which is specific on organisational and management requirements, while the DWAF (1997) *White Paper on a National Water Policy for South Africa* provides little guidance on WUA. However, there are a number of policy issues that require further clarification, many of which concern institutional

[33] After transformation of a WUA, whether to use or maintain the irrigation board's compulsory reserve is at the discretion of the management committee.

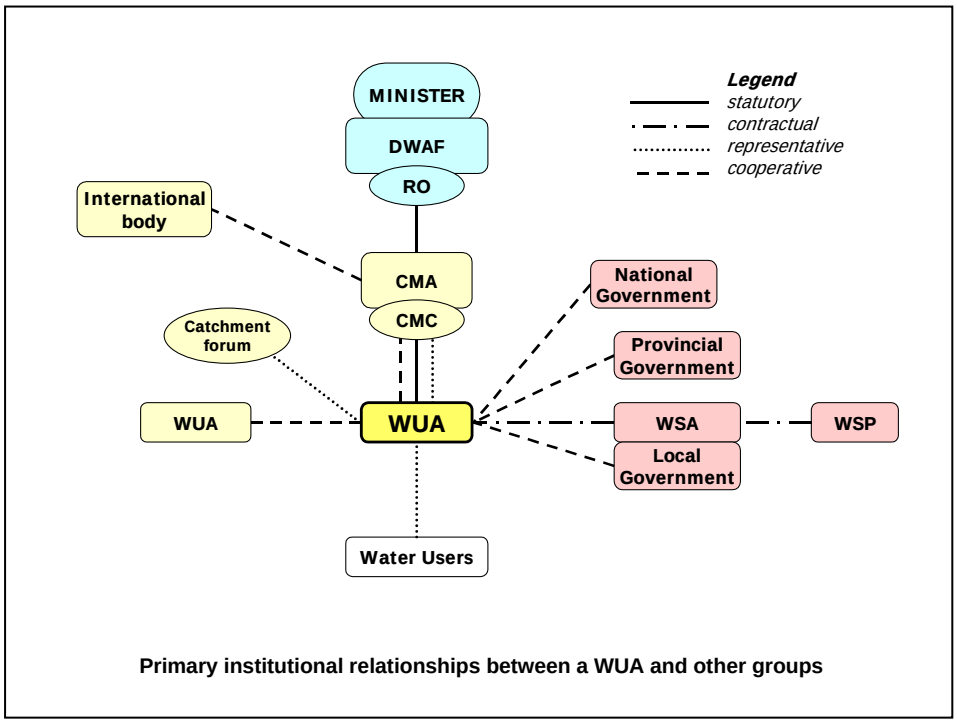
relationships and roles. The key issues arising from this study are highlighted in Chapter 5.

6.4.1.3 Institutional relationships

During the establishment and functioning of a WUA, it will interact with a range of other groups and organisations and should develop strong relationships with many of these. Institutional relationships may be categorised in the following way (although in practice more than one type of relationship may be developed with another organisation):

- *Statutory* relationships can be seen as those that are governed by the NWA (in the case of a WUA), which would specifically be with the Minister (through DWAF) and the CMA. The CMA and DWAF would be responsible for establishing and monitoring the WUA, delegating or assigning functions, providing financial or training support, and intervening (through a directive) where necessary.
- *Representative* relationships include both the representation of the WUA members (and nominated interests) by its management committee and the representation of the WUA (or its interests) on other bodies, such as catchment forums and the CMA (or an established CMC). Whether this is formal or informal, representation implies some degree of accountability and influence.
- *Contractual* relationships may be established between the WUA and any other body for which the WUA provides services or that provides services to the WUA, usually in exchange for remuneration. Where a WUA provides water services for a WSA (local government), this should be governed through a contractual relationship. Similarly a CMA could contract a WUA to provide a service, rather than delegate the associated function.
- *Cooperative* relationships may be developed by the WUA with a range of government departments and local government[34], particularly where their mandates affect the WUA objectives. These relationships may need to be formalised where direct support is required from these other government bodies. On the other hand, cooperative relationship may be developed between WUAs, as well as with other civil society and private sector organisations with the purpose of networking and sharing information.

Important institutional partners and the primary relationships are indicated in the following figure.



Primary institutional relationships between a WUA and other groups

6.4.2 Institutional Support and Oversight

6.4.2.1 Technical support, skills transfer and capacity building

To be effective and sustainable, most WUA will require managerial, technical or financial support, through external personnel assistance and/or training and awareness (capacity building). This support is primarily the responsibility of DWAF, the CMA and potentially other government departments (such as Agriculture) and should be focused in three key areas, namely:

- Building capacity (training) and providing assistance to the *WUA leadership* (i.e. management and executive committees), in terms of the institutional and management requirements of a WUA, including business and financial planning.
- Building capacity and providing assistance to the *WUA staff* (and/or members involved in operational activities), in terms of technical operations (and possibly financial management).
- Creating awareness of the *WUA members*, in terms of their rights and responsibilities, as well as the management, financial and operational responsibilities of the WUA leadership and staff.

The required type of capacity building will obviously depend upon the functions that the WUA is responsible for, as well as the complexity of the system and the existing capacity of the members. Although this support should be ongoing, it is particularly important during and immediately after establishment of a WUA (and if additional functions and responsibilities are transferred). It is also absolutely necessary for the sustainable establishment of developmental WUA.

An alternative mechanism to establish capacity within the staff structure, that can then be used to create capacity within the leadership and membership, is through the transfer of DWAF staff associated with schemes (or possibly functions) to be transferred to the WUA.

6.4.2.2 Institutional regulation, monitoring and intervention

Implementation of the policy and legislative requirements for a WUA must be supported by effective institutional regulation, including monitoring and intervention. This must ensure that the policies and laws are implemented correctly, as well as protect the interests of the WUA members and the government (particularly where state assets, functions or finance are concerned). Once again, this is the role of DWAF, supported by the relevant CMA.

> *DWAF's (and the CMA's) institutional regulatory function should have both supportive-facilitating and oversight-intervention elements to ensure sustainable WUAs.*

6.4.3 WUA Involvement in Water Services

The South African Constitution specifies that it is a local government responsibility (as the WSA under the Water Services Act) for ensuring access to water services. Therefore, any involvement that a WUA has in water services must be on behalf of the WSA, preferably under contract to the WSA. In this situation, the WUA would act as the water services provider (WSP), and should be paid by the WSA for services rendered. The WUA would not be a water services intermediary, but rather may provide water to members who are acting in this role (particularly farmers providing water to their labourers).

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[34] As an organ of state, a WUA has a duty to promote cooperative governance. In fact, developmental WUA may provide a vehicle to coordinate government rural development initiatives at a project level.

WUA that are involved in the management of water schemes for other purposes are suited to providing raw (or even) treated water as a bulk WSP. However, WUA should avoid becoming involved in reticulation and customer provision (including tariff collection), as this requires different types of capacity. The WUA should also specify in their WSP-WSA contract issues that may affect service provision, such as potential breaks in water supply associated with annual (two weekly) maintenance on canal systems (in which case the WSA would be responsible for ensuring supply during that period).

6.4.4 Financial arrangements

6.4.4.1 Water Use Charges

A WUA may recover its lawful costs by assessing charges on its members according to the pricing strategy[35], which currently allows charges to cover the costs of water resources management, as well as charges to cover the costs of infrastructure development and operation. A WUA may be involved in either of these activities, depending upon the functions outlined in the Constitution and that have been delegated to it. Charges are based on the authorised volume of water (entitlement), which is derived from irrigated or afforested area in the case of irrigation and forestry users.

6.4.4.2 Billing, collection and financial transfers

Where a WUA collects charges from its members, it is appropriate for the WUA to collect all water use charges and transfer the relevant portion to the CMA (or DWAF). Combining all charges on one invoice, prevents member water users from being invoiced by a number of bodies for water used. However, this requires the WUA to incorporate its charges onto the invoices generated by the Water Use Authorisation and Management System (WARMS). On the other hand, if DWAF or the CMA is invoicing and collecting the charges, a portion of this would be transferred to the WUA.

6.4.4.3 Financial support

A WUA may be supported financially during its establishment or operation, particularly if it is involved in empowering marginalised communities and/or supporting redress of previously inequitable allocations. Included in this would be support to emerging farmers that may be channeled through a developmental WUA or the relevant sub-area executive committee.

6.4.5 Institutional Models for WUA Structure

In South Africa there is a major challenge in addressing the specific (and potentially different) needs of various water user groups within an area. This is particularly relevant to the situation of commercial water users adjacent to “developmental” water users, such as emerging farmers, but may equally apply to different commercial irrigation schemes abstracting from the same resource. The following institutional models (reflecting different approaches to organisational federation) may be established to address this situation (as indicated in the following figure):

- *Sub-divided WUA* is based on an internal distinction between groups or areas within the WUA, with executive committees being established to manage the affairs of the sub-areas, each of which has representation on the WUA management committee, which would play a strategy and coordination role.

[35] The *Pricing Strategy for Raw Water Use Charges* (Government Gazette 20615 - 12 November 1999) specifies the requirements and possibilities for setting charges, and is not repeated here.

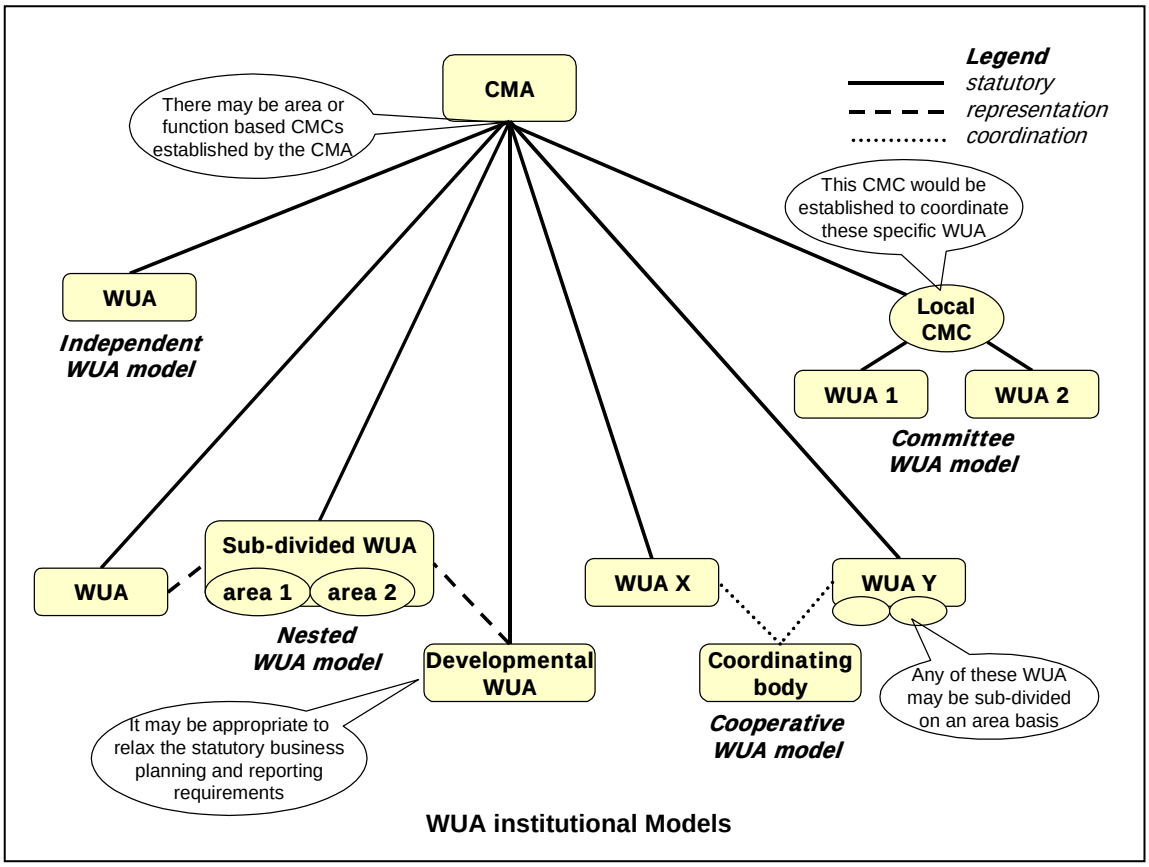
The advantage of this model is that management of all water use in an area can be coordinated, while allowing the sub-committees to maintain their focus on specific activities. Similarly, capacity and resources can be shared between groups, while maintaining financial and management autonomy, where appropriate. A drawback of this model is that smaller, potentially less capacitated groups may be dominated by the more powerful established groups. Nevertheless, it is the recommended model for the South African context.

- *Individual cooperative WUAs* may be established for each group, with agreements between the WUA or bodies for coordinating management and sharing capacity.

Although this model seems to facilitate autonomy between the groups, impacts that the groups may have on each other are more difficult to manage and are dependent upon inter-WUA cooperation (which can be difficult to maintain). This model can easily lead to a proliferation of small WUA, which can work against the principles of IWRM and institutional viability, and places significant coordination and regulatory requirements on the CMA (or DWAF).

- *Committee WUA* with coordination between WUA by a catchment management committee as part of the CMA, provides a formal body to coordinate inter-WUA cooperation.
- *Nested WUA* with lower level WUA for specific groups, with membership on the higher level WUA.

This is a pragmatic solution, particularly where certain groups need a formal body to represent them in non-water functions (such as agricultural product marketing).



WUA institutional Models

7. POLICY ISSUES AND FURTHER WORK

This study has identified a number of issues that require further work. Most of these need background research study leading to DWAF policy and guidelines. However for some, DWAF needs to provide clarity. The following are of particular importance (some of which DWAF is currently initiating or conducting processes to address).

- Fundamental transformation and community, racial and gender representation on WUA is dependent upon reallocation of water entitlements to redress past inequities. Therefore, the process of authorisation and compulsory licensing needs to engage the implications on WUA establishment and functioning. A number of issues are related to this, namely:
  - The role and responsibility of WUAs in terms of the facilitating redress of water entitlements and access to water by previously disadvantaged groups, as this is primarily a DWAF (or CMA) responsibility.
  - The responsibility of WUAs to ensure racial and gender representation in membership and leadership, given that this is largely determined by entitlements and the selection of the water use member (representative) at a household or organisational level.
  - The role and responsibility of a WUA to support and/or build capacity in previously disadvantaged groups, within the strategies and to meet the objectives of DWAF and the CMA.

- The Pricing Strategy provides the framework for collecting water use charges, for WUA and CMA costs. This indicates that the members (and other benefiting water users) should cover the costs of the primary functions of the WUA. However, clarity is needed on the funding of ancillary functions, particularly where these are more the mandate of DWAF or the CMA (such as capacity building and support of previously disadvantaged communities).

- Although a policy process has been initiated on the role of agricultural WUA as vehicles for rural development and poverty eradication, a number of issues remain (as indicated in that process). In particular, innovative approaches need to be developed (either in the context of WUA or other bodies) to enable integrated departmental initiatives. This may require DWAF to allow water use subsidies (particularly support to emerging farmers) to be channelled through local bodies other than WUA.

- This study has indicated that WUA may play a role in water services, but as water services providers contracted by the relevant water services authority. Furthermore, it is recommended that WUA should address bulk water services, and should avoid becoming involved in water services provision to individual customers or households.

- The issue of transfer of ownership linked to the responsibility for operation and maintenance of water resources infrastructure needs to be resolved for WUA. It is relatively clear at the scheme level, but the advantages and disadvantages of WUA ownership of previously DWAF infrastructure needs to be weighed.

- Similarly, issues around the transfer of staff (associated with functions and/or schemes) need to be clarified, particularly in terms of the conditions and guarantee of employment.

- Although, it is not the model that is recommended by this study, the concept of umbrella WUAs needs to be engaged and a policy position developed.

- The minimum requirements for participation in the establishment of a WUA should be clarified, as this uncertainty is delaying a number of processes.

- Similarly, clarity is needed on the requirements for representation (or membership) by all water users using water resources within an area.

- Guidelines are needed on the minimum requirements for WUA business plans and annual reporting (fleshing out the requirements of Schedule 4 particularly for WUA). An assessment needs to be made as to whether these requirements (as well as the requirements for the Constitution) may be relaxed for developmental WUA.

- More research leading to a policy position is needed on the potential role of WUA in managing local water allocation and water markets between members.

- Streamlining the process of establishing and approving WUA. May be possible relaxation of requirements for establishing and reporting within the context of Minister's responsibility.

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