

# Basin management approach

## *A guidebook*

2nd Edition  
Revised and updated



Ministry of Agriculture, Water and Forestry

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# Preface

Namibia's arid climate and highly variable rainfall has always posed a special challenge in ensuring the sustained supply of fresh water. The challenges these days are, however, even greater. Population growth, a developing economy, increased standards of living and the growing threats of pollution that go hand-in-hand with these, place even more pressure on our precious water resources. Managing demand to ensure the sustainable supply of water to meet the variety of needs now and in the future – especially under the threat of climate change – requires an integrated approach, involving all stakeholders. Mutual understanding of our water needs in our diverse society and economy and the limitations of our water resources is essential to the equitable, efficient and assured long-term supply of water.

Through the reform of our water sector following Namibia's independence, the advantages of implementing such an integrated approach were recognised and were adopted as policy in 2000. Applying this approach over a common drainage area – the river basin – and shared water resource was recognised as the most sensible unit over which to apply integrated water resources management. Implementation of this so-called basin management approach has since been piloted, tested and implemented in a number of basin areas in Namibia over the past decade.

A guidebook, first published in 2005, by the Desert Research Foundation of Namibia – a non-government partner of the Ministry of Agriculture, Water and Forestry – has assisted practitioners and stakeholders implement the approach in a number of basins, sub-basins and water management areas. This second edition of *Basin Management Approach: A guidebook* takes the best practices and lessons learnt through their efforts to assist others in the further implementation of this integrated management approach. It is our hope that this booklet will help water users throughout the country become partners in managing our water resources together.

Abraham Nehemia  
Undersecretary  
Ministry of Agriculture, Water and Forestry

# Acknowledgements

The second edition of these guidelines has been produced after putting the basin management approach into practice in a number of basins in Namibia over the past eight years. It takes the lessons learnt and best practices from these experiences. The many stakeholders in basins around the country who supported this process in its infant stages are gratefully acknowledged. Without their tireless participation, implementation of the basin management approach and the production of this booklet would not be possible. These stakeholders include government officials, and representatives of private sector institutions and businesses, state-owned enterprises, and non-government and community-based organisations. Thanks also go to the basin support officers, the BMCs and other implementers who have helped shape the basin management approach in Namibia and provided valuable input and comments on drafts of this second edition.

## List of abbreviations and acronyms

BGR	Bundesanstalt für Geowissenschaften und Rohstoffe
BMA	basin management approach
BMC	basin management committee
CBO	community-based organisation
DRFN	Desert Research Foundation of Namibia
EU	European Union
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH
IBMC	lishana sub-Basin Management Committee
IWRM	integrated water resources management
MAWF	Ministry of Agriculture, Water and Forestry
NCCI	Namibia Chamber of Commerce and Industry
NGO	non-governmental organisation
PS	Permanent Secretary (of MAWF)

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# Background to the basin management approach

## What is the basin management approach?

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Water is probably the single most important natural resource. All forms of life, land use, economic activities and natural processes are dependent on it. They, in turn, affect the balance and quality of water. To ensure that there is enough water of acceptable standards for us all, and to support our various economic activities and our natural environment – at present and for the future – we need manage it carefully. This is especially true in a country as arid as Namibia.

To manage our water resources effectively, we need to understand what water resources we have, how they function and the demands placed on them. We also need to understand how our actions and activities threaten the health of our water resources. Considering all these aspects and the relationships between them provides an integrated approach to the management of water. It recognises that water and the land over which it flows are inextricably linked. What happens upstream, affects the quantity and quality of water downstream. Consequently, an area of drainage – or basin – is considered the most appropriate unit for the management of water resources.

Taking an integrated approach in the management of such a shared water resource is *the basin management approach* – BMA.

## Basic principles

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In the past, water resources in Namibia were formally managed through central government. In the late 1990s a process to review the water sector was carried out. An integrated approach to the management of water resources was recommended. The idea of managing water resources at a basin level was introduced to stakeholders. Stakeholders indicated a willingness to assist in the management of their water resources, especially given the problems associated with our arid climate. This approach also supported the policy of decentralisation being promoted in Namibia at that time. The basin management approach (BMA) was subsequently adopted as policy in the 'White Paper' (MAWF, 2000).

At that time, there was a growing regional and global awareness of the value of integrated water resources management – or IWRM, as it became known. At the World Summit on Sustainable Development in Johannesburg in 2002, a call was made for countries to adopt and implement it. It is now considered the way to effectively and efficiently coordinate water development for long-term economic and environmental sustainability.

In Namibia's BMA, functional responsibilities for the integrated management of water resources are vested in basin management committees (BMCs). The need to form institutions to manage water and related resources within a basin was identified in the National Water Policy White Paper (MAWF, 2000), under the basic principle of stakeholder participation. The Water Resources Management Bill of 2013 (and previous to that the Water Resources Management Act of 2004) further elaborated on the establishment and role of BMCs.

*“BMCs are platforms for stakeholder engagement and collaboration.”*

The BMC represents the various stakeholders in the basin being elected by them through a stakeholder forum. The BMC is designed to facilitate the participation of all stakeholders with an interest in water and provide feedback to central government, allowing government and the community to work together.

## *Guiding principles of IWRM*

There are five principles to integrated water resources management (IWRM):

1. Fresh water is a finite and vulnerable resource, essential to sustain life, development and the environment.
2. Water development and management should be based on a participatory approach, involving users, planners and policy-makers at all levels.
3. Women play a central role in the provision, management and safeguarding of water.
4. Water has an economic value in all its competing uses and should be recognised as an economic (and social) good.
5. The management of water should integrate three EEs – economic efficiency, equity and environmental and ecological sustainability.

The BMA is guided by the principles of IWRM, as well as:

- *Openness*: It is open to voluntary participation by all concerned, affected and interested stakeholders.
- *Inclusiveness*: All views are represented.
- *Transparency*: Information is freely available and directly accessible in an understandable form to those who are or will be affected by decisions.
- *Flexibility*: Opportunities exist to revise activities and re-visit issues.
- *Reiteration*: It requires continuous evaluation, review, revision and adjustment on an ongoing basis.
- *Information-rich*: It includes gathering, synthesising, interpreting, reviewing, revising, disseminating and archiving all relevant information available on the basin for use by all stakeholders.
- *Capacity enhancement*: It enhances the capacity of stakeholders to actively participate in the process and basin management initiatives.
- *Shared vision and understanding*: It facilitates the establishment and ongoing refinement of a shared vision amongst all basin stakeholders and the ongoing enhancement of stakeholders' understanding of the basin and its structure and functions.
- *Environmental and economic sustainability*: It focuses on identifying options and opportunities for sustainable development in the basin and the implementation of these.
- *Integration*: While water resource management is its core business, it promotes integrated, multi-sectoral approaches to basin management and development.
- *Representation*: The interests and contributions of institutions and stakeholder groups are developed and shared through active representation.



## Why is the basin management approach a good idea?

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Many of the challenges that exist in river basins are as a result of the resources being required for a number of diverse uses. They are needed to support people and their large- and small-scale economic activities, as well as maintaining a healthy ecosystem so that it can continue to provide resources and services.

The aim of the basin management approach (BMA) is to involve basin stakeholders in the effective and sustainable management of the water resources with support from the relevant service-providers and government ministries. The objective of stakeholder participation is to improve decision-making by ensuring that:

- decisions are soundly based on shared knowledge, experience and scientific evidence
- decisions are influenced by the views and experiences of those affected by them
- innovative and creative options are considered
- decisions are workable and publicly owned.

The BMA creates an awareness and understanding of the demands placed on water and other natural resources and the challenges, concerns and solutions in managing them. Such understanding leads to greater cooperation and coordination and improved management and conservation of your resources to the benefit of the basin community now and in the future.

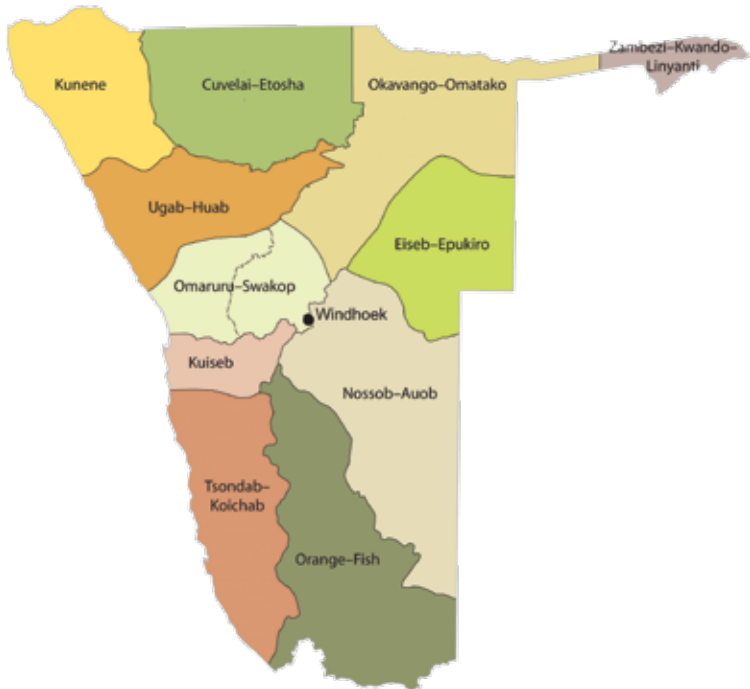
The BMA in Namibia is most useful where real threats or concerns to the availability of water have been identified, and/or the following conditions prevail:

- limited water and/or high demand for it
- demand for water exceeds availability
- poor water quality restricts its use
- competition between water users exists
- susceptibility to water-related disasters, such as floods or drought
- natural resources related to water – vegetation, land, soil – are under pressure
- pollution threatens water resources
- water governance is in crisis.

## What's been done so far?

Based on a number of criteria, Namibia was divided into eleven main basin management areas. The main criteria used, amongst others, included:

- geographic extent of surface and groundwater catchments
- water supply infrastructure and schemes
- land use
- administrative regions and areas
- population density and settlement.



The basin management approach has been implemented in five of these basin management areas. First piloted in the Kuiseb Basin, initiatives soon followed in the Cuvelai-Etoshia, Omaruru-Swakop, Orange-Fish and Okavango-Omatako basins. These initiatives either included the entire basin, or sub-basins of these areas. As a result there are currently a number of basin (and sub-basin) management committees established in Namibia and working towards improving water resource management in their respective areas.

## How has it made a difference?

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By sharing information and through training and a number of initiatives, basin management committees (BMCs) have had some influence on improving resource management throughout the country. By identifying areas of concern in an integrated forum, solutions have been found. Examples of how the basin management approach (BMA) has made a difference on the ground in recent years, follow below.

### *Improved knowledge*

*Groundwater pollution:* The smelter in Tsumeb was suspected of polluting groundwater. By sharing information at forum and BMC meetings, their environmental expert made a presentation on their operations, findings on the research they had carried out, improvements they had made and how they intended to further improve operations. This helped dispel any misconceptions.

*Understanding water resource recharge:* By sharing information on research into the effects of small dams in the upper catchment of the Kuiseb Basin, fears that these were seriously affecting flows to the lower reaches and the recharge of alluvial aquifers there, were alleviated.

*Improved water supply:* The Regional Council in Niipele sub-basin has been able to provide a more secure water supply to permanent settlements by using monitoring boreholes. This came as a direct result of issues raised at a stakeholder forum meeting and taken up with MAWF.

### *Coordination*

*Flooding:* Flood forecasts and early warning information are provided through the Iishana sub-Basin Management Committee (IBMC) office. BMC coordination has significantly improved disaster management, preventing loss of life and property, and giving credibility to BMCs.

*Veld fires:* Coordination by the BMC has significantly improved efficiency in the response of different agencies to veld fires.

### *Mediation*

*Wildlife conflict:* Human–wildlife conflict centred around animal watering points was mediated between farmers and officials of the Ministry of Environment and Tourism by the BMC.

*Forestry resource conflict:* An amicable solution between the conservancy and forest association in Niipele through the intervention of the BMC led to reduced conflict over resources.

## *Regulation*

*Wastewater discharge permits:* As a result of BMC meetings, the regional council and three town councils of Olushandja sub-basin have started taking wastewater management seriously and applying for licences in accordance with water and environment legislation.

*Sanitation guidelines:* Following BMC meetings and training, Oshikunde School noted that their boreholes and toilets were in close proximity; they contacted MAWF for specifications to ensure that their planned toilet rehabilitation adhered to guidelines.

*Water reuse guidelines:* The Olushandja BMC raised the issue with MAWF of the need to develop guidelines for the use of grey water to promote and encourage the reuse of water.

## *Integration of planning and implementation examples*

*Solid waste action:* The regional council and three town councils in Olushandja sub-basin are attempting to join hands with private-sector operators for improved solid-waste collection and disposal.

*Water loss management:* Improvements in the maintenance of the Etunda supply canal as a result of BMC discussions between the Etunda irrigation scheme, NamWater and other stakeholders has led to reduced water loss and lower energy bills.

*Sanitation:* The Ministry of Fisheries and Marine Resources addressed pollution of open water sources from the septic tank at its research station following discussions in the BMC.

*Drought response:* Emergency drought measures to pump water through the Etaka earth canal were taken up at high level and contracts are underway to make repairs to allow the release of water in periods of drought – an outcome that arose, in part, from BMC discussions.

*Mobilising corporate social responsibility:* A forum member representing the University of Namibia worked with the BMC to secure corporate sponsorship to rehabilitate a weather station.

*Promotion of integrated planning:* Ongwediva Town Council adopted an integrated plan involving a series of actions on water supply, flood management, solid-waste management, establishment of a recycling yard and sewage management in their 2012 work plans that was presented as good practice at the 2012 Cuvelai–Etosha Basin Annual Planning and Coordination Workshop..

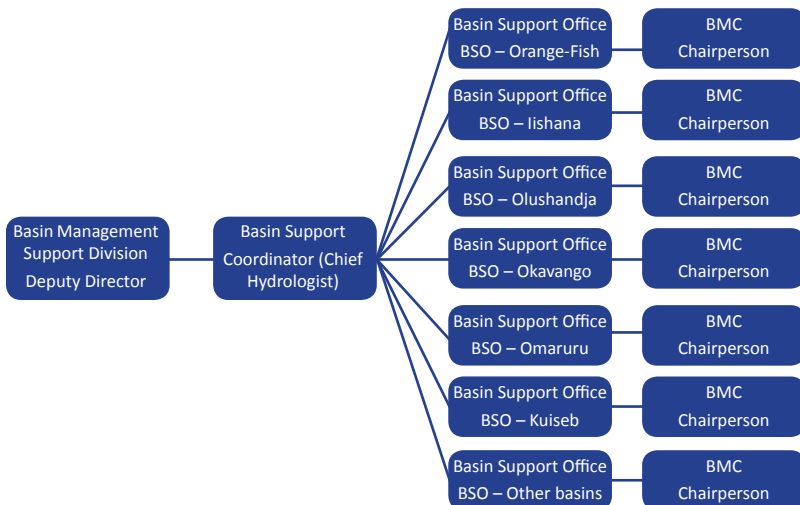
## Institutional arrangements

As an initiative to promote integrated water resources management, the basin management approach (BMA) is supported by the Ministry of Agriculture, Water and Forestry (MAWF). The Basin Management Division in the Directorate of Resource Management of MAWF has been created to support basin management committees (BMCs).

MAWF may provide financial and technical support to a BMC, including:

- the establishment of a support office in the area of a BMC operated by MAWF staff as designated by the Permanent Secretary for this purpose;
- financial resources for defraying expenses pertaining to the functions of the BMC; and
- water resources management levies payable to the BMC as part of charges for water abstraction and use and wastewater disposal.

If a support office is not established, the Permanent Secretary must designate staff members of the Ministry to provide administrative, technical and clerical support to a BMC. Staff designated to BMCs provide support and assistance in planning, implementation and monitoring of annual plans. They also facilitate and coordinate different activities between responsible people and institutions, including MAWF.



*Proposed institutional arrangements for basin management in Namibia after re-structuring of MAWF*

This is key to avoid duplication and ensure plans are integrated. In that regard, these basin support officers (BSOs) report to the Chairperson of the BMC, and other tasks can be discussed between them.

*“BSOs provide decentralised  
MAWF functions.”*

In the longer-term, the Directorate of Resource Management (DRM) will be decentralised. Once this happens the coordination role of decentralised staff members or BSOs will be additional to the designated DRM duties of water resource management at basin level.

Government is the custodian of all national information and data collected at basin level. These are used both for national and basin planning.

# Step-by-step development

## Introduction

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As mentioned earlier, the functional responsibilities for the BMA are vested in the basin management committee (BMC), elected by a group of stakeholders. Once a BMC is recognised by the Minister of the Ministry of Agriculture, Water and Forestry (MAWF) as able to further the government's objective of achieving integrated management of water resources at basin level, it is able to gain support from government.

For a group of representatives and persons as a BMC to gain such recognition, the Minister has to be satisfied that:

1. interests in the use and management of water resources in the basin or part of the basin concerned are broadly represented in the membership of the group.
2. membership of the group is open for inclusion of further representatives of any other institutions or stakeholders or interested persons as may be directed by the Minister in writing to the group concerned for the purposes of achieving a broad representation of interests in their membership.

A BMC may be recognised for any purpose connected with the use protection, development, conservation, management or control of a water resource in a basin or part of a basin, including:

- an aquifer
- a shared water supply infrastructure
- an area comprising adjacent geographic entities with joint water resource management features
- an area defined for common management of water resources
- an area under irrigation.

The BMC and its stakeholder forum forms part of a larger BMA institutional set up. As such, BMCs are water management institutions, whose primary purpose is water management at basin level. They operate in a demarcated area and are, in effect, cooperative associations of water-user groups that wish to undertake water management activities for their mutual benefit. The BMC is responsible to the forum and reports to it on an annual basis. The roles, responsibilities and functions of the BMC are agreed upon at the forum.

Guidelines to establishing a BMC through an integrated approach are outlined in the following sections.

## Phase I: Start-up

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This description of the start-up phase for implementing the basin management approach (BMA) assumes that either the Minister of Agriculture, Water and Forestry (MAWF) or a group of stakeholders has identified a need for an integrated approach to address issues of concerns, and is prepared to lead the process during the initial steps.

From lessons learnt, the following factors have been found to make the approach more effective and the success of implementation of the BMA more likely:

- A champion or champion institution to lead the process is essential to maintain momentum during the process.
- MAWF, as a leading and supporting institution, should play a major role in the start-up phase and help guide the process. It is important that they introduce the concepts of IWRM and BMA to stakeholders and at the same time gain information from stakeholders on their concerns and priorities.
- Stakeholders need to understand the benefits that the process can offer them from the onset.
- Stakeholders can be most easily kept involved by allowing them to contribute to the process and by addressing their concerns, challenges and needs. It is therefore sometimes necessary to address a number of challenges simultaneously to keep a diverse group involved, while keeping the overall goal of improving the water resources management.
- Information on the BMA initiative should be widely disseminated in media during the start-up phase to ensure that all stakeholders are reached.

*“It takes at least three years to establish a functioning basin-level institution.”*



## *1.1 Basin identification and preliminary demarcation of area*

### **Identify basin area for initiation of basin management approach**

The Minister of Agriculture, Water and Forestry or interested stakeholders are responsible for identification of the area, and its relevant issues, for initiation of the BMA. Priority challenges that need to be addressed and resolved in the basin should form the basis for selection of a basin or within which they will apply the BMA. The map on page 6 was drawn up to guide the demarcation process.

### **Review demarcation as forum and BMC evolve**

The boundaries of the identified basin or area of operation should be reviewed based on a preliminary map of the boundaries and the issues arising identified. The boundaries, and relevant basin issues, should be reviewed and refined as the forum and BMC evolve. Permanent features on the ground, such as villages and administrative boundaries can be used as basin boundaries for easy identification. This will help make the boundaries not only easy to describe, but more practical in addressing issues. Coordinates of the basin boundaries should be recorded when possible and made known.

### **Make the basin area known**

Include a map, a description and other graphics about the demarcated basin in all information materials. As the details of the basin boundaries change, incorporate these into revised and new information materials.

## *1.2 Identify stakeholders*

### **Identify potential stakeholder groups**

Draw up a preliminary list of all potential stakeholders from the private sector, including NGOs and CBOs, and government. This list should serve the preliminary steps of the BMA and should be reviewed, revised and updated on a continuous basis.

### **Identify representative individuals**

From the list of potential stakeholder groups, use appropriate channels to identify individuals from these stakeholder groups to help initiate communication. Identify individuals who are considered representative, officially or unofficially, by the groups and who are aware of the

*“Special effort is required to ensure members are present not as individuals, but as representatives of their institutions.”*

relevant issues and interested in participating in and contributing to the BMA. This step too is central to the process and requires reviewing and revision as the process evolves.

**Develop database of stakeholders**

Establish a spreadsheet of stakeholder groups and their representatives for easy communication. This should include at least: organisation, representative's name, title, position and contact details (e-mail, postal and physical addresses, and telephone and fax numbers). With time, the groups' interests, issues to which they can contribute, and other aspects should be included. This database should be revised and updated continuously as information becomes available and members and representatives change.

*Potential stakeholders for the BMA*

Depending on the priority issues of the basin, the following institutions, organisations and bodies might be important stakeholders for participation through a representative:

- village or traditional authorities
- local government
- regional councils
- water-user associations, such as water-point committees or irrigation authorities
- other community-based organisations (CBOs), such as conservancies, community forest organisations, etc.
- relevant NGOs
- farmers' associations
- relevant government line ministries
- tourism sector
- industry and businesses, such as the NCCI
- environmental associations
- academic institutions
- union officials
- women's affairs

*“Town councils, regional councils and traditional authorities represent communities, especially where there are few civil society organisations.”*

### *1.3 Preliminary meetings*

#### **Hold preliminary meeting with potential stakeholders**

Guided by the stakeholder database, preliminary meetings should be held with potential stakeholders to disseminate information and gauge interest. This may be done as a single, large meeting or as several smaller meetings with particular stakeholders or groups or stakeholders, either living in a particular part of the basin or with a particular common interest. Group facilitation and visualisation methods should be used to share information and identify issues. New stakeholders might be identified. The stakeholder database should be reviewed and refined after each preliminary meeting and all other meetings.

#### **Disseminate proceedings to participants**

Immediately establish a process for recording the minutes of meetings with stakeholders and disseminating them to participants, as well as other stakeholders in your database. Continue to refine this process to become more efficient and effective.

#### **Start gathering information needs and interests**

Use preliminary meeting and all subsequent meetings to identify the use of land and water resources in the basin area and management issues related to these. Identify information needs and interests of the stakeholders. Continually ask stakeholders:

- what their needs and interests are;
- from where they think this information can be gathered;
- who amongst the stakeholders might have information and whether they willing to share it;
- how stakeholders might use this information;
- how new information might be gathered to satisfy needs and interests.

#### **Identify information sources**

During the meetings, stakeholders should identify persons and institutions that they think have the required information to elaborate or resolve issues and answer relevant questions. If they don't it might be necessary to ask relevant external authorities for their advice. Stakeholders must also identify who will be responsible for collecting and sharing information from these sources.

Information-sharing is central to the BMA. As the process progresses, information needs with respect to subject and level detail will change. Efforts need to be continuously made to meet these needs.

### *1.4 Preliminary information dissemination*

#### **Develop an information dissemination plan**

Review the stakeholder groups identified, and their representatives, and make a first dissemination plan for preliminary information materials. The interests, livelihoods, capacities and usual information sources of the stakeholder groups should be taken into consideration as far as they are known. Ask the questions:

- What would stakeholders want to know to start addressing issues in their basin?
- What are the best media for dissemination?
- Highlight the issues already identified by the initiating body.

*“Simple consistent messages, but with multiple awareness approaches and entry points are the most successful, especially those aimed at the youth.”*

#### **Identify suitable dissemination mechanisms**

Based on the plan, select the best mechanisms to disseminate the information so that it will reach stakeholders. What media would be best? Radio, posters, brochures, videos, role plays, maps, meetings, internet, sms? Several mechanisms might be appropriate for initial dissemination steps.

#### **Collect and develop information materials**

Assemble information about the basin using identified challenges of the basin as a guide. This information should include a first overview of some or all of the following: geographical setting of the basin; basin size; relevant land and water management and use issues; land tenure and land use; population density and distribution; agricultural practices; economic activities; environmental characteristics and social patterns. This preliminary information will be revised and extended during the BMA process.

**Disseminate information according to plan**

Use meetings, the stakeholder database and other means to disseminate information on land and water resources use and management as it is gathered. Invite stakeholders to make formal presentations at planned meetings and to provide the supporting information. This is an iterative process.

*“Basin demand for improved water management is the driving force of the BMA, so awareness is crucial.”*

*Checklist of activities: Start-up***1.1 Basin identification and preliminary demarcation of area**

- Basin area for initiation of basin management approach identified
- Demarcation reviewed as forum and BMC evolve
- Graphic and descriptive information on the demarcated basin included in all information materials

**1.2 Stakeholder identification**

- Potential stakeholder groups identified
- Representatives identified
- Database of stakeholders developed

**1.3 Preliminary meetings**

- Preliminary meetings with potential stakeholders held
- Proceedings of meetings to participants disseminated
- Information needs and interests of stakeholder gathered
- Information sources identified

**1.4 Preliminary information dissemination**

- Information dissemination plan developed
- Dissemination mechanisms identified
- Information materials developed
- Information disseminated according to plan

## Phase II: Establishing a stakeholder forum

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The description of this phase to establish a stakeholders' forum for implementing the basin management approach (BMA) assumes that all potential groups of stakeholders that are interested and committed to integrated water resources management (IWRM) to address the identified issues, have been identified. These stakeholders through their representatives are the forum. This forum needs to establish its own procedures and programmes. This phase of the BMA is relatively flexible and evolves and develops depending on the basin, the land and water resources management and use issues and the stakeholders' preferences. During this phase, many of the activities in the start-up phase are revisited and refined. The stakeholder base is broadened and the information base and capacity of stakeholders strengthened, preparing them for establishment of a basin management committee (BMC).

### *2.1 Develop a forum structure*

#### **Review, refine and expand stakeholder database**

Continue to identify stakeholder groups and representatives of those groups that are interested in and can contribute to the BMA process. This is an ongoing process.

#### **Target absent key stakeholders**

Review the stakeholder database and identify important stakeholders that have not yet been contacted or have declined to participate in the process. Focus on those potential stakeholders that have information pertinent to and/or solutions relevant to the use and management of land and water resources. Fully inform them about the BMA process and progress. Ensure that they have received all information. Stress why their participation is important. Point out benefits in participating in this multi-stakeholder platform.

*“Mobilising economic interests is crucial.”*

#### **Hold meetings, disseminate proceedings**

Organise and facilitate meetings that will contribute to establishing the forum. These should have a specific objectives of sharing information, identifying and prioritising issues of importance to stakeholders and ways to address them. The meetings should become more structured as the process evolves. Disseminate the proceedings to all stakeholders, including those that weren't able to attend.

**Formalise the forum as a structure supporting the BMA**

At one of the first larger meetings involving a majority of stakeholder representatives, the concept of a forum should be introduced. The forum should be described as a broad, interactive structure to facilitate the early phases of developing a BMC. The forum is an ongoing, permanent structure facilitating information exchange throughout the basin and its stakeholder groups. The forum is open, transparent and supports and is supported by the smaller, more formal BMC when it is established. Participants should be given time to consider the establishment of a forum, but this should be accomplished within the first year. Write nomination letters to stakeholder institutions and organisations so that they can nominate representatives to formalise forum structure.

**Establish a secretariat**

The lead institution should establish a secretariat to support the forum as an important component of the BMA process. The secretariat would maintain and review the stakeholder database; plan and organise meetings; compile proceedings and information for dissemination to stakeholders; and serve as the central point for information exchange. The forum secretariat later serves the BMC when established. The Permanent Secretary (PS) may designate MAWF staff members to serve as the secretariat and to provide administrative, technical and clerical support to the forum.

**Develop annual forum programme**

In consultation with stakeholders at forum meetings, develop an annual forum schedule and programme. This might include, *inter alia*, more formal, quarterly meetings, smaller meetings covering a local geographical area or localised issues or fields of interest. It may include exchange visits to familiarise forum members with other parts of the basin to illustrate land and water resources use and management issues, or familiarise them with water management bodies and activities in the basin, targeted training courses or other group activities.

*“Engage institutional stakeholders by identifying actions relevant to their mandate.”*

### **Develop an agenda for meetings**

In consultation with stakeholders at forum meetings, develop an agenda for these meetings. The agenda would include, procedural items, and presentations to share information on issues related to land and water resources use and management, the BMA legislative framework, the structure and functioning of the BMA, and the stakeholders' roles, responsibilities and contributions. The agenda should have space to include identification and discussion of newly arising and/or newly identified issues related to land and water resources use and management. The agenda should be reviewed and revised at least annually.

### **Develop meeting mechanisms**

Mechanisms to support meetings must be established in consultation with stakeholders at forum meetings. These mechanisms would include location of meetings, resources and/or funds for transport, accommodation and catering. They would also include mechanisms for activities, presentations and excursions within the basin.

## *2.2 Strengthen the information base of stakeholders*

### **Develop a vision for basin**

Using visualisation and other techniques to enhance discussion, establish a draft vision for the basin. How should, *inter alia*, the land and water resources and their use and management look in 15 years' time? The vision should include a description of the social, economic and environmental aspects of the basin. It would form the basis for identification of options and opportunities for sustainable development in the basin.

### **Identify information needs concerning the basin**

Use forum meetings to further identify and refine information needs, interests and issues of the stakeholders. Use visualisation techniques. Continually ask the stakeholders what their issues, needs and interests are; where do they think this information can be gathered; who amongst the stakeholders has this information and are they willing to share it; how might stakeholders use this information; and how might they gather new information to satisfy their needs and interests. This is an ongoing process.

*“Hydrological data collection is a long-term undertaking – a good reason to start now.”*



**Identify people and other sources of information**

The forum must continue to identify people and sources of information as they undertake the iterative process of identifying their land and water resources use and management information needs and wants. Often the information is available although its location and accessibility are not known to interested stakeholders.

*“Ensure that subject matter specialists are made available to complement information technology expertise.”*

**Continued compilation and dissemination of information**

The forum secretariat and stakeholders should compile relevant information on an ongoing basis. This should address pertinent issues particularly related to land and water resources use and management. The secretariat can assist with dissemination although this often takes place directly between relevant stakeholders. This is an ongoing process facilitated by the forum and its secretariat.

*“Refresher courses are needed for awareness and capacity not to dwindle.”*

**Review and revise information management process**

The forum, supported by its secretariat, should review and if necessary revise the information management process in an iterative manner. The questions to be asked should include: Are stakeholders identifying relevant land and water resources use and management issues? Are they asking for information? Are they receiving the information they are requesting? Are stakeholders sharing information upon request? Is the information being filed and is it easily retrievable? Is information commonly requested being disseminated to a wider audience?

*“Build on established software and hardware platforms to ensure a robust and simple system maintenance.”*

### *2.3 Strengthen the capacity of stakeholders*

#### **Undertake exchange visits amongst forum stakeholders**

Experience has shown that exchange visits between stakeholders who are interested in the same areas and have similar challenges related to resource management is a powerful mechanism for enhancing capacity and information exchange, for example, between water-point committees. This allows them to speak to each other on a one-to-one basis.

#### **Undertake information-gathering visits with forum stakeholders**

Experience has shown that information-gathering visits with stakeholders are a useful way to convey complex information concerning relevant issues and enhance understanding. Information-gathering visits could include, *inter alia* and where appropriate, visits by water-point committees to NamWater's purification works or billing department to enhance understanding of these important processes.

#### **Plan and implement targeted training for stakeholder groups**

During the forum meetings, a training needs assessment should be undertaken from time to time. To meet these needs, the forum should facilitate existing training activities and courses, as well as design their own. The forum should facilitate planning and implementation of targeted training for identified stakeholder groups. This is done by inviting experts to give presentations on technical issues to increase stakeholder awareness and to train stakeholders.

Before moving to the BMC phase, it is important that stakeholders understand the BMA at the forum level and are interested and committed to the process.

*“Project management and exposure to legal and institutional set-up are areas usually highly appreciated.”*

*“Technical information should be communicated with care, so as not to mislead non-specialists.”*

*Checklist of activities: Establishing a stakeholder forum*

**2.1 Development of forum structure**

- Stakeholder database reviewed and refined
- Absent key stakeholders identified and approached
- Meetings held, proceedings disseminated
- Forum is formalised
- Secretariat established
- Annual forum programme developed
- Agenda for meetings developed
- Meeting mechanisms developed

**2.2 Strengthening stakeholders' information base**

- Vision for the basin developed
- Information needs identified
- Sources of information identified
- Appropriate information compiled and disseminated
- Information management process reviewed and revised

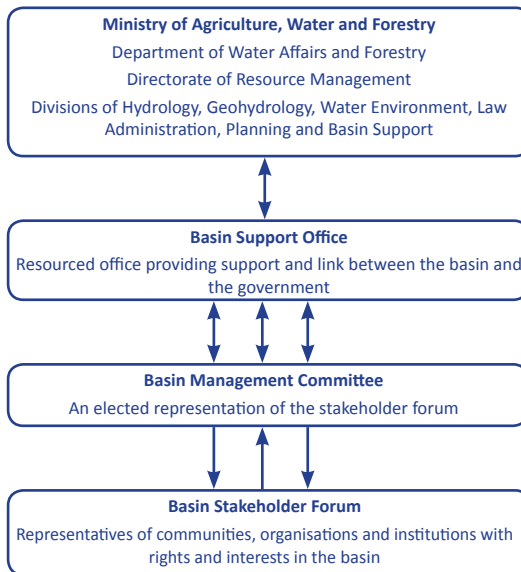
**2.3 Strengthen stakeholders' capacity**

- Exchange visits amongst forum stakeholders undertaken
- Information-gathering visits with forum stakeholders undertaken
- Targeted training for stakeholder groups planned and implemented

## Phase III: Establishing a basin management committee

The description of the third phase in the basin management approach (BMA) process assumes that a forum with a secretariat is established and functioning. The institution leading the previous two phases – possibly MAWF – and the stakeholder forum have made a decision to continue with the process and formalise the management approach further.

This third phase is less flexible than the previous one as guidelines for the formation of the basin management committee (BMC) are laid down in the Water Resources Management Bill of 2013.



*Basin management functional structure (courtesy of DRFN)*

### *Five ingredients to a successful BMC*

- An effective Chairperson
- A well-informed Basin Support Officer
- Selection of high-priority areas for intervention
- Availability of funding
- Capacity of forum members

### *3.1 Initiate discussion about the basin management committee*

#### **Discuss concept of BMC at forum meetings**

The agenda of the forum meetings should include introduction and discussion of the concept of a BMC. The BMC is an executing arm of the forum and ensures implementation of priority issues as identified at the forum level on their behalf. Examples from Namibia and elsewhere in southern Africa could be presented. The policy and legislative background for BMCs should also be presented.

#### **Identify roles, responsibilities and functions of a BMC**

The discussion amongst stakeholders in the forum meetings should identify the potential roles and responsibilities of the BMC in their particular basin in relation to ministerial (MAWF's) guidelines. What will the responsibilities of the BMC in relationship to the existing water authorities be? What will the BMC's responsibilities be regarding issues and concerns? The discussion should integrate the legislated functions of a BMC with those identified by stakeholders. The stakeholder forum needs to identify the niche of the BMC that suits its needs. This should be an iterative process. See pages 35–37 for guidance.

#### **Identify the structure of the BMC**

During or after identification of the BMC roles, responsibilities and functions, the forum stakeholders should also discuss the appropriate structure to facilitate implementation of the agreed-upon roles, responsibilities and functions. See pages 38–40 for guidance.

#### **Identify stakeholders to be represented on BMC**

After the roles, responsibilities, functions and structure of the BMC have been identified, the forum stakeholders should identify (core) stakeholder institutions to be represented on the BMC. To facilitate this process, a typical stakeholder analysis is required to determine core stakeholders. This step can be discussed during several forum meetings before the BMC is established. As with all information and decisions taken at meetings, stakeholder representatives on the forum are responsible for conveying the results of discussions and decisions made to their institutions or groups, and those of their groups and institutions back to the forum.

## *Responsibilities of the BMC, according to legislation*

According to the Water Resources Management Bill of 2013, the BMC is expected to assume responsibility for the following functions:

1. to advise the Minister on matters concerning the protection, development, conservation, management and control of water resources and water resource quality in its water management area;
2. to promote community participation in the protection, use, development, conservation, management and control of water resources in its water management area;
3. to prepare or cause to be prepared an integrated water resources management plan for its water management area for submission to the Minister for consideration in developing the Integrated Water Resources Management Plan under Section 66;
4. to make recommendations to the Minister in relation to applications for licences in respect of its water management area or the amendment, cancellation, or suspension of any such licence;
5. to promote community self-reliance, including arrangements for the recovery of costs for the operation and maintenance of any waterworks;
6. to monitor and report on the effectiveness of policies and measures in achieving sustainable management of water resources and resource quality in its water management area;
7. to collect, manage and share data required for the proper management of its water management area in coordination with the Minister;
8. to conduct, with the concurrence of the Minister, a water research agenda appropriate to the needs of institutions and water users within its water management area;
9. to help resolve conflicts relating to water resources and resource quality in its management area;
10. to report to the Minister the occurrence or threat of serious water or pollution problems within its management area;
11. to compile and submit an annual report on its activities to the Minister and to assist the Minister in the coordination of such activities in Namibia; and
12. to perform such functions as are delegated or assigned to it by the Minister.

### *3.2 Establish and implement basin management committee*

#### **Elect an executive committee**

The BMC should elect an executive committee, *inter alia*, to deal with urgent matters arising between scheduled meetings and to ensure ongoing functioning of the BMC. Institutions on the stakeholder forum should be informed on elected members.

#### **Strengthen secretariat**

The established forum secretariat continues to support the executive committee and help manage the BMC's activities, until such time that a Basin Support Officer (BSO) can be appointed as secretariat. As for the forum, the secretariat plans and organises meetings; compiles minutes, proceedings and information for dissemination to its members; and serves as the central point for information exchange. Members of the BMC assist the secretariat when necessary, depending on capacity and issues. The executive committee and the secretariat may be the same group of people depending on the basin and the situation therein.

*“Linking capacity development to formal mandates and targeting gaps in current performance is effective.”*

#### **Develop meeting mechanisms**

Mechanisms to support the BMC must be established. These mechanisms would include location for meetings and payment for transport, accommodation and catering. They would also include the activities to address functions within the basin.

#### **Elaborate a constitution**

The BMC must draft and ratify a constitution. This will vary among basins, but should cover basic elements as required by the Minister.

#### **Elaborate a vision for the basin**

The vision initially elaborated by the forum should be revisited by the forum and the BMC in an iterative process. The BMC should adopt the agreed-upon vision for the basin as its overall goal. The BMC may develop and adopt a logo.

**Identify issues for BMC to address**

With the help of the forum, the BMC should identify and prioritise land and water resources use and management issues within the basin requiring their attention. This process should involve ongoing review of the responsibilities and functions expected of the BMC and should incorporate new issues that arise within the basin. This is an iterative process.

**Formulate a strategic plan and operational plans**

Based on the agreed-upon vision and prioritised issues, the BMC should formulate an overall strategic plan and annual operational plans to facilitate its programme.

*“IWRM planning does not need to wait until BMCs are fully consolidated.”*

**Develop an annual BMC programme**

The BMC members should develop an annual BMC schedule and programme, based on the annual operational plan, to address roles and responsibilities of the committee. The programme of the BMC should, with time, address all their ascribed functions and responsibilities, as well as land and water resource issues in the basin.

**Solicit and obtain ministry confirmation**

The BMC must solicit and obtain formal ministry approval for its formation. The request letter for approval and recognition must include the basin area, constitution, list of member stakeholder institutions or groups and their representatives and an activity agenda or work plan.

**Share information and outputs with relevant government entities**

The BMC should ensure that its activities are shared with relevant government entities whether or not they are members of the BMC. This should take the form of regular written briefings and ongoing communication with government staff included in the BMC’s overall programme and forum meetings.

**Establish a network to support work of BMC in addition to the forum**

The BMC, through its secretariat and individual members, should network as widely as possible in support of the BMC, the forum and basin management in general. The network should include institutions and individuals knowledgeable about land and water resources use and management within the basin. Depending on pressing issues, specialised working groups can be formed as part of the BMC structure.



**Establish network with relevant persons and departments**

In view of the large number of international and regional institutions addressing IWRM, the BMC should establish a strong network regionally. The network should also encompass national and local institutions and individuals both to gain information and to keep the broader framework aware of development in integrated water, land and other resources use and management.

*Checklist of activities: Establishing a basin management committee***3.1 Discussion about a basin management committee**

- Concept of BMC discussed at forum meetings
- Roles, responsibilities and functions of a BMC discussed
- Structure of BMC identified
- Key stakeholders to be represented on BMC identified

**3.2 Establish and implement basin management committee**

- Executive committee elected
- Secretariat strengthened
- Meeting mechanisms developed
- Constitution elaborated
- Vision for the basin elaborated
- Strategic and operational plan formulated
- Issues identified for BMC to address
- Annual BMC programme developed
- Ministry confirmation solicited and obtained
- Information and outputs shared with relevant government entities
- Network to support work of BMC, in addition to the forum, established
- Network with relevant persons and departments established

# Putting the basin management approach into practice

## Acting on information

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Adopting the basin management approach (BMA) and inviting stakeholders to participate in the decision-making and providing them to share information implies that action will be taken. The BMC is in the position of being able to advise competent authorities to take action or facilitating the process for stakeholders to take action. This requires time, capacity and financial resources. Knowing what assistance is available and how to secure it is an important role of BMCs.

## Work plans

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Apart from an IWRM plan – or strategic plan – for the basin, a BMC should develop annual work plans. Annual work plans assist the BMC to prioritise activities over the coming year. They should take into consideration the BMC's anticipated functions as outlined in the Water Resources Management Bill, and align their identified activities to these functions. Such activities should be based on problems, identified and prioritised by the stakeholders.

*“A balance needs to be struck between reflecting felt needs and technical insight based on information and expert judgement when developing plans.”*

A work plan has to be submitted to the Minister annually, together with a progress report on the previous year's activities. This is essential to secure funds for activities.

A log-frame forms the basis of the work plan. For each activity the log-frame should outline:

- the person responsible to see it done
- the time by when it will be completed
- the amount it will cost
- the end product or deliverable.

*“Finance and administration skills are crucial for BMCs if they are to complete their plans.”*

Where larger IWRM demonstration projects are proposed for implementation, a full project proposal would be required. Project proposals are usually written around the log-frame, but detail should also be given on the rationale for the project, approach and methodology, institutional arrangements, and monitoring and evaluation. When compiling a proposal, ensure that it is in line with the funding priorities of the targeted donor and that it follows their proposal requirements.

A proposal should be screened using the following criteria:

- implementation projects are preferable to study projects
- improved water use or protection of water is demonstrated, i.e. more efficient, more effective, more sustainable or more economic use of water
- there is an element of innovation
- involvement of communities
- direct benefit for communities
- a structure for managing activities
- monitoring of water utilisation and benefits
- reporting plan
- endorsed by BMC and/or other institution, such as the regional council.

*“Audience and purpose of the IWRM plan needs to be very carefully thought out.”*

## Acquiring financial support

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BMCs can acquire funds to carry out their activities from government or donors.

### *Government funds*

These are acquired through the Ministry of Agriculture, Water and Forestry. They can be used to purchase equipment, such as office equipment, or to cover running costs, such as costs to conduct workshops and to produce awareness-raising materials. Basic rules on purchases using government funds include:

- At least three price quotations have to be obtained for provision of equipment or services below N\$10,000.
- Goods will be purchased from the supplier with the lowest price.
- Should the cost of the equipment or service exceed N\$10,000, tendering procedures must be followed.
- Payments are only made through a requisition order.

### *Donor funds*

Donor funding institutions can be approached to provide funds for BMCs to carry out specific activities. An action or work plan with a budget and specified outcomes should be presented with the application. Funds requisitions should be specific for relevant activities and not for expensive resources such as vehicles.

### *Preparing project proposals*

To apply for support for a particular activity or project usually requires a project proposal. With any project proposal it is important to be familiar with the requirements of the potential assisting institution and the procedure to be followed. For example, all proposals to and correspondence with MAWF concerning BMC support have to be submitted to the Under Secretary for Water Affairs and Forestry. Proposals will be discussed by MAWF. Should the applicant fail to follow their procedures, the application might not be considered.

Guidelines on the preparation of project proposals can be found on Namibia's IWRM website (<http://www.iwrm-namibia.info.na/index.php>).

## Other support for basin management committees

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### *Technical assistance*

Officials working in the various technical divisions of the Directorate of Resource Management in MAWF, are able to provide support, advice and guidance on various technical aspects. The basin support officer or coordinator can provide contact names and details.

### *Transport*

MAWF can assist with transport (to and from workshop venues, for instance), when and where possible.

### *Capacity-building and training*

Training manuals containing a number of modules relevant to basin management are available in the basin support offices. These include, amongst others, modules on legal and institutional framework, stakeholder engagement, communication and facilitation skills, conflict management, reporting procedures, project management, fund-raising and financial management. These modules are also available on Namibia's IWRM website, <http://www.iwrm-namibia.info.na/index.php>. MAWF will facilitate capacity-building and training for BMCs as required and/or requested.

*“The level of capacity and training needs differ enormously; careful assessment of subject and level required is crucial, and finding the right trainers for the job.”*

## *Project implementation*

### **Working groups**

Some BMCs have found it useful to establish small working groups to assist them in implementing activities and getting projects off the ground. Working groups are particularly useful if the BMC has a number of diverse projects or activities running simultaneously. Typically, stakeholders with a particular interest in the activity and/or have the knowledge and skills to assist in facilitating, managing or contributing to the activity form the working group. At least one BMC member should be part of the working group to ensure that it is represented at BMC meetings.

### **Role of NGOs**

All relevant NGOs can assist with the implementation of projects and activities geared towards a sound integrated management approach, provided that they study and adhere to the guidelines as presented in this guidebook.

## Useful references

GIZ, 2013. *Sharing Experience with Integrated Water Resources Management (IWRM)*. GIZ: Bonn and Eschorn.

MAWF, 2000. National Water Policy White Paper Policy: Framework for equitable, efficient, and sustainable water resources management and water services. Accessed at <http://www.iwrm-namibia.info.na/downloads/mawf-2000.-national-water-policy-white-paper.pdf>, 11 November 2013.

MAWF, 2008. Water Supply and Sanitation Policy. Accessed at [http://www.iwrm-namibia.info.na/downloads/nat\\_wss\\_policy\\_0910-1.pdf](http://www.iwrm-namibia.info.na/downloads/nat_wss_policy_0910-1.pdf), 11 November 2013.

MAWF, 2010. Draft regulations related to establishment of basin management committees. Accessed at [http://www.iwrm-namibia.info.na/downloads/draft\\_regulations\\_on\\_bmc\\_20101.pdf](http://www.iwrm-namibia.info.na/downloads/draft_regulations_on_bmc_20101.pdf), 11 November 2013.

MAWF, 2013. *Integrated Water Resources Management, Namibia*. Accessed at <http://www.iwrm-namibia.info.na/index.php>, 11 November 2013.

SADC, 2010. Guidelines for Strengthening River Basin Organisations: Stakeholder participation. SADC: Gaborone.

## Supporting materials

The relevant policies, bills, acts and regulations regarding the management of water resources in Namibia are available on Namibia's IWRM website, <http://www.iwrn-namibia.info.na/index.php>.

### Key functions and roles of the basin management committee

The key functions and responsibilities of the BMC as elaborated in the Water Bill can be fulfilled through a number of roles and activities as shown in the table below.

Key function	Roles and activities to fulfil functions*
(a) To advise the Minister on matters concerning the protection, development, conservation, management and control of water resources and water resource quality in its water management area	<ul style="list-style-type: none"> <li>• Identify key water-related issues and needs</li> <li>• Investigate key issues and needs</li> <li>• Consult stakeholders, including service providers</li> <li>• Act as the communication link between MAWF and basin stakeholders</li> <li>• Advise the Minister through reports or meetings and provide recommendations</li> </ul>
(b) To promote community participation in the protection, use, development, conservation, management and control of water resources in its water management area	<ul style="list-style-type: none"> <li>• Develop and disseminate water resource information materials</li> <li>• Create an enabling participatory environment</li> <li>• Raise awareness through public radio, workshops, etc.</li> <li>• Serve as a forum where stakeholders can raise issues and concerns</li> </ul>
(c) To prepare an integrated water resources management plan for its water management area	<ul style="list-style-type: none"> <li>• Facilitate the preparation of an IWRM plan for the basin</li> <li>• Submit the basin IWRM plan to MAWF for endorsement</li> <li>• Coordinate implementation of the basin IWRM plan through annual work plans</li> <li>• Monitor and evaluate the implementation of the basin IWRM plan</li> <li>• Review and update the basin IWRM plan (mid-term review) after 2.5 years</li> </ul>

Key function	Roles and activities to fulfil functions*
(d) To make recommendations to the Minister in relation to applications for licences in respect of its water management area or the amendment, cancellation, or suspension of any such licence	<ul style="list-style-type: none"> <li>• Collect and submit recommendation letters every month</li> <li>• Review and make recommendations on applications for licences</li> <li>• Make recommendations to the Minister</li> <li>• Make recent licence applications available at offices for stakeholders' inspection</li> </ul>
(e) To promote community self-reliance, including arrangements for the recovery of costs for the operation and maintenance of any waterworks	<ul style="list-style-type: none"> <li>• Create awareness on importance of paying for water supply services</li> <li>• Educate water-point members on their roles and responsibilities</li> <li>• Liaise with DWAF and MAWF on issues of cost recovery and provide feedback to community</li> </ul>
(f) To monitor and report on the effectiveness of policies and measures in achieving sustainable management of water resources and resource quality in its water management area	<ul style="list-style-type: none"> <li>• Be informed of the legal framework</li> <li>• Provide input in the development and review of policy, e.g. tariff policies, community management strategies, cost recovery measures, subsidy policy, wastewater disposal permits, etc.</li> <li>• Provide feedback to the Minister on the effectiveness of policies</li> <li>• Report law transgressions and non-compliance offences to relevant authority(ies) for action</li> </ul>
(g) To collect, manage and share data required for the proper management of its water management area in coordination with the Minister	<ul style="list-style-type: none"> <li>• Identify data to be collected in corroboration with MAWF</li> <li>• Collect flow, water level and water quality data with the support of the BSO</li> </ul>
(h) To conduct, with the concurrence of the Minister, a water research agenda appropriate to the needs of institutions and water users within its water management area	<ul style="list-style-type: none"> <li>• Identify research needs</li> <li>• Help formulate research agenda</li> <li>• Coordinate research activities with the support of the BSO</li> </ul>
(i) To help resolve conflicts relating to water resources and resource quality in its management area	<ul style="list-style-type: none"> <li>• Manage conflicts in collaboration with MAWF and other stakeholders</li> </ul>



Key function	Roles and activities to fulfil functions*
(j) To report to the Minister the occurrence or threat of serious water or pollution problems within its management area	<ul style="list-style-type: none"> <li>• Investigate incidences</li> <li>• Alert the Minister on serious water supply interruptions (drought, pollution, flood, pump breakdown)</li> <li>• Alert the Minister on serious water pollution incidences</li> <li>• Report on flood or drought threats that affect people's livelihoods</li> </ul>
(k) To compile and submit an annual report on its activities to the Minister and to assist the Minister in the coordination of such activities in Namibia	<ul style="list-style-type: none"> <li>• Share lessons learned and propose recommendations for the future, e.g. through the basin coordination platform</li> <li>• Compile an annual activity report to the Minister (through the BSO)</li> </ul>
(l) To perform such functions as are delegated or assigned to it by the Minister	<ul style="list-style-type: none"> <li>• Perform <i>ad hoc</i> activities as delegated by the Minister</li> </ul>

\* Channels to the Minister is usually through the Basin Support Coordinator

## Functions of the basin support officer

- Give organisational, secretarial and technical support to BMCs
- Raise stakeholder awareness with regards to IWRM, the BMA, BMCs and water-related matters
- Run the decentralised basin management support office
- Assist BMCs with compilation of water resources management plans
- Solicit financial and technical assistance for implementation of water resources management plans
- Assist BMCs in the execution of water resources development projects
- Assist institutions, in particular regional council planning units, and other stakeholders in basin with technical information on water resources
- Administer BMC involvement in the assessment of licence applications (for water abstraction, discharge, etc.)
- Assist with the collection and management of water resources data
- Ensure the availability of technical information on water resources at basin level, including a computerised information system with access to data at central level

## Structure of basin management committee and roles of members

The structure and roles of BMC members should be shaped to the needs of the particular basin. That of the Ilishana sub-Basin Management Committee (IBMC) is given as an example in the table below.

Committee member	Responsibilities	Reports to
Chairperson	<ul style="list-style-type: none"> <li>• Coordinate formulation of strategic plan</li> <li>• Coordinate monitoring of plan</li> <li>• Facilitate development of the constitution</li> <li>• Facilitate formulation of annual work plan</li> <li>• Facilitate BMC and forum meetings</li> <li>• Pursue documentation for legal recognition</li> <li>• Ensure capacity of BMC members is strengthened</li> <li>• Be familiar with BMC issues and activities</li> <li>• Represent BMC at relevant meetings</li> <li>• Provide guidance and management</li> <li>• Represent the Ilishana sub-basin in court</li> <li>• Ensure integration of line ministries</li> <li>• Ensure efficient administration of committee</li> <li>• Spearhead formulation of the sub-basin's vision</li> <li>• Ensure that key stakeholders participate</li> <li>• Ensure implementation of long-term plans</li> </ul>	<ul style="list-style-type: none"> <li>• DWAF</li> <li>• Stakeholder forum</li> <li>• Other committee members</li> </ul>
Vice-Chairperson	<ul style="list-style-type: none"> <li>• Support Chairperson in all planning and monitoring activities</li> <li>• Represent Chairperson when required</li> <li>• Be familiar with sub-basin issues and activities</li> <li>• Coordinate sub-basin activities</li> <li>• Identification of people and places of activities</li> <li>• Ensure equitable access to natural resources</li> <li>• Review sub-basin demarcation issues and take forward as required</li> </ul>	<ul style="list-style-type: none"> <li>• Chairperson</li> <li>• DWAF</li> <li>• Stakeholder forum</li> <li>• Other committee members</li> </ul>

Committee member	Responsibilities	Reports to
Secretary	<ul style="list-style-type: none"> <li>• Take records of the meeting</li> <li>• Prepare a one-page quarterly report</li> <li>• Prepare proceedings and minutes of all meetings</li> <li>• Facilitate ongoing networking of BMC with stakeholder forum and government</li> <li>• Take advantage of opportunities for capacity-building</li> <li>• Be familiar with BMC issues and activities</li> <li>• Represent BMC at relevant meetings</li> </ul>	<ul style="list-style-type: none"> <li>• Chairperson</li> <li>• DWAF</li> <li>• Stakeholder forum</li> <li>• Other committee members</li> </ul>
Treasurer	<ul style="list-style-type: none"> <li>• Mobilise funds for basin activities</li> <li>• Establish financial system for BMC (e.g. banking, auditing, claims, invoicing, payments, etc.)</li> <li>• Control assets in Iishana</li> <li>• Maintain financial records of IBMC</li> <li>• Compile financial reports</li> <li>• Coordinate fund-raising for IBMC</li> <li>• Take advantage of opportunities for capacity-building</li> <li>• Be familiar with BMC issues and activities</li> <li>• Represent IBMC at relevant meetings</li> </ul>	<ul style="list-style-type: none"> <li>• Chairperson</li> <li>• DWAF</li> <li>• Stakeholder forum</li> <li>• Other committee members</li> </ul>
Programme Officer: Planning	<ul style="list-style-type: none"> <li>• Plan, manage and monitor basin activities</li> <li>• Involve other stakeholders in basin activities</li> <li>• Evaluate basin activities</li> <li>• Implement stakeholder decisions</li> <li>• Ensure that water policies are effective</li> <li>• Assist the community in water-point operations</li> <li>• Review BMC demarcation issues and take forward as required</li> <li>• Support Chairperson in all planning and monitoring activities</li> <li>• Take advantage of opportunities for capacity-building</li> <li>• Be familiar with BMC issues and activities</li> <li>• Represent BMC at relevant meetings</li> </ul>	<ul style="list-style-type: none"> <li>• Chairperson</li> <li>• DWAF</li> <li>• Stakeholder forum</li> <li>• Other committee members</li> </ul>

Committee member	Responsibilities	Reports to
<p>Programme Officer: Data and information management</p>	<ul style="list-style-type: none"> <li>• Obtain overview of natural resources in the basin</li> <li>• Coordinate identification of issues</li> <li>• Coordinate collection of data and information</li> <li>• Coordinate annual 'state of the basin' report</li> <li>• Information-sharing and dissemination</li> <li>• Identify the need of natural resources</li> <li>• Raise awareness of and provide reports and feedback to the farmers</li> <li>• Take advantage of opportunities for capacity-building</li> <li>• Be familiar with sub-basin issues and activities</li> <li>• Represent BMC at relevant meetings</li> </ul>	<ul style="list-style-type: none"> <li>• Chairperson</li> <li>• DWAF</li> <li>• Stakeholder forum</li> <li>• Other committee members</li> </ul>
<p>Programme Officer: Awareness-raising and capacity-building</p>	<ul style="list-style-type: none"> <li>• Establish and oversee capacity-building and awareness-raising plans for committee, forum, other stakeholders and the public</li> <li>• Strengthen community awareness and provide feedback on activities</li> <li>• Strengthen local participation and mobilise community members</li> <li>• Organise exchange visits and field trips</li> <li>• Take advantage of opportunities for capacity-building</li> <li>• Be familiar with sub-basin issues and activities</li> <li>• Represent BMC at relevant meetings</li> </ul>	<ul style="list-style-type: none"> <li>• Chairperson</li> <li>• DWAF</li> <li>• Stakeholder forum</li> <li>• Other committee members</li> </ul>

## Glossary

<i>aquifer</i>	a sub-surface geological formation that has structures or textures that hold water or permit appreciable water movement through them
<i>borehole</i>	a well, excavation or any artificially constructed or improved underground cavity that can be used for the purpose of intercepting, collecting or storing water in, or removing water from, an aquifer
<i>cost recovery</i>	fee structures that cover the cost of providing the service
<i>decentralisation</i>	the distribution of responsibilities for decision-making and operations to lower levels of government, community organisations, the private sector, and/or non-governmental organisations
<i>demand management</i>	the use of price, quantitative restrictions, and other devices to limit the demand for water
<i>domestic use</i>	the household use of water for cooking, bathing, watering a household garden and household animals, and fire-fighting; it does not include the irrigation of crops for commercial purposes or the use of water in a business
<i>environment</i>	the aggregate of surrounding objects, conditions and influences that affect the life and habits of people or any other organism or collection of organisms
<i>environmental assessment</i>	a process whereby the likely significant bio-physical and socio-economic effects of land use and water use are identified, assessed and taken into account in the decision-making process to ensure sustainable land-use and water-use practices
<i>integrated water resources management (IWRM)</i>	a process that promotes the coordinated development and management of water, land and related resources in order to maximise economic and social welfare in an equitable manner without compromising the sustainability of vital ecosystems and the environment

<i>pollutant</i>	any substance, whether liquid, solid or gaseous that, directly or indirectly, alters the quality of any segment or element of the receiving water environment so as to adversely affect the beneficial use of the water, or render it hazardous or potentially hazardous to health
<i>pollution</i>	the direct or indirect alteration of the physical, chemical or biological properties of a water resource so as to make it less fit for any beneficial purpose for which it may reasonably be expected to be used
<i>representative</i>	someone who serves on behalf of an organisation or group of people; a representative presents ideas, decisions and information from their organisation or group and delivers ideas, decisions and information back to it
<i>river basin</i>	a geographical area determined by the watershed limits of a system of water, including surface and underground water, flowing into a common terminus
<i>stakeholder</i>	an interested individual, group or institution that may or may not be affected by decisions or actions pertaining to a specific resource, and may or may not be part of decision-making about the management of the resource
<i>water conservation</i>	the efficient use and saving of water achieved through measures such as water-saving devices, water-efficient processes, protection from pollution, water demand management and water rationing





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