

Water Resources Management Plan for the Kuiseb Basin

Institutional Development and Capacity Building

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Abbreviations and acronyms

CBWUF	Coastal Bulk Water Users Forum
CETN	Coastal Environmental Trust of Namibia
CoM	Chamber of Mines
DRFN	Desert Research Foundation of Namibia
ELAK	Environmental Learning and Action in the Kuiseb
GBB	Gobabeb Training and Research Centre
GM WWE	General Manager, Water, Waste and Environment
GRN	Government of the Republic of Namibia
HERS	Health, Environment and Radiation Safety
IWRM	Integrated Water Resources Management
KBMC	Kuiseb Basin Management Committee
LA	Local Authority
MAWF	Ministry of Agriculture, Water Affairs and Forestry
MET	Ministry of Environment and Tourism
NGO	non-governmental organisations
NNP	Namib-Naukluft Park
NRM	Natural Resource Management
NWRMR	Namibian Water Resources Management Review
SADC	Southern African Development Community
TAC WWM	Technical Advisory Committee on Water and Waste Management (HERS)
WDM	Water Demand Management
WRMA	Water Resources Management Act
WRMP	Water Resources Management Plan

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1 Introduction:

Integrated water resources management plans are a key element for sustainable development generally and use of limited water resources particularly. This Water Resources Management Plan (WRMP) for the Kuiseb Basin represents a first attempt at the development of such a plan in Namibia. The compilation of such a plan usually requires an iterative process involving all stakeholders and wide participation. During the process, a variety of institutions are involved with varying levels of capacity to contribute to the plan according to their allocated or identified mandates. This report represents a preliminary assessment of the institutional framework in which the Kuiseb Basin Management Committee (KBMC) is operating and of the capacity of the components of that institutional framework. It also describes the shortcomings and a step-wise development/ capacity building process for the KBMC.

2 Information sources:

To obtain information about the relevant institutions operating within or whose activities touch upon the Kuiseb Basin, a simple questionnaire was sent to 25 institutions or organisations who directly or indirectly are involved with Kuiseb Basin resource management. Three extensive replies were received, two of which directly addressed the queries for which information was requested and one of which simply provided an organogram of the relevant government department. Four additional replies referred the query to other institutions. An undated (± 2003) strategic plan was acquired for one of the key institutions. The discussion and recommendations are based on these replies and available information as well as information derived from the records of the Environmental Learning and Action in the Kuiseb (ELAK) project which led to the formation of the KBMC. References consulted are listed in the bibliography.

3 The existing situation:

Management of water and other resources in the Kuiseb Basin involves, directly and indirectly, a number of government and non-government institutions. Those institutions that directly contribute to water management do so primarily through abstraction and use of water recovered from the alluvial aquifer in the lower Kuiseb. These are the institutions responsible for infrastructure development and maintenance and cost recover for water supply services and waste water management. Particularly the Municipality of Walvis Bay (and the Gobabeb Centre on a much smaller scale) implements a multi-faceted programme of Water Demand Management (WDM) to ensure efficient water distribution and waste water management. Those institutions that indirectly contribute to water and other resources management do so primarily through their demand for and (in)efficient use of the varied resources including water supply.

Government: The Kuiseb Basin falls within the Erongo and Khomas Regions and peripherally within the Hardap Region and hence the respective Regional Councils have responsibilities within the basin. The Ministry of Agriculture, Water and Forestry (MAWF) is responsible for the management of the water cycle throughout Namibia and hence the water resources in the Kuiseb Basin. The Directorate of Rural Water Supply, within MAWF, provides water supply services to the rural Topnaar Community living in the upper part of the lower Kuiseb Basin, supported by the Directorate of Extension and Engineering Services. NamWater, a State Owned Enterprise also falling under the responsibility of MAWF, provides bulk water to Walvis Bay Municipality, the Topnaar Community who live within the area of their bulk water abstraction scheme and the Gobabeb Training and Research Centre further upstream. The Namib-Naukluft Park (NNP), which encompasses a majority of the lower basin, falls under the Ministry of Environment and Tourism, and uses groundwater to supply wildlife. Mineral rights are controlled by the Ministry of Mines and Energy which has an increasing role with the uranium rush currently being experienced in the Namib Desert. They have also granted copper mining and dimension stone mining rights within the NNP, both operations using water from the Kuiseb alluvial aquifer. The Ministry of Fisheries and Marine Resources controls the fishing industry, one of the major users of Kuiseb water in Walvis Bay. Most other Ministries have responsibilities for their mandate, e.g. health, education, labour, finance, within the Kuiseb Basin.

Local Authorities: The Municipality of Walvis Bay is the only Local Authority within the Kuiseb Basin. The Town Council and Rate Payers Association are both involved in water management decisions. In the past, Kuiseb water has supplied Swakopmund Municipality, Arandis and Rössing Uranium Mine, a situation that could recur if supply is temporarily limited.

NGOs: The Gobabeb Training and Research Centre is a strategic institution within the Kuiseb Basin responsible for research and training related, *inter alia*, to the Kuiseb River environment and the basin area within the Namib-Naukluft Park. The Gobabeb Centre is supported in its activities by the Coastal Environmental Trust of Namibia (CETN), based in Walvis Bay, and the Desert Research Foundation of Namibia. The free-hold tenure, commercial farmers are represented in the basin through their Farmers' Associations.

The Southern African Institute of Environmental Assessment (SAIEA) is currently implementing a Strategic Environmental Assessment of the uranium development in the west coast area and, as such, is a key NGO currently operating in the area.

Private Sector: The upper, higher-rainfall part of the Kuiseb, from which most of the available water in the basin is derived, falls under the ownership of commercial farmers living on free-hold tenure farmland. The farming community in the lower Kuiseb is represented by the Topnaar Community Foundation. In the lower Kuiseb, Exclusive Prospecting Licenses and mining rights cover the entire Namib-Naukluft Park within the Kuiseb Basin. These involve primarily uranium, copper and dimension stone. The private sector in the form of the fishing and other industries in Walvis Bay and residents of Walvis Bay including Langstrand are major beneficiaries of the water provided from the Kuiseb Basin.

Mandates and responsibilities: Based on the information received, and not received, most of the relevant institutions are clear on their own mandates in a fairly narrow sense. All know what they are directly responsible for and, in most cases, to whom they are responsible. Most, based on economic reasoning, are attempting to use water as efficiently as possible even though water management is not their primary focus. Many are not aware, however, of the options and benefits of more efficient management or alternative sources. On the other hand, many are not aware of their responsibilities for, for example, integrated water resources management on a broader scale, including water demand management or the benefits that could be derived. Those who have been exposed to the ELAK project and the KBMC are more aware of their broader mandates and responsibilities than those who have not.

Human resources and capacity requirements: Two of the institutions that responded highlighted gaps in human resource availability and provided some examples of limited capacity to carry out their specific mandate. One institution for which information was available indicated that 70% of its workforce is considered semi-skilled. This correlates with the limited availability of supervisory-level staff indicated by other institutions. Another issue highlighted is the availability of staff with vast experience who lack formal qualifications and are consequently highly valued members of staff but disadvantaged in terms of employment conditions. Development of the capacity of mid-level managers, technical and supervisory staff appears to be a key area requiring attention.

Links: Those institutions that responded to the request for information indicated good links with other relevant institutions. Several networking/ coordination institutions are of high relevance to the Kuiseb Basin and include:

- Coastal Bulk Water Users Forum. This is an organisation with representatives from all water managers and major users on the west coast. Although the Kuiseb Basin is supplying water only to Walvis Bay, Kuiseb water has been used outside of the basin in the past. The other main source of water currently used on the coast is the Omaruru Delta aquifer while desalination will serve the planned uranium mines by 2010 from private desalination plants and one to be erected by NamWater.

- Health, Environment and Radiation Safety (HERS) Technical Advisory Committee on Water and Waste Management (TAC WWM) initiated by the Chamber of Mines in response to the extensive uranium development taking place on the west coast
- Kuiseb Basin Management Committee and Forum
- Regional Council meetings (Erongo Regional Council)

Shortcomings of these existing linkage networks are two fold. The first two listed are well represented technically but focus closely on water supply and waste water management. They are not fully integrating IWRM and WDM in their overall strategies and planning. Primarily through the Walvis Bay Municipality, information from these forums is available to the KBMC. Representation on the third listed network is questionable in that only some of the members have a real mandate from their constituencies and report back to them concerning issues raised. Other KBMC representatives of key institutions sometimes attend meetings but do not actively involve themselves in the programme. Although the Municipality of Walvis Bay participates in Erongo Regional Council meetings, interactions and linkages are limited to the meetings and the minutes that arise.

An additional linkage known but not reported by interviewees and apparently not active in the Kuiseb Basin includes:

- a Basin Management Coordination desk that has been established within the Division of Hydrology, Directorate of Resource Management, MAWF, with a Project Coordinator funded by GTZ. This desk will coordinate issues of all the Basins in the country including the KBMC

Functions: In terms of functioning of the KBMC, they do have a common vision for the Kuiseb amongst KBMC and Forum members. Whether this vision is accepted and acted upon by the institutions represented on the KBMC and Forum is not evident. Interpretation of the vision and the actions necessary to address the vision are expected to vary amongst the institutions involved.

The KBMC has mechanisms for iterative, consultative planning that were fully developed at the time of the formation of the KBMC. Consultative planning takes place at the quarterly KBMC meetings although lack of time and staff limit ongoing implementation from taking place between meetings. Broader consultation takes place through KBMC representatives within their own institutions but the extent of this consultation varies widely.

Decision makers who are members of the KBMC have an understanding of the relevant issues and of basin dynamics. Nevertheless, as membership changes, this understanding has not been reinforced. It is questionable as to whether all the institutions from which the KBMC membership is derived have a good understanding and ongoing awareness creation has not been possible from within the KBMC.

Participation by stakeholders in the basin, in terms of monitoring, evaluation and adjustment mechanisms, is limited. The KBMC members meet quarterly and discuss developments within the basin based on their institutions' ongoing monitoring and evaluation. The KBM Forum meets annually for report back from the KBMC. Adjustment mechanisms are available on an institutional basis. Participation is extended through membership, primarily by the Walvis Bay Municipality, in the two major networks of CBWUF and HERS. To date, as evidenced by the information provided by those queried for this plan, further participation will have to be actively solicited and encouraged by the KBMC. A process for which staff and time is currently not available.

Documentation and dissemination to interested parties at all levels of processes, actions, information and results is mixed. Within the KBMC itself, minutes of meetings and discussions are documented and disseminated. This includes information on various activities within and affecting the basin. Broader dissemination takes place through the newsletter of the Walvis Bay municipality and various articles in popular media.

The gaps and shortcomings in the functioning of the KBMC reflect the limited resources, particularly staff and time, available to devote to the KBMC and the inconsistent support from the side of the relevant government institution.

Adapting the scorecard used in the NWRMR Theme Report on Institutions and Community Participation (MAWRD 2000), the following analysis is presented:

Clear accountability: The concept of the BMC is clearly elaborated in the WRMA 2004, which has, however, not commenced. Different messages are conveyed to the KBMC concerning the value and expected orientation of their efforts - at different times by different people, often from the same Ministry. The KBMC has adopted their networking role on a low-key basis awaiting the implementation of the WRMA.

Clarity of roles: It is still not clear whether the BMCs are to implement, e.g. 'prepare a water resources plan for the basin', or 'facilitate the establishment of an operational system and maintenance system' as stated in the WRMA, or simply to familiarise themselves and advise government. This is expected to be addressed with the revision of the Water Resources Management Act. The KBMC continues, however, to network and play a role in information exchange within the basin.

Efficiency and effectiveness: This aspect is still constrained by the unclear role that the basin management is expected to take. Moreover, the KBMC requires more dynamic action and a greater staff presence to undertake its networking role more effectively.

Being knowledge driven: The KBMC is driven by the knowledge available to it – which is relatively extensive - provided by its individual members and derived from their institutions. Through its networking, however, it does not have easy access to a broader variety of information and knowledge; this deficiency could be addressed by this WRMP.

Integration: Based on its membership and the information available, the KBMC uses an integrated approach. The degree of integration could and should be expanded.

Community participation: The KBMC was founded on a very participative approach. Participation has decreased, however, as many of the participants have yet to recognise the advantage of the KBMC viewing it from their own narrow institutional perspective only.

Regionalisation: The current networking mandate of the KBMC is totally regionalised but additional local support for water management in the basin could be provided, if acceded to by the relevant government authorities.

4 Implications for the KBMC:

The Kuiseb Basin Management Committee operates within the above-outlined milieu. While having taken the lead in terms of the recommendations of the Namibian Water Resources Management Review (NWRMR) and the National Water Policy and being in line with the Namibian Water Resources Management Act, the KBMC has not realised its full potential. Two lines of development within the current framework present themselves. The KBMC could capitalise on its strengths and focus on establishing a vibrant institutional framework with dynamic participation involving all relevant stakeholders in the basin. The alternative approach would be to remain a reactive institution responding to changes taking place within the basin but mainly imposed from outside of the basin.

These two lines of development parallel the approaches taken by the networking institutions affecting the KBMC. The CBWUF and HERS are actively organising and planning involving all key players primarily involved in water supply. On the other hand, the Regional Councils and the Basin Management Coordination desk have appeared to take a passive role in terms of engaging or becoming engaged with the KBMC. Recently, however, Erongo Regional Council is being represented

by Mr Usurua of DRWS, since decentralisation of RWS is underway. Other than the last mentioned networking institution, none of these institutions are aware of the potential value of the KBMC. Nevertheless, the approach to be taken by the KBMC must include all the networking institutions to be fully effective.

5 Roadmap for implementation of the action plans in terms of institutional and capacity development for the KBMC.

The KBMC is first and foremost a networking institution to inform stakeholders on plans and developments within the basin and affecting the basin. It has the direct responsibility for developing institutional and human resource capacity within the members of the KBMC and the Forum and the indirect responsibility for involving stakeholders at all levels and providing information to enhance understanding of the various related institutions.

As an institution, the KBMC has been entirely dependent on its elected members who, in turn, are supported by their parent institutions. This has meant that limited resources, particularly staffing and time, are available to devote to the KBMC. Moreover, the members of the KBMC have demonstrated differing levels of proactive involvement to address the objectives of the KBMC. This has resulted in some of the members passively responding to KBMC activities initiated and planned by others or, in some instances, hindering planned actions.

As elaborated in the Action Plan, it is clear that the KBMC requires additional resources to energise and coordinate the activities of the KBMC. These resources should, in the first year, support the activities of two people, one volunteer to re-kickstart activities and one long-term employee. They would actively address the networking and information exchange mandate of the KBMC to raise the visibility and the status of the KBMC amongst members, member institutions and those managing and using resources in the basin in general. Outsourcing and mentoring approaches could be integrated into the implementation process. For this to happen successfully, however, strong and visible support must be provided from the Ministry responsible for overseeing Basin Management under the WRMA.

In terms of the capacity of the KBMC, it is essential that all committee members be provided with a constant flow of easily assimilated information concerning the basin and the activities of other institutions in the basin so that they can exercise their mandate effectively. It is also essential that short courses be implemented to address the several requirements of a BMC, as indicated in the WRMA. This would require the backing of the responsible Ministry to intervene on behalf of the KBMC members to allow their participation. Also in terms of capacity, the use of mentors and outsourcing should be undertaken by the KBMC to support their ongoing activities in terms of awareness raising and capacity building.

6 Conclusions:

Under the current circumstances, the KBMC is maintaining its institutional integrity although restricted in terms of staffing and time available. This situation could be rapidly strengthened with the addition of dynamic staff and a programme to address key issues throughout the basin.

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