



Newsletter CEB

VOLUME 1, ISSUE 1

APRIL—JUNE 2012

IWRM in the Cuvelai-Etoshia Basin (CEB), Namibia

About CEB

In order for Namibia to manage its scarce water resources, the government has embraced the global and holistic concept of integrated water resource management (IWRM) and introduced basin management approach. This leads to the division of Namibia into 12 water basins. One of the basins is Cuvelai – Etoshia Basins located in Northern Namibia.

The Cuvelai-Etoshia Basin constitutes the drainage system of the Cuvelai system. Surface water in this basin is international water originating from Cuvelai in Angola and ending in Etoshia National Park in Namibia. In this article we will define the Namibian part of the CEB. The Biophysical characteristic

study that was carried out in 2010/11 estimated the population of the basin at 900 000 people, of whom about 760 000 living in the rural areas. It is the most densely populated basin in Namibia and with a lot of water uses. Drinking water is supplied through the Kunene River while some part supplied from ground water. The basin is rich in varieties of fauna and flora, Etoshia National Park is part of the basin. The basin covers the whole of Ohangwena, Omusati, Oshana, Oshikoto regions, parts of Kunene and Otjozondjupa regions. The Cuvelai-Etoshia Basin is sub-divided, based on hydrological characteris-

tics into 4 sub-basins namely Iishana, Nüpele, Olushandja and Tsumeb (refer to the map of the basin). There are 4 sub-basin management committees (sub-BMCs) comprises of water point committees, farmers associations, conservancies cooperatives, traditional authority leaders, community based organisations, mines, regional councils, local authorities, government institutions, chamber of commerce and Industry. The primary function of these Committees is to advise the Minister of MAWF in matters of water resources governance (policies, laws and water related development activities) and promote the concept of Integrated Water Resource Management to all communities in the basin.

Events

- Awareness Raising Days in Schools on IRWM in May and June 2012
- Coordination Workshop 13-15th June 2012
- Release of new Website

Inside this issue:

Project Result 1	2
Project Result 2	4
Project Result 3	4
Project Result 4	4
Project Result 5	5
Study Review	6
Pictures	8

The map of the Cuvelai-Etoshia Basin and Namibia Water Basin



Result 1: Adequate IWRM institutions created and operational

Activity 1: Establish Technical Support Unit

The International Expert, Ms. Sonja Berdau, as agreed by the PSC during the meeting of 24th November 2011, has been contracted to the project unit in Oshakati as a project team member and will joined the Project Unit as from the 1st of May. The Water Expert position will not any longer be filled. The existing gap will be covered by short-term consultancies.



Activity 2: Carry out a stakeholder analysis

The stakeholder analysis by DRFN has been completed. The project is already on a day to day basis using the provided stakeholder engagement plan from the report. However, in the 3 quarter DRFN will be responsible to fully implement the stakeholder engagement plan on sub-basin level. This activity will be an ongoing part.

Activity 3: Organize and support consultations among decision makers and stakeholders



The 2012 Annual Planning and Coordination workshop took place successfully on 13-15 June 2012 in Ongwediva. It was a good representation by 60 stakeholders. Key issues were identified and grouped in four thematic areas: pollution control, waste management, flood management and water supply while the rest were put under cross-cutting issues.



The key decisions and way forward for the workshop was the drafting of the Annual Operational IWRM CEB Plan 2012-2013. An IWRM Coordination Committee of 12 members was nominated from a broad representation and tasked to review CEB institutional plans and compile a CEB IWRM Annual Operational Plan 2012-2013 financial year. The CEB being the secretariat to this committee was tasked to get all operational plans from key institutions in the CEB. The purpose is collaboration and coordination and weeding out duplication of efforts.

Activity 4: Facilitate the identification, gathering and dissemination of information required for planning and develop planning procedures.

During the CEB coordination workshop, CEB institutions were invited to present their issues and challenges and at the same time relevant resource institutions: (OPM: Disaster Risk Management, MET, MAWF, UNAM, Ministry of Fisheries,



Cuvewaters, BGR, EU and GIZ) provided necessary information and feedback.

The CEB facilitated and provided technical support to BMC/Forum meetings.

The Nüipele executive committee met on 27 June 2012 and attend by the CEB staff

The Tsumeb BMC/Forum meeting was held on 29 June 2012, water environment, geo-hydrology

Iishana Sub-Basin Management Committee, met on 28 June 2012 and attended by CEB staff

Olushandja Basin Management Committee did not meet during this quarter, a meeting is scheduled on 02 July and exposure trip to Okavango on 03 July 2012 .

Result 1: Adequate IWRM institutions created and operational, cont.

Activity 5: Support the introduction of functional sub-basin management committees and a coordinating CEB Management Committees

For all four sub-BMC the local subsidies have been issued and the sub-BMC are now busy implementing their work plans. The constitutions of Niipele, Olushandja and Tsumeb sub-BMC are with the Ministry for approval. The official launching of the three mentioned sub-BMCs had to be postponed due to the fact that the constitutions were not yet signed by the Minister. Technical support according to the needs of the BMCs was provided throughout the quarter.

Activity 6: Develop an alternative system to finance BMCs

Alternative funding systems are described in a project study. However it seems that the only sustainable funding system is the existing and functional funding through GRN-MAWF funds.

Activity 7: Do financial audit of Basin Management Committees

Regular checking and control is done to ensure adherence to the local subsidy contracts when purchasing of items or services.

Activity 9: Promote and document best practices

Best practices and lessons learnt from sub-BMCs and on SADC level were collected and documented. The presentation of these findings will take place in the 3rd quarter. The presentation will take **place** in the Oshakati office as well as in the Windhoek office at the Ministry. Comments out of the discussion during the presentations will be incorporated in the final report.

Activity 10: Define the support of the BSO in CEB

The Directorate of Resource Management has assigned ministerial staff as resource staff and support to the BMA in the basin. The list with contact is disseminated to all Basin Support Offices. BSO are using the contact list accordingly.

Activity 11: Clarify (Terms of References (TORs) for the BSO team in CEB

The job description (TORs) for the BSOs have been developed. BSOs are contracted and work on the basis of these. The bi-annual meeting amongst the BSOs and the basin coordinator took place during the CEB coordination and planning workshop.

Activity 12: Public Education and Awareness Programme

A radio show has been advertised and the tender procedure has been finalised. The contracting negotiations are ongoing and will be finalised in the beginning to the 3rd quarter. The radio show will then kick off in the next quarter. The CEB staff provided constant support in the implementation of a school awareness programme in the four sub-basins during this quarter.

Result 2: Full stakeholder involvement in basin management activities

Activity 2: Maintain regular interaction between stakeholders through networking

The Niipele, Olushandja, Iishana and Tsumeb Sub-Basin Stakeholders network during organised stakeholders meetings. The Basin Support Officers and chairpersons of the basins are invited to attend other sub-basin meetings in order to exchange ideas and networking. All sub-basins have planned exchange and networking activities with

other basins in Namibia, this is an ongoing activity.

Activity 3: Develop and conduct IWRM relevant training modules

An investigation was done to find out which other Namibian institutions are involved in the topics of the identified modules. It was also investigated whether some modules already exist on the Namibian market and which would just need to be applied to the specific needs of the basins. Based on this, three parts of

TORs have been developed and sent to the SC for approval. Trainings are expected to start in the next quarter.

Activity 4: Organize exposure trips for stakeholders

There was an exposure trip planned and organized to Zimbabwe. Due to political decisions this trip has been cancelled. Ongoing effort is put into the identification of a different destination. The exposure trip is planned to take place on 13-21 October to South Africa.

Result 3: Adequate technical support for IWRM provided

Activity 1: Carry out assessment of surface water resources and rainfall and develop monitoring network

Due to tendering and contracting challenges this activity is delayed.

Activity 2: Conduct groundwater investigations and establish a monitoring network

The TORs to conduct the core drilling were prepared. They will be tendered in the next quarter. First measurements (max-min-sitting) for the geophysical investigations in Olushandja sub-basin are taken with Geohydrology staff and material. Further measurements (seismic and/or electro-magnetical) will be conducted in the 3rd quarter according to the findings. The geophysical BH logging is in progress.

Activity 3: Undertake studies on the biophysical and socio-economic characteristic of the basin

TORs for the design, pictures, editing and printing of the biophysical and socio-economic atlas have been developed. The contract is already prepared and signed. The atlas is expected to be available for dissemination in the next quarter.

Result 4: Sustainable and integrated management plans for water resources developed

Activity 1: Compile and maintain an integrated computerised water resources database

The consultancy kicked off in the beginning of June 2012. The inception report was agreed upon with the technical BWIS working group. In this quarter the consultant reviewed the existing data and information systems in the water resource management sector, including the IT infrastructure and the actual data available. This also includes a data quality and completeness assessment. In the same time the consultant defines the BWIS stakeholders and conducted a needs assessment to define their data and information requirements. This assessment also covers functional requirements of stakeholders. The presentation will be given in the 3rd quarter.

Activity 2: Design a numerical groundwater flow model (using information collected under result 3)

Conceptual hydro geological models are available for Karst (Tsumeb), Oshivelo and Ohangwena. Reports are at the library of Geohydrology. The development of a numerical model for pilot areas is in a first draft for Ohangwena. Testing and calibrating is ongoing with further investigations.

Result 5: Capacity for IWRM implementation built

Activity 2: Improve communication, collaboration between academic, research and scientific institutions

Polytechnic of Namibia and the NWRM project have agreed on areas for cooperation amongst one another. So far Polytechnic of Namibia and university of Namibia participate in forum meetings whenever possible from their side. The project continues to use graduates from these institutions for specific tasks as interns and presentation to the stakeholders (SH) scientific papers. Intensive collaboration is taking place with Polytechnic in the fields of BWIS and Disaster Risk Management.

Activity 3: Promote IWRM principles at primary and secondary education level through provision of teaching materials, including case study materials

In all four sub-basins a IWRM shooting, school awareness program was rolled out. The BMC members supported by the BSOs and the CEB office went to eight schools within the



CEB. The awareness raising day included lectures, presentations and discussions on the water sources, water cycle, water uses and water management as well as the principles of IWRM and the implementation of this concept in the Namibian context. Posters, flip charts and a ground water module were for visualisation. To keep a balance to the classroom session's role outside games and sessions were part of the teaching methods. Besides the water background, the learners received one lecture of how to use disposal cameras and got a short introduction of how to shoot nice pictures.

The homework of the kids was to capture IWRM



related activity at their home and describe that picture in their note

book, which was handed out during the lesson. In the next quarter the pictures are being developed. The best pictures including the note will be printed in a photo book. Each class will produce one photo



book. The competition amongst the eight schools will be to chose the

best two pictures of each school and print them on big posters including the note and have them as a small exhibition in various locations like schools, municipalities, the Ministry, cultural centres, etc.

Activity 4: Research, compile and promote indigenous knowledge relevant to integrated water resources management

The report is constantly shared amongst the stakeholders at various meetings. It is also continuously being updated, see the study review on page 7.



Understanding of IWRM in the CEB

A study has been conducted analyzing the Households' participation in and awareness of Integrated Water Resource Management in the Cuvelai-Etosha Basin in 2011. By carrying out the study full stakeholder's involvement in the basin management activities was ensured and the overall objective of the study was to provide information regarding the awareness of IWRM at household level in the CEB.

Data was collected by interviewing two focus groups and by carrying out over 190



household survey questionnaires. Communities' perception regarding to the four Dublin principles of IWRM were studied in detail, especially regarding water sources



allocation, water pollution and sanitation, participation, social integration and gender as well as water as economic good.

The main topics covered during the meetings were distance to water, water tariffs and water quality and quantity. Ac-

Water is life
Omeya ogo omwenyo

According to the study results the majority of the participants confirmed that water has a value and should be

traded as any other commodity. However, it was emphasized by that different water users should pay different tariffs. In terms of participation the household meetings were



attended mostly by men and therefore a lack of female participation in stakeholder's involvement on a local level can be identified and needs to be

addressed further in the future. The study identified 58% of the households are cooperating



in water related issues in communities and 28% cooperating for the construction of wells. The implications for the IWRM strategies include the consideration of local management structures, the specific targeting of women and the incorporating of rain water use. Overall, the study has confirmed that there is still a need for strengthening the integration of women in the participatory decision making

process related to water and a need to bridging the gap between the households and the higher governmental actors.



Indigenous Knowledge of IWRM in the CEB

A study looking at the indigenous knowledge in relationship to IWRM was conducted in three individual villages in Cuvetlai-Ethosha Basin (CEB): Ombathi, Epyeshona and Onekaku village. Indigenous knowledge in Namibia is accumulated over generations through the observation of the environment and accumulation of informal experiences over time. The study identified the indigenous knowledge in rela-

tionship to IWRM capacity building.

As research methods semi-structured face-to-face interviews and focus group discussions were used in order to analyze indigenous traditions and knowledge in relation to water resources. During the in-depth discussions indigenous knowledge in relation to preparing for and coping with floods, rain and droughts was identified. Cultural perceptions of water quality, use and safety also played a significant role in

the analysis.

The study findings provide several implications for the IWRM-CEB project. The findings show clearly that



Local Water Supply

some of the Dublin principles are already applied in the CEB communities to some extent. Water is seen as a limited and finite resource by local communities and seen as a wider



community concern and therefore water related issues are often addressed in cooperation

within the community. Moreover, in traditional societies in the CEB women play a crucial role in water management by fetching water and managing the domestic use of water in the villages. However, in villages without installed taps water is still seen as a free ‘god-

given’ good and water has yet to be conceptualised as an economic good.



Based on the findings the study confirms

the importance of indigenous knowledge and traditional techniques regarding disaster prediction, preparation and coping mechanism. Especially specific knowledge regarding the observation of the nature such as the growth of certain trees or appearance of animals can be a useful indicator and support for the prediction of floods, rain and droughts. According to the findings sustainable water management tech-

niques are widely applied in CEB such as rain water harvesting, water re-use and conjunctive water use. The study concludes that the indigenous techniques

OMUSATI AND OMWANDI TREES ARE INDIGENOUS SYMBOLS FOR UPCOMING DROUGHTS



should be further integrated and supported by integrated water management strategies. In addition,

the IWRM should make use of cultural references in the provision of information materials and implementation mechanism.

Pictures and Maps



Water off takes from the canal



Indigenous wells , Omundaungilo



Shallow wells, Omundaungilo



Tsumeb Stakeholders visiting the Tsumeb municipality waste water treatment plant



BGR in the field, Eenhana



CEB Stakeholders Exposure Trip 2010

Cuvelai-Etoshia Basin Office

P.O. Box 3567, Ongwediva

Physical Address: Ministry of Agriculture, Water and Forestry,

Oshakati East Kwame Nkrumah Street,

erf 1281/1282, Oshakati, Namibia

Tel.: +264 65 220 589

Fax: +264 65 224 305

E-Mail: tuwilika.haludilu@giz.de