



ORASECOM

THE ORANGE-SENQU RIVER COMMISSION

NEWSLETTER

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Foreword from the Executive Secretary



May I take this opportunity to firstly wish you a healthy, prosperous and happy 2010.

I am glad to present the first ORASECOM Newsletter. The idea of having a newsletter

emerged from the interest to share ORASECOM experiences and knowledge with a broad spectrum of colleagues and others interested in transboundary water resource management, and to keep interest groups throughout the Basin informed about developments and events in the Orange-Senqu River Basin.

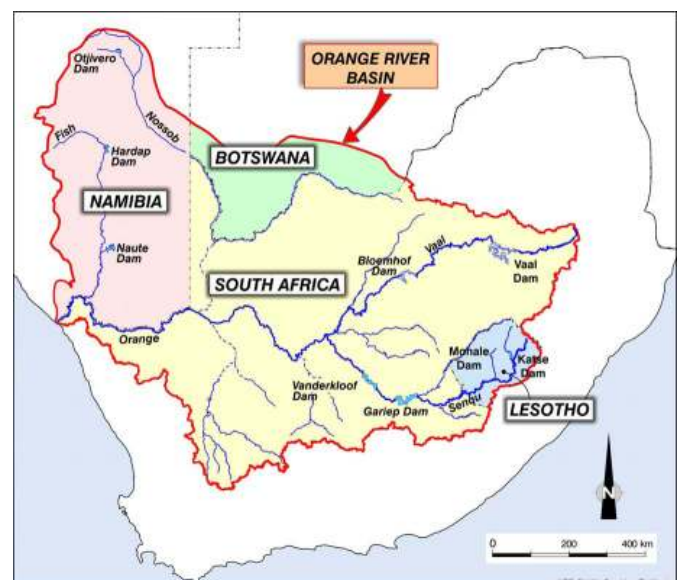
Since ORASECOM's establishment in 2000 we have made considerable progress, not only in mapping the status of the Orange-Senqu River System, but also in building partnerships and exchanging ideas with other transboundary water resource management institutions.

This first newsletter provides background information about the Orange-Senqu River System, about ORASECOM, its projects supported by international cooperating partners, as well as ORASECOM's main achievements and progress throughout 2009.

The Orange-Senqu River Basin

The Orange-Senqu River originates in the Lesotho Highlands, from where it flows westwards to its mouth at Alexander Bay/Oranjemund on the Atlantic West Coast of Africa. The river basin is the third largest in southern Africa, after the Zambezi and the Congo, covering a total area of 1,000,000 km² of which almost 60% is inside the Republic of South Africa. Four countries – Botswana, Lesotho, Namibia and South Africa - share the Basin, and the river forms the border between South Africa and Namibia in its lower reaches.

Lesotho, the most upstream country falls entirely within the basin and contributes over 40% of the stream flow from only 5% of the total basin area, but Lesotho is one of the smallest users of water from the basin. South Africa is by far the biggest user of water from the Orange-Senqu River System, and this use drives the economic heartland of South Africa. In South Africa, the basin receives inter-basin transfers from the Inkomati and Usutu systems, shared with Mozambique and Swaziland, and from the Tugela system. Water is also transferred out of the basin to the Limpopo system, shared with Botswana, Zimbabwe and Mozambique and into the Eastern Cape Province. The footprint



of the basin is therefore much wider than its geographical extent. The part of the Basin in Botswana is entirely covered by the Kalahari Desert with very little surface runoff, but groundwater contributes to the water demands in this portion of the basin. However, indications are that gradual salinisation of this groundwater means that this source may not provide for the needs of the people of that part of the basin for much longer.

The water requirements in the lower reaches of the river are driven primarily by irrigation demands from both Namibia and South Africa, as well as the need to maintain environmental flows to the estuary. The middle and lower reaches of the river are subject to periodic and often devastating floods. The Orange River estuary is ranked as one of the most important wetland systems in southern Africa. Developments in and around this wetland system as well as reduced freshwater inflows have, nevertheless, resulted in environmental degradation. This wetland system was recently re-designated as a Ramsar Site and placed on Montreux Record. However, reduced freshwater inflow to the estuary may be affecting wetland functioning.

Effective management of the Orange-Senqu River Basin is, therefore, particularly complex, but is also vital to the economy of the region. SADC



The Senqu River near its source
Source: Lesotho Water Commission 2003

therefore prioritised this basin for the establishment of a joint basin commission following the entry into force of the SADC Revised Protocol on Shared Watercourses. As a relatively new organisation, ORASECOM faces considerable challenges in establishing itself as a key role player in the basin.

About ORASECOM



Organisational set-up of ORASECOM

ORASECOM was established in 2000 through an agreement between Botswana, Lesotho, Namibia and South Africa. The Commission has its origins soon after the signing of the Revised SADC Protocol on Shared Watercourses and is one of the first Shared Watercourse Institutions to be established under the Revised Protocol. The Permanent Secretariat was established in 2007 and is based in Pretoria, South Africa.

ORASECOM advises its Member States (the Parties) on matters related to development, utilisation and conservation of the water resources in the River system. This may include recommendations on *inter alia*; water availability, equitable and reasonable utilisation of water resources, development of the river system, stakeholder participation, harmonisation of policies, and a standardised form of collection, processing and dissemination of data and information. processing and dissemination of data and information.

In addition, ORASECOM may advise Member States on the prevention of pollution and control of aquatic weeds, contingency plans for responding to emergencies, and a variety of procedural matters on water related development between the Member States.

To date ORASECOM partners include the GTZ - the German Gesellschaft für Technische Zusammenarbeit (BMZ - the German Federal Ministry for Economic Cooperation and Development - and DFID - The British Department for International Development), French GEF - Global Environment Facility, EU - European Union, UNDP-GEF – The Global Environment Facility of the United Nations Development Programme.





EU Support



The overall objective of the EU Supported Project in ORASECOM derives directly from the vision of the SADC Revised Protocol on Shared Watercourses, and is specified as follows: *“To reduce poverty and food insecurity through improved management and environmental protection in the Orange - Senqu River basin.”*

The Basin States differ widely in their ability to convert water from the Orange-Senqu system into GDP and jobs. Strategies to address poverty and food insecurity in the basin through water use may differ. In Lesotho, Botswana and Namibia the population of the Basin is largely rural and poor, while in South Africa water use also supports the urban, industrial and mining heartland of the nation. There are considerable irrigation demands in the

middle and lower reaches of the river from both Namibia and South Africa, which make a significant contribution to the economy of that part of the Basin. Moreover, the countries have different social needs that sit high on their national developmental agenda. There is consequently no standardized approach to using water to promote growth and development.

The context within which ORASECOM will function may therefore be influenced by different approaches to national development and poverty reduction strategies – as well as the principles and strategies espoused by SADC. This, to some extent, defines the role that ORASECOM could play in the basin, as well as the form and extent of the Basin Wide Plan. This in turn influences optimal institutional arrangements for the organisation.



The Richtersveld region, South Africa/Namibia
Source: Stockphoto/Roode 2008

The EU project therefore focuses on institutional strengthening and to better understand the form and extent of ORASECOM's technical advisory role. The EU Project seeks to answer:

- “What is the best institutional form and functioning for ORASECOM?”

- “What is the form and extent of the organisation's technical advisory role?”
- “What can ORASECOM do, that can not be done by the bilateral arrangements or by the Member States acting independently?”



GTZ support has to date consisted of two Phases. Phase I, with financial support from BMZ, was concluded in 2008 and included studies in the following areas:

- Current Analytical Methods and Technical Capacity of the four Orange Basin States
- Summary of Water Requirements from the Orange River
- Demographic and Economic Activity in the four Orange Basin States
- Environmental Considerations Pertaining to the Orange River
- Water Quality in the Orange River
- Review of Existing Infrastructure in the Orange River Catchment
- Institutional Structures in the four Orange Basin States.
- Legislation and Legal Issues Surrounding the Orange River Catchment
- Review of Groundwater Resources in the Orange River Catchment
- Review of Surface Hydrology in the Orange River Catchment
- Water Quality in the Orange River

The above documents can be downloaded from the ORASECOM website.

Phase II of the GTZ Project, with financial support of BMZ and technical and financial assistance from DFID, started in August 2009 and includes the following seven action areas:

- Assessment and Upgrading of an Integrated Orange-Senqu River Basin Model
- Updating and Extension of Orange-Senqu River Hydrology
- Assessment of Requirements for, and the Development of, an Integrated Water Resources Quality Management Plan for the Orange-Senqu River
- Determination of Catchments Boundaries
- An assessment of the impact of global climate change on the hydroclimatology, water resources, vulnerabilities and adaptation requirements in the Orange River Basin
- An Assessment of Environmental Requirements
- An assessment for the potential for Water Demand Management in the irrigation sector of the Orange River Basin



FGEF Support



The French Global Environment Facility (FGEF) Supported Project was concluded in August 2009 and provided support to strengthen ORASECOM, through the implementation of concrete actions. The project support aimed to strengthen transboundary and inter-sectoral networking systems so as to build capacity and confidence through transparency and the sharing of information to support transboundary river basin management. The following actions were implemented under the FGEF support:

- Capacity Building Programme
- Feasibility Study for the Development of a Mechanism to Mobilize Funds for Catchment Conservation
- Assessment of Potential for the Development

and Use of "Marginal Waters"

- Feasibility Study of the Potential for Sustainable Water Resource Development in the Molopo-Nossob Watercourse
- Groundwater Review of The Molopo-Nossob Basin for Rural Communities Including Assessment of National Databases at The Sub-basin Level for Possible Future Integration
- Protection of the Orange-Senqu Water Sources/Sponges

The reports of these actions are complete and pamphlets with summaries are available both on the ORASECOM website (www.orasecom.org)



Competing water uses in the context of dwindling and uncertain future supplies are the critical issues in the basin. As past experience has shown, single sector oriented management of water resources does not solve the problems. Only integrated planning of water resources at the basin level can adequately address the environmental and socio-economic development needs.

Awareness of this fact has promoted the development of a UNDP-GEF sponsored "Development and Adoption of a Strategic Action Programme for Balancing Water Use and Sustainable Natural Resource Management" Project among four of the riparian countries. The Project forms part of the ORASECOM-led Orange-Senqu Water Resources and Environmental Programme. As such the Project will build upon and create synergies with a range of initiatives being undertaken by the countries themselves and those of bi-lateral and multi-lateral donors that have given priority to the Basin.

In April 2008 ORASECOM adopted a preliminary Transboundary Diagnostic Analysis (TDA) of water resources related issues in the Basin. The preliminary TDA followed the GEF International Waters "best practice" approach, including:

- Identification and initial prioritisation of transboundary problems;
- Gathering and interpreting information on environmental impacts and socio-economic consequences of each problem;
- Causal chain analysis, to identify underlying root causes; and
- An analysis of institutions, laws, policies and projected investments.

It identified five priority transboundary problems:

- Stress on surface and groundwater resources;
- Altered water flow regime;
- Deteriorating surface and groundwater quality;
- Land degradation; and
- Alien invasives.

In 2009 activities on the ground were limited, although signing of the Project Document by all four riparian countries and the recruitment of the project manager were both important milestones. A Project Coordination Unit, hosted at the ORASECOM Secretariat, will now finalise the TDA by undertaking a number of gap filling activities including:



- A review of the impacts of artesian mining on the middle and lower Orange;
- An assessment of Persistent Organic Pollutants levels in the river; and
- A detailed yield assessment and demand forecast for the basin for the next 25 years.

Though climate change and biodiversity are not independent priority transboundary concerns, these issues will be highlighted and integrated throughout the Project. The final TDA will serve as the scientific basis for development of an agreed set of interventions under the framework of a Strategic Action Programme (SAP) and associated National Action Programmes (NAPs). The SAP will incorporate a basin vision, water resource quality objectives, targets and interventions in the short and medium term to meet the targets. It will be developed in a participative manner with the wide range of stakeholders involved.

In parallel to the SAP development the Project will implement three pilot projects which will demonstrate replicable solutions in three critical areas of concern:

- The setting of environmental flows;
- Water demand and quality management in the irrigation sector; and
- Community-led rangeland management.

The Project's duration is until 2013.



Activities and Events 2009

Appointment of the Water Resources Specialist to the Permanent Secretariat

In June, Mr Rapule Pule, a hydrologist by training joined the ORASECOM Permanent Secretariat as a Water Resources Specialist. Mr. Pule has more than twelve years of work experience in water resources management. He spent eight of these years working for international organisations such as the SADC Water Sector Coordinating Unit (WSCU) now known as the SADC Water Division, and the International Council for Local Environmental Initiatives (ICLEI). Throughout his career, he gathered experience in, inter alia, integrated water resources management (IWRM), sustainable development, hydrology, hydrogeology, water quality management, environmental impact assessment and project management. He worked with both national and



local governments. Mr. Pule's appointment is a very welcome addition to the Secretariat and we wish him a very successful and productive time in the Secretariat!

The International Water Law Course

The ORASECOM Secretariat arranged a course on International Water Law, in Pretoria – South Africa from 1-5 June 2009. About 20 participants, drawn from all Member States, as well as Secretariat staff attended and obtained a wealth of material, as well as a fresh understanding of the intricacies of International Water and Environmental law.



Delegates debate the intricacies of International Water Law at the course

This course, supported by the EU and FGEF, provided a common understanding of the core principles of International Water Law, as well as the specific requirements of international instruments directly applicable to the Orange-Senqu River Basin situation. The course covered the following topics and principles

- An introduction to International Water Law;
- Determining Equitable Utilisation;
- The duty to prevent significant harm;
- Environmental protection obligations;
- The duty to cooperate, and
- The relationships between the SADC Revised Protocol, ORASECOM Agreement and the Bilateral Agreements.

Practical exercises allowed participants to engage these principles on fictitious shared river basins.

The course was designed and presented by, Dr Daniel Malzbender of the African Centre for Water Research, and supported presentations from Dr Owen McIntyre (of the University College Cork – national University of Ireland) and Dr Brian Hollingworth (Independent Consultant). Dr Guy Pegram also presented a session on institutional arrangements in River Basin Organisations around the world. The course was very well received, and participants felt that it had been a rewarding and enriching experience.

ORASECOM visit to the ICPDR

A delegation of 4 people from ORASECOM and the EU support team visited the Secretariat of the International Commission of the Protection of the Danube River (ICPDR) based in Vienna, Austria from 12-17 July 2009. This visit formed part of an on-going cooperation between ORASECOM and the ICPDR, and was supported by the EU.



ORASECOM Delegation in Austria and Slovakia

The primary focus of the visit was to exchange experiences on joint multi-national water resource quality monitoring programmes, as well as to engage the ICPDR

on stakeholder communication. Key lessons brought back by the team include

- 1) Monitoring could focus on a basin wide perspective on the state of the system, as well as specific transboundary problems.
- 2) Monitoring can be done at different intensities from intensive surveys on an irregular basis, to routine operational monitoring at lower intensities and higher frequencies
- 3) Monitoring programmes could be paralleled with existing national monitoring programmes.
- 4) Methods for quality assurance inter-laboratory comparisons build trust in the shared data.
- 5) A Basin Wide Observers forum consisting of specific interest groups could be considered to help build legitimacy for the future Basin Wide Plan.
- 6) Awareness raising toolboxes can be developed with the engagement of stakeholders.

These lessons have been built into the ongoing work supported by the ORASECOM's International Cooperating partners.

ORASECOM Orange-Senqu Field Excursion



ORASECOM field Excursion team at Secunda.

In August-September and with support of GTZ, members of ORASECOM made a field excursion along the Orange-Senqu River from its source in the Lesotho Highlands, to the Orange River Mouth. The tour was organised by WRP Consulting Engineers.

Participants from toured along the river, visiting key sites of interest along the way. The purpose of the excursion was to familiarise the delegations with the river system and develop a broader understanding of the key issues.

The two week excursion began in South Africa, visiting SASOL at Secunda, Hendrina Colliery and the Vaal Dam

before heading to Lesotho. Here the group had an extensive tour of the Katse Dam before traveling through Maseru to the border and the Caledon River. The group then travelled along the Orange River visiting Gariep Dam and its power plant, Kimberley, the Kuruman Eye, Sishen Mine, Neusberg Weir and Augrabies Falls. On the Lower Orange River, the team crossed into Namibia at Vioolsdrift to visit Aussenkehr and a Namibian Wine farm before crossing back over into South Africa. Finally, they drove through Port Nolloth to Alexander Bay and Oranjemund where they were provided with an extensive visit of the river mouth.



GTZ supported Project enters Phase II

In August 2009 GTZ supported project entered its second phase. The project is divided into seven work packages as follows



Climate change may alter the availability of water
Source: Vogel 2009

Assessment and Upgrading of an Integrated Orange-Senqu River Basin Model.

The main objectives of this consultancy are to enlarge and improve the existing models for the Orange-Senqu Basin, so that they incorporate all of the essential components in the four Basin States and are accepted by each Basin State.

Updating and Extension of Orange-Senqu River Hydrology. This project will focus on generating new hydrological data for the data-deficient segments of the Basin and extending current hydrological records for the Orange-Senqu Basin, according to the priorities set by ORASECOM.

Assessment of Requirements for, and the Development of, an Integrated Water Resources Quality Management Plan for the Orange-Senqu River. The project will build on an initial assessment conducted as part of the Phase I water quality data assessment project, and then propose a robust water quality management plan for incorporation into the overall integrated water resources management plan for the Orange-Senqu Basin.

Determination of Catchments Boundaries.

The project will seek to fully delineate all the sub-catchments comprising the Orange-Senqu Basin, focussing especially on the semi-arid to arid zones in the middle to lower reaches of the Orange-Senqu Basin.

An assessment of the impact of global climate change on the hydroclimatology, water resources, vulnerabilities and adaptation requirements in the Orange River Basin. The objective of this work package is to undertake a detailed assessment of the occurrence and extent of climate change due to anthropogenic factors in the Orange River basin.

An Assessment of Environmental Requirements.

The consultancy should undertake an assessment at intermediary level (by criteria set out by the Department of Water Affairs and Environment of South Africa) of environmental requirements of the Orange River basin in selected key areas.

An assessment for the potential for Water Demand Management in the irrigation sector of the Orange River Basin. The consultancy should undertake a detailed assessment of the water used for irrigation in the Orange-Senqu River Basin.

The launch of the ORASECOM River Awareness Kit



Photos from the launch of the Orange-Senqu RAK in Maseru Lesotho

ORASECOM launched its Orange-Senqu River Awareness Kit (RAK) on the 19th of October 2009, in Maseru – Lesotho. The RAK introduces users to the fundamentals of the geography, socio-economics,

water governance and water management of the Orange-Senqu River Basin. It provides a centralised repository for knowledge related to the Basin, and includes an abundance of information on the basin and its history.

The RAK was developed with financial and technical support of GTZ and includes self-learning resources, supported by interactive visualisation tools, maps, documents and quizzes. This will support a broad spectrum of stakeholders in the Orange-Senqu River Basin so that they can better understand the basin and its key challenges.

The Orange-Senqu RAK is available at <http://www.orangesenqurak.com/>, or as a DVD from the ORASECOM Secretariat.



An example of a C climate type - Lesotho highlands
Source: Lesotho Water Commission 2003



ORASECOM participates in the Africa Water Week and Orange River Symposium



From 9 to 13 November the second Africa Water Week took place at the Gallagher Convention Center in Midrand, Johannesburg, South Africa. The event brought together African countries and UN agencies, civil society groups, the private Sector and development cooperation partners, to address the critical issue of water and sanitation development and management, which is a key to sustainable development in the continent. This was a unique opportunity for ORASECOM to share with the participants its achievements and challenges. This was done through an information exhibition stand that was established within the vicinity of the event. The exhibition stand was designed and manned by the ORASECOM Communications Task Team.

During the same week, on 11 and 12 November, the second Orange River Symposium took place at the University of the Orange Free State in Bloemfontein, South Africa. ORASECOM was represented by two delegates at the Symposium. The symposium was also used to inform participants about the initiatives of ORASECOM. This was also achieved through an

exhibition stand and also through participation in the symposium.

ORASECOM's contribution to both events have undoubtedly contributed to increased visibility of the organisation, and at the same time created enthusiasm among organisers and participants alike.



Second ORASECOM visit to the ICPDR



The Ex. Sec. presenting ORASECOM at the Ordinary Meeting of the ICPDR

ORASECOM Secretariat Participates in the Preparations and the 12th Ordinary Meeting of the International Commission for the Protection of the Danube River (ICPDR)

The ORASECOM Secretariat visited the International Commission for the Protection of the Danube River (ICPDR) from the 30th of November to the 12th of December 2009. The purpose of the visit was to participate in the preparations and conducting of the 12th ordinary meeting of the ICPDR. The meeting was held at the Austria Centre in Vienna (ACV) from the 10th to the 11th of December 2009. The ORASECOM Secretariat also had an opportunity to

learn about the different initiatives of the ICPDR. These include existing information management systems within the ICPDR, development and implementation of the management plan of the Tisza River which is one of the main tributaries of the Danube River, public awareness programmes of the ICPDR including the Danube School Box Project, development of the Danube River Basin Management Plan (DRBMP), water quality management programmes and monitoring networks



The Water Resources Specialist attending the 12th Ordinary Meeting of the ICPDR

of the ICPDR, the types of agenda used for the ordinary meetings of the ICPDR, and how the meetings are conducted, including the adoption of resolutions by the ICPDR Commissioners.



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