Transboundary River Basin Cooperation in the Orange - Senqu River Basin Commission

» By ORASECOM Secretariat

» 25 April 2012, Kempton Park
Structure of Presentation

- Orange-Senqu Characteristics
  - Geographical Set Up
  - Rainfall Distribution
  - Runoff Distribution
  - Water Uses
  - Economic Benefits from Water
  - Challenges

- Transboundary institutional arrangements
  - Bilateral Organisations/Agreements
  - Establishment of ORASECOM
  - ORASECOM Programme & Delivery

- Lessons Learnt
Africa’s 63 shared river basins contain:

- 65% of the area
- 75% of the people
- 93% of the surface water

Population Living Within Basin: 14,27 million

Basin Area: 1 million sq km.

Basin States: Botswana, Lesotho, Namibia and South Africa.
Topography

- 0 - 50
- 50 - 300
- 300 - 500
- 500 - 600
- 600 - 800
- 800 - 1000
- 1000 - 1200
- 1200 - 1400
- 1400 - 1600
- 1600 - 1800
- 1800 - 2000
- 2000 - 2600
- 2600 - 3500
Rainfall Distribution
Precipitation: MAR = 11 900 Mm3, about only 3 700 Mm3 (117 m3/s i.e. 30% of Total) reaches river mouth
Orange-Senqu Sources in Highlands of Lesotho at around 3000 metres above mean sea level (alpine wetlands “sponges”) – very important for sustaining flows especially in dry season and during drought periods.
Water use in the Orange-Senqu River Basin

Water use by sector in the Orange-Senqu River Basin

Location of major water uses

Commercial Irrigation and Hydropower generation in the river basin.
- The River Mouth along the border between Namibia and South Africa (a Ramsar Site). Put on Mauntreux record in 1995

- Steadily advancing destruction of salt marsh vegetation by, among other agents, windblown sediment).

- Remaining *Sarcocornia* salt marsh community

- Totally degraded salt marsh. Sand dumps such as those in the background are the result of diamond mining activities and have contributed much of the sediment that has smothered the vegetation

- Looking towards the mouth along the road embankment that was built to provide access to the mouth. The effect of the embankment has been to isolate the bulk of the salt marsh (on left side) from the river
Alluvial diamond mining operations in the lower Orange-Senqu extending into the shallow sea bed of the Atlantic Ocean.
Dry River-bed on Molopo system - In the dry Kgalagadi/Namib Desert.
Complex System of Water Transfers in Basin
Economic benefits from water

- Average Rands GDP/m³ used (2000)
  - Agriculture: R3.20 (irrigation only) – R16.80 (including livestock)
  - Mining: R7.60 – R163.40
  - Manufacturing and services: R209.30 – R730.00

Lesotho
- royalties from LHWP average M340 M p.a
- Katse dam hydropower generates over 75% of Lesotho’s electricity needs

- The Vaal River basin produces
  - >50% of South African GDP
  - >80% of South African electricity

- There are important deposits of alluvial diamonds along the Orange River and around its mouth.
Key challenges in the Orange-Senqu basin
(Source: GTZ)
Continuing Challenges

Water scarcity, which will be compounded by climate change.

Defining equitable allocation and benefit sharing with limited available water resource and basin wide data.

Effectively involving stakeholders at basin level e.g given assymetry of stakeholder groups in basin States.

Managing Stakeholder expectations e.g on delivery of MDGs

Determining long term ecological allocation.

Ensuring clear long term roles and relationships with bilaterals.

Ensuring consistency in delegations and maintaining institutional memory.
PARA NATIONAL WATER MNGT INTTNS IN
ORANGE BASIN

• JOINT TECHNICAL COMMITTEES

Limited geographical scope, Technical people solving technical problems

• DEVELOPMENT AUTHORITIES

Sometimes limited geographical scope. Infrastructure based – large agencies

• BASIN WIDE COMMISSIONS

Basin wide improved management
ORASECOM agreement was signed on 3rd November 2000 by Republic of Botswana, Kingdom of Lesotho, Republic of Namibia and Republic of South Africa.

Task Teams: technical, legal, communications, finance and hydrogeology.

4/26/2012
Different Water Related Decisions Made on an Annual Basis

Mandate: To advise Parties on matters related to development, utilisation and conservation of the water resources in the River system.

• Areas of Advise include:

i. **determination of yield**;

ii. equitable and reasonable utilisation of water resources;

iii. investigations and studies on development of the river system;

iv. stakeholder participation, harmonisation of policies and impact of water resources development on social, cultural, economic and natural environment;

v. **standardised form of collection, processing and dissemination of data and information**;
vi. prevention of pollution and control of aquatic weeds;

vii. contingency plans for responding to emergencies resulting from natural causes such as droughts, floods and industrial accidents;

viii. exchange of information and consultations on possible effects of planned measures.

ix. measures with a view to arriving at settlement of dispute between two or more of the Parties.

x. any other matters as may be determined by the Parties.
Actions on Institutional Establishment in 2000-2012

- Development of Rules and procedures including equal representation, equal powers and decision making by consensus (2002).

- Benchmarking and seeking international best practices.

- Establishment of Permanent Secretariat hosted by RSA; profile based on 2003 need analysis.

- Agreement on equal cash contributions towards Secretariat operations (4 core positions) and programme requirements.
Actions on Institutional Establishment in 2000-2012

• Mobilising funding partners – current profile includes GIZ (BMZ and DFID, and Australia Aid), French GEF, EU, GEF UNDP.

• Mobilising strategic partners for delivery of components and the programme and continuous experience sharing (including ICPDR, La Plata, Sasol)
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<thead>
<tr>
<th>Programme Delivery (2 of 5)</th>
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<td>Review of Institutional arrangements</td>
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<td>Establishment and support to Secretariat and other ORASECOM Institutions</td>
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<td>Development of mechanism to mobilise funds for conservation of catchment</td>
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<td>Creation and support to sub-basin stakeholder councils /committees</td>
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<td>International Congress on Basin Commissions, lessons learnt and secondments</td>
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<td>Design of common basin observation and monitoring system</td>
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<td>Awareness raising on ORASECOM</td>
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<td>Raising awareness among general public</td>
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<td>Ground water review and feasibility study of water resources of the Molopo-Nossob</td>
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<td>Assessment of Environmental Water Requirements in Lower Orange-senqu and other selected points and proposal of harmonised methodologies</td>
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Lessons learnt

• Shared appreciation of common issues and challenges foster cooperation;

• Ownership and commitment are essential at both political level and technical level; and financial support from own sources is key to institutional sustainability and programme development;
Lessons learnt

- Programme and partner coordination is essential to ensure focused delivery and enhance synergy among complementary initiatives;

- Institutional and programme growth should be driven by basin States within their collective capacities.
Thank you.

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