

Part IV

Making Water Work
for Local Governments

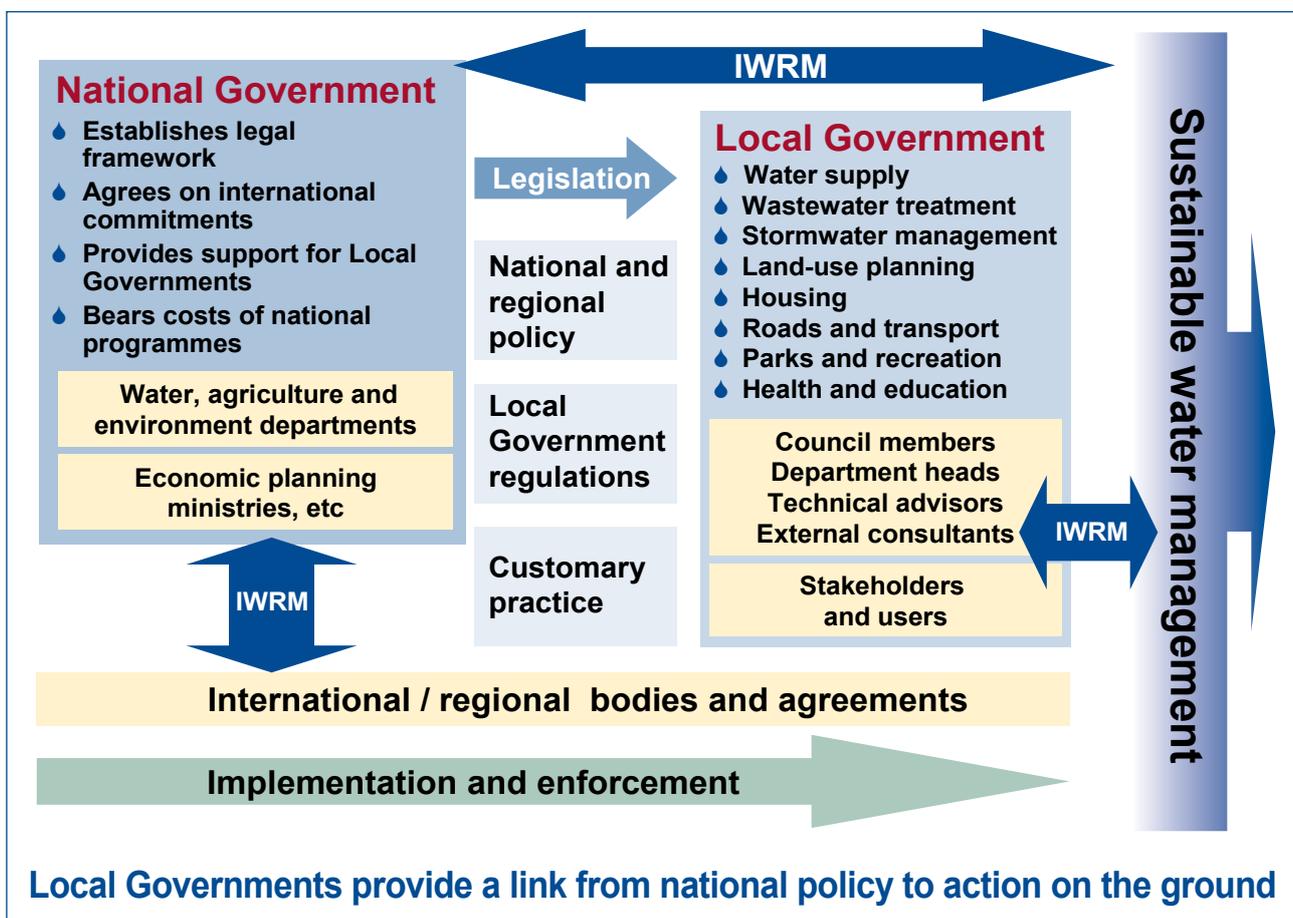


Ten Top Tips
for Integration
in Water Management

How Local Governments Contribute to Sustainable Water Management

Water resources are best managed at river basin level. This is why Integrated Water Resources Management (IWRM) has been introduced. While IWRM in a river basin is mainly addressed at the countries sharing a basin, it is also highly relevant at the local level. IWRM has many advantages for Local Governments and can contribute to more sustainable water management.

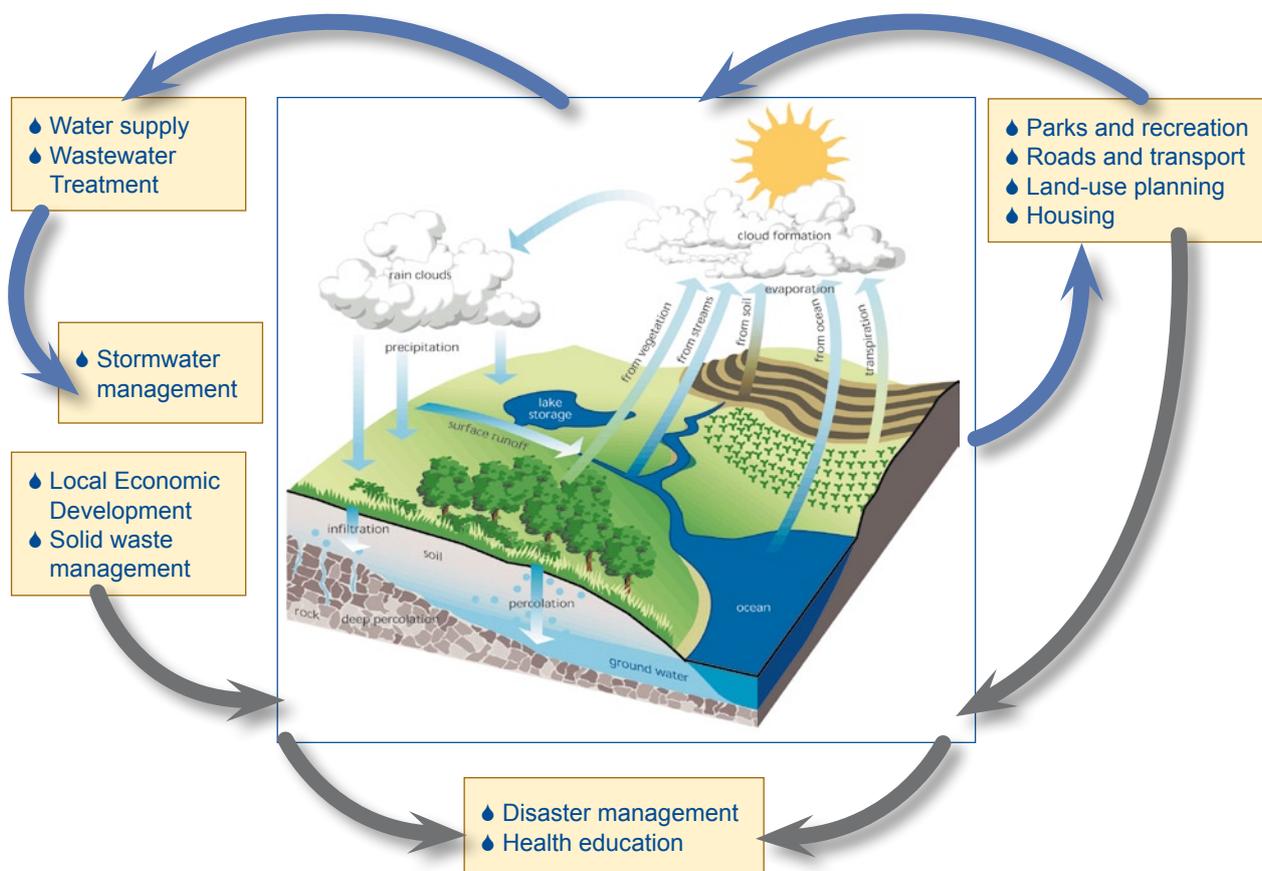
Sustainable water management connects the human system to the earth system.



Consider the following ten tips to find a pathway to integration

1 Determine Responsibilities for water-related activities

All Local Government departments will be influenced by, and will influence, the hydrological cycle. Wise water use and management will take account of these linkages to the earth system to ensure that water resources are protected for both current and future generations.



How Local Government mandates fit into the global water cycle

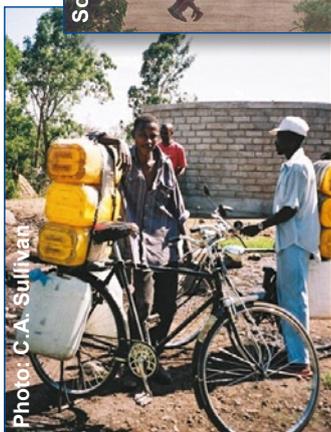
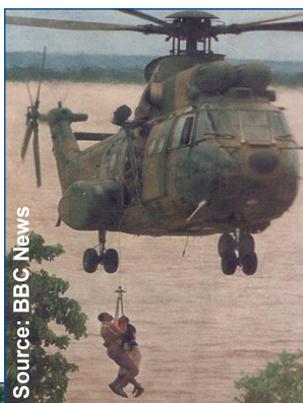
- ◆ Nearly all Local Government mandates are linked to the water cycle – responsibility needs to be shared across all departments.
- ◆ An integrated approach to water resources management requires coordination and the establishment of a steering group.
- ◆ Inter-departmental communication and sharing of data can be promoted through an internal network.

2 Prioritise Local Issues

What future do we want?

Each municipality, local district or ward should bring together a responsible group. These people, in consultation with other key individuals, should identify the most important issues relating to water management in their area.

Identify *your* vision for *your* community!



Potential key issues which Local Governments must address:

- ◆ **Water infrastructure** – maintenance of pumps, dykes, drains, etc.
- ◆ **Water for health** – provision of clean water and sanitation
- ◆ **Water for environmental security** – protecting our life support system
- ◆ **Water for production and services** – providing for smallholders, fisheries, businesses, factories, workshops, commercial farms, tourism, etc.
- ◆ **Water in schools** – promoting hygiene practices and increasing female enrolment rates
- ◆ **Flood control** – managing land use for minimal impact and developing appropriate emergency plans

The **Dublin Principles** state that water development and management should be:

'based on a participatory approach ... with decisions taken at the lowest appropriate level'¹.

Along with the clearer rights that people may have to water, there are important responsibilities for its effective management.

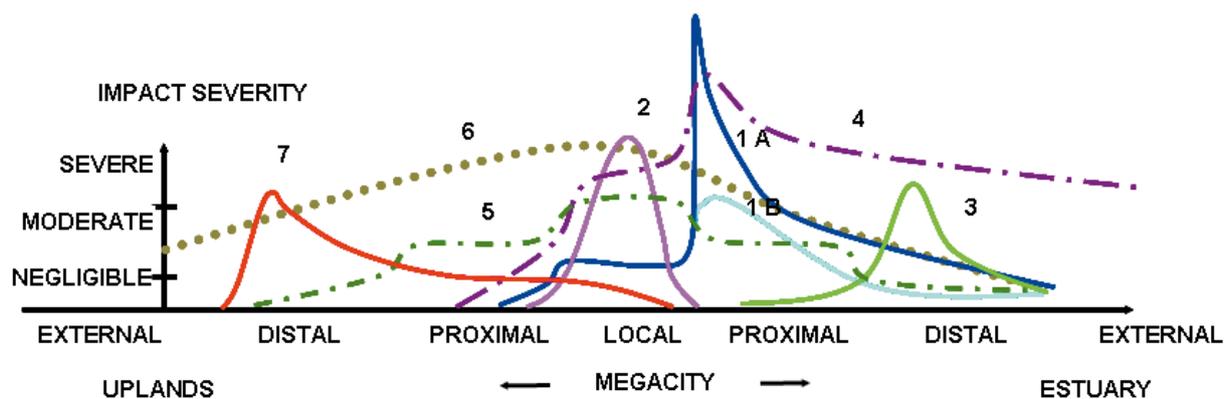
¹ Principle 2, Dublin Statement on Water and Sustainable Development, International Conference on Water and the Environment: Development Issues for the 21st Century, Dublin, Ireland (1992)

**Prioritisation
must be
underpinned by
consultation**

3 Identify Constraints on water activities

- ◆ Increased access to safe drinking water, as called for by the Millennium Development Goals, is already a big challenge.
- ◆ Water service cost recovery is difficult.
- ◆ Low income groups may need subsidy from big users.
- ◆ Water rights may not be embodied in local or national laws – there may be a need for legislative revision.
- ◆ Land rights and water rights are often linked – provision of water to households on unsecured title may be problematic.
- ◆ Certain social groups may be disenfranchised and need special consideration.

Building political will and trust can be crucial for overcoming constraints



Key to impacts:

- | | |
|----------------------------|---------------------------|
| 1. Organic pollution | 2. Sewer overflow |
| 3. Estuarine nitrification | 4. Metals |
| 5. Habitat degradation | 6. Atmospheric pollutants |
| 7. Timber rafting | |

How a city's water needs impact upon the landscape

Ref. Impact Profiles of Paris Megacity on the Seine River, Meybeck 2002, Aquatic Sciences

The diagram above shows how the impacts of an urban area are spread both upstream and downstream within a river basin. This can also create constraints on water use elsewhere in the catchment.

4 *Maximise Benefits from water-related activities*

- ◆ Healthier river systems deliver better quality ecosystem services. This results in more stable and productive soils, more absorption of chemical pollutants, less risk of landslides, less sediment in water and longer life of infrastructure.
- ◆ Additional benefits from a healthy river basin can be more biodiversity, greater food security, more attractive conditions, more potential for the development of income-generating tourism and other businesses to drive the local economy.

Maintaining and securing water ecosystems is a wise investment.

Economic development is influenced by many aspects, but if water is available as a factor of production, it will create more opportunities for investment in business ventures. By planning water management and infrastructure in an integrated way, municipal authorities can work within their current mandates and gain a variety of benefits and lower costs per unit of supply. This can lead to greater employment opportunities.

While some Local Governments both control and distribute water, others may simply make bulk purchases for distribution to their municipal users. In both circumstances, there are many savings that can be made through wiser water use.

Better water access can relieve the burden of water collection on women and can improve health and livelihoods for the more vulnerable in society



Photo: S. Smits

Supporting local livelihoods, promoting economic development and empowering local communities – these are important benefits that Local Governments can achieve with better, more integrated water resources management.

5

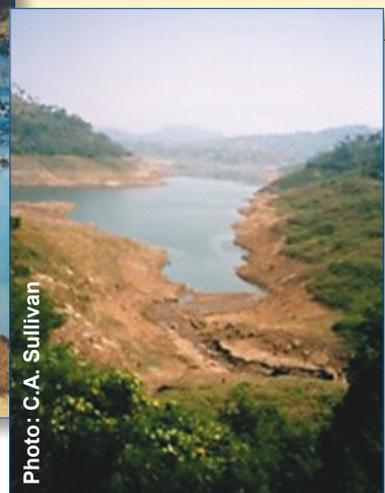
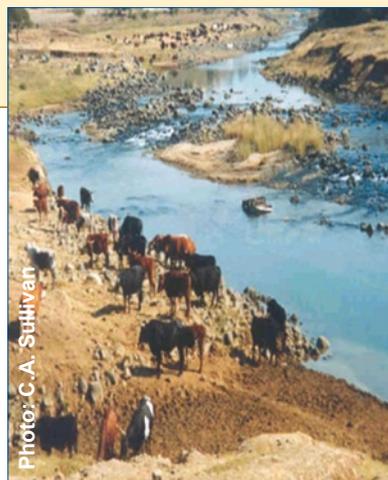
Build a Strategy ***for local water resources management***

Actions taken by Local Governments might be confined to the local area or be extended beyond their administrative boundaries through, for example, collaboration with catchment management organisations. Combining the two strands of action can be referred to as the 'twin-track approach'.

Even when focussing on more immediate local goals, it is also good to keep medium-term, basin-wide goals in mind.

Remember...

- ◆ ... that an integrated water strategy should link all water-relevant mandates.
- ◆ ... to make links with national water authorities and bulk water suppliers.
- ◆ ... where your water comes from and what alternative sources are available.
- ◆ ... the importance of the resource and its contribution to tourism and other economic activities.
- ◆ ... to build public awareness about the limitations of the resource.
- ◆ ... to build greater awareness of the need for more control of land use in water storage areas, as this can improve water quality.
- ◆ ... the possibility of water recycling and rainwater harvesting for businesses, schools and households.
- ◆ ... the potential of using wetlands as part of the water purification process, adding value as an attractive component of the local environment and as a buffer to floods.



Think Big,
but start small

LOCAL GOVERNMENT



Natural Springs

Rural Municipalities

Tourism & Recreation

Streams

Rural Users

Health Services

Storage Dams

GroundWater

Commercial Agriculture

Boreholes and Pumps

Power Plant

Roads & Transport

Water Supply

Rivers

Estuaries

Domestic Users

Emergency Services

Stormwater Management

Local Government Mandates

Water Resources

Water Services Infrastructure

Water Users

IN THE WATER CYCLE



LoGo Water - Towards effective involvement of local government in Integrated Water Resources Management (IWRM) in river basins of the Southern African Development Community (SADC) region. LoGoWater is funded by the European Commission Research Directorate General. Contract Number 003717.

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6 *Involve Stakeholders* in water issues

Good quality water provision for the local population is a key responsibility of Local Governments.

- ◆ Prioritisation of needs is an important task which requires inputs from a range of stakeholders. This must include representation of all groups in society and involve women.
- ◆ Policies developed with stakeholder inputs are likely to be more easily adopted than those imposed from above. This can be viewed as democracy in action.
- ◆ Capacity development and awareness raising should be promoted in stakeholder meetings and public fora.

Stakeholder consultation should include everyone who has a defacto right to use the water in question.



Photo: D. Cox

Principles of Good Governance

- Social inclusion
- Transparency
- Accountability

Stakeholder consultation can take many forms but is an essential part of IWRM



Photo: C.A. Sullivan

7 Promote Efficiency of water use by sectors

Water used by different industries and businesses will generate different rates of return. This must be considered in water allocation decisions.

Generation of employment is another key consideration. Local Governments can support job creation schemes and small business enterprises by making water more readily available.

**Don't forget:
some users will not
be able to pay**

- ◆ In many places agriculture is the largest user of water. Local Government can encourage farmers to reduce their water use by asking questions such as: *'Is the crop mix right for the water conditions?'*, *'What incentives must be developed to promote water use efficiency in farms?'* or *'Are the most efficient techniques being used?'*
- ◆ Separation of water for domestic use from water for industry would enable water charges to be varied. A very small amount of water reallocation can have big social benefits.
- ◆ Small-scale production that uses domestic water could still be supported from domestic supplies, as is often the case today.
- ◆ Water allocated to tourism can have multiple benefits in addition to income generation and job creation.



By considering water resources across all their mandates and maximising the economic benefits of water use Local Government can promote development and ultimately reduce poverty and improve health.

8 *Talk to the Neighbours* *about sharing your water resources*

Sharing the water

Most of the world's water resources are shared between more than one country. Integrated Water Resources Management at river basin level has been introduced to coordinate policies of different countries in the same basin.

National interests are prominent in such transboundary dialogues. Being best informed of local conditions relevant to river basin management, Local Governments should seek to voice their needs and concerns through intermediary organisations such as municipal associations.

Sharing the benefits

Often it is better to share the economic benefits from water than the water itself. A higher allocation of water to a specific region is usually agreed on the basis that it has a comparative advantage to carry out a certain economic activity, such as agriculture or hydropower generation. Benefit sharing occurs when:

- ◆ the region privileged with more water shares the benefits gained with the region with the smaller water allocation
- ◆ compensation payments are made to downstream areas impacted upon by upstream activities (for example dams)

Such an approach can help to move away from expensive engineering solutions for transferring water from one place to another. It can also significantly reduce the ecological impacts that accompany such transfers.

Horizontal and vertical collaboration

More cooperation between Local Governments in the same region increases the positive effects of water management locally (horizontal collaboration). It also fosters mutual relations and ultimately increases a community's strength.

In addition, Local Governments can link up with higher levels of authority in their country or in the basin (vertical collaboration). Local issues can thus be integrated into national and regional policy-making.

Well organised IWRM can advance health conditions for local populations all across the region. Basin-wide health protection measures – such as against river blindness and malaria – further improve results.

This has important social and economic benefits for all parties concerned.

9 *Build Effectiveness* in managing your water resources

- ◆ Encourage participatory monitoring and record data by ward, building knowledge about your resource base
- ◆ Highlight the responsibility of all to take care of water resources
- ◆ Promote meaningful gender representation in the decision process – include normally disenfranchised groups
- ◆ Request inputs and support from all relevant public and private sector bodies – encourage public-private partnerships
- ◆ Use by-laws to strengthen legislation – based on the principles of equitable and reasonable use
- ◆ Strengthen pollution controls and enforcement to reduce water treatment costs and health impacts
- ◆ Respect the natural environment on which we are dependent, and recognise that it is part of a larger ecological system which provides our own life support

Effective local policies can provide support for national commitments to international agreements



Photo: C. Sullivan

The example shown in this picture, from the Thugela basin in South Africa, illustrates how clean potable water can be delivered in measured quantities for domestic use. This means that potable water quality for all is more likely to be achieved if water of non-potable quality is provided for other uses. This kind of cost sharing can improve cost recovery.

You can increase effectiveness and cost recovery by following a management cycle:

Carry out a base line assessment



Initiate a visioning process



Build a strategy, including objectives, targets and indicators



Develop a plan for implementation



Carry out the planned actions



Monitor progress and evaluate achievements



10 *Generate Knowledge about your water resources*

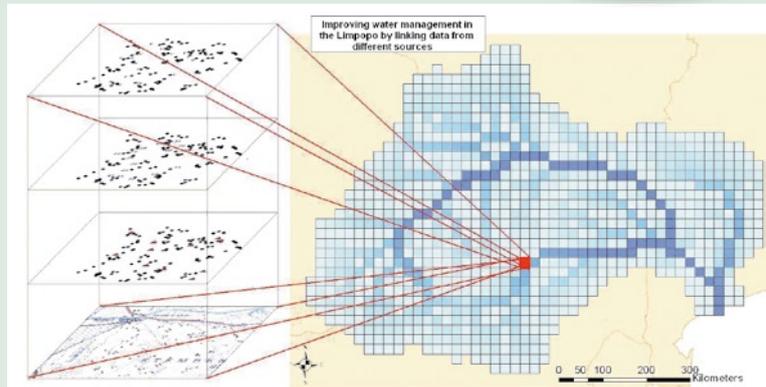
Science can support more informed decision-making in favour of local water resources. Also Local Governments should make use of the best available knowledge for carrying out their responsibilities. This applies, for example, to:

- ◆ Land-use planning – science can make the impacts more evident.
- ◆ Monitoring – science allows more accurate identification of the risks from sewage, over-abstraction of water and pollution from nitrates and heavy metals.
- ◆ Enforcement – scientific evidence can support cases of prosecution where illegal activity, such as the discharge of pollutants into a watercourse, is suspected to have occurred.
- ◆ Disaster management – a scientific approach to integrated hydrological data collection in each municipality is useful to improve the accuracy of flood forecasting, thus helping to mitigate the impacts of floods and preventing disasters. Also droughts can be forecast and managed more effectively.

*Take
advantage of
scientific knowledge to
support policy*

Actions for Local Governments

- ◆ Use new technologies (for example GIS - Geographic Information Systems) to assist in water planning.
- ◆ Build capacity to understand and adapt to water management needs within all departments.
- ◆ Encourage water-relevant data collection across all mandates.
- ◆ Get involved in regional and national initiatives and partnerships, and collaborate with key institutions to generate and manage water data.
- ◆ Share water knowledge with the public, acknowledging that water is everyone's responsibility.
- ◆ Promote the integration of water study modules into school activities at both primary and secondary level.



Information Sources

LoGo Water Project Publications

1. Local Government and Integrated Water Resources Management (IWRM)

Compiled by: Anton, B., Bonjean, M., Bromley, J., Cox, D., Dickens, C., Govender, V., Philip, R., Smits, S., Sullivan, C.A., Van Nierkerk, K., Chonguiça, E., Monggae, F., Nyagwambo, L., Pule, R., and Berraondo López, M. (2008)

*Part I: Reaping the Benefits - How Local Governments Gain from IWRM**

Part II: Understanding the Context - The Role of Local Government in IWRM

Part III: Engaging in IWRM - Practical Steps and Tools for Local Governments

*Part IV: Making Water Work for Local Governments - Ten Top Tips for Integration in Water Management**

2. Literature Review: Local Government and Integrated Water Resources Management,

Smits, S. and Butterworth, J. (2006)

3. Local Governments and IWRM in the SADC Region,

Nyagwambo, N.L., Chonguiça, E., Cox, D. and Monggae, F. (2007)

4. Local Government and Integrated Water Resources Management in Europe, Berraondo López, M., Sullivan, C.A., Arrojo Agudo, P.; Smits, S. (2007)

5. Report of the workshop “Local Action for IWRM”, held in Gaborone, Botswana (27-29 July 2006)

6. Report of the symposium “Water for Local Needs - The Contribution of Local Governments to Integrated Water Resources Management (IWRM)”, held in Benoni, South Africa (9-10 July 2007)

**All materials can be downloaded from:
www.iclei-europe.org/logowater**

* Hard copies in English and Portuguese can be obtained from:

ICLEI – Local Governments for Sustainability Africa Secretariat

44 Wale Street, Cape Town, or
PO Box 16548, Vlaeberg, 8018
Cape Town, South Africa
Fax: +27-21/487 2578
E-mail: iclei-africa@iclei.org

Websites

- ◆ African Development Bank
<http://www.afdb.org>
- ◆ African Water Facility
<http://www.africanwaterfacility.org/>
- ◆ African Water Page
<http://www.africanwater.org/>
- ◆ ‘Earth Trends: The Environmental Information Portal’ (WRI)
<http://earthtrends.wri.org/>
- ◆ EU-ACP Water Facility
<http://ec.europa.eu/europeaid/where/acp/regional-cooperation/water>
- ◆ Food and Agriculture Organization of the United Nations (FAO)
<http://www.fao.org>
- ◆ Global Water Partnership
<http://www.gwpforum.org>
- ◆ UN-Water <http://www.unwater.org/flashindex.html>
- ◆ United Nations Advisory Committee of Local Authorities (UNACLA):
<http://www.unhabitat.org>
- ◆ United Nations Development Programme (UNDP)
<http://www.undp.org>
- ◆ United Nations Environment Programme (UNEP)
<http://www.unep.org>
- ◆ ‘Water and Sanitation’ World Health Organization (WHO) http://www.who.int/water_sanitation_health
- ◆ WIN-SA <http://www.win-sa.org.za/>
- ◆ The World Bank
<http://www.worldbank.org/>
- ◆ World Resources Institute (WRI)
<http://www.igc.org/wri>

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iclei-africa@iclei.org**

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Members of the LoGo Water project team



Rapule Pule, Suzan Takalani-Ramalivhana, Dr Britta Freitag
ICLEI Africa Secretariat

*Barbara Anton, Ralph Philip, Francesca Schraffl, Joao Rabaça,
Monika Zimmermann, Paul Fenton*
ICLEI International Training Centre and European Secretariat



Dr Caroline A. Sullivan, Muriel Bonjean, Dr John Bromley (from 2007)
Oxford University Centre for the Environment (OUCE)



*Dr Caroline A. Sullivan, Muriel Bonjean, Dr John Bromley, Dermot O'Regan,
Dr Jeremy Meigh* (before 2007)
Centre for Ecology and Hydrology (CEH Wallingford)



Mikel Berraondo López, Prof Dr Pedro Arrojo Agudo, Majed Barakat Atwi
Foundation for a New Water Culture (FNCA)



Dave Cox, Chris Dickens, Myles Mander, Kate van Niekerk, Vanashrie Govender
Institute of Natural Resources (INR)



Stef Smits, Dr John Butterworth, Ton Schouten
IRC International Water and Sanitation Centre



Ebenizario Chonguica
International Union for Conservation of Nature (IUCN), Mozambique Office



Dr Lawrence Nyagwambo, Ngoni Reginald Mudege
Institute for Water and Sanitation Development (IWSD)



Felix Monggae, Bonatla Thsolofelo, Sakhile Koketso
Kalahari Conservation Society (KCS)

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