Local Government and Integrated Water Resources Management (IWRM)

Part IV

Making Water Work for Local Governments

Ten Top Tips for Integration in Water Management

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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.

### National Government
- Establishes legal framework
- Agrees on international commitments
- Provides support for Local Governments
- Bears costs of national programmes

### Local Government
- Water supply
- Wastewater treatment
- Stormwater management
- Land-use planning
- Housing
- Roads and transport
- Parks and recreation
- Health and education

### IWRM
- Legal framework
- Policy
- Water, agriculture and environment departments
- Economic planning ministries, etc

### International / regional bodies and agreements
- Implementation and enforcement

Local Governments provide a link from national policy to action on the ground.

### 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.

Consider the following ten tips to find a pathway to integration:

- 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.
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’.

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


### 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.

### Prioritisation must be underpinned by consultation

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.

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

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
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 de facto right to use the water in question.

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.

- 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

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

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.
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.

**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.

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**Information Sources**

**LoGo Water Project Publications**

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


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**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](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/)
- [United Nations Development Programme (UNDP)](http://www.undp.org)
- [United Nations Environment Programme](http://www.unep.org)
- [Water and Sanitation](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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