



Abbie Traylor-Smith/Panos

IWMI in Southern Africa

A water-secure world

About IWMI

The International Water Management Institute (IWMI) is a non-profit, scientific research organization focusing on the sustainable use of water and land resources in developing countries. It is headquartered in Colombo, Sri Lanka, with regional offices across Africa and Asia. IWMI is a member of CGIAR, a global agriculture research partnership.

IWMI in Southern Africa

Southern Africa has high rainfall variability and an ever-present threat of drought. Yet over 70% of the population depends on subsistence rainfed farming for their livelihoods. Agriculture is the largest single user of water: more than 50% of freshwater withdrawn is used for irrigation. Against this background, IWMI's regional program was established in 2000 and takes a holistic approach to improved water management, underpinned by a continuing commitment to sustainable and equitable economic growth. IWMI works in partnership with governments, civil society, academia and the private sector to develop scalable water management solutions that have a real impact on poverty reduction, food security and ecosystem health.

IWMI is a:

- think tank driving innovative research and generating ideas for solutions;
- provider of science-based products and tools; and a
- facilitator of learning, strengthening capacity and achieving uptake of research findings.

Sharing knowledge, building capacity

IWMI fosters informed decision making at all levels by involving partners in the research process, and through active participation in national and regional dialogues. Our research results are always open access, and we share our findings through freely available research reports, working papers, policy briefs and issue briefs, and online via websites and social media.

A good example of this collaborative approach is the Regional Strategic Analysis and Knowledge Support System for Southern Africa (ReSAKSS-SA). This provides an important platform for policy dialogue and stakeholder engagement in the agriculture and water sectors in South Africa and other Southern African Development Community (SADC) member states.



Photographer: Steve McCurrach

Our staff

Of IWMI's 300 global staff, around 20 researchers and support staff are located in the Southern African Regional Office. Expertise includes:

- Socio-economic studies
- Hydrology
- Ecology
- Computer Modelling
- Remote sensing

IWMI research in the region

Water for Agriculture

Southern Africa needs to grow more food. By 2030, over 67million people will live in the region. To feed everyone a nutritious diet, we will need to intensify our farming. This must be done without undermining the natural systems that underpin agriculture. So we will need to use land and irrigation water more efficiently. IWMI research helps identify the opportunities and investment options that will enable this to happen including:

- Revitalising public irrigation schemes
- Supporting on-farm smallholder water management
- Promoting sustainable conjunctive use of surface water and groundwater

Managing risk under climate change

Southern Africa's fragile environments are at risk from climate change, exacerbated by poor infrastructure and a lack of preparedness. IWMI research aims to help build up the resilience of high risk areas through:

- Generating and sharing knowledge and information related to climate induced extremes on water
- Exploring with partners an integrated approach to transboundary river and floodplain management
- Identifying high potential development options for improved flood protection while sustaining ecosystem services.



Photographer: Matthew McCartney

Natural systems and sustainable development

Ecosystem services are the benefits that people receive from nature. Without knowing the sustainable amounts and condition of the natural resources that are at our disposal, it is impossible to intelligently plan for any development. IWMI's research contributes to that knowledge. This includes assessing of the environmental water requirements of development plans. IWMI is also exploring how to improve resource-use efficiency in rural and urban areas. This includes innovative business models for re-using urban waste for products such as fertilizer, and promoting the safe use of wastewater in farming.

Equitable access to water

In Southern Africa there are marked gender disparities in water access for irrigation and other uses. IWMI research seeks to identify the underlying causes of this and ensure that both men and women have equal access to water. Where competition for water is intense, IWMI analyses differing water rights, and engages in productive policy dialogues to improve equity.

International cooperation on water

The region has 15 international transboundary river basins and numerous internationally shared aquifers. Of these water resources, 70% cross or flow along national boundaries. Focusing on the Zambezi and Limpopo River basins, IWMI research is providing information on how transboundary aquifers could be incorporated into arrangements for groundwater management. In addition we explore smaller-scale water community cooperation at the level of tributaries or catchments. We seek to identify practical options for improved flood control and aquatic weed management.



Photographer: David Brazier

Our research: Local solutions to regional challenges



"Our office provides not only water management expertise located right in the heart of Southern Africa, but also serves as an access point for IWMI's global experts working in over 30 countries. This unparalleled reach gives us the relevant skills to undertake cutting edge research, and supports access to innovative water management solutions with a real focus on improving livelihoods and sustainable resource use."

Chris Dickens, Principal Researcher and Head of Office, IWMI, Southern Africa

"Without proper analysis, backed by rigorous monitoring and evaluation, implementation of the Comprehensive Africa Agriculture Development Programme (CAADP) will be challenging. That is where the Regional Strategic Analysis and Knowledge Support System for Southern Africa (ReSAKSS-SA) can help. Hosted by IWMI in South Africa, it is a unique knowledge sharing partnership which focuses on delivering improved food security and poverty reduction at both country and regional levels."

Greenwell Matchaya, Researcher-Economics/ReSAKSS-SA Coordinator, IWMI, Southern Africa



"As researchers, we have to take the extra step to ensure that evidence that can improve policy is accessible and useable. In some cases, users also require new skills to use decision-support tools and technical evidence. The Improved Management of Agricultural Water in Eastern and Southern Africa (IMAWESA) has provided a network for this. It translates technical evidence into practical help, bringing together implementers into learning alliances that can improve the impact and sustainability of investments in water management, and suggest ways to scale up those solutions."

Nicole Lefore, Coordinator, IMAWESA, IWMI, Southern Africa

"My research is about water, land and ecosystems, but only so far as these can serve the needs of people. This includes identifying how institutions governing water and land management in Sub-Saharan Africa can sustainably improve livelihoods in an equitable manner. I believe that, jointly with colleagues and partners, we are positively impacting rural livelihoods in Africa."

Everisto Mapedza, Senior Researcher- Social and Institutional Scientist, IWMI, Southern Africa



"International human rights instruments commit countries to using water resources in a non-discriminatory manner, irrespective of class and gender. Our research assists African governments in finding ways to realize these commitments. But we also explore community level innovations. People can seek to meet their multiple water needs through more cost-effective multipurpose infrastructure – an approach called multiple use services or MUS. Together with partners, we have developed the concept to tap into these benefits."

Barbara van Koppen, Rural Sociologist and Gender Expert, IWMI, Southern Africa

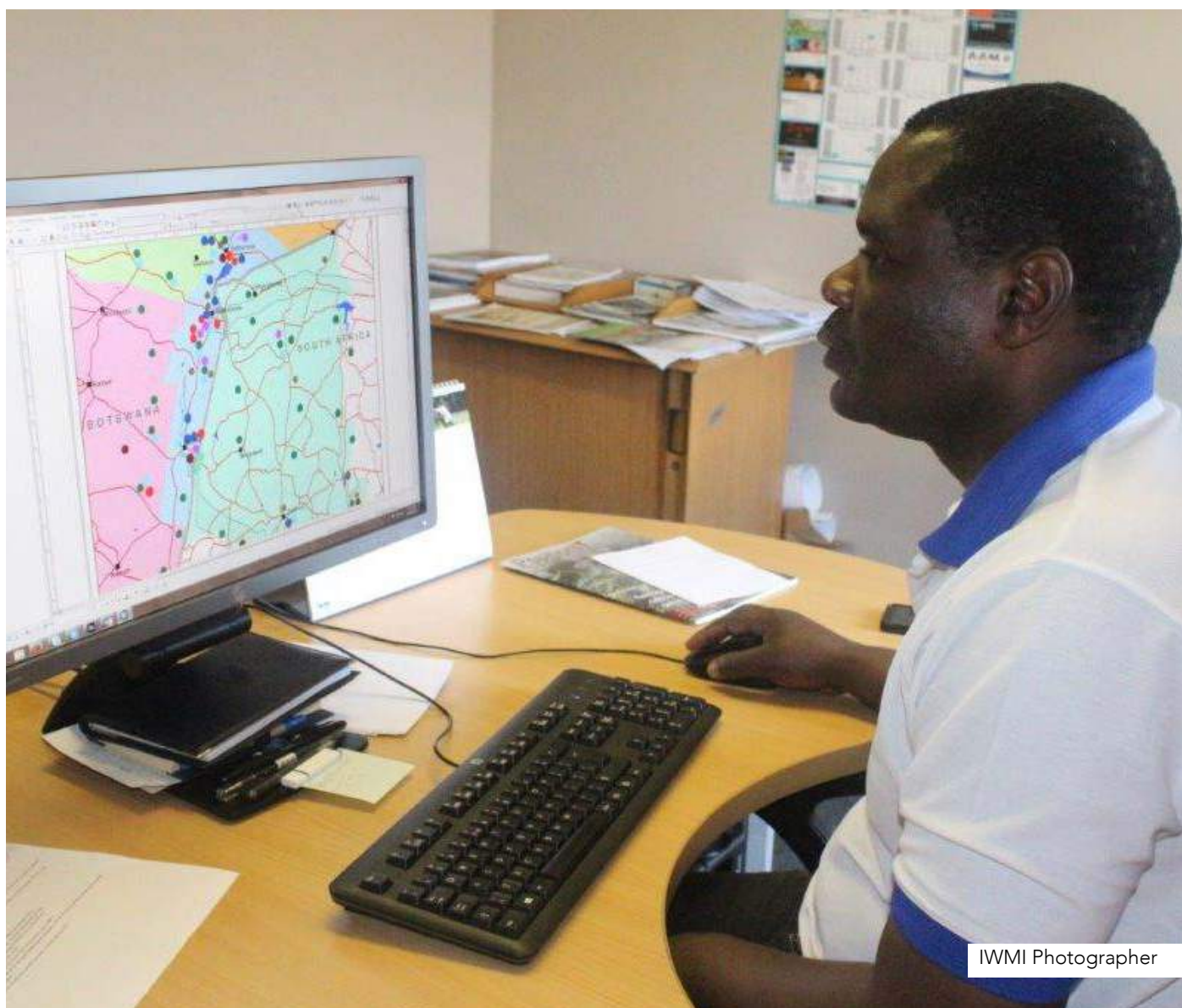
"Geographical information systems and remote sensing from space satellites are transforming water resources management. Maps and models can reveal how land use is changing in the region, track floods and droughts and provide policy makers with detailed analyses of future development scenarios."

Luxon Nhamo, Researcher-Agriculture Water Management and GIS Specialist, IWMI, Southern Africa



"Groundwater is a critical resource in the region. For instance, access to small amounts of groundwater could transform the prospects of poor female farmers, and our research looks at how this could be achieved. But we also look at groundwater management on a broader scale. Many of Southern Africa's aquifers cross international boundaries. We are providing maps and data to help governments cooperatively manage these resources more sustainably."

Karen Villholth, Sub-Theme Leader (Groundwater and Underground Solutions)



IWMI Photographer

CGIAR Research Program on Water, Land and Ecosystems

IWMI is the global leader of the CGIAR Research Program on Water, Land and Ecosystems (WLE), which combines the resources of numerous national, regional and international partners to provide an integrated approach to natural resource management research. WLE investigates new paths to sustainable intensification in which healthy functioning ecosystems are seen as a prerequisite to agricultural development, improved resilience of food systems and human well-being. In South Africa, through IWMI, WLE is bringing a wealth of expertise and resources to this critical area of human development.

IWMI partners in South Africa

Agricultural Research Council
African Development Bank
African network of Basin Organizations
Agriculture and Rural Development
Department of Agriculture, Forestry and Fisheries
Department of Water and Sanitation
Food, Agriculture and Natural Resources Policy Analysis Network
Global Water Partnership
Institute for Poverty, Land and Agrarian Studies - University of Western Cape
Land Bank of South Africa
New Partnership for Africa's Development
South African National Biodiversity Institute
University of Free State
University of Pretoria
University of Limpopo
University of KwaZulu Natal
University of Witwatersrand - Department of Civil & Environmental Energy
United States Agency for International Development
Water Research Commission
World Vision-South Africa



Photographer: Graeme Williams



Martha Katsi/Practical Action

Contact details

IWMI-Southern Africa office
141 Cresswell Street
Weavind Park
0184
Pretoria, South Africa

Mailing address:
Private Bag X813
Silverton 0127
Pretoria, South Africa
Tel: +27 12 845 9100
Fax: +27 12 804 6397
E-mail: iwmi-southern Africa@cgiar.org
<http://southernafrica.iwmi.org>

IWMI Headquarters
127 Sunil Mawatha, Pelawatte, Battaramulla, Sri Lanka
Mailing Address:
P.O. Box 2075, Colombo, Sri Lanka
Tel: +94 11 2880000, 2784080
Fax: +94 11 2786854
Email: iwmi@cgiar.org
Web: www.iwmi.org

Head of Office:
Chris Dickens (c.dickens@cgiar.org)

Director, Africa:
Timothy Olalekan Williams (t.o.williams@cgiar.org)