



An ODI Water Policy Programme, Global Water Initiative East Africa and University of East Anglia event marking World Water Day 21 March 2014 at Overseas Development Institute, London

From ground to growth

Can Africa's hidden water resources help secure future agricultural growth and food security?

The challenge

Twelve months ago a paper on Africa's water resources made the news headlines. African agriculture, so the story went, sits atop a vast reserve of untapped water that could fuel a Green Revolution, support food security and bolster economic growth, as well as increase resilience to climate change. The attention on Africa's 'hidden' resource is long overdue, but do such headlines go too far? Can resource availability equate with affordable and economically rational access – particularly for smallholder farmers? In short, can groundwater really fuel an agrarian transformation similar to that of South Asia, but without the 'race to the bottom' of the continent's aquifers?

The question is critical, not least because of Africa's rapid population growth, rising demand for food and vulnerability to climate change. Despite rapid urbanisation, much of Africa's economic development remains rooted in rural contexts and few doubt that agricultural development is a necessary, if not sufficient condition, for poverty reduction and food security.

Sustainable land management and reliable water control form a centrepiece in major new initiatives such as the Partnership for Agricultural Water for Africa (AgWa) under the Comprehensive Africa Agricultural Development Programme (CAADP), Feed the Future and The New Alliance for Food Security and Nutrition. Improved agricultural water management and irrigation expansion, so the argument runs, are key to boosting yields and building the assets and incomes that smallholder farmers need to break out of rural poverty.

The event

ODI's Water Policy Programme (WPP), the Global Water Initiative East Africa (GWI) and UEA's Water Security Research Centre (WSRC) will host a flagship event on 21 March 2014 to mark World Water Day (22nd March). The event will bring together international experts from a range of disciplines and sector perspectives to discuss four key themes:

- The groundwater perspective: Are recent headlines about Africa's vast groundwater potential credible? What do we know – and what don't we know – about the development potential and management needs of groundwater resources in SSA?
- The agriculture perspective: Does better land and water management, and more irrigation in particular, hold the key to 'climate-proofing' agriculture, raising yields and reducing rural poverty?
- The development and poverty perspective: Groundwater irrigation for smallholder farmers in SSA is accelerating, but what do we know about its ability to deliver inclusive growth and the factors that still block development?
- Lessons from the Asian perspective: Thanks to a groundwater boom, millions of farmers have improved their livelihoods and food security in South Asia and northern China. But the costs of runaway withdrawals are now hitting hard – on poorer farmers, the environment and other sectors, not least energy. What important lessons can be drawn?

The day will conclude with the launch of a new book, *Water Security, Principles, Perspectives and Practices*, published by Earthscan, with brief insights from some of the well-known authors.

Agenda

| Time | Theme | Speakers |
|-------------|--|---|
| 09:45-10:00 | Introduction: The scope of the water & agriculture challenge | Roger Calow (ODI) & Dr Alan Nicol (GWI) |
| 10:00-10:15 | Keynote 1: The resource perspective | Prof. Alan Macdonald (BGS) |
| 10:15-10:30 | Keynote 2: The agriculture perspective | Dr Hezron Mogaka (ASARECA Uganda) |
| 10:30-10:50 | Break | |
| 10:50-11:10 | Keynote 3: A country perspective – Ethiopia | H.E. Ato Sileshi Getahun (Ethiopian State Minister for Agriculture) |
| 11:10-11:30 | Keynote 4: A development & poverty perspective | Dr Karen Villholth (IWMI) |
| 11:30-12:20 | Facilitated discussion: From ground to growth, but what are the pathways? | Roger Calow/Alan Nicol chair |
| 12:20-13:00 | Water security perspectives: Rapid-fire session from Earthscan book chapter authors | Chapter authors give 3-minute 'elevator pitch' followed by discussion. Dr Bruce Lankford (UEA) chairs |
| 13:00-14:00 | Lunch | |
| 14:00-14:15 | Keynote 5: Lessons from India: the rise and fall of the groundwater irrigation economy | Shilp Verma (IWMI) |
| 14:15-14:30 | Keynote 6: Grounding the South Asia perspective in Africa | Prof. Richard Taylor (UCL) |
| 14:30-15:15 | Facilitated discussion | Discussants: Violet Alinda (GWI) Dr Steve Wiggins (ODI) Dr Eva Ludi (ODI) Dr Bruce Lankford (UEA) |
| 15:15-15:45 | Closing session | Roger Calow & Alan Nicol |
| 15:45-17:00 | Earthscan book launch and wine reception | |

Speaker bios

Prof. Alan MacDonald is a principal hydrogeologist at the British Geological Survey (BGS) with more than 20 years' experience on African groundwater issues. Much of his work focuses on the science base for the sustainable development and management of groundwater, with a particular interest in climate resilience and water security. He has published more than 60 scientific papers and is author of the book *Developing Groundwater: A Guide to Rural Water Supply* and editor of *Applied Groundwater Studies in Africa*. Alan led the team that recently published the first quantitative groundwater maps for Africa, which renewed interest in unlocking the potential of groundwater for poverty reduction and livelihood security.

Dr Karen Villholth is Principal Researcher within Groundwater Management stationed at the IWMI-Southern Africa Office in Pretoria, South Africa since 2012. Her interest in groundwater for development has prompted her to do research, consultancy and capacity building related to groundwater management and in particular groundwater use and management for agriculture in Sub-Saharan Africa and Asia. She has also worked on groundwater resilience and vulnerability to climate change as well as to extreme events, like the 2004 Asian tsunami. She also works on transboundary aquifer mapping, benefit sharing and management. She is Chair of the Danish National Chapter of the International Association of Hydrogeologists (IAH) and a co-founding member of the IAH Commission on Groundwater for Decision Makers. She has more than twenty years of professional experience, has edited three books related to groundwater management, and a significant number of publications in international high-ranking journals. She holds a Ph.D. on flow and transport processes in soil and groundwater from the Technical University of Denmark.

Currently the Chair of the Irrigation and Water Forum, [Dr Bruce Lankford](#) is Professor of Water and Irrigation Policy at the School of International Development, University of East Anglia, UK. He has worked in the fields of irrigation and water resources management for more than 30 years, starting in Swaziland in 1983. His main research and advisory work covers irrigation management and water policy in Sub-Saharan Africa. Other interests cover the use of games in natural resource management, resource use efficiency, river basin management, water allocation and ecosystem services. He is a co-Director of the UEA Water Security Research Centre and a Fellow of the Institution of Civil Engineers.

[Shilp Verma](#) is an independent researcher; and doctoral fellow with the Integrated Water Systems and Governance Group at UNESCO-IHE, Delft. Shilp completed his graduation with honours in Economics from the University of Delhi (1998) and post-graduate program in Rural Management (2001) from the Institute of Rural Management, Anand (IRMA) before joining the International Water Management Institute (IWMI). In 2005, Shilp received an IWMI fellowship to undertake M.Sc. in Water Resources Management at UNESCO-IHE. The main areas of his research include groundwater governance, energy-irrigation nexus, river basin management, community management of water resources, water-food-trade policies, smallholder farming in South Asia and Sub Saharan Africa.

[Prof. Richard Taylor](#) is a hydrogeologist with more than two decades of experience investigating groundwater resources and providing technical assistance to water-supply projects in East and Southern Africa as well as South Asia. His research interests and expertise include the impact of climate and development on groundwater resources, and the mobility of faecal pathogens in groundwater. Apart from providing technical assistance to a range of international and non-governmental organisations, Richard has since 2000 held a faculty position at University College London and is adjunct Professor in the Department of Geology and Petroleum Studies at Makerere University (Uganda).

[Dr Alan Nicol](#) is Program Director, East Africa, for the Global Water Initiative funded by the Howard G Buffett Foundation. He is a political scientist with 20 years of professional experience on global water policy and practice and previously established and led the Water Policy Programme at ODI and the RiPPLE consortium in Ethiopia. He is currently based in Kampala.

[Dr Eva Ludi](#), a Research Fellow in Overseas Development Institute, is a geographer with a diverse project portfolio. She has over fifteen years' experience in research and policy with a special focus on Ethiopia and other East African countries particularly related to sustainable rural development and sustainable natural resource management.

[Dr Steve Wiggins](#) is an agricultural economist with more than 35 years of experience of teaching and research on agricultural and rural development. Formerly at the University of Reading, since 2002 he has been a Research Fellow at the Overseas Development Institute. His interests centre on rural livelihoods, agricultural development, poverty, and food and nutrition security. He has been studying agricultural development in Africa since 1980. He currently works with colleagues in five countries as part of the Future Agricultures consortium, with a particular interest in how smallholders commercialise their production.

[Roger Calow](#) is Head of ODI's Water Policy Programme and has over 20 years' experience on international development and research projects in Africa, Asia and the Middle East. Key interests include water resources management, service delivery, climate change impacts and adaptation, irrigation reform and water rights. Roger was based in China for two years working on basin planning and water rights with the Ministry of Water Resources and provincial government, and has also worked as a consultant for the World Bank, UNESCO, FAO, DFID and the UK Foreign Office. He is an Honorary Research Associate at the British Geological Survey.