



CV

Professor Bruce Lankford

Email: b.lankford@uea.ac.uk

Occupation: Professor of Water and Irrigation Policy

Key Qualifications:

- Water management specialist covering water resources planning, river basin management, irrigation, hydrology, rural development, general agriculture and soils.
- Capability in institutional analysis and reviews of water resources policy at local, regional and international levels.
- Experience of capacity-building (including strengthening water user associations), assessing training needs, curriculum development, and developing/giving training courses with lectures, workshops and seminar sessions.
- Use of the river basin game and Excel models in water sharing workshops with resource users and decision-makers; has also involved training of trainers in the use of the game.
- Experienced in assessment of hydrology, agro-meteorology, and impact of irrigation development on water resources and hydrological environment.
- Knowledge of integrated & sectoral water resource planning. Understanding of needs and issues related to river basin and catchment planning, domestic/health sectors, village water supply, water quality, cultural and educational issues, and of other sectors such as power generation and ecological/environmental demands of water.
- Specialized in rehabilitation and improvement of irrigation systems; including technical investigations, extension, water user associations, participatory research and implementation of improvement programmes.
- Research experience includes research management, researcher supervision and research design; establishing pilot surveys and identifying key researchable issues..
- Project management and administration skills: planning and budgeting; chairing of committees; reporting, writing and reviews of proposals and bids; marketing; interviewing; co-ordinating; and development and monitoring of prioritised strategies and action plans. Communication, team-working, management and facilitation skills. Organised/presented talks/seminars/conferences.
- Overseas work includes short-term consultancies, research, research management and long-term TA projects.

Total professional experience: (All related to the water sector): 30 years, 13 years internationally.

Country experience: Swaziland, Tanzania, India, Kyrgyzstan, Pakistan, Malaysia, Mozambique, Sudan, Ethiopia, Nigeria, Kenya, South Africa, Zambia, Laos, China, Rwanda, Botswana, Belize.

Education:

PhD. Irrigation Design & Management, University of Newcastle upon Tyne, UK, 1998.

M.Sc. Irrigation (Distinction), University of Newcastle upon Tyne, UK, 1992.

B.Sc. Hons. Soil Science, University of Reading, UK, 1985.

Further Training:

Water Evaluation and Planning (WEAP) software for River Basin Management, Tellus Institute, Boston, USA, 2002.

Finance for Non-Financial Managers, Mananga Agricultural Management College, Swaziland, 1988.

Mid-Management 1, Maccuvlei Institute, Swaziland, 1987.

Memberships:

Fellow of the Institution of Civil Engineers (FICE).

Chair of the Irrigation Commission on Irrigation and Drainage (ICID) - British Section.

EMPLOYMENT RECORD

2011 - present	Professor of Water and Irrigation Policy, School of International Development, UEA, UK
2005 - 2011	Senior Lecturer in Natural Resources, School of International Development, UEA, UK
2006 - 2010	Head of School, School of International Development, UEA, UK
1994 - 2005	Lecturer in Natural Resources, School of Development Studies, UEA, UK
1990 - 1994	Consultant & Irrigation Agronomist, Hunting Technical Services Ltd, UK
1985 - 1989	Irrigation Agronomist, Commonwealth Development. Corporation, Swaziland
1983 - 1984	Assistant Soils Agronomist, Commonwealth Development. Corporation, Swaziland

Professional Activities:

- May 1994 to present
UK
- Professor of Water and Irrigation Policy (Aug 2011-present)**
Researcher/Senior Lecturer in Natural Resources
School of International Development, University of East Anglia, UK.
Head of School (Aug 2006-Aug 2010). Major responsibility for School staff (>35) administration, budgets and strategies for a range of teaching and research activities and programmes. Many of these were designed to grow the School's size taking it to a higher level of profitability by 2010. High level of responsibility for delivering the RAE (Research Assessment Exercise) and managing staff appointments. Liaised with Faculty and University committees and senior staff on many related issues. Identified opportunities with other Schools in the University.
Lecturer/Senior Lecturer/Professor (May 1994-present). Director of BSc and MSc programmes; Chair of Computing and Equipment Committee; Study Skills; Overseas Development Group Director; Co-Director of the UEA Water Security Research Centre. Responsible for developing and teaching BSc and MSc courses on water security, hydrology, agro-meteorology, irrigation and water resources assessment, planning and management. Lectured on: hydrology (rainfall assessment, evaporation, surface water flow, catchment processes, groundwater, measurement and evaluation, hydrological modelling, links with irrigation); supply and demand management; institutions; participatory methods; village water supply; health and sanitation; environmental demands for water; river basin management; integrated water management, global irrigation issues; and policies regarding the management of the water sector. Contributed to courses on natural resource management and theory. Taught courses on soils, statistics, modelling and research methods. Provided training courses for visiting professionals. Had major responsibility for selected administrative matters and budgets within the School. Supervision of nine PhD students on projects covering river basin management, water policy, irrigation management and water and development. External Examiner 2003-2006 for University of Newcastle upon Tyne on three Masters programmes: External examiner 2009-2012, Cranfield University. Continued to be available for short and long term research, consultant, training and advisory inputs.
- 2000-ongoing
UK/Global
(Various)
- Water Policy Analyst**
Made numerous short contributions and meetings on water policy analysis, including: 1) via OASIS (the DFID Advisory Group) commenting on "CSD Synthesis Paper on Water" for submission to the UN Commission on Sustainable Development (CSD) in April 2004; 2) Notes towards the UK White Paper on Agriculture in mid-2002; 3) Drawing up a possible framework for evaluation of EU water projects included in a Consultancy Proposal in Dec 03; 4) Contributor to World Bank E-conference on smallholder irrigation in Sub-Saharan Africa in March 03. 5) Input to water management strategy for PRSP in Tanzania via WaterAid. 6) Commentary on the Tanzanian Water Resources Strategy directly for the steering committee. 7) Sitting on WWF's Virtual Water Steering Panel including a series of meeting designed to consider the value of the virtual water concept to WWR policy. 8) Contributing to IIED's co-ordination of DFID's emerging water policy. 9) Lead panelist for DFID's nascent policy on irrigation in Africa, following on from authorship of the Commission for Africa Irrigation analysis, including two meetings in London in November 2006 and March 2007. 10) Expert invitee for the Royal Society Study into Biological Approaches to Food Production in the next twenty years. 11) Contribution to Food Security study commissioned by UK Chief Scientist, J. Beddington December 2010. 12) Contribution to Food Security analysis for UKWRIP Agriculture Action Group April 2013.
- November 2013
South Africa.
Belmont Funding
- Research adviser and facilitator (water and climate).** Part of a team researching the use and uptake of climate forecasting for improved water and land management in Southern Africa.
- October 2013
June 2014
Belize
FAO
- Irrigation specialist (Hydrology/GIS/irrigation).** Part of a multidisciplinary team of consultants recruited by FAO to undertake a mission to formulate an irrigation and drainage strategy for the Government of Belize. Contributed to discussions regarding policy on public-private partnership policies. Second visit concentrated on institutions to support interventions.
- May-July 2013
UK/IWMI
- Irrigation policy analyst (desk study).** Commissioned by the International Water Management Institute to formulate research frameworks for the Water Land Environment (WLE) programme of the CGIAR network to process concept notes on irrigation in Sub-Saharan Africa.
- August 2012
Botswana
SIWI
- Session Leader – water allocation and water efficiency**
River Basin Game and Water Management Discussions.
Utilised the River Basin Game and models to explore theory for water allocation and water use efficiency for staff from the Botswana Department for Water Affairs.

- Oct 2011
Botswana
SADC/GIZ
- Session Leader – water allocation.**
River Basin Game and Water Management Discussions.
Utilised the River Basin Game and models to explore theory for re-allocation of water in the Limpopo Basin for LIMCOM.
- Oct 2010
Abu Dhabi
Arab Water
Academy
- Session Leader – water allocation.**
River Basin Game and Water Management Discussions.
Utilised the River Basin Game and models to explore theory for re-allocation of water. Trained 25 professionals from the Middle East region.
- Aug 2010
Sweden
Ramboll &
SIWI
- Session Leader – water allocation.**
River Basin Game and Water Management Discussions.
Utilised the River Basin Game and models to explore theory for re-allocation of water in the Zambezi Basin.
- Various 2009
S. AFRICA
(NERC)
- Co-Principle Investigator. The impacts of ecosystem services and environmental governance on human well-being in the Pongola region, South Africa**
Funded research to characterise and assess the impact of management decisions on the state of ecosystem services and associated human wellbeing in the Pongola floodplain system in S Africa.
- May 2008
CHINA (UEA)
- A short visit to discuss collaboration with China Agricultural University, Chinese Centre for Agricultural Policy, WWF-China and DFID.
- November
2007/8
LAOS
(IWMI/Ramboll
/WATERNET)
- Session Leader – water allocation.**
River Basin Game and Water Management Discussions.
Utilised the River Basin Game and models to explore theory for re-allocation of water. Trained 28 professionals from countries around the world, including some from the Mekong Basin.
- November 08/09
RWANDA
(IWMI/Ramboll
/WATERNET)
- Session Leader – water allocation.**
River Basin Game and Water Management Discussions.
Utilised the River Basin Game and models to explore theory for re-allocation of water. Trained 30 professionals from countries around the world, including some from the Nile Basin.
- February
2007/8/9/10
Zambia/Malawi/
Botswana
(IWMI/Ramboll
/WATERNET)
- Session Leader – water allocation in Zambezi River Basin. River Basin Game and Water Management Discussions.**
Utilised the River Basin Game to explore re-allocation options for high level decision-makers in the Zambezi Basin. In 2008, developed a decision-aid to explore how the Helsinki Protocols might be used to determine equitable allocation according to a set of principles.
- November
2005/6
SOUTH
AFRICA
(IWMI/
Ramboll)
- Session leader**
Integrated Water Resource Management, Advanced International Training Program.
On a training program organized by the International Water Management Institute and Ramboll Consultants, led a session on the relationship between decision-aids and river basin management
Took part in a study tour of the Oliphants River Basin. Repeated in 2006.
- March 2006
SOUTH
AFRICA
(IWMI)
- Workshop Facilitator**
River Basin Game and Conflict Dialogue.
Conducted two workshops around the River Basin Game, one with Southern African scientists including IWMI, followed by one with local water users in the Oliphants River Basin.
- June 2001-06
TANZANIA
(DFID & IWMI)
- Project Team Leader**
Raising Irrigation Productivity and Releasing Water for Intersectoral Needs (RIPARWIN)
Responsible for managing and directing a major DFID-funded 5-year research project on irrigation and river basin management. This work, involving over 15 researchers, aimed to inform stakeholders and decision-makers within the Ruaha River Basin about policy options for re-allocating water and increasing irrigation productivity. Worked closely with research partners - the Soil Water Management Research Group (SWMRG) & the International Water Management Institute (IWMI) in coordinating various research programmes on institutional analysis, livelihood and economic values of water, wetlands values & functions, smallholder irrigation, and community management of water for multi-purpose use. Helped organize and

attended numerous meetings, including the East African River Basin Management Conference and workshops that centered on the River Basin Game, a conflict-resolution tool and simulation model of water competition and resolution, plus RUBDA a computer based decision-aid. Reviewed and edited submissions from researchers, and helped draw up new research lines of inquiry. Co-wrote Policy Briefs and information sheets. Managed logistics, budgets and log-frame outputs, and the use of video-media to influence farmers' understanding of water management.

September 2005
KENYA

Workshop Participant and Presenter. "The River Basin Game: A role-playing board game for initiating discussions on visions and strategies of water allocation". In *Managing Water Conflicts: Emerging Challenges And Opportunities*". NETWAS - 17th Regional Water And Sanitation Seminar, 5-9th September 2005, Mombasa, Kenya.

May-June 2005
NIGERIA
(DFID)

River Basin Workshop Facilitator, Joint Wetlands Project (JWL)

Responsible for designing and conducting two workshops for stakeholders in the Hadejia Jama'are Komadugu Yobe Basin for the DFID-funded "JWL" project in Northern Nigeria. The workshops were designed around the use of the River Basin Game, a tool devised by Lankford to facilitate the discussion of water sharing arrangements in a river basin context.

Nov 2004
UK
(DFID)

Irrigation and Water Development Analyst, Commission for Africa

Formulated a comprehensive framework for irrigation and water development for the Commission for Africa. Reviewed opportunities to increase the productive potential of arable land by increasing the area of irrigation, increasing access by poor people to irrigation and/or the benefits of irrigation, and by enhancing the management of existing areas under irrigation. Determined sustainable targets for growth and productivity gains, a budget and a benefit: cost analysis.

April 03 to Mid
04
TANZANIA
ETHIOPIA
(IWMI - CA)

Researcher/Adviser

Productivity of Water and Interacting Systems (PWAIS)

Contributed to this research project funded and commissioned by the Global Comprehensive Assessment (International Water Management Institute) designed to examine the measurement of productivity of water in irrigated and rainfed agriculture in the Southern Highlands of Tanzania and Tigray Region of Ethiopia. Contributed to opening workshops in both countries and helped draw up a research programme using a log-frame methodology.

July 2003
UK
(ODG, IDS)

'Rural Livelihoods', Overseas Development Group

'Pastoralism: Productivity, Governance and Services' Institute of Development Studies

Presented sessions on two short-courses on rural livelihoods with an emphasis on irrigated agriculture. These were for the Overseas Development Group, University of East Anglia and for the Institute of Development Studies, University of Sussex; the latter course being 'Pastoralism: Productivity, Governance and Services' for the Government of Ethiopia. The aims of the sessions were similar; to present new policy directions to promote the adoption and expansion of smallholder irrigation in Sub-Saharan Africa, while recognizing the institutional and livelihood challenges in irrigation within a river basin context. Sessions covered policy analysis, livelihoods, the complexity and attraction of irrigation, improvement programmes, promoting wild-fire uptake of irrigation, and impacts of excessive irrigation abstraction for other users.

October 2002
May/June 2003
KYRGYZSTAN
(DFID)

International Irrigation Specialist

Sustainable Livelihoods For Livestock Producing Communities (SLLPC)

Over two inputs, analysed infrastructure and WUA institutions for managing irrigation water in order to recommend investments and support by the DFID project to enhance agriculture-based livelihoods in villages in Manas Region. The review indicated a good level of institutional sustainability and technical ability of the newly formed WUA (following the hand-over of irrigation systems to farmers). Designed small infrastructural works and proposed conditions that leveraged new water management capabilities. During the 2nd input, assisted in delivering and chairing a two-day seminar involving 42 WUAs in collaboration with the World Bank On-Farm Irrigation Project, and visited three WUA in Chui Region to assess other project proposals.

April 03
TANZANIA
(Iteco-private)

Consultant - Hanang Wheat Farms

Desk study on recommendations, risks and information needs for implementation of supplementary irrigation for 41 000 ha wheat farm in Northern Tanzania.

Sept 2002, April
2003 and April

Irrigation Specialist. Second Chennai Water Supply Project: Reassessment Of Groundwater Potential in the A-K Basin

2005.
INDIA
(World Bank)
- In three inputs, was responsible for investigations of irrigation management to determine means and possible outcomes of transfer of water rights from agriculture to meet urban water needs for the city of Chennai (Madras) in Tamil Nadu. Determined quantities of water being utilized by irrigated agriculture from groundwater and assisted in discussions related to surveying and modeling borehole/aquifer management. Reviewed previous estimations of water demand. Interviewed farmers and examined current purchasing of water from farmers by Metro Water.
- August 2001
UK
- Organiser: Irrigation Design Management Seminar**
ODG Visiting Professional contribution for the project "Improving Livelihoods in Northern Bihar and Eastern Uttar Pradesh"
- June 2000, Feb 2001, May 2001
TANZANIA
(DFID)
- Natural Resources (Water) Researcher**
Livelihoods and Diversification Directions Explored by Research (LADDER)
Planned, organised and undertook research to examine irrigation-based rural livelihood issues in relation to the policy environment in Tanzania. Worked in the Kilosa region conducting field work and advising Tanzanian collaborators accordingly. Visited various research and donor organisations in Dar Es Salaam to establish collaborative working arrangements and likely routes for future promotional pathways. Worked as a collaborative researcher as a part of this 10-person inter-disciplinary team. Presented paper at livelihoods workshop.
- 1999-2000
TANZANIA
(DFID)
- Principal Researcher**
Irrigation Efficiency Research
In collaboration with the Soil Water Management Research Group (SWMRG) at the Sokoine University of Agriculture (SUA), planned and conducted research studies to assess the efficiency of the various types of formal and informal rice irrigation systems on the Usangu Plains within the context of river basin management. Supervised a PhD student conducting the fieldwork. Drew up the budget for this research and monitored costs accordingly.
- Jan-Feb, Nov-Dec 1999, Mar-Apr, Jun-Jul, Sept-Oct 2000,
TANZANIA
(DFID)
- Water Management Specialist**
Sustainable Management of the Usangu Wetlands and Catchments (SMUWC)
Worked as a consultant with HTS on this process-orientated river basin/catchment project with inter-sectoral allocation objectives (between rice irrigation, HEP, wetlands, a national park and upper-catchment farmers). Completed inputs to determine the impact of irrigation activities on the wetlands and hydrology of the Usangu Catchment. Worked with farmers to understand their management of water. Formulated models to determine effects of climate and river flows on area irrigated and efficiency of irrigation systems. Worked alongside national and international experts, contributing to discussions regarding water and irrigation policies and capacity-building at local, river-basin and national levels. Developed policies toward integrating water supply for cross-sectoral use and re-allocation including the "red routes" strategy of prioritising compensation flows. Drafted a position paper for discussion on a flexible water strategies for the area, including proportional water rights.
- July-Aug, Sept 1999
MOZAMBIQUE
(British Council)
- Natural Resources Adviser**
Catholic University of Mozambique (UCM)
On two visits, provided detailed advice on curriculum development and planning as a part of the proposed establishment of a new Faculty of Agriculture of the Catholic University of Mozambique. Identified training and skills needs reflecting local and national natural resources management. Facilitated a workshop designing overall curricula and student-learning progress.
- October 1998
UK (PRIVATE)
- Expert Opinion "Sugarcane Business Interruption Claim"**
Barlow Lyde & Gilbert, London
Undertook a desk study following failure of irrigation for a project based in Sudan.
- Sept 1997
UK
- Organiser: Irrigation and Water Management Seminar**
CAP 21 Course, UEA
Developed and presented a seminar for participants on: Capacity 21: Capacity Building for Introducing Environmental Economics into Decision Making for Sustainable Development.
- June 1997
SWAZILAND
(SSA)
- Short course on water management**
Swaziland Sugar Association (SSA)
Developed and presented a two-day course to managers on improved water management. The course, entitled "Self-Running Irrigation Schemes" used spreadsheets, discussion exercises and a field trip, and was favourably evaluated.
- Feb-June 1997,
June-July 1996
July-August 1995
- PhD Research**
Mhlume Sugar Company, Royal Swaziland Sugar Company, Ubombo Ranches, Vuvulane Irrigated Farmers

- SWAZILAND (PRIVATE)** Conducted research for PhD on design-management interactions for high performance irrigation scheduling on lowveld irrigation schemes. Undertook participatory research with farmers and estate employees on irrigation operation of water delivery schedules. Developed methods for improving water operation to fit with existing control technologies and cropping plans. Determined methods for upgrading canal equipment to fit with intended water schedules.
- 1995-99
UK (PRIVATE) **Sugarcane and Irrigation Consultant**
ED&F Man Sugar Ltd, London
Conducted seven desk studies on sugarcane irrigation agronomy, and soils and irrigation.
- Aug 1994,
UK (PRIVATE) **Irrigation Consultant**
Bob Zepecki Associates, USA
Completed a desk study on date palm water requirements and irrigation management.
- September 1990 -
March 1994
UK **Consultant (Irrigation Agronomist) and Administration Assistant**
Hunting Technical Services Limited (HTS)
When not on assignment, assisted the Regional Director and wrote proposals.
- Jan-Feb 1994
April-May 1993
Oct-Nov 1993
SUDAN (UNDP) **Soils and Irrigation Agronomist (HTS)**
Lower Atbara Area Development Scheme (ADSLA)
Studied irrigated agriculture, soil types and crop water use. With farmers, researched constraints to efficient use and management of groundwater. Reviewed operation of farmer groups for community management of water. Examined farm inputs and labour requirements and determined gross margins. Investigated existing range of crops (wheat, vegetables, sorghum) and the introduction of alternative crops likely to yield a higher return (oilseeds and additional vegetables). Assessed the need for further studies in soil survey, land use and on-farm water management. For the latter, planned an appropriate adaptive research programme.
- May-August
1992
MALAYSIA (PRIVATE) **Researcher (HTS)**
MSc Irrigation Degree
Followed a programme of study in England/Malaysia covering: hydrology; soils; design; engineering; farming systems; water economics; land drainage; irrigation science, principles, systems and management. In Malaysia, carried out research and made detailed field studies of sprinkler and drip irrigation systems. Was seconded for 6 weeks to the Department of Irrigation and Drainage to research a dissertation; 'A Systems Approach to Water Control at the Sungai Muda Irrigation Scheme', examining aspects of management that were influencing performance.
- January 1991 -
September 1991
UK With HTS, completed the Agriculture Studies volume for the Right Bank Master Plan. Carried out general administrative duties, statistical work and reviewed crop water use for an ODA project in Sindh Province, Pakistan.
- October-
December 1990
PAKISTAN (ODA – DFID) **Irrigation Agronomist (HTS)**
Lower Indus Region, Study for Right Bank Master Plan (RBMP)
As a member of a multi-disciplinary team, undertook a study of agricultural production in Right Bank Indus Irrigated Area. Evaluated factors influencing cropping patterns and the production of individual crops, with major emphasis on rice and wheat. Assessed the influence of the 1.6 million ha irrigation system on the distribution of agriculture types. Studied husbandry practices (fertilisers, crop protection), water supply, soils, on-farm water management, post-harvest handling and processing. Gave particular attention to evaluation of the effects of flooding and salinity on rice yields and salinity and dry soil conditions on wheat yields. Examined crop diversification plans for non-rice crops including sugarcane, oilseeds, cotton and vegetables. Identified major constraints to agricultural production and assessed institutional support services (research, extension, seeds and fertilisers supply services and marketing channels). As a team member, participated in the formulation of medium and long term plans for the improvement of irrigated agricultural production and development of the Right Bank.
- October 1988
ZIMBABWE **Study Tour (CDC)**
Studied Lowveld Sugarcane Industry with reference to irrigation & harvesting methods.
- November 1988
MAURITIUS **Study Tour (CDC)**
Studied sprinkler, furrow and drip irrigation methods on sugarcane estates throughout the island. Attended a sugarcane irrigation symposium.
- September 1985 -
September 1989
SWAZILAND **Irrigation Agronomist (CDC)**
Inyoni Yami Swaziland Irrigation Scheme (IYSIS)
As a staff member of Commonwealth Development Corporation (CDC), had major responsibility in review and rehabilitation of irrigation management on a 10,000 ha sugarcane estate by various

(CDC) approaches. Identified yield losses due to irrigation and soil management practices. Implemented policy changes on irrigation scheduling, data collection, computer records, canal control systems and field water supply. Important irrigation improvements were achieved through the training of field irrigation staff. Investigated meteorological records, soil-water-sugarcane growth and yield relationships including studies of root distribution and soil structure. Planned and implemented a programme of irrigation field trials designed to investigate efficient use of water. Advised on the management of drip and sprinkler irrigation systems for both sugarcane and citrus crops. Reviewed water delivery and control in the canal system, including the use of small storage dams, and made engineering recommendations. Identified in-field and field-edge water management deficiencies. Recommended 'most-appropriate' methods of irrigating problematic salsodic soils with water of a low salt content. Designed and implemented a performance-measurement system for attaining irrigation targets. This work led to the amendment of existing irrigation and cultivation practices, resulting in improvements in crop yield, water use efficiency and long-term maintenance of favourable soil tilth. Assessed soils and land capability for expansion of sugarcane, citrus and cotton crops.

September 1983
– August 1984
**SWAZILAND
(CDC)**

Soils Agronomist (CDC)

Inyoni Yami Swaziland Irrigation Scheme (IYSIS)

Responsible for soil and land surveys in cultivated and bushland areas to determine soil types, monitor salinity levels under irrigation and identify further suitable areas for sugarcane production. Assisted in sugarcane agronomy and trials covering studies of crop growth in relation to soil types, soil salinity and differing cultivation practices.

January, 1982
GUYANA

On field assignment to study soils, sugarcane cultivation and harvesting methods during university BSc degree studies.

Languages: English (Mother tongue). Spanish (Fair). French (Fair) siSwati (Basic)

Computer Literacy: Word; Excel; Statistics: SPSS. Hotmetal Pro HTML. AutoCad – Express. WEAP

Selected Publications:

1. Lankford, B.A., Bakker, K., Zeitoun, M., and Conway, D. (Eds) 2013. Water security: Principles, perspectives and practices. Earthscan Publications, London.
2. Lankford B.A. 2013. Does Article 6 (Factors Relevant to Equitable and Reasonable Utilization) in the UN Watercourses Convention misdirect riparian countries? *Water International*. Vol 38, Issue 2, 130-145.
3. Lankford B.A. 2013. Resource Efficiency Complexity and the Commons: The Paracommons and Paradoxes of Natural Resource Losses, Wastes and Wastages. Earthscan Publications.
4. Lankford B.A. 2013. Infrastructure hydromentalities; water sharing, water control and water (in)security. In, B.A. Lankford, K. Bakker, M. Zeitoun and D Conway (Eds) 'Water security: Principles, perspectives and practices'. Earthscan Publications, London. Pp 256-272
5. Lankford, B.A., 2013. A Synthesis Chapter: The Incodys Water Security Model. In, B.A. Lankford, K. Bakker, M. Zeitoun and D Conway (Eds) 'Water security: Principles, perspectives and practices'. Earthscan Publications, London. Pp 336-351.
6. Lankford B.A. 2012 Fictions, fractions, factorials, fractures and fractals; on the framing of irrigation efficiency. *Journal of Agricultural Water Management*. 108 (2012) 27– 38.
7. Lankford, B.A., 2011. Responding to water scarcity – beyond the volumetric. In, Mehta, L. (ed) *The Limits of Scarcity*. Earthscan, London. Pp 195 -214.
8. Bunclark, L and Lankford B.A. 2011. Rainwater harvesting: A suitable poverty reduction strategy for small-scale farmers in developing countries? *Waterlines Journal*
9. B. Lankford, C. Pringle, Dickens C, Lewis, F, Mander, M, Chhotray, V, Goulden, M, Nxele Z and. Quayle, L. 2011. Hydrological modelling of water allocation, ecosystem services and poverty alleviation in the Pongola Floodplain, South Africa. *Journal of Environmental Planning and Management*. Volume 54, Issue 9: 1237-1260.
10. Lankford, B.A. and Hepworth, N. 2010. The Cathedral and the Bazaar: Monocentric and polycentric river basin management. *Water Alternatives* 3(1): 82-101.
11. Pittock, J. and Lankford, B.A. 2010. Environmental water requirements: demand management in an era of water scarcity. *Journal of Integrative Environmental Sciences*, 7(1):1–19.

12. Lankford, B.A. 2009. The right irrigation? Policy directions for agricultural water management in sub-Saharan Africa. *Water Alternatives* 2(3): 476-480.
13. Lankford, B.A., Tumbo, S. and Rajabu, K. 2009. Water competition, variability and river basin governance: A critical analysis of the Great Ruaha River, Tanzania. In; F. Molle and P. Wester (Editors) *River Basin Development in Perspective*, CABI. Pp 171-195.
14. Mehari, A., Barbara Van Koppen, B., McCartney, M. and Lankford, B.A. 2009. Uncharted innovation? Local reforms of national formal water management in the Mkoji sub-catchment, Tanzania. *Physics and Chemistry of the Earth, Parts A/B/C*. 34, (4-5): 299-308.
15. Magombeyi, M.S., Rollin, D., Lankford, B.A. (2008). The river basin game as a tool for collective water management at community level in South Africa, *Physics and Chemistry of the Earth, Parts A/B/C* (33) 873-880.
16. McCartney, M., Kashaigili, J.J., Lankford, B.A., Mahoo, H. F., 2008. Hydrological modelling to assist water management in the Usungu wetlands, Tanzania. *Intl. J. River Basin Management*, Vol. 6, No. 1 pp. 51-61
17. Lankford, B. A. and Watson, D. 2007. Metaphor in natural resource gaming; insights from the River Basin Game. *Simulation & Gaming*, Vol. 38 No. 3, 421-442
18. Lankford, B.A., 2007. Integrated, adaptive and domanical water resources management. International Conference on Adaptive and Integrated Water Resources Management. CAIWA 12 – 15 November 2007. Basel, Switzerland.
19. Lankford, B. A. and Dickinson, S. 2007. Water management issues and problems in Africa, *CAB Reviews: Perspectives in Agriculture, Veterinary Science, Nutrition and Natural Resources* 2007 2, No. 032.
20. McCartney, M. P., Lankford, B. A. and Mahoo, H. F. 2007. Agricultural water management in a water stressed catchment: Lessons from the RIPARWIN project. Research Report 116. International Water Management Institute. Columbo, Sri Lanka.
21. van Koppen, B. Sokile, C., Lankford, B.A., Mahoo, H., Hatibu, N., and Yanda P, 2007. Water rights and water fees in Tanzania. In; *Irrigation Water pricing: The Gap Between Theory and Practice* edited by Francois Molle, and Jeremy Berkoff. Pp 143-164. Sponsored by the Comprehensive Assessment. IWMI/CABI. Wallingford
22. Lankford, B. A. 2006. A dynamic framework for sustainable agricultural water management under risk and uncertainty: concept and a case study. *World Water Week 2006*. Stockholm International Water Institute.
23. Lankford, B.A. Merrey, D., Cour, J., and Hepworth, N. 2007. From Integrated to Expedient: An Adaptive Framework for River Basin Management in Developing Countries. Research Report 110. International Water Management Institute. Columbo, Sri Lanka.
24. Lankford B. A. and Beale, T. (2007). Equilibrium and non-equilibrium theories of sustainable water resources management: dynamic river basin and irrigation behaviour in Tanzania. *Global Environmental Change* 17: 168–180.
25. Lankford, B.A. (2006). Localising irrigation efficiency. *Irrigation and Drainage Systems* . 55: 345–362.
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Technical/Consultancy Reports:

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- BOTSWANA, 2011.** Training on Water Allocation for the Limpopo Watercourse Commission, 5-7 October 2011, Gaborone Sun Hotel – Botswana. By Bruce Lankford and Owen McIntyre. SADC/GIZ. 60 pp.
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- TANZANIA, 2006.** Raising Irrigation Productivity and Releasing Water for Intersectoral Needs, Final Reports for DFID, CD-Rom.
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- TANZANIA, 2000.** Water Resource Management Strategies for the Usangu Catchment, in Working Papers June 2000, for DFID, 9 pp.
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- SWAZILAND, 1996.** Design-management interactions on the Simunye Estate. Report of Irrigation Study, June/July 1996 (Private reports for the Simunye Sugar Estate and Royal Academy of Engineering). 45 pp.
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- SUDAN, 1994.** Towards the Development of a Farm Planning Model. Area Development Scheme - Lower Atbara (HTS for UNDP). 114 pp.
- SUDAN, 1993.** Soils and Irrigation Agronomy Report. Area Development Scheme - Lower Atbara (HTS for UNDP). 120 pp.
- MALAYSIA, 1992.** A Systems Approach to Water Control at the Sungai Muda Irrigation Scheme, Pinang. M.Sc Dissertation, 140 pp.
- PAKISTAN, 1991.** Lower Indus Region. Right Bank Master Plan Volume 3 Part 1 - Agricultural Studies. (HTS, for ODA). 250 pp and 7 annexes.
- SWAZILAND, 1989.** Estate sugar cane irrigation manual. Inyoni Yami Swaziland Irrigation Scheme. (IYSIS) Commonwealth Development Corporation (CDC)
- SWAZILAND, 1989.** The irrigation section of the Technical Services and Agronomy Department Annual Report. (Reports also done for 1988, 87 and 86). IYSIS, CDC.

- SWAZILAND**, 1988. Irrigation leadstream cycling groups and distribution, investigations and engineering recommendations. IYSIS, CDC.
- SWAZILAND**, 1988. A basic irrigation training manual for Estate Staff. IYSIS, CDC.
- SWAZILAND**, 1987. Infield irrigation control and irrigator management study. Implementation of the Tindzima System. IYSIS, CDC.
- SWAZILAND**, 1987. Study of the irrigation of the 1986/87 sugarcane season. IYSIS, CDC.
- SWAZILAND**, 1986. Soil survey of bushland for cotton production of the West Lutala area, Northern Lowveld. IYSIS, CDC.
- SWAZILAND**, 1985. Soil structure management study of IYSIS soils. London Office, CDC
- SWAZILAND**, 1983. Bushland soil survey and evaluation reports for expansion of sugarcane production. IYSIS, CDC.

Selected talks and conferences attended/organized:

1. January 2013. Presentation at 6th Hydro-Hegemony meeting London. What does justice bring to Article 6 of the UN Watercourses Convention? Journeying from equity ledgerdmain to justice transparency for water allocation and sharing.
2. November 2012. Presentation at ICID November meeting on ‘Do we need a World Commission on Irrigation?’ at London.
3. April 2012. Presentation at Oxford Water Security Conference.
4. February 2012. Presentation on the water-food-energy nexus at ICID technical meeting, London.
5. June 2010: Talk at SOAS ‘Awakening the Giant’ workshop on African Agriculture.
6. April 2010. Presentation at Hydro-hegemony workshop in London on UN Watercourses Convention.
7. February 2009. Talk at London Water Group evening seminar, KCL; The Inside Story: the Commission for Africa policy on irrigation in Africa; a folly doubled?
8. November 2008. Paris Conference. Freshwater systems, resources and society. A different water cycle. (A "French presidency of the European Union" event). Invited to talk on topic "Stakeholder strategies and collective decision making on the catchment scale".
9. November 2008 and March 2009. Invited to be a Session Leader for two international training programme on IWRM ‘Water allocation in river basins’. Utilised the River Basin Game and spreadsheets to explore re-allocation options for high level decision-makers in the Nile.
10. October 2008. Invited by the Royal Society down to London to provide an expert input to the study Biological approaches to enhance food-crop production. Interviewed by a panel chaired by Professor David Baulcombe.
11. July 2008. Invited by Dr Carlos Garces, IPTRID programme to FAO for a two day workshop to discuss a reformed global programme for irrigation support and rehabilitation.
12. May 2008. Invited by Mark Zeitoun, LSE, to present “Does socialised science speak to power?”
13. Explorations in water allocation methodologies for catalysing cooperation, a case study from the Zambezi” at the Fourth International Hydro-Hegemony Workshop at LSE, London.
14. April 2008, Invited by Dr Evan Fraser to Leeds, Centre for the Environment to contribute to research thinking around Arid Systems resilience.
15. Presented The River Basin Game: “Managing Water Conflicts: Emerging Challenges And Opportunities”. NETWAS - 17th Regional Water And Sanitation Seminar, 5-9th September 2005. Plaza Beach Hotel, Mombassa, Kenya.
16. April 2007. Invited to a workshop organised by IIED’s to co-ordinate DFID’s emerging research programme ‘Water ecosystem services and poverty reduction under climate change’
17. February 2007, November 2007, February 2008, February 2009. Invited to be a Session Leader for a training programme on ‘Water allocation in Zambezi River Basin’. Utilised the River Basin Game to explore re-allocation options for high level decision-makers in the Zambezi Basin. (Similar sessions were repeated in Malawi and Laos (Mekong basin).
18. December 2006. Invited by Tony Allan to give a talk for the SOAS Water Group Seminar at Kings College, London on the ‘Cathedral and Bazaar’ paper.

19. December 2006. Had major involvement, including presenting and chairing, in a “two-day programme of conversations, a workshop and PhD defences with the Irrigation and Water Engineering Group, Wageningen University, The Netherlands” on ‘Governance, Technology And Reform In Water Management’.
20. November 2006 and March 2007. Lead panellist for DFID’s nascent policy on irrigation in Africa, following on from authorship of the Commission for Africa Irrigation analysis, including two meetings in London.
21. March 2006. Invited to attend an ‘International Dialogue on Rice and Water: Exploring Options For Food Security And Sustainable Environments’. Contributed to the Dialogue Statement.
22. June 2005. Invited to give a presentation at the IDS, Sussex titled 'Scarcity and the politics of allocation' funded by the ESRC Science in Society research programme.
23. March 2005. Invited to give a presentation (one of two presenters) at the ODI "Rights in Action" meetings on water. These presentations became the basis of a day-long seminar on water rights.
24. March 2005. Co-organised the East Africa River Basin Management Conference in 7-9 March 2005, Morogoro, Tanzania and presented two papers.
25. January 2005. Presented a paper at the international workshop on ‘African Water Laws: Plural Legislative Frameworks for Rural Water Management in Africa’, 26-28 January 2005, Gauteng, South Africa
26. Oct 2004. Co-organised the ICID daylong technical meeting “*Tools for Public Participation, Conflict Resolution and Decision-Making in Water Resources Management*”, London, UK.
27. Feb 2004. Organised and presented a paper at the ICID Technical Meeting on “*Tools for Public Participation, Conflict Resolution and Decision-Making in Water Resources Management*”, London, UK.
28. Dec 2003. Co-organised the “*Ruaha +10 Seminar, 1993-2003: Ten years of the Drying Up of the Great Ruaha River*”. A two-day seminar Morogoro, Tanzania
29. Oct 2003. Demonstrated the river basin game at the *Scientific and Technical Review Workshop of EURAQUA* network at HR Wallingford.
30. Sept. 2003. Presented a paper at the *ICID 20th European Regional Conference*, Montpellier, France, 17-19 Sept 03.
31. Oct. 2002, presented a paper on irrigation and livelihoods for the *WATERNET/WARFSA Symposium: Water Demand Management for Sustainable Development*, Tanzania.
32. May 2002, presented a paper for the *ICID British Section* meeting, on demand management for the environment.
33. March 2000, April 2002 and March 2004. Organized the *Research Conferences* for International Commission on Irrigation and Drainage (ICID) at HR Wallingford, Oxfordshire, attended by approximately 100 delegates.
34. April 2002, presented a paper at a Livelihoods Policy meeting in Dar es Salaam, Tanzania.
35. March 2001, invited by Royal Embassy of Denmark and Danish International Development Agency (DANIDA) to be a keynote speaker in the *1st National Irrigation Workshop*, Morogoro, Tanzania. The presentation was called “Sustainable Utilisation of Water Resources - a non-equilibrium approach: Informed by the Usangu Plains, Tanzania”.
36. March 2001, invited by SOAS, London to present a talk - part of their *Anthropology of Development Seminars*. Talk was entitled: "Beyond shibboleths; interdisciplinary irrigation design to improve water resources productivity".
37. Spring 2000, co-organised the *DEV Water Seminar Series* where presenters from the University of East Anglia constituted a programme of about 10 talks.
38. Sept. 1998, presented a paper for the Lisbon Conference “*Water and the Environment: Innovative issues in irrigation and drainage*”
39. Sept. 1997, presented a paper for the Oxford ICID Conference “*Water: Economics, Management and Demand*”.
40. Sept. 1996, presented a paper for the Cranfield University Conference “*Allocation and Management in Practice*”