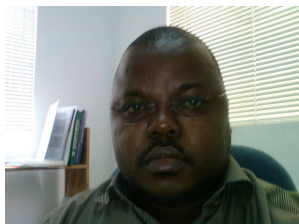


# ***CURRICULUM VITAE***

***Dinis Juízo***



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## ***PERSONAL DETAILS***

<b>Surname:</b>	Juízo
<b>Forenames:</b>	Dinis
<b>Profession:</b>	Hydrology and Water Resources Engineering
<b>Sex:</b>	Male
<b>Date and place of Birth:</b>	05 November 1970 / Maputo, Moçambique
<b>Nationality:</b>	Mozambican
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## ***MEMBERSHIP IN PROFESSIONAL ORGANIZATION***

Board Member – Mozambique Academy of Science – Head of the Technological Sciences

Board Member – WaterNet – acting in the scientific sub-committee

Member of the International Association of Hydrogeologists

Member of Mozambican Engineering Society

## ***FORMAL TRAINING***

Dr Dinis Juízo has extensive experience in the area of water resources development with key qualifications in hydrogeology, hydrology and water resources management. Dr. Juizo completed in 1994 his studies on inverse groundwater flow modelling to quantify groundwater recharge and sustainable exploitation of the coastal aquifers north of Maputo (Mozambique). Following this he was granted a MSc. scholarship (1996 -1998) at the Institute for Infrastructure, Hydraulics and Environmental Engineering (IHE), Delft, The Netherlands, where he worked for his thesis on groundwater resource assessment and well-field management for the water supply of the city of Pemba (Mozambique). This study focused on the role of biofouling due to iron bacteria activity as a constraint on groundwater utilization, in this study he used a numerical model based on ModFlow. Dr Juizo concluded in

February 2008 his reading for his doctorate at Lund University, Sweden, undertaking research on the operational issues associated with water allocation in international rivers. As a researcher and consultant he has been involved in numerous projects dealing with a variety of issues related to water resources development and management. His specialisation in issues pertaining to international rivers has developed as a result of his exposure to, and his understanding of, the many challenges facing the allocation and sustainable management of shared water resources in Mozambique and the southern African region.

## *CAREER PATH*

Based at Mozambique's Eduardo Mondlane University since 1993, he progressed in his carrier from trainee lecturer to his current position as Assistant Professor. Dr. Juízo is currently an Assistant Professor of Hydrology and Water Resources Management at the department of civil engineering his currently in the process to be appointed Associated Professor (predicted for June 2013) . Dr Juízo was head of the Civil Engineering Department between 2008-2010. Dr. Juízo has been involved in lecturing, research and tutoring of young graduates in the fields of hydraulics and water resources management. Dr. Juízo has extensive experience in education; research and consultancy work in the field of water resources related subjects. Although, based at Eduardo Mondlane University throughout his carrier he has worked with several national and international organizations in missions or short period assignments.

## *RELATED EXPERIENCE*

His areas of expertise include:

- Water resources engineering: water resources assessment and development; water supply, storage, and distribution; hydraulic works, rural development, groundwater studies development and management
- Integrated water resources management: water demand management and the interface between water technology and society
- Management information systems: database management systems, water resources modelling, geographic information systems, material flow accounting, and systems thinking and analysis

## *RESEARCH PROJECTS*

- Hydropower-to-environment water transfers in the Zambezi basin: balancing ecosystems health with hydropower generation in hydropower-dominated basins (**Power2Flow**) 2010-2013. Acting as coordinator and principal investigator of the project on behalf of the Faculty of Engineering. The proposed research project aims to develop an analytical framework that includes explicitly the relationship between flow regime and ecosystem health in rivers where hydropower development dominate the system operation.
- Risk-based operational water management for the Incomati River Basin (**RISKOMAN**). The proposed research aims to assist water managers and stakeholders in identifying, implementing and continuously adjust policies for efficient allocation of water resources in a dynamic and uncertain hydrological environment. The focus of the project is to develop an innovative decision support policy system that integrates the physical, social and economic problem for real-time time allocation of water considering the hydrological and climatic uncertainties. This project is implemented in partnership with UNESCO-IHE, the KOBWA and the University of Kwazulu Natal for the period 2010 - 2014.

- Joint Zambezi River Basin Environmental Flows Programme (**E-Flows**), This is an initiative of the WORLD WIDE FUND FOR NATURE (WWF) in partnership with educational research institutions in Mozambique (UEM), Zambia (UNZA) and Zimbabwe (UZ) with the participation of key institutions in the management of water resources of the Zambezi basin in the case of Mozambique the HCB and ARA-Zambezi. This initiative aims to carry out scientific studies aimed at determining and implementing environmental flows in the Zambezi basin where the flow regime has been substantially altered due to construction and operation of dams for energy production. In this context the participation of the Faculty of Engineering is the development of a hydrological model to identify the consequences of various options for operation of dams. The project is divided into two phases, Phase I (2010-2012) the second stage is from 2012 to 2015.
- Armazenamento de água associado a estruturas de estradas (**ROAD PONDS**). Experience in Mozambique has shown that the road works (construction) can be used to improve access to water by communities. For example bridges and aqueducts can be designed to retain water during rainy season. The stored water can be used by local communities in the dry season, thus reducing the period with shortage or lack of water leading to communities having to travel long distances to collect water. The stored water also helps recharge the groundwater. The aim of the research was to identify the main characteristics of road works associated with water retention, constraints and opportunities for its use, identifying the legal and institutional implications of the adoption of this option for water storage for the preparation of an Implementation Manual and Guide to be used by designers. The project was divided into two phases the first dedicated to the feasibility study (2010-2011) and the second for implementation of case study in pilot areas.
- Center for Natural Resources and Development (**CNRD**). In order to achieve the MDGs universities need to join forces and act together to pull together the experience and knowledge that is scattered and build synergies for cooperation in providing capacity building needs. The Cologne University of Applied Sciences (CUAS) of Germany using funds from the German government established a network of inter-university cooperation that involves nine countries whose aim is to provide education and research in the area of natural resource management. EMU participates in this project through the Department of Civil Engineering and the Department of Geography. The main activities of the project are graduate courses at Masters enabling the exchange of teachers and the development of joint scientific research. My role was coordinator and principal investigator of the project. From 2010 to 2014.
- Principal investigator of the project "Cooperation Brazil-Mozambique for Consolidation of Masters courses in Hydraulics and Water Resources, University Eduardo Mondalane / Mozambique" that facilitates the participation of Brazilian professor in Mozambique for teaching a set of modules of the Master course. 2011 - 2013.
- "Wetlands-based livelihoods in the Limpopo basin: balancing social welfare and environmental security". Research project implemented in partnership with the University of Zimbabwe and the International Water Management Institute (2004-2008).

- Rationalization of water use in irrigated agriculture in Brazil and Mozambique considering the technological, social, economic, environmental and cultural aspects of each country. The research project started in 2006 (in its Phase I for a year, comprising exploratory visits). Phase 2 of the project began in 2008 and ended in August 2011. The project was implemented in collaboration with the Department of Environmental Engineering - Federal University of Espírito Santo in Brazil under funding from CNPq.
- “Integrated Water Resources Quality/Quantity Management in a Multi-Purpose River Basin. A Case Study in the Maputo River Basin”. Project is ongoing since 2003 is implemented in partnership with the University of Lund of Sweden. My PhD work was carried out within the implementation of the activities of this project. In the current agreement with Sweden there are on joint activities which will lead to training of masters and doctoral colleagues some of them under my supervision, the current phase ends in 2016.

### *SOME PUBLICATIONS*

1. Dinis Juízo & Peder Hjorth, 2009, Application of District Management Approach to Southern African River Basin Systems – the case of Umbeluzi, Incomati and Maputo river basins, *Water Policy*, vol 11, pp 719-730.
2. Nelson P. Matsinhe, Dins Juizo, Kenneth M. Person, 2008: Water services with private water vendors in peri-urban Maputo, *Water SA*, Volume 34 No.3, reference 2233.
3. Nelson P. Matsinhe, Dinis Juizo, Berta Macheve & Clara dos Santos, 2008, Regulation of formal and informal water service providers in peri-urban areas of Maputo, Mozambique, *Physics and Chemistry of the Earth* 33 (2008) 841–849.
4. Dinis Juízo & Rikard Lidén, 2009 “Computation of water share and reliability of water supply for key users in transboundary Umbeluzi river”, 10<sup>th</sup> WaterNet/WARFSA/GWP-SA Symposium, Entebbe, Uganda.
5. Dinis Juízo & Rikard Lidén, 2010: Modeling for transboundary water resources planning and allocation, *Hydrology Earth System Science*, Vol 4, pp 2343-2354.
6. Tilmant, W. Kinzelbach, L. Beevers, D. Juizo, 2010, Optimal Water Allocation in the Zambezi Basin, International Environmental Modelling and Software Society (iEMSs) 2010 International Congress on Environmental Modelling and Software Modelling for Environment’s Sake, Fifth Biennial Meeting, Ottawa, Canada David A. Swayne, Wanhong Yang, A. A. Voinov, A. Rizzoli, T. Filatova (Eds.).
7. J.P. Matos, T. Cohen Liechti, D. Juízo, M.M. Portela, A.J. Schleiss, 2013: Can satellite based pattern-oriented memory improve the interpolation of sparse historical rainfall records?, *Jorurnal of Hydrology*, vol 492 (201, pp3) 102–116.
8. Maria João Calejo, Dinis Juizo, Francisco Saimone e Alfredo Zunguze, 2013: Aplicação do modelo VIC na avaliação dos impactos hidrológicos das mudanças de uso de terra no Baixo Zambeze, XI SILUSBA, Maputo, Moçambique.
9. Dinis Juízo, Issufo Chitumia e Delário Sengo, 2013: Metodologia de Avaliação de Alterações de Cursos de Rios - o Caso do Rio Maputo, XI SILUSBA, Maputo, Moçambique.
10. Francisco Saimone e Dinis Juízo, 2013: Aplicação do Modelo de Curva-Número Para Estimar os Impactos da Mudança de Uso e Cobertura da Terra sobre o Escoamento Superficial, XI SILUSBA, Maputo, Moçambique.

11. Dinis Juízo, 2013: Capacity building in Mozambique for Water Resources Development, Proceedings of the AFRICA 2013 – Water Storage and Hydropower Development in Africa, Addis Ababa, Ethiopia.
12. Marianne Hilders, Jill Slinger and Dinis Juízo, 2010: The Practice of Transboundary Decision Making on the Incomati River: Elucidating Underlying Factors and Their Implications for Institutional Design, Ecology and Society Journal, Vol 15(1).
13. Mazvimavi, D., Nhapi, I., Mulwafu, W., Juízo, Kansime, F and van der Zaag, P. (Eds.) (2010) 10th WaterNet/WARFSA/GWP-SA symposium: IWRM – Environmental sustainability, climate change and livelihoods, Physics and Chemistry of the Earth, Parts A/B/C, Vol. 35(13-14), p561-848.
14. Jordi Gallego-Ayala and Dinis Juízo, 2011 Strategic implementation of integrated water resources management in Mozambique: An A'WOT analysis, Physics and Chemistry of the Earth, vol. 36, pp 1103–1111.
15. Tilmant, W. Kinzelbach, D. Juízo, L. Beevers, D. Senn and C. Casarotto, 2011, Economic valuation of benefits and costs associated with the coordinated development and management of the Zambezi river basin, Water Policy Vol 14 No 3 pp 490–508.
16. Pieter van der Zaag, Dinis Juízo, Agostinho Vilanculos, Alex Bolding, Nynke Post Uiterweer, 2011: Does the Limpopo River Basin have sufficient water for massive irrigation development in the plains of Mozambique?, Physics and Chemistry of the Earth, Volume 35, Issues 13–14, 2010, Pages 832–837.
17. Erick CM Fernandes, Chenchu Norbu, Dinis Juízo, Tashi Wangdi, Jeffrey E Richey, 2011, A Dynamic Information Framework: A Multi-Sector, Geospatial Gateway for Environmental Conservation and Adaptation to Climate Change, AGU.
18. Jordi Gallego-Ayala and Dinis Juízo, 2012: Performance evaluation of river basin organizations to implement Integrated Water Resources Management in Mozambique using a composite index, Physics and Chemistry of the Earth, vol 50-52 (2012), pp 205-216, . <http://dx.doi.org/10.1016/j.pce.2012.08.008>
19. Ronaldo Inguane e Dinis Juízo, 2011: “**Challenges of the Implementation of Decentralized Water Resources Management in Mozambique**”, 12<sup>th</sup> WaterNet/WARFSA/GWP-SA Symposium, Maputo.
20. Juízo D, Lidén R, 2005, Sharing Rivers – The Umbeluzi case, Stockholm Water Symposium at the World Water Week, presentation.
21. Dinis Juízo, Rikard Lidén & Álvaro Carmo Vaz, 2006, Remaining challenges for bi-national agreements on shared water: The Umbeluzi case; Water Policy 8 (2006), pp 231-253.
22. Bekithemba Gumbo, Dinis Juízo & Pieter van der Zaag, 2003, Information is a prerequisite for water demand management: experiences from four cities in Southern Africa; Physics and Chemistry of the Earth 28 (2003), pp 827–837.
23. Dinis Juízo, 2005, Apoveitamento de água subterrânea na presença de ferrobactérias - Caso de estudo de Pemba, Moçambique, Conference Presentation, Congresso Luso Moçambicano de Engenharia, 2005, Maputo.
24. Siteo A, Juízo D, 2005, Evaluation of the Groundwater Contribution for Maintenance of the Incomati Estuary Ecosystem, Conference Presentation, Congresso Luso Moçambicano de Engenharia, 2005 Maputo.

25. Lidén R, Juízo D, 2005, Sharing the bi-lateral Umbeluzi River, Conference Presentation at the South Africa National Chapter of the International Association of Hydrological Scientists. 2005 Johannesburg.
26. Heath RG, Dias L and Juízo D., 2006, Environmental flows study for the Massingir Dam Southern Africa Society of Aquatic Scientist, Conference Presentation in Maputo Rovuma Hotel.
27. Gustafsson A, Johansson M, Juízo D and Lidén R, 2006, An investigation of nutrient levels along the Mbuluzi River – Background for sustainable water resources management, Southern Africa Society of Aquatic Scientist, Conference Presentation in Maputo Rovuma Hotel.