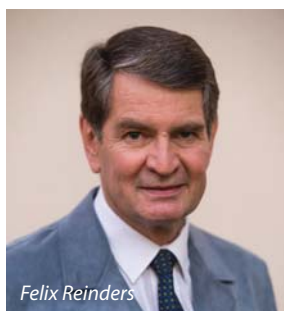


PERSONALITY

Proudly-South African Felix Reinders to head up global irrigation and drainage commission

Felix Reinders of the Agricultural Research Council (ARC) is the first South African to be elected President of the International Commission on Irrigation and Drainage (ICID). This honour was bestowed upon Reinders at the 23rd ICID Congress in Mexico in October 2017. Water Wheel spoke to him about his appointment and the vision of this prestigious global body for a water secure world. Article by Kim Trollip.



Felix Reinders

A research manager at the ARC and a professional engineer with 36 years' experience in the field of agriculture and civil engineering, Reinders specialises in water resources management and irrigation engineering, including research, design, training and mentoring.

Reinders has authored many scientific and semi-scientific papers and articles in the field of irrigation and served on various Water Research Commission (WRC) projects. He is also a visiting lecturer at the largest international graduate water education facility in the world, IHE Delft Institute for Water Education (formerly UNESCO-IHE Institute for Water Education,) where he imparts knowledge on design and operation of drip and sprinkle irrigation systems.

Responding to his election as 24th President of ICID, Reinders said, "I am humbled, as it is a huge honour... and responsibility. This a first for the ARC, for the South African National Committee on Irrigation and Drainage (SANCID), for South Africa and for the Southern African Development Community in the 67-year history of ICID."

Reinders was actively involved in the establishment of SANCID as a member of ICID in 1993. He served as SANCID Vice Chairman and as Chairman on more than one occasion over a period of 20 years. International recognition followed when Reinders was elected Vice President of ICID for the period 2005-2008. He successfully chaired and organised the 51st IEC Meeting and 6th International Micro Irrigation in South Africa conference in October 2000. Under his chairmanship for the period

2008-2011, SANCID was adjudicated as the best performing National Committee of ICID.

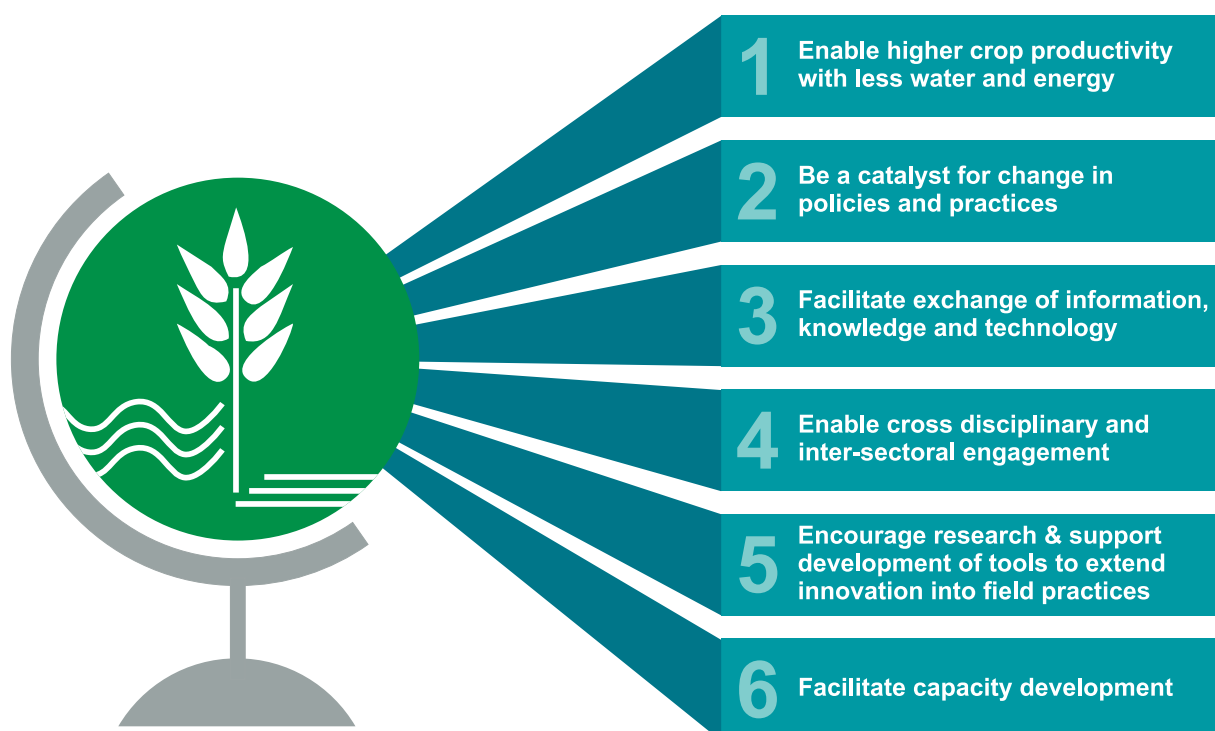
"It is actually remarkable that South Africa only became a member of ICID in 1993, and is therefore celebrating its 24th anniversary as a member of ICID. The ARC, Department of Agriculture Forestry and Fisheries, Department of Water and Sanitation, together with the WRC, founded SANCID with the South African Irrigation Institute as an honorary founder member," adds Reinders.

The task at hand: A water secure world

ICID is currently launching its **Vision 2030 Road Map**. The subtitle of the document is: **A water secure world free of poverty and hunger**. This is a tall order and as President of the Commission it will be Reinders' responsibility to start rolling out this vision during his term in office. Best practice advises that leaders can't, and shouldn't work in isolation. Hence, in true leadership style, Reinders' approach is one of teamwork.

"For me realising this vision must start with working together with the national committees and working groups of ICID in realising **Vision 2030** towards sustainable agriculture water management through inter-disciplinary approaches to economically viable, socially acceptable and environmentally sound irrigation, drainage and flood management. In order to realise the vision, ICID has set clear organisational goals for the network that will enable national committees to re-confirm or re-orient their national goals or will help establish specific goals at the national level, addressing the specific national needs. Fortunately, in the build up towards the **Vision 2030 Road Map**, interaction with the national committees has already ensured extensive involvement and together we will build on that to realise the vision."

GOALS



The goals in the Action Plan of ICID Vision 2030.

The six goals in the Action Plan can briefly be discussed as follows:

GOAL A: Enable Higher Crop Productivity with Less Water and Energy

ICID network would advocate with the national governments and funding agencies to make strategic choices that favour higher crop production using less energy and water thereby contributing to sustainable agricultural water management (AWM) and net increase in farmers' income and profits.

GOAL B: Be a Catalyst for Change in Policies and Practices

ICID, through its working groups will provide guidance to water policy analysts at the national level to facilitate analysis of tradeoffs to maintain the economic efficiency of agricultural production and minimize adverse environmental impacts by developing and sharing experiences, using latest tools and modelling principles for simulating development scenarios, and generating knowledge, which can serve as catalyst for policy changes.

GOAL C: Facilitate Exchange of Information, Knowledge and Technology

Current irrigation systems and services are generally characterised by low water use efficiencies and irrigated agriculture is under considerable pressure to adopt practices and methods to increase efficiency of water use. New irrigation technologies have the potential to increase

productivity and in some cases may result in increased water availability for alternative uses (e.g. environmental flows to maintain ecosystem services) or both. ICID will work towards exchange of information, knowledge, management practices and use of new technologies for sustainable AWM.

GOAL D: Enable Cross-Disciplinary and Inter-Sectoral Engagement

ICID network would make available the required information about irrigation, drainage, drought and flood management to all the relevant stakeholders in the language suitable for their use. Where required, platform for inter-disciplinary networking would be facilitated for dialogues among various groups. NCs at the national level and the central office, by facilitating active participation of experts and stakeholders from the relevant sectors and fields of expertise, will play key roles in achieving this goal.

GOAL E: Encourage Research and Support Development of Tools to Extend Innovation into Field Practices

ICID network would provide technical support on the latest innovations available in the agriculture water domain to non-governmental entities that are engaged in providing various kinds of services in the rural areas and are increasingly occupying the vacant space to provide

excellent opportunities for covering the last mile and help in the outreach into rural communities.

GOAL F: Facilitate Capacity Development

ICID would work towards continuous capacity development of professionals including young professionals through

training programmes, promoting irrigation and drainage as relevant academic topics in education and training within the context of integrated water resources management, and will try to foster closer connections with various stakeholders including farmers through NCs.

Strengthening the ICID network will be key

Strengthening of the ICID network, partnerships and enhanced visibility for ICID will be crucial in tackling the complex challenge presented by the water, poverty, inequality and climate change nexus. In order to realise the vision of a water secure world that is free of poverty and hunger, one of the first steps Reinders is taking as the new ICID President is to mobilise the Commission's numerous partners and inform them of the critical link between agricultural water management and enhanced food production.

"ICID's partners around the globe include a number of stakeholders. The national committees represent various stakeholders engaged in different facets of agricultural water management in their respective countries. Farmers are the end- and most important user of the knowledge that the network provides through its national committees, and as such, they constitute the key stakeholders. We will also target irrigation and drainage professionals, as they operate in the large public and private sectors and play a crucial role in various aspects of agricultural water management."

Reinders believes that policy-makers have the responsibility to ensure provision of the basic necessities to citizens within the framework of given natural, financial, and human resources in an institutional setting (legislation, organisations, and regulations). The irrigation and drainage industry — that includes public sector agencies, private consultancy companies, individual consultants, contractors, manufacturers, and service providers — plays an important role in the transfer of technology in today's global marketplace.

Academia, research and the extension workers coalesce into a multi-disciplinary research team that plays a critical role in understanding the complexity of issues in agricultural water management.

Finally, society at large, being the ultimate consumer of agricultural produce and as a competing water consumer in various forms, is impacted by the way the network serves farmers to produce more food and fibre with limited water resources and without adversely impacting the environment.

South-South cooperation for capacity development in irrigation management

ICID emphasises South-South cooperation for capacity development in the field of irrigation management. It also has a *Position Paper on the Green Revolution in Africa* and an emphasis on drought management. These are issues we in Africa

work on every day. By driving these agendas in ICID, developing countries can benefit.

Reinders agrees. "As 24th President of ICID, I believe we as South Africa are bringing a vast amount of knowledge to the table. The Green Revolution was the result of a sequence of scientific breakthroughs and development activities that successfully fought hunger by increasing food production. The beginnings of the Green Revolution are often attributed to Norman Borlaug, an American scientist interested in agriculture. In the 1940s, he began conducting research in Mexico and developed new disease resistance high-yield varieties of wheat. By combining Borlaug's wheat varieties with new mechanised agricultural and irrigation technologies, Mexico was able to produce more wheat than was needed by its own citizens, leading to its becoming an exporter of wheat by the 1960s. Prior to the use of these varieties, the country was importing almost half of its wheat supply. Due to the success of the Green Revolution in Mexico, its technologies spread worldwide in the 1950s and 1960s.

"In a world that faces new challenges and is more sensitive to the sustainability concerns, it is important that a framework for the 'Second Green Revolution' which aligns itself with sustainable development principles is clearly articulated and fully comprehended to enable all stakeholders to contribute towards the desired objectives in a synergetic collaboration. It has to cover the regions that got a miss in the first edition, for example the African continent was unable to reap the benefits of the first Green Revolution. Similarly within countries in Asia, for example India, the east and north east states were not privileged enough to benefit from the first Green Revolution.

Continues Reinders: "We believe that through the efforts of our national committees in Africa and support from other national committees of ICID network, we will be able to facilitate the second Green Revolution as envisaged by leaders in Africa, including former UN Secretary General Kofi Annan."

Who is Felix Reinders the professional and the person?

Professionally, Reinders completed his engineering studies in 1979 at the University of Pretoria and started his work at the then Department of Agriculture's Directorate of Irrigation Engineering. Working now for the ARC's Institute for Agricultural Engineering, he has a passion for agricultural engineering. "As a professional engineer, I play a pivotal role in the co-ordination of irrigation research, development, testing, design and training." He serves on several International committees and is also previous



President of the South African Institute of Agricultural Engineers and the South African Irrigation Institute.

Reinders' primary achievements include research on an infiltrometer to size centre pivots, which received international recognition. He is the main author of the **Water Conservation and Demand Strategy for Agriculture** as an outflow of the 1998 National Water Act of South Africa. He developed and implemented a mobile irrigation laboratory to determine the performance of irrigation systems in the field.

Like any good researcher, Reinders has authored many scientific papers, chapters in books and articles on irrigated agriculture. He has been involved in organising various international and national symposiums and congresses. He is passionate about education and has trained students on an international (IHE Delft Institute for Water Education) and national basis (universities), successfully mentoring young engineers and technicians to enter the engineering market. He serves on local international committees and has presented various scientific irrigation engineering papers at congresses and symposiums.

Reinders developed a new water use efficiency framework for South Africa, he developed two manuals on drip irrigation (designers- and farmers' manual), and he formulated and compiled the national drainage design manual for South Africa.

Every professional needs to find balance in their busy schedule and Felix Reinders and his wife, Rika, are passionate gardeners. "We love to grow our own vegetables. We also have a selection of orchids and we built ourselves a net house with automated micro and drip irrigation. Further, we love to visit the Kruger National Park on an annual basis because for us, it is South Africa's most exciting destination. Steeped in legend and history, the iconic Kruger National Park in South Africa is there for us to explore its vast landscapes and spectacular African wildlife. Over years, we have created timeless memories with our five children where we spent quality time and during the evening enjoyed the time together around the campfire. When our children, with our grandchildren (the ninth is to be born in the New Year) visit us, we also make time to just enjoy our beautiful country."

"Strengthening of the ICID network, partnerships and enhanced visibility for ICID will be crucial in tackling the complex challenge presented by the water, poverty, inequality and climate change nexus."