

Organisations and collaborations

An effective irrigation knowledge network in Africa

Improving the effectiveness of irrigation schemes is not only a South African objective, but something that many countries on the continent are striving for. Arguably one of the most active networks of its kind in Africa, the Southern African Regional Irrigation Association (SARIA) has created an effective knowledge sharing mechanism for its members.

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Loskop Dam

SARIA was created under the auspices of the International Commission on Irrigation and Drainage (ICID). At present, the organisation comprises members from 15 SADC countries, with the Water Research Commission (WRC) in South Africa acting as the Secretariat. SARIA's vision is to strengthen research, communication, training and development of appropriate science and technologies in irrigation and drainage for gender balanced poverty eradication and economic development. This must be done to improve the livelihoods of the inhabitants of southern Africa.

Says SARIA member, Lisema Lekhooana, from Lesotho: "Water plays a vital role in the production of food. In Africa, food security is an escalating challenge, made more difficult by the often unfavourable climate conditions experienced on the continent, including floods and drought. The SARIA initiative has contributed positively to the SADC region, especially towards the efficient management of water resources for food."

Earlier this year, SARIA organised a workshop and steering committee meeting in Pretoria. This event was well attended, with attendees representing

13 of the 15 member countries. The workshop was jointly funded by ICID and the Department of Agriculture, Forestry and Fisheries. The main objective of the workshop was to facilitate the exchange of ideas and practices between researchers, advisors and government officials from southern Africa.

On the first day, participants attended a training workshop on rainwater harvesting and conservation of crop lands. The tone was set by ICID Vice President Honoraire, Dr Gerhard Backeberg, whereafter Jonathan Denison and Heidi Smulders from Umhlaba

Consulting presented their work on the topic, which was undertaken as part of a WRC project.

The Umhlaba Consulting Group has developed a comprehensive water harvesting and conservation learning materials package targeting learners and facilitators at training organisations and resource-poor gardeners and farmers (**WRC Report No TT 492/11 to TT 496/11**). As rainwater harvesting is a major challenge for all SARIA members, it was agreed that the training resource material will be used as a basis for organising further courses in the respective member countries.

“The training materials on water harvesting will definitely be used by myself and colleagues here at the Botswana College of Agriculture,” noted SARIA member, Anne Clift-Hill. “I was not aware that there were several traditional methods in use in South Africa, including spate irrigation, which I was already familiar with from Sudan. Given that Botswana is currently in the grips of one of its worst ever droughts, the subject for this year’s capacity building was very relevant.”

Added SARIA member, Winston Sataya from Malawi: “The SARIA workshop was really an eye opener which imparted practical knowledge on how to design and implement environmentally responsible water harvesting and

conservation systems on farms. Most countries in the region are experiencing unreliable rainfall for crop production... It is therefore vital that our farmers should be knowledgeable on how they can make use of available water resources through water harvesting and conservation.”

On the second day, members visited South Africa’s second largest irrigations scheme at Loskop. Loskop irrigation scheme is managed by a water user association. Each section of the scheme has a section manager that monitors and manages the water distribution. The current scheme comprises 667 properties with an average scheduling of 25.7 ha each. The main products being cultivated are wheat, vegetables, tobacco, peanuts, cotton and citrus.

Loskop Irrigation Operations Manager, Nico Jurdo, explained to SARIA members how the scheme is being managed. The main water resource of the scheme is the Loskop Dam (originally constructed in the 1938 and raised in 1979). The mass concrete dam has a wall height of 54 m and a net storage capacity of 348 million m³, making it one of the largest dams in South Africa.

Among others, SARIA delegates learnt how water deliveries are timed, the mechanisms to adjust schedules to each member of the irrigation scheme and procedures for paying operations

and maintenance of the canal system. Loskop Dam also supplies water to other stakeholders, including the Olifants River Irrigation Board, Hereford Irrigation Board and two local municipalities, namely Groblersdal and Marble Hall.

SARIA member, Dr Musa Dlamini, shared his experience: “The field visit to Loskop Dam has added value to our knowledge and experience. We learned that water as a vital resource needs to be managed with great care and sharing it with other community members improves its diversification and use.”

On the third day, a steering committee meeting was held. All countries present were given opportunities to report on activities of national committees and irrigation issues. ICID Vice President Honoraire, Felix Reinders, also gave an excellent presentation on the activities of SARIA since its founding 15 years ago. Members also used this opportunity to map the way forward for SARIA for the next three years. Some of the issues which received attention included how to keep the organisation viable, and the inclusion of aquaculture and fisheries in SARIA activities.

SARIA’s next training workshop and steering committee meeting will be held in Malawi in 2016. The theme for this event will be rural freshwater aquaculture.



The Members of SARIA during the workshop in Pretoria.



SARIA members viewing the main canals at Loskop Irrigation Scheme.