Virtual Irrigation Academy (VIA) Project

Background
The Virtual Irrigation Academy (VAI) project was developed in 2015 in response to major new irrigation investments that are being rolled out in Malawi and Tanzania. In the past, irrigation development projects in sub-Saharan Africa proved more expensive and had lower economic rates of return than those in Asia and South America. Many lessons have been learned concerning design and construction of irrigation infrastructure, but little regarding water management.

Key VIA partners
The four-year project was a brainchild of the Commonwealth Scientific and Industrial Research Organization (CSIRO) in partnership with the Australian Centre for International Agricultural Research (ACIAR). In Africa, the project was undertaken in Malawi and Tanzania. In Malawi, the Department of Agricultural Research Services (DARS) in collaboration with the Department of Irrigation (DoI) were the lead implementers. In Tanzania, it was implemented by the National Irrigation Commission in collaboration with Arusha Technical College.

The Association for Strengthening Agricultural Research in Eastern and Central Africa (ASARECA), the body mandated to coordinate sub-regional research in the sub-region coordinated and provided technical backstopping to the project in the two countries.

Aim and objectives
The aim of this project was to improve the profitability of irrigation farming by better water, salt and fertilizer management. The objectives were:

- To deploy farmer-friendly monitoring tools that measure soil water, nutrients, salt and depth to water table;
- To develop a “Virtual Irrigation Academy” (VIA) through on-line visualisation of data from the monitoring tools linked to a virtual discussion, learning and teaching space with skilled facilitators; To determine how the VIA promotes the social and institutional learning that
improves irrigated farm productivity;
- To develop partnerships for the post project continuation of the VIA and monitoring tools.
- Ensure the Virtual Irrigation Academy (VIA) combines new irrigation monitoring tools with an on-line communication and learning system.

Roles of the Virtual Irrigation academy

- Physical data capture from the schemes on a daily basis, so that project and country leaders can understand the situation and mentor extension workers.
- Capture of the dialogue between farmers, extension workers and scientists for analysis of how learning occurs;
- Training resources such as: videos on equipment installation and maintenance, interpretation of data and documenting success stories which can be shared with other farmers in the project countries.

How the tools work

The monitoring tools were designed to fit the mental model of farmers and to give an output that is linked to action. For example, information on soil water suction, nitrate concentration and salinity levels are illustrated by colours that represent action thresholds, and not as numbers with complicated units, hence promoting inclusiveness in the use of the monitoring tool across the gender categories especially the women and girls who often have low levels of literacy.

The anticipated longer term outcomes

- Increased productivity and profitability through better management of water and nutrients on smallholder irrigation farms
- Sustainable water and salinity management; and Improved economic returns from investments in irrigation infrastructure.

Source URL: https://www.asareca.org/projects/via-project