

## **Vaal water user efficiency to be boosted in innovative new water saving project**

In a new irrigation water use efficiency project in the Welkom area - covering the 12 325ha under irrigation in the Sand-Vet Water Users Association's area of operation – Sasol and SABI (South African Irrigation Institute) have teamed up to boost efficient irrigation water use in the Vaal River catchment, in a move heralded as both “innovative and, importantly, measurable” by agricultural and water user stakeholders. The project aims to develop and promote water use efficiency practices at farm level in the area.

The Sasol-SABI Sand-Vet Irrigation Project – where wheat, maize and potatoes comprise 78% of the crops under irrigation – is seen as highly pioneering as an agricultural water efficiency initiative. The Sand-Vet area has a total scheduled quota of 106,15 million cubic meters of water per year on full quota , with over 200 farmers in the area. Further crops grown are pecan nuts, peanuts and sunflowers.

Sasol, as a prominent water user in the Vaal district, has in recent years initiated various awareness campaigns as part of its Sasol Water Sense initiative to alleviate future water shortages in the Vaal River system. Recently Sasol's Water Sense won the Mail & Guardian's Greening the Future Awards in the Water Management category for its work in water conservation.

Sasol New Energy's Senior Manager: Sustainable Water Bob Kleynjan says: “The project builds on work we have been doing for around two years in the agricultural community with SABI. Approximately 60% of fresh water is utilised for irrigation purposes, and thus a focus on irrigation farmers is important in any approach to water conservation. In this project we are taking a more focused approach by working closely with a select group of irrigation farmers for a longer period of time in order to quantify water use and savings as a result of certain locally relevant interventions. The results are to be presented periodically at information days with farmers and stakeholders in the district. Communicating the results and meaning of the project to the farmers is also a vital part of the work.”

SABI's Technical Executive Officer Isobel van der Stoep reports that the new project's focused and measurable approach has already yielded its crop of first results. Notably, increasing demand for water as well as below average rainfall during the last season have been putting water resources in the Vaal River catchment under more pressure.

Elaborates van der Stoep: “The results of the first series of system evaluations that took place during June 2013, have shown that although the uniformity of water application can be improved, the application efficiency of the systems were good, in most cases better than the minimum requirement of 80%. Detailed feedback will be provided to the water users during a farmers' day in September 2013 and biannually thereafter. SABI is happy to be partnering with Sasol on this initiative, as it takes forward a programme to assist with present and future water use efficiency in the Vaal catchment area we started with Sasol two years ago. We hope it will be a success and replicated in the interests of water use efficiency in South Africa.”

The Sand-Vet WUA Project activities that are planned for implementation during the next 2 years include the following:

- Evaluation of a number of irrigation systems to determine typical application efficiencies and distribution uniformities
- Provision of irrigation scheduling advice and monitoring services to improve water management practices

- Regular feedback of project results to the stakeholders and other interested parties by means of farmers' days and popular articles

The CEO of the Sand-Vet Water Users Association (WUA) Andries Labuscagne says he is delighted by the new water savings programme that SABI and Sasol have created for his Association's water users – the users consist of over 200 irrigation farmers, two municipalities and the Sedibeng Water Board.

Says Labuscagne: "It is these kinds of proactive water use efficiency projects that is very much to be welcomed as an initiative as it is aimed directly at water use efficiency on farmer level. I believe it is a benchmark project. We have, indeed, been very keen to see a water use efficiency project of this nature that delivers value-adds to our users, the farmers.

"We are delighted that the farmers in our Sand-Vet Water Users Association will benefit from ongoing value-adds arising from this project such as analysis of weather patterns and scheduling information. We have been one of the WUA's that have been a pilot area for the Department of Water Affairs' compilation of a Water Management Plan, which is aimed at addressing water use efficiency at scheme-level and is also an excellent initiative. Now the Sasol-SABI initiative brings a water efficiency programme to on farm level, which is an excellent supplement to the already drawn Water Management Plan."

- The Sand-Vet irrigation scheme (Sand-Vet WUA) was established in the early 1960s with the construction of the Erfenis Dam in the Vet River and the Allemanskraal Dam in the Sand River, the two dams having a combined storage capacity of 381.7 million cubic meters of water. The irrigation scheme has a total scheduled area of 12 325 hectares and a total scheduled quota of 106.15 million cubic meters water per year on full quota. Water is conveyed from the two dams by means of two canal systems and some is released into the rivers. The main types of crops irrigated in the Sand-Vet Irrigation Scheme are wheat, potatoes and maize, which comprise 78% of the crops under irrigation. Pecan nuts and peanuts are on the increase in the area.
- SABI (South African Irrigation Institute) is a non-profit organization actively promoting irrigation water efficiency and water conservation knowledge, to ensure the ongoing growth of socio-economies and sustainability in environments. [www.sabi.co.za](http://www.sabi.co.za)

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