Future Scenarios of Japan and South Africa Surface Water Quality:

Under Changing Climate and Land Use

Agricultural Research Council and Shimane University

Venue: ARC-Central Office Auditorium, 1134 Park Street, Hatfield, Pretoria, South Africa

Date: 1 March 2018

PROGRAMME

08:00	Registration
08:30	Opening and overview of the project
08:50	**Mr. Isamu Yamaguchi**: Counsellor, Embassy of Japan in South Africa
09:00	Keynote Speaker: **Dr. Mike Silberbauer**: RQIS-DWS **Visual methods for sharing water quality information** Hii River observation example (9 min video)
09:45	**TEA BREAK**
10:00	***Session 1: Remote sensing and teleconnection session*** • **Prof. Hiroshi Yasuda:** Teleconnection of rainfall time series over Vaal • **Ms. Prosper Bande:** Comparison of Sentinel-2 and Landsat 8 in the estimation of water quality at Vaal Dam, South Africa • **Prof. Yuji Sakuno:** Turbidity monitoring using remote sensing technique in Vaal Dam Reservoir of South Africa • **Mr. Harold Weepener:** Land use / cover changes of the Upper Vaal catchment
12:00	**LUNCH BREAK**
13:00	Keynote talk: **Dr. Chris Dallimore**: Hydronumerics, Australia **Numerical modelling for water resources management**
13:45	***Session 2: Hydrology and WQ modelling and simulation in river system*** • **Dr. Yumi Yoshioka:** Modeling the impact of climate changes on hydrology and water quality of Hii River Basin in Japan • **Dr. Mohamed Abd Elbasit:** Modeling the impact of climate and land use changes on Upper Vaal hydrology and water quality
14:30	**BREAK**
14:45	***Session 3: Future WQ simulation for Japan and South Africa*** • **Prof. Hiroshi Yajima**: Future water quality forecast of Lake Shinji and Lake Nakaumi in Japan • **Dr. Khaled Abutaleb**: Future water quality forecast of Vaal Dam Lake in South Africa
15:30-16:00	Closing and recommendations

BACKGROUND OF THE PROJECT

Surface water bodies are the major water supply systems for Japan and South Africa's domes c, agricultural, and industrial water requirements.

Therefore, maintaining water quality in surface water bodies is of major concern in both countries. These surface water bodies are highly sensi ve to various pollutants from both point and non-point sources.

Thus, the systema c monitoring and assessment of surface water quality are cri cal for managing and improving such water resources.

A bilateral project co-funded by the Na onal Research Founda on-South Africa and the Japanese Society for the Promo on of Science has been approved in order to perform research ac vi es and establish discussion on the future scenarios of water quality in the two countries under changing climate and land use.

The major ac vi es of the research project are to exchange research visits and discuss future collabora on between the Japanese (represented by Shimane University, To ori University and Hiroshima University) and South African (represented by the ARC-Soil, Climate and Water and University of the Witwatersrand) research teams.

The research collabora on has included performing research ac vi es in monitoring water quality using remote sensing and simula on ac vi es for predic ng the changes occur on water quality due to climate and land use changes in the Vaal Dam (South Africa) and Lakes Shinji and Nakaumi (Japan).

This project is supported by JSPS and NRF under the JSPS - NRF Joint Research Programme

In collaboration with:
Tottori University, Hiroshima University and University of the Witwatersrand

Nominal support of the Embassy of Japan in South Africa

Sponsors: NRF, JSPS

Please RSVP: **Adri Laas at adril@arc.agric.za / 012 310 2518**

Technical information queries: **Mohamed Abd Elbasit at MohamedAhmedM@arc.agric.za**

Hiroshi Yajima at yajima@soc.shimane-u.ac.jp