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 domestic, 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 sensitive to various pollutants from both point and non-point sources.

Thus, the systematic monitoring and assessment of surface water quality are critical for managing and improving such water resources.

A bilateral project co-funded by the National Research Foundation-South Africa and the Japanese Society for the Promotion of Science has been approved in order to perform research activities and establish discussion on the future scenarios of water quality in the two countries under changing climate and land use.

The major activities of the research project are to exchange research visits and discuss future collaboration between the Japanese (represented by Shimane University, Tottori University and Hiroshima University) and South African (represented by the ARC-Soil, Climate and Water and University of the Witwatersrand) research teams.

The research collaboration has included performing research activities in monitoring water quality using remote sensing and simulation activities for predicting the changes occur on water quality due to climate and land use changes in the Vaal Dam (South Africa) and Lakes Shinji and Nakaomi (Japan).

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

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