



Meeting Report: SANCOLD Conference 2017

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The 2017 SANCOLD Conference was held in Centurion, South Africa from 15 to 17 November. The BDS Chair attended the various technical sessions, a workshop on dam safety issues, the Annual General Meeting, the Young Persons Forum and social events. A summary description of the event is included within this report.

1. Introduction

The annual South African National Committee on Large Dams (SANCOLD) Conference in 2017 was held in Centurion, Tshwane from 15 to 17 November 2017 in the beautiful grounds of the Royal Elephant Conference Centre. The event was attended by 219 delegates. A workshop on Dam Safety Issues formed part of the annual event, with the main discussion topic being on Approved Professional Person (APP) training and appropriate means, methods and approaches to develop systems to ensure the ongoing safety of dams in South Africa. The SANCOLD Committee invited representatives of the British Dam Society (BDS) and Ethiopia to speak at the Workshop. The author, Tracey Williamson (the BDS Chair), was pleased to accept SANCOLD's invitation to attend the workshop to represent the BDS.

2. Opening session

The conference was opened by the SANCOLD Chair, Quentin Shaw, with a tribute to Dr Chris Oosthuizen, who passed away a few days before the event. He then welcomed the delegates to the Conference and gave a presentation on the management of dams and reservoirs in South Africa. He advised that South Africa has the 8th highest number of large dams in the world and the average age of these dams is around 50 years. South Africa has a total of approximately 5000 dams with a height above 5 m (and storage less than 50 000 m³), that is considered to have a safety risk. He gave two clear messages; that South Africa's dams are generally very-well engineered, but that many things can go wrong and we need to keep up standards. He went on to say: consequently, it is particularly important that the dam community of South Africa assemble regularly, to share experiences, concerns, knowledge and development and to make contributions to the sustainability of water storages and resources.

The Keynote Speaker, Trevor Balzer, Deputy Director General of the Department of Water and Sanitation (DWS) followed, giving insights into DWS' master-planning for South Africa's water resources and water infrastructure. He talked about how water security is one of the biggest issues and challenges

facing South Africa and the world in this century, and how it presents a profound challenge to South Africa's social wellbeing and economic growth. He said that South Africa's water scarcity could get rapidly worse as supply contracts and demand escalates due to growth, urbanisation, unsustainable use, degradation of wetlands, water losses and a decrease in rainfall due to climate change. He advised that the purpose of the National Water and Sanitation Master Plan is to provide an overall perspective of the situation in the water and sanitation sector and a consolidated plan of actions, to improve the current situation to meet the desired future state of the sector, defined by Government's vision, goals and targets until 2030.

3. Technical sessions

The general theme of the SANCOLD Conference 2017 was 'management of dams and reservoirs in southern Africa'. Forty-one papers were presented over the 3 days. Twenty-two of these papers were prepared and presented by a 'Young Person (YP)'. A 'Young Engineer' is defined by ICOLD as a person below the age of 40 years. Since ICOLD Young Engineers include scientists, technicians and technologists and is an all-embracing term for persons involved in dam engineering, SANCOLD uses the term YP and they allow membership of the YP Forum up until 40 years of age, but representatives and prizes are only for those under 35. This allows some support in leadership transfer to the younger contingent.

The sessions covered a diversity of topics including

- New developments in dam engineering
- Managing ageing infrastructure
- Environmental and social issues
- Monitoring systems
- Engineering capacity
- Drought and flood management
- Operation, maintenance & refurbishment of dams
- Tailings & water quality dams
- Dams and energy

4. Annual General Meeting

The AGM was held at the end of the first day's sessions. Quentin Shaw gave an overview of SANCOLD activities in 2017. The international objectives in 2017 were

- Meaningful participation in ICOLD activities.
- Participate in the ICOLD Annual Meeting in 2017.
- Greater involvement in the region and African Regional Club.
- Strengthen the functioning of the SANCOLD working groups, which relate to representation on ICOLD Committees.

The local objectives in 2017 were

- Attract additional corporate and individual members.
- Strengthen relationship with DWS Management and Ministry.
- Advertise a new scholarship for 2017.
- Preparations for the development of a guideline on floods.
- Preparations for the development of a guideline on risk analysis.
- Development of a guideline for the application of geofabrics in embankment dams.
- Preparations for the development of a publication on Your Dam, which will focus on the operation and maintenance of small dams and their owners.
- Preparation of a publication on Ecological Water Reserve.
- Preparation of a publication on 'Your Tailings Dam'.
- Preparation of a Guideline on Blasting Practices.
- Improvement in the dissemination of SANCOLD & ICOLD publications.
- Continued interaction with members particularly via the regular SANCOLD News & the website.
- Appoint a new Webmaster, update the website, keep it current and promote the sale of advertisement on the website.
- Targeted marketing of SANCOLD.
- Promotion of the SANCOLD Young Engineer's Forum.
- Identify and prepare for SANCOLD 2017 Annual Event.
- Organise short half-day workshops and/or courses.
- Implement accounting software for improved financial matters.

Quentin advised that membership had increased to 220 individual members and 53 corporate members. Other matters were presented including financial matters and constitutional changes. In conclusion, he stated that 2017 had been a very active one for SANCOLD and they estimated that they had reached over 90% of their set targets.

The AGM was followed by the YP Forum and social event, where the Acting YP Chair, Jaretha Lombaard, presented on activities to date and plans for the future of the YPs. It was

very good to hear the enthusiastic contributions and ideas from many of the YPs at the meeting.

5. Dam safety issues workshop

The author was honoured to be invited to attend the workshop on APP development. The workshop took place at the start of the second day. It was chaired by the President of Ethiopia's National Committee on Large Dams (EtCOLD), Michael Abebe.

Quentin Shaw opened the session, stating the key issue under discussion to be the most appropriate means to ensure the sustainability of a dam safety system reliant on engineers with extensive experience in the design and construction of dams in an era of little, or no new dam development. Then Michael Abebe followed, sharing his experiences on the Eastern Nile Dam Safety Programme, which has created a strong partnership between the Government and the owners. They have established a National Dam Safety Panel of experts, with the objective to advise the Government on dam safety standards.

The SANCOLD Vice-Chair, Louis Hattingh, presented on his experiences of dam failures. The author followed with a presentation on the legislation and Panel Engineer system in the UK.

A debate followed with open floor discussions on the following topics

- The need and role of the APP and/or All Reservoir Panel Engineer.
- The requirements for experience.
- Replacing experience with training and coursework.
- Modification of the APP system on the basis of British, or other systems, to qualify grades of inspectors, safety reviewers, and so on.
- Approaches for training programmes, mentorship and APP development.
- Responsibilities of the existing APPs.
- The development of training and mentorship systems.
- The role of SANCOLD in changing the system.
- The role of SANCOLD in APP development and training.
- The involvement of ECSA.
- Necessary legislation changes.
- Funding for the necessary changes, training, mentorship, and so on.

It was a lively debate, with many people contributing their thoughts, ideas and concerns. It was deemed a success and an excellent start to a debate that should be continued.

The author plans to write a more detailed paper on the South African APP system and compare this to the UK's Panel Engineer system with the aim to consider what we can

learn from each of the countries and reflect on what may be considered best practice, with the ultimate goal of improving dam safety.

The conference dinner was held on the evening of the second day, starting with drinks on the beautiful lawns of the Royal Elephant hotel. Despite an unseasonable cold wind, the setting and evening were delightful.

6. Summary

The author noted many commonalities between South Africa's and the UK's dam safety concerns and challenges during the

conference. It was agreed that the two countries should continue to collaborate and share knowledge, and maintain close links between the two nation's committees, with the overall goal to improve dam safety.

Acknowledgement

The author would like to thank the SANCOLD family for their warm hospitality and friendship, and their willingness and openness to share information and address the sometimes sensitive and challenging issues that we face. The BDS look forward to building on the partnership formed.

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