



SANCOLD

SANCOLD News

Newsletter of the South African National Committee on Large Dams

www.sancold.org.za

November 2013

SANCOLD News: New Format

SANCOLD is entering a new phase with the organisation of ICOLD 2016 and the production of a range of new Guidelines. It is therefore apt to have a new face to our Newsletter! Comments welcomed!

dam technology for water and energy in Southern Africa and welcomed all of the attendees. In the welcoming address he mentioned the large increase we have experienced of SANCOLD membership, various activities during the year where SANCOLD played a prominent role such as Africa 2013 and ICOLD 2013. Some 47 papers were prepared by 98 authors.

SANCOLD Conference 2013

The SANCOLD Conference 2013 was held at Thaba’Nchu from 5 to 7 November and was attended by just over 230 delegates which was a record attendance. A number of wives also attended and enjoyed the beautiful surroundings. We were pleased to have attendees from Kenya, Lesotho, Namibia, and Swaziland.



SANCOLD Conference 2013

Seated in front (L to R) Danie Badenhorst, Keynote Speaker George Annandale and SANCOLD Scholarship holder Guy Robertson who assisted with the technical arrangements



Chairperson Danie Badenhorst delivering the welcoming address

Danie concluded by stating that:

“the number of attendees and the interesting contributions show that there is a need for SANCOLD and a need for a Conference like we have today. Here we can share dam engineering experiences and knowledge”.

SANCOLD Chairperson Danie Badenhorst opened the Conference with a theme of *Advances in*

We were very privileged to have Dr George Annandale from the USA as our Keynote Speaker. George is well-known in South Africa

having lived and worked here for many years. George gave a most thought provoking address on *Sustainable Water Supply and Climate Change*. The detailed information can be found in his book on the same topic which can be bought via Amazon. Mention of the book was made in the last edition of SANCOLD News.



Dr George Annandale delivering the keynote address

We were fortunate in having four Exhibitors who had their stands in the lounge which was used during the tea breaks.



Carpi's Exhibition Stand.

Marco Bacchelli of Carpi also gave an excellent paper on Geomembranes for long-term seepage control in dams

Each session was sponsored by a different organisation and they gave a brief presentation on their organisation which was found to be most enlightening.

The Conference ended on the Wednesday afternoon and the site visit to the Metolong Dam in Lesotho followed on the Thursday (see separate report).

SANCOLD Annual Meeting 2013

The SANCOLD Annual Meeting was held after the Conference sessions on the Wednesday afternoon. It was attended by 62 persons. Minutes of the meeting will be posted onto the SANCOLD website in due course. The Chairperson highlighted the SANCOLD Annual Report 2013 which will be forwarded to SANCOLD Members with this Newsletter and also placed on the website. The financial situation of SANCOLD was presented by Treasurer Peter Pyke.

The highlight of the meeting was the presentation of the SANCOLD Award to two prominent dam engineers. The SANCOLD Management Committee instituted an award system in 2011 to recognise prominent persons in the dam industry who have made major contributions in this regard. The Management Committee decided that an Award should:

- Acknowledge exceptional contributions to SANCOLD;
- and/or exceptional contributions to the dam industry in South Africa.

The first award went to **Dr Chris Oosthuizen**. The citation for the award was read out and is given below.

Dr Chris Oosthuizen has been working for the Department of Water Affairs since 1974, and currently is a Specialist Engineer in Dam Safety Surveillance and Rehabilitation. Chris has been the Approved Professional Person for more than 150 DWA dams since 1986 and has been appointed as the Dam Safety Expert for two arch dams in Switzerland since 2000. Chris is also involved in the monitoring of the dams of the Lesotho Highlands Water Project. The topic of Chris' doctoral thesis was on risk analysis and he has applied and developed this methodology on the safety of dams. He presently serves on Advisory Committees of UCT and UNISA and was an Associate Professor at the Tshwane University of Technology. Chris is a member of the ECSA Committee on Dams and a member of the ICOLD Technical Committee on Dam Surveillance that produced ICOLD Bulletins 138 and 158 on that topic. Since 2012 he has been Chairman of that Committee. Chris has been very active in SANCOLD and has been a presenter of papers and lectures at a number of SANCOLD

Conferences and Courses. He served for a several years on the SANCOLD Management Committee and was SANCOLD Secretary for a number of years. He assisted with the SANCOLD restructuring and was a prime mover in initiating the matter. Chris is therefore an engineer in the dam sector who has received wide recognition in South Africa, the region and internationally and is thus a worthy recipient of the SANCOLD 2013 Award.



Chris Oosthuizen receiving the Award from SANCOLD Chairperson Danie Badenhorst

Our second recipient is **Willie Croucamp** who joined the Department of Water Affairs in December 1966. He holds Bachelors and Honours degrees in Civil Engineering from the University of Pretoria. In 1971 he was sent on a one year in-service training at the United States Bureau of Reclamation to study all aspects of the design of arch dams. During his 44 years of service with the Department he acquired and was recognized for expertise in the development and management of large water resource infrastructure. Following the USA visit he concentrated on the establishment of a unit to do advanced structural analysis of arch dams.

The engineering profession in South Africa in the late 1970's drew attention to the need for a programme to regulate the safety of dams. Willie was tasked to drive this process. Following a local symposium and a study tour to the USA and Europe, appropriate dam safety legislation was prepared and promulgated. The Dam Safety Office was established in 1985 to implement the legislation. Willie was the Head of the Dam Safety Office from inception to 2003. He promoted the development of clear guidelines for use by Approved Professional Engineers

(Persons) in the execution of tasks defined in the legislation. He also officiated as Assessor for the Judicial Inquiry on the deaths following the failure of two tailings dams in the late 1990's.

Since 1991 Willie has been involved in the oversight over the implementation of large water resources infrastructure projects. For instance for Phase 1 of the Lesotho Highlands Water Project he served as leader of the RSA Delegation to the Lesotho Highlands Water Commission for seven years and was intimately involved in decision-making relating to aspects such as engineering, environmental and social impacts and mitigation, funding models, stakeholder relations, dispute resolution and project management. Following the release of the report by the World Commission on Dams in 2000 he initiated a national dialogue on the guidelines included in the report. He participated in the preparation of a report to assess the extent to which the RSA legislation conforms to the WCD guidelines.

Willie has been an active member of SANCOLD and ICOLD. He served on the SANCOLD Management Committee for a number of years and was the Team Leader for the Study Tours for the ICOLD Congress held in Durban in 1994. He served as member of the International Commission on Large Dams (ICOLD) Technical Committees that prepared a Bulletin on Seismicity and Dam Design and another one on Cost of Dams. Willie Croucamp is a recognised engineer locally, regionally and internationally and it is apt to hand over this SANCOLD Award so close to Lesotho!



Willie Croucamp receiving his Award with his wife Annette

SANCOLD Young Engineers' Forum

The SANCOLD YEF meeting was held after the SANCOLD Annual Meeting and was well attended. Ivor Segers reported on progress during the year and the successful ICOLD YEF meeting in Seattle. A new SANCOLD YEF Chairperson was elected by a show of hands. The new Chairperson is **Motebele Moshodi** of the Department of Water Affairs. Congratulations Mo! The Young Engineers had a pleasant braai together that evening.

SANCOLD Constitutional Change

The SANCOLD Constitution was changed on 4 November 2013 by the SANCOLD Management Committee to make provision for the current SANCOLD YEF Chairperson to serve on the Management Committee. The revised Constitution will be placed on the website.



Ivor Segers conducting the YEF Meeting



SANCOLD YEF Chairperson Motebele Moshodi

SANCOLD has been encouraging the participation of Young Engineers in the organisation and as an incentive, a prize (Apple Ipad mini) was given to the best paper prepared and presented by a Young Engineer. The

recipient was **Mfundo Vezi** of the Department of Civil Engineering, University of Cape Town for his paper on *Dynamic modelling of arch dams in the ambient state*. The prize was handed over to Mfundo during the Conference Dinner.



Mfundo Vezi receiving the prize

Site visit to the Metolong Dam

The Metolong Dam is in Lesotho, is some 50 km East of Maseru. The purpose of the dam is to provide a water supply to Maseru and surrounding rural areas. The dam is being developed by the Metolong Authority who is the client. Arcus Gibb-Consolidated Consultants Joint Venture was appointed for the design and construction supervision. The construction contract was awarded to Sinohydro Corporation Ltd of China. Some 190 participants took part in the tour to the dam.

Several papers were delivered on the Metolong Dam during the Conference so the 190 participants on the Study Tour on the Thursday were well briefed. The RCC gravity Dam will be 83 m high, crest length of 280 m and a concrete volume of 315 000 m³. The reservoir storage capacity is 64 million m³. The spillway must accommodate a 2 021 m³/s Safety Evaluation Flood. The dam should be substantially complete by the end of 2014.



Participants at the well-prepared display



General view of the Metolong Dam looking downstream



Detail of rollcrete placing



Participants testing a rollcrete mix



Tour participants had to repair the road edge to enable the busses to pass by a stalled cement tanker!

ICOLD 2016 and SANCOLD

The SANCOLD Management Committee met at Thaba’Nchu on 4 November and devoted most of the meeting to the organisation of ICOLD 2016. The following main topics were discussed:

- Formation of the Local Organising Committee;
- Programme for ICOLD 2016;
- Selection process for a Professional Conference Organiser (PCO).

More detail will be provided on the SANCOLD website. Once a PCO has been appointed, a dedicated ICOLD2016 website will be developed for the Event. The broad programme for the week is given below.

| ICOLD 2016 Programme | |
|----------------------|--|
| Mon: | Exhibition ICOLD Young Engineers’ Forum |
| Tues: | Exhibition Technical Committee Workshops African Regional Club |
| Wed: | Symposium Exhibition |
| Thurs: | Technical Tours Workshops |
| Fri: | General Assembly Workshops |

The Event is the 84th ICOLD Annual Meeting, known shortly as ICOLD 2016. It is to be held at Sandton, Johannesburg from 15 to 20 May 2016. Pre- and Post-meeting Study Tours with a maximum duration of a week are also arranged to dams in South Africa and neighbouring countries. We expect about 1 000 delegates from the 96 ICOLD Countries.

The South African Cabinet approved the hosting of the event and that grant funding be provided via the Department of Water Affairs

During the closing session of the SANCOLD Conference, SANCOLD Secretary Paul Roberts gave an overview of the intended arrangements for ICOLD 2016 and highlighted the opportunities for SANCOLD members which are many and varied:

- International and regional contact;
- Technical Exhibition of 40-50 Stands;

- Symposium with a theme of “*Appropriate technology of dams in developing countries*”. The Call for Papers will be around March 2015;
- Technical Workshops which will showcase local and regional expertise;
- African Regional Club: International contacts;
- Technical Committees- delegates may attend meetings of these international experts;
- Technical and Study Tours – technical guides will be needed;
- Publication on SA water resources and dams- Authors needed.

If you are interested in participating, please submit your name to the SANCOLD Secretary. This is how Paul Roberts became involved in ICOLD and SANCOLD some 35 years ago!

ICOLD Technical Committees and SANCOLD Working Groups

SANCOLD is now represented on two additional ICOLD Committees by the following persons:

- Cemented materials for dams: David Cameron-Ellis;
- Multi-purpose dams and reservoirs: Dr Beason Mwaka.

SANCOLD Working Groups need to be formed for these two Committees. If anyone is interested please contact the SANCOLD Secretary.

SANCOLD Management Committee Elections

The nominations have been received and we have an excellent group of candidates! The Ballot Forms have been distributed. Please vote. **Due date 29 November 2013.**

Membership Fees 2014

The SANCOLD Management Committee has set the following membership fees for 2014:

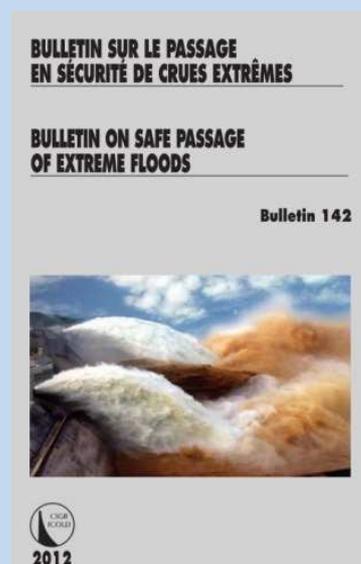
- Corporate Members R3750
- Individual Members R 375

Invoices will be sent to all members before the end of November 2013.

Membership Contact Details

Please inform the SANCOLD Secretary of changes in your e-mail address or other contact details.

Free ICOLD Publications for SANCOLD Members



ICOLD took a decision in 2009 regarding easier (and cheaper) dissemination of its publications. This will be done via the revamped ICOLD website (www.icold-cigb.net). A password has been issued to each National Committee which allows access to the Members’ Section on the website and also for free downloading of ICOLD Bulletins (reports). Any SANCOLD member who requires this access must apply to the SANCOLD Secretary for the password.

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