

THE GROUND WATER DIVISION

SPECIALIST DIVISION OF THE GEOLOGICAL SOCIETY OF SOUTH AFRICA

INTRODUCTION

The Ground Water Division aims to serve the Ground Water Community in southern Africa, for the advancement of the science and technology of groundwater and to promote the efficient use of groundwater as well as professionalism throughout the groundwater industry.

EXECUTIVE COMMITTEE

The Executive Committee of the Division consist of a Chair, a Vice Chair, a Secretary, a Treasurer and two (2) additional members.

The duties of the Executive Committee are to manage the affairs of the Division in the interest of the Members of the Division and in accordance with its own Constitution and Rules and the Constitution and Bylaws of the Geological Society of South Africa.

Present Executive Committee Members:

Dr Shafick Adams (Water Research Commission) - Chairperson

Mr Fortress Netili (Council for Geoscience) - Treasurer

Mr Matthys Dippenaar (University of Pretoria) – Co-opted Member

Ms Elanda Botes (acting Secretariat) / Ms Joannie Jordaan (Accounts/Membership support)

Ex-officio:

Mr Gawie van Dyk (AngloGold Ashanti Limited) - Central Branch Chair, Treasurer: Ms Jennifer Pretorius

Dr Kornelius Riemann (Umvoto) - Western Cape Branch Chair, Treasurer: Mr John Weaver

The GWD welcomed Mr Jan Myburgh (Ages, Eastern Cape) in 2014 as the new Eastern Cape Branch Chair, Secretary: Ms Alta Lindeque.

Mr Duncan Munyai (WSM Leshika Consulting) - Chairman of the newly established GWD Limpopo Branch. Secretary: Gladness Mohale

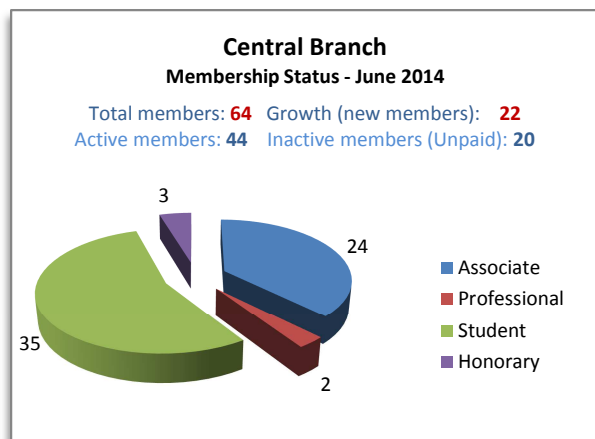
MEMBERSHIP

The Division strategically focused on **student** and **individual** membership. To be able to filter

groundwater expertise more proficiently the GWD membership were invited to *upgrade* their current **Associate membership** to **Professional membership**. Professional members will be professionals active in a groundwater specific field and SACNASP registered. **53** members upgraded from associate to professional members. In total, the GWD membership database grew from 570 members in May 2013 to 599 members in May 2014. Of these members, 410 were invoiced of which **112** settled their membership dues to date.

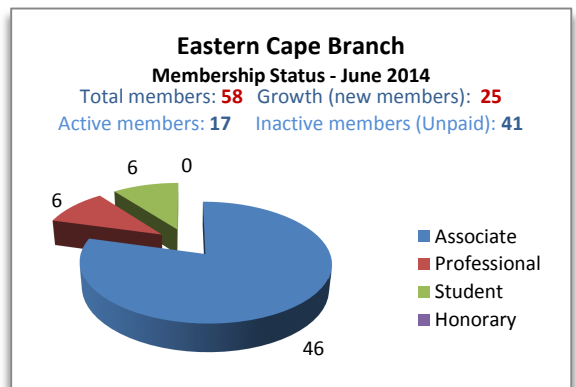
CENTRAL BRANCH

The Central Branch of the Ground Water Division incorporates members from the Free State, Northern Cape and North West Provinces.

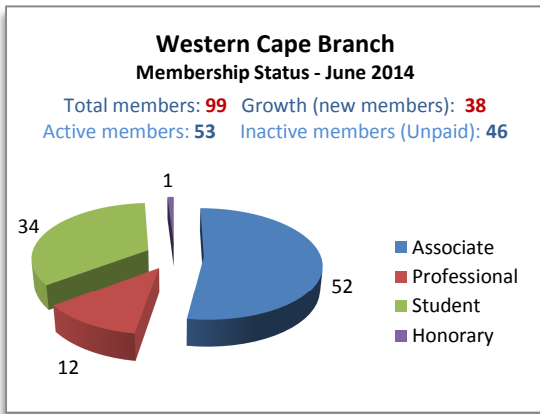


EASTERN CAPE (AND KZN)

The Eastern Cape Branch of the Ground Water Division currently incorporates members from the Eastern Cape as well as KwaZulu-Natal.

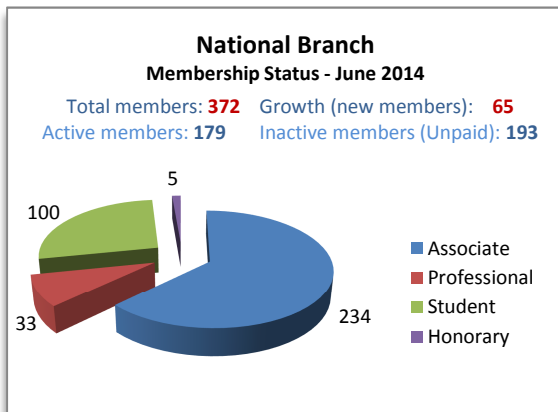


WESTERN CAPE BRANCH



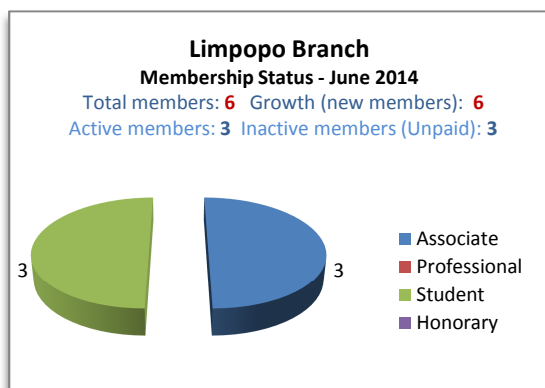
NATIONAL BRANCH

The National Branch of the Ground Water Division currently incorporates members from Gauteng, Northern Province and Mpumalanga. The National Branch serves as the hub for all GWD governance issues.



LIMPOPO BRANCH

The Limpopo Branch of the Ground Water Division is a newly established branch and groundwater professionals and interested parties from the greater Limpopo Region are being invited, through continuous marketing efforts, to join the Polokwane-based branch.



ACTIVITIES FOR THE YEAR

March 2014 - GWD National /GSSA One-day Conference on “Hydrogeology for Geohydrologist”

The Professional Meetings Programme of the Geological Society of South Africa together with Ground Water Division presented this one-day Conference on GEOHYDROLOGY FOR GEOLOGISTS.

The programme included presentations by renowned groundwater specialists such as Shafick Adams, John Weaver, Phil Hobbs, Chris Hartnady, Fanie de Lange, Andrew Johnstone and Kevin Pietersen.

Topics presented on informed on a number of current and relevant issues:

- An Introduction and Overview of South African Geohydrology and Groundwater Resources
- Exploration for Groundwater
- Groundwater Contamination
- Deep Systems
- Geohydrology of the Karoo Supergroup Generation
- Groundwater and Mining
- Unconventional Gas and Groundwater
- Legal Overview and New Water Act Amendment

The Engineering News article Press-release following this event, highlighted again the issues around Shale Gas:

Shale gas – let the science speak says WRC

Amid increasingly heated debates over the impact of mooted shale gas extraction in the Karoo, Water Research Commission water research manager Dr. Shafick Adams said it was time South Africa gave science a chance to speak.

Speaking during a question and answer session at the Geological Society of South Africa’s (GSSA) Geohydrology for Geologists conference last week, he said proponents were arguing past each other and that the politics – jumping ahead of science – was now in the way....

Read the full article on <http://www.engineeringnews.co.za/article/shale-gas-let-the-science-speak-says-wrc-2014-03-17/>

January 2014 - Urban Hydrology Workshop, GWD/UP

The University of Pretoria (UP), the Water Research Commission, the Ground Water Division of the Geological Society of South Africa and the Adopt Moreletaspruit Initiative invited delegates to participate in an event showcasing the water resources of the City of Tshwane (CoT) municipality. The purpose of the workshop was dedicated around five major themes:

• **Water Cooperation** – stakeholders in water research relevant to the City of Tshwane; role of water research; aesthetics; integrated management

• **Water in Urban Areas** – considering the impacts of the complete water cycle on urban development, including water resources, hydrometeorology, water pollution, ecological infrastructure and water sensitive urban design

• **Water and Urban Development** – addressing the topics of karst subsidence and karst aquifers; land use planning

• **Water and the Environment** – biodiversity, wetlands and preservation of green areas throughout the municipality

• **Showcasing the Moreleta** – using the Moreleta Catchment as an example of urban hydrology and the intricate interaction between the water cycle, biodiversity, urban development and community involvement in the restoration protection of the Spruit on a voluntary basis.

Speakers from a wide range of disciplines (including the University of Pretoria, City of Tshwane, Department of Water Affairs, Water Research Commission, Adopt-Moreletaspruit, and Council for Geoscience, University of Cape Town and the SA National Biodiversity Institute) gathered at this highly successful workshop and committed towards the preservation of our shared water heritage in Pretoria.

December 2013 – Groundwater Talk Dr Brent Usher

Perspectives on groundwater aspects associated with Coal Seam Gas extraction in Queensland, Australia by Brent Usher, PhD

Dr Brent Usher, currently the Geosciences Manager and a Senior Hydrogeochemist / Hydrogeologist at Klohn Crippen Berger Ltd in Brisbane, Australia, presented on his work along the following technical strands:

- Acid Rock Drainage and Metal Leaching (ARD/ML) prediction, assessment and management;
- Aqueous Geochemistry;
 - Hydrogeochemical modelling;
- Groundwater – aquifer conceptualization and assessment; and
- Contaminant hydrogeology.

His presentation, attended by approximately 50 people, were well received and debated. Presentations were made available to open directly from the Klohn Crippen Berger company website:

<http://www.klohn.com/index.php?key=186>

September 2013 – Talk by Andrew Stone, CGS

Hydraulic Fracturing: Water & environmental issues related to energy resource development by Andrew Stone, Executive Director, American Ground Water Trust

Andrew Stone, a hydrogeology graduate from London University, has over thirty five years' experience in Africa and the US as a university professor, groundwater consultant, advocate & educator. As the director of American Ground Water Trust's education programs he has convened over one hundred and fifty conference programs related to well design, groundwater management, aquifer storage recovery, conjunctive use, geothermal technology, hydraulic fracturing and water issues, water banking, and asset management. He is a recipient of the National Ground Water Association "Oliver Award" in recognition of his work in promoting groundwater education. He is Director of the International Association of Hydrogeologists Commission on Groundwater Outreach to Decision Makers.

His presentation on Hydraulic Fracturing, hosted by the Council for Geosciences, was attended by approx. 60 delegates.

September 2013 – Groundwater Conference BIENNIAL GROUND WATER DIVISION CONFERENCE & EXHIBITION

17-19 September 2013: Southern Sun Elangeni, KwaZulu-Natal, South Africa



This biennial conference with the theme **Groundwater: A New Paradigm**, aimed to bring together students, academics, specialists and decision-makers to discuss and showcase groundwater and related activities.

The Conference presented papers around the following themes:

- Special WRC Dialogue Session on Karoo Aquifers and Unconventional Gas Exploration
- Groundwater: The Paradigm Shift
- Groundwater and mining
- Groundwater governance
- Groundwater and springs
- Monitoring, data and information management
- Knowledge gaps and innovations
- Groundwater and the environment
- Case Studies
- Groundwater in the SADC region

Conference Statistics

Total number of people at the conference (including delegates, people manning exhibition stands, media, etc.)	314
Delegates who cancelled after registering for the conference	12
Delegates from outside South Africa (incl. in above numbers)	9
Countries represented: Botswana, Germany, Namibia, Nigeria, South Africa, The Netherlands, UK	7
Delegates from Government Departments (DWA and DMR)	72
Delegates from Municipalities	14
Delegates from universities [local & international]- students and academics	34
Social functions:	
Welcome reception	82
Icebreaker Student function	115

Conference dinner	212
Programme:	
Abstracts received from the "Call for Papers"	255
Poster Papers	22
Abstracts received from the "Call for Papers"	255
Keynote papers (included in oral total above)	4
Pre-conference:	
Pre-conference technical tour	18
Workshop: Groundwater & Municipalities	63
Workshop: Groundwater Exploration and Evaluation	33
Exhibition:	
Exhibition stands	19

SPONSORSHIP, AWARDS and ENDORSEMENTS

The Conference awarded the following individuals for their exceptional contributions:

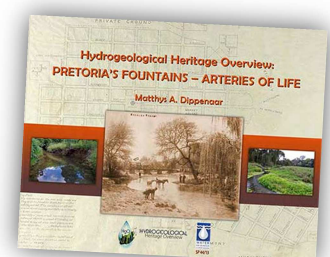
- The best oral presenter: Mr Steven McKeown
- Best oral student presenter: Mr Jannie Weitz
- Best poster: Mr Kobus Prinsloo

The GWD opened a sponsorship application process and the panel awarded 12 conference attendance sponsorship to the following students:

- 7 UFS (IGS) students sponsored by the GWD Central Branch
- 3 UWC students sponsored by the GWD National Branch:
- 2 UWC students sponsored by the GCS Pty Ltd.

The Hydrological Heritage Overview: The Water History of Pretoria Book Launch, 16 July 2013, UP

The GWD, as proud sponsor and endorser of this WRC project, attended the book launch.



This series was established to promote awareness of water resources in South Africa. It supplies important information to the general public about water heritage and promote its protection and wise use through numerous printed & visual media outlets. The follow-up in this series will feature the water heritage of both Johannesburg and Cape Town.

PLANNED ACTIVITIES

Public Talk, 26 June 2014, UP

A Critical Review of the Risks to Water Resources from Unconventional Shale Gas Development and Hydraulic Fracturing in the United States by Prof Avner Vengosh - Division of Earth and Ocean Sciences, Nicholas School of the Environment, Duke University, Durham, United States

Pretoria Symposium, 18-19 August 2014 - UNCONVENTIONAL GAS: JUST THE FACTS

A symposium organised by the Ground Water Division of the Geological Society of South Africa and the Mine Water Division of the Water Institute of Southern Africa.

This two-day symposium will include invited presentations from industrial, regulatory, research, and civil society organisations. A panel discussion, poster presentations, a social function, and ample opportunity for networking and discussion will also be included.

Course: Groundwater in Action, 16 and 17 September 2014, UP

The Ground Water Division, the University Pretoria and the Council for Geosciences are coordinating this two day course where the main objective is to teach participants the basic theory of groundwater in an easy and understandably way with emphasis on practical hands-on-experience. *On-line registration available on the GWD website.*

FINANCIAL SUMMARY

The GWD is in the process to centralise its accounts into one National Account where branches will gain access to ring-fenced funds through an inter-branch transfer request.

This will aid in the overall reporting function as well as ensure better application of available funds.

Current reported balances (June 2014)

NATIONAL	R 247, 103.05 (Invest) R 859,454,91 (Current)
CENTRAL	R 84 000.00 (Ring-fenced) R 5000.00 (cashbox)
WESTERN CAPE * *last reported	R 160 043.06 (Invest) R 14 498.11 (Current)
EASTERN CAPE	R 5000.00 (cashbox)
LIMPOPO	R 5000.00 (cashbox)

PASSING OF A GROUNDWATER LEGEND

It was with shock and disbelief that we learnt of the passing of our esteemed, and much respected and beloved Prof. Gerhard Johannes van Tonder. Prof. van Tonder died of a sudden heart attack on 22 April 2014, leaving behind his beloved wife Fransie, and his children Sanri and Gideon. He was 61.

The Groundwater Community is poorer without Prof Van Tonder. He was instrumental in developing groundwater hydrology and the capacity we have today. Like so many others, I will miss his engagements on a variety of issues.
Hamba Kahle

. - Dr Shafick Adams GWD Chair

