

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 consists of a Chair, a Vice Chair, a Secretary, a Treasurer and two (2) additional members. Not all positions are currently filled. The 2015 Elections, where results will be announced at the GWD AGM in September 2015, will inform on the new Committee for the 2015-2017 term.

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

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

Ms Elanda Schaffner (Secretariat)

Vacant positions: Vice Chair; Co-opted Member

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

Mr Jan Myburgh (Ages, Eastern Cape) - Eastern Cape Branch Chair, Secretary: Ms Zimbini Pemba

Mr Duncan Munyai (WSM Leshika Consulting) - Chairman of the 2013 established GWD Limpopo Branch. Secretary: Gladness Mohale

MEMBERSHIP

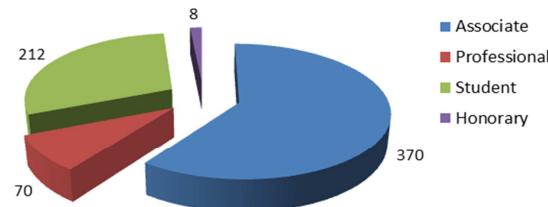
The Division strategically focused on **student** and **individual** membership. To be able to filter groundwater expertise more proficiently the GWD membership were invited to *upgrade* their current **Associate membership** to **Professional membership**. Professional members will be professionals active in a groundwater specific field and SACNASP registered. **70** members upgraded from associate to professional members. In total, the GWD membership database grew from 599 members in May 2014 to 661 members in May 2015. Of these members, 408 were invoiced of which **147** settled their membership dues to date.

In order to upgrade to professional membership, email the secretariat with your SACNASP number. Practicing professionals in the fields of Water Science, Earth Science and Geological Science qualify for professional membership, provided that they are actively working in the field of groundwater science.

Student membership is in coordination with the IAH ECHN and the newly elected student and early career representative is Ms Kelley Swana.

**Ground Water Division
Membership Statistics - June 2015**

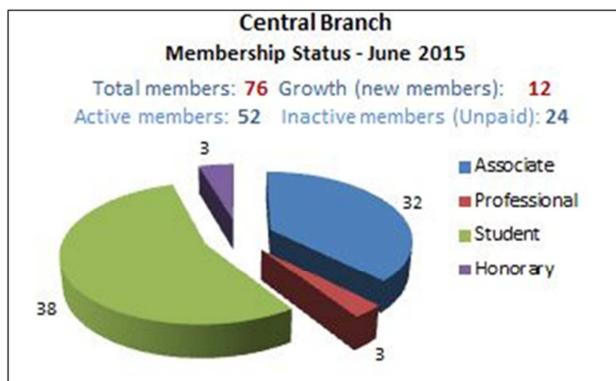
Total members: **661** Growth (new members): **62**
Active members: **379** Inactive members (Unpaid): **281**



BRANCH STATISTICS

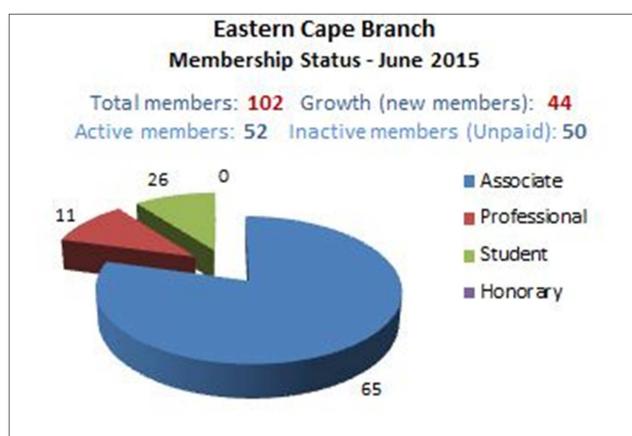
CENTRAL BRANCH

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



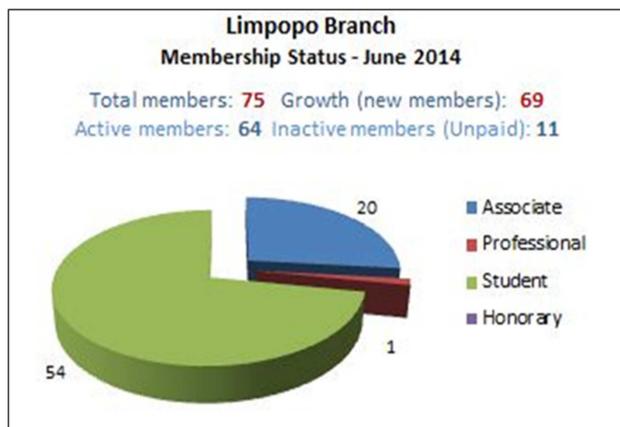
EASTERN CAPE (AND KZN)

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



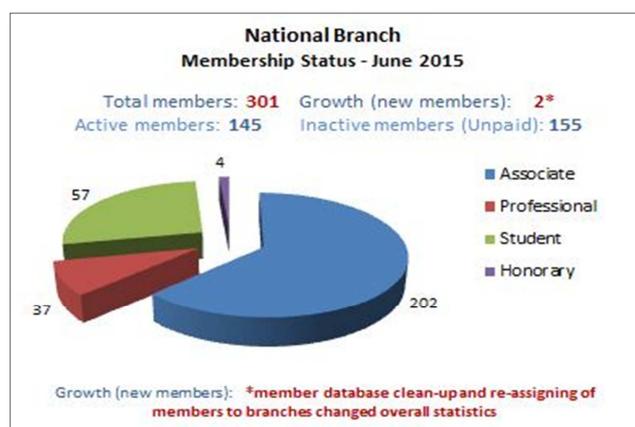
LIMPOPO BRANCH

The Limpopo Branch of the Ground Water Division is a newly established branch (2013) and groundwater professionals and interested parties from the greater Limpopo Region are being invited, through continuous marketing efforts, to join the Polokwane-based branch.

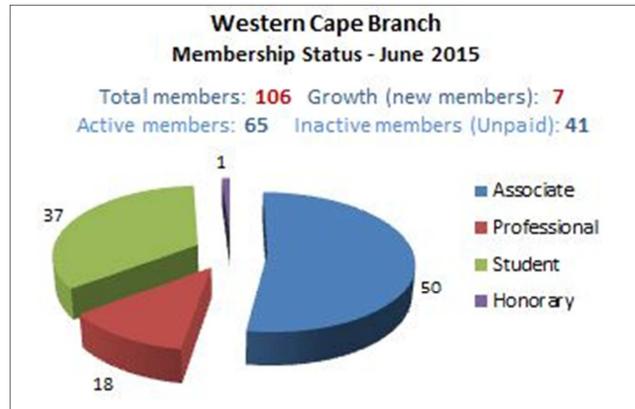


NATIONAL BRANCH

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.



WESTERN CAPE BRANCH



ACTIVITIES FOR THE YEAR

26 June 2014, Public Talk, Pretoria

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.

Hosted at the University of Pretoria IT Lecture Hall, this interesting and enlightening talk was attended by approx. 55 delegates. The GWD posted the WRC introduction and lists of Prof. Vengosh's current papers on the website.

18-19 August 2014, Pretoria

Symposium: Unconventional Gas: Just the Facts

This symposium was 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 hosted at the CSIRICC and attended by approximately 255 attendees, featured 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 were some of the highlights.

16-17 September 2014, Course: Groundwater in Action, Pretoria

The Ground Water Division together with the University of Pretoria (Dr Matthys Dippenaar) coordinated this two day course where the main objective was to teach the attending 24 participants the basic theory of groundwater in an easy and understandable way with emphasis on practical hands-on-experience. The programme, hosted at the UP High Performance Centre in Hatfield, included presentations by groundwater sector specialists such as Victor Boshoff (DWS), Robel Gebrekristos (Digby Wells) Johan Kriek (ERM), Lixiang Lin, Council for Geoscience, Collen Monokofala, Golder Associates, Jude Cobbing (ex-SLR) and David Love (Golder Associates). Topics presented on Day 1 were:

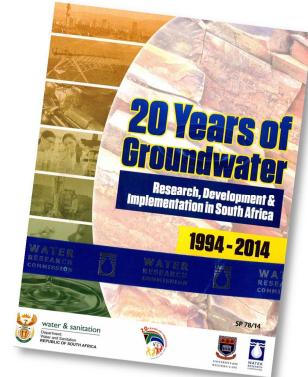
- Groundwater Hydrology
- Groundwater Exploration

- Data & Information
- Groundwater Models
- Site Investigation for Contaminated Land
- Mine Water
- Groundwater for Water Supply
- Management & Governance

The practical field programme on Day 2 started off with a presentation on Groundwater Quality and Pollution, whereupon delegates were transported to the UP Experimental Farm for instruction on Infiltration and percolation – as well as pump testing. This was followed by a Pump Test interpretation session and an informative panel discussion where delegates raised their concerns and commented on current challenges in the sector.

12 November 2014, Book Launch, Cape Town

The publishing of '**Twenty Years of Groundwater Research, Development and Implementation In South Africa'**' needed a little occasion. It happened at the invitation of the Water Research



Commission on the evening of 12 November with a cocktail function at the historical Centre for the Book in Cape Town.

The meeting was well attended by the groundwater fraternity of the Western Cape and helped along by some good wine sponsored by the local branch of the Groundwater Division. Groundwater was honoured by the presence and encouraging words of the CEO of the WRC, Mr. Dhesigen Naidoo. Shafick Adams, Eberhard Braune, Kevin Pietersen and Fanus Fourie all reflected on different aspects and challenges that stood out for them in the 20 years.

"Time is running out. My people will need to know, so that they can become guardians themselves each and every one – of our hidden treasure – the infinitely precious water of the ground of Africa."

Closing lines from the "Well of Wisdom" by Elanda Botes, which ran every night at the World Summit in Johannesburg in 2002.

Standing out for me from the evening were the two 'students', Kate Robey and Gaathier Mahed, who gave some impressions of their first encounter with groundwater research. Their keenness, confidence and love of fun augers well

for the future and echoed what was heard on the floor from the student community in attendance. It was therefore fitting for Fanus to close the evening, pointing to the younger generation:

'It is now up to you to take groundwater to a new higher level!'

Well done groundwater community and thank you WRC.

Eberhard Braune

27 November 2014, Public Talk on International Water Law and Transboundary Aquifers

"What must hydrogeologists sacrifice in cross disciplinary work?" - Experience from work with the UN International Law Commission in developing the Legal Articles on the Law of Transboundary Aquifers by Shammy Puri (MSc, FGS, MICE, CEng, CGeol) Secretary General: International Association of Hydrogeologists.

Hosted at the University of Pretoria IT Lecture Hall, this interesting and enlightening talk was attended by approx. 45 delegates.

24 March 2015, Screening of 'unearthed', Life Sciences Building, University of the Western Cape

The Western Cape Young Water Professionals and the Western Cape Ground Water Division presented the screening of 'Unearthed', an independent South African feature documentary that investigates fracking in the United States – the technology's place of origin – in order to understand what this new method of gas extraction could mean for the semi-arid Karoo and other countries who are considering its implementation. The film covers the extensive journey that Karoo born director, Jolynn Minnaar, took – 18 months of research; over 400 interviews; traveling across South Africa, the United States, Canada and the United Kingdom; battling gag orders and no trespassing zones; losing cameras to extreme heat and sub-zero temperatures and suffering first hand chemical exposure from drilling sites – to get to the bottom of the controversial topic.

3 April 2015 - Eastern Cape GWD Talk and Get-Together, East London

Word from the Branch: The year has reached cruising altitude and it was about time that the Eastern Cape GWD members got together to see if everybody survived the take-off! The Eastern Cape Groundwater division consist of a total of 35 members, a small start that can bring about



big change. We decided on an informal get-together where we could get to know each other a little better, share experiences and challenge our knowledge around groundwater in the Eastern Cape Province. Members of the local SAICE branch were also invited and we were glad to see a couple of engineers attending and participating.

We were fortunate to host the talk at the Science and Technology Park at the East London Industrial Development Zone, a local proactive driver of the green economy. They have a thoroughly green-infused approach to all zone operations, including waste and water management and sustainable energy consumption; it couldn't be a more fitting venue.

After snacks, new introductions and rekindling of old acquaintances, we got together in the conference room where Mr. Myburgh, current Chairman of the ECGWD, gave a quick update on ECGWD's finances, membership status and planning for the year. It was decided that the next get-together will comprise a formal ECGWD meeting to confirm management members and year planning. Mr Myburgh also handed out material advertising the coming Groundwater Conference and showed a sample of the conference bags that will be used and the initiatives around its manufacturing.

Everybody was motivated to attend and also to make use of sponsorship opportunities at the conference.

As there are no longer membership fees being charged, members were invited to make donations to be able to pay for the venue and snacks. The following individuals and companies contributed:

- AB PUMPS; • SRK; • REDE; • AGES
- Etienne Mouton; • Kimopax

Mr Myburgh then introduced our guest speaker, Dr. Eric Tordiffe, a stalwart in South African and Namibian groundwater circles with over 40 years' experience in the field. Dr. Eric Tordiffe has recently retired and now stays in Kaysers Beach.

Dr. Eric Tordiffe presented an informative presentation on the characteristics and management of aquifers in the Tsumeb Sub-Basin, Namibia. The points he covered were applicable to all members as it covered the whole spectrum of groundwater exploration, development and management.

The presentation was highly informative, and all of us found a way to relate to the topic in each of our unique roles we play within our own personal profession. Dr. E. Tordiffe's presentation really got us thinking and discussions started flowing on how we can implement basin management to contribute to groundwater awareness nationally, with the following conclusion:

- **We need to be active in appropriation of groundwater**
- **Assist in the protection of vulnerable resources**
- **Become involved with the groundwater monitoring**
- **Share information on groundwater awareness**
- **Gather rainfall data assist with protection of monitoring installations**

We look forward to our next get-together, a platform where we can inform and inspire existing members as well as attract new potential Groundwater division members to jump aboard our Eastern Cape team.

See the GWD Website for a full version of this report.



5 May 2015 - GWD Western Cape Talk & Networking Session, Stellenbosch

The 5th of May 2015 marked the opening function for 2015 of Ground Water Division in the Western Cape. The event took place at Stellenbosch University, with the idea to reduce the gap between research institutions and consultants in the area. The forty guests who attended the function were associated with local groundwater companies and the universities of UWC, UCT and Stellenbosch.

The evening commenced with a presentation by the dynamic Dr Roger Diamond, on his PhD research on the use of isotope techniques for understanding groundwater flow paths in the Table Mountain Group. Well presented with a good explanation of basic processes, most students left the presentation with a clearer understanding of the research field. And if this was not enough, the breath-taking pictures of the TMG outcrop were sure to dazzle. The presentation was followed by a networking event where students, academic staff and consultants were able to socialise and share some knowledge about the field. And keeping true with the Wineland's tradition, this event was accompanied by good wine, cheese and other snacks, funded by local consulting company GEOSS.

So what are the plans for the future? Julian Conrad from GEOSS wishes to continue to integrate the worlds of consulting and academia, with the idea of increasing collaboration and giving students the opportunity for individual networking in the industry. After the great success of the first event, many who attended support this idea. A quarterly presentation and networking event, as well as an electronic newspaper on interesting research in the area, are the current ideas in the pipeline. Whether or not the allure of fine wine and good conversation was initially the main selling point, the first event of 2015 marked an exciting beginning for conversation and collaboration in the Western Cape, and Stellenbosch University looks forward to being a part of this journey.

Anya Eilers (MSc student – University of Stellenbosch)

SPONSORSHIP, AWARDS and ENDORSEMENTS

SA Journal of Geology: Special Groundwater Issue.

The GWD is a proud co-sponsor of this SAJG publication featuring eight groundwater papers to be printed within the coming months. The papers were selected following the 2011 conference in Pretoria.

Paper contributors include: Shabalala et al, Talma and Esterhuyse, Aphane and Vermeulen, Weitz and Demlie, Demlie and Titus, Cobbing et al, Witthueser et al and Adams et al.

PLANNED ACTIVITIES

Public Talk, 27 July 2015, University Pretoria

The Fulbright Scholar will be visiting South Africa in July and will share her geohydrological experiences in a public talk to be hosted at the University of Pretoria. More information will be shared on the GWD website shortly.

Public Talk, 29 July 2015, Western Cape

The topic ""Hydrogeochemical fingerprinting of shallow groundwater and natural springs in the Karoo Basin as a precursor to shale gas development and what it tells us about the composition of deeper groundwater" will be presented by Dr Ricky Murray, Dr Jodie Miller and Kelley Swana

Groundwater Conference, 2015



The 14th Groundwater Division of the Geological Society of South Africa Conference will take place in Muldersdrift, Ekudeni, South Africa, from 21 – 23 September 2015.

Groundwater: From Theory to Action being the main theme, this biennial conference aims to bring together students, academics, specialists and decision-makers to discuss and showcase groundwater and related activities. Building on past conferences, this conference aims to highlight the issue of improving the uptake of existing knowledge and experiences to assist in solving environmental and societal problems. South Africa is well endowed with good legislation, policies and strategies. However,

some of these are not fully implemented and there is a real need for stakeholders, at all levels, to use and enforce these.

This conference will aim to demonstrate these excellent resources and how South Africa can become a global leader in best practice management and implementation.

FINANCIAL SUMMARY

In 2014, the GWD centralised all 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 (01 June 2015)

NATIONAL	R 380, 178.25 (Current) R 794, 927.32 (Invest)
CENTRAL	R 84 000.00 (Ring-fenced within main National Account)
WESTERN CAPE *	R 173 172.10 (Ring-fenced within main National Account) R 5365.81 (Cashbox)
EASTERN CAPE	R 5000.00 (cashbox)
LIMPOPO	R 5000.00 (cashbox)

Income and Expenditure for the year 2014

	Expense Account	Income Account
<i>Operational expenses (Website/ Email/Secretariat/ Exco Meetings)</i>	<i>49 591.00</i>	
<i>Vat, Refunds and Bank charges</i>	<i>39 774.82</i>	
<i>Events 2013/14</i>	<i>40 326.73</i>	<i>175 547.41</i>
<i>For Conference 2015</i>	<i>188 994.55</i>	
<i>Other expenses (sponsorships/ endorsements)</i>	<i>14 334.34</i>	
<i>Other income (profit sharing and interest)</i>		<i>42 051.86</i>
<i>Transfer to/from branches</i>	<i>5 000.00</i>	<i>259 000.00</i>
<i>Membership</i>		<i>31 104.00</i>
TOTAL	R 338, 021.44	R507,703.27

END