



Annual Report to the GSSA 2011/12



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.

The 2010/2011 Executive Committee met five times in 2011 and convened for a day-long strategy session on 17 February 2012.

Present Executive Board Members:

Dr Shafick Adams (Water Research Commission) - Chairperson

Ms Nancy Motebe (Department of Water Affairs) - Vice Chairperson (*resigned May 2012*)

Mr Fortress Netili (Council for Geoscience) - Treasurer

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

Ms Elanda Botes, Secretariat

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

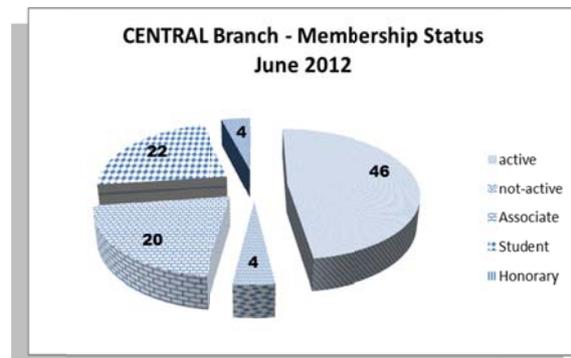
Mr Gert Nel (SRK) –Eastern Cape Branch Chair, Treasurer: Ms Charon Swarts

MEMBERSHIP

The Division strategically focused on **student** and **individual** membership. The GWD membership increased considerably from the initial 244 members by end May 2010 to 371 members May 2012. Current paid-up members as tallied in June 2012, only totals 46.

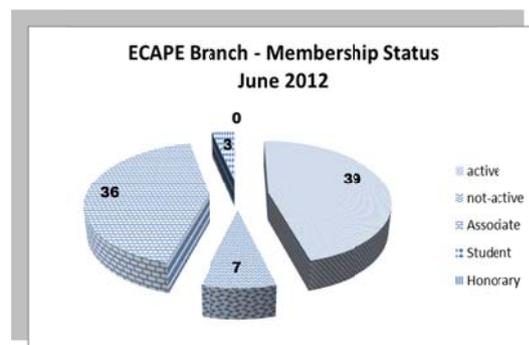
CENTRAL BRANCH

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.

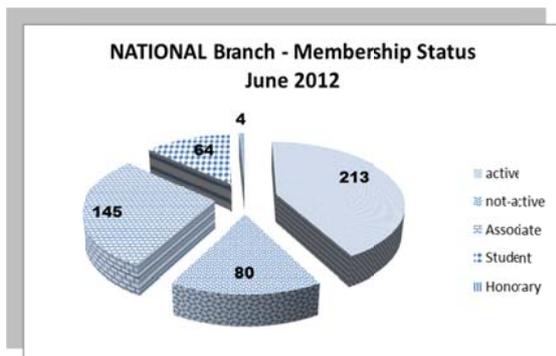


WESTERN CAPE BRANCH



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.



ACTIVITIES FOR THE YEAR

February 2012:

GWD Western Cape Branch

Presentation by Roger Parsons on experience of drought relief drilling.

Presentation by Kornelius Riemann on 'Silver Drop' system for groundwater management.

MAY 2012:

GWD Central Branch Awards

Central Branch, together with Dr Johan van der Merwe (GWD Honorary Member), awarded prizes for best posters to selected Honours students GLG637 2012 (Environmental Geochemistry) at the Institute for Groundwater Studies, UFS.

NOVEMBER 2011: Darcy Lecture Series

"The birth of groundwater hydrology as a quantitative science can be traced to the year 1856. It was in that year that a French hydraulic engineer named Henry Darcy published his report on the water supply of the city of Dijon, France. In the report Darcy describes a laboratory experiment that he carried out to analyze the flow of water through sands. The results of this experiment can be generalized into the empirical law that now bears his name." - R.A. Freeze and J.A. Cherry, Groundwater, 1979

The GWD hosted a 2011 Distinguished Darcy Lecture Series (Stephen Silliman, Ph.D.) in South Africa from 7 – 10 November. Dr. Silliman lectured in three centres: Pretoria, Bloemfontein and Cape Town.

University of Pretoria, Lecture TALK TOPIC 1: Development of Reliable Hydrologic Data Sets in Difficult Environments: Case Studies from Benin, West Africa.

Both the University of the Free State and the University of the Western Cape opted for TALK TOPIC (2): Characterization of a Complex, Sole-Source Aquifer System in Benin, West Africa as well as additional informal talks between the students and Dr Silliman.

SEPTEMBER 2011:

GWD-IAH International Groundwater Conference,

Date: 19th to 21st September 2011. Venue: The CSIR International Convention Centre, Pretoria, South Africa.

We themed this conference 'Groundwater: Our source of security in an uncertain future' to highlight the significant role groundwater plays during periods of scarcity and its

anticipated role in meeting our ever increasing water demands. It is estimated that groundwater is already a primary source of drinking water for as many as two billion people and drives a significant part of the world's irrigated agriculture. Groundwater use is expected to grow significantly in the next few decades and in most countries intensive groundwater use or the 'silent revolution' is already observed. In order for this growth to happen in a responsible manner the groundwater sector must be an important player in the decision making processes. Groundwater is fast losing its 'Cinderella' status as planners and decision makers realise the true value and importance of groundwater. It can no longer be considered a mysterious resource. Effective groundwater management will not only rely on the improvement of our scientific understanding but also long-term political commitment, well-functioning institutions and supporting legislation. The challenge remains - how do we translate our ever-growing scientific knowledge into improved management of all resources and bringing about change in human behavior? The conference was arranged around the following sessions:

- Climate change and drought
- Mapping and data
- Dealing with uncertainty
- Water and energy
- Dealing with uncertainty – modeling
- Getting the message across
- Water quality – changing trends
- Exploration and water supply
- Water quality – acid mine drainage
- Reserve and licensing
- Groundwater and the environment
- Case studies
- Merging science and policy

The response to the conference had been

CONFERENCE ORGANISING COMMITTEE	
South Africa	
Dr Shafick Adams (Chair)	:
Water Research Commission	
Ms Elanda Botes	:
GWD National Secretariat	
Mr Jude Cobbing	:
SLR Consulting / IAH – SA National Secretariat	
Ms Christine Colvin	:
World Wildlife Fund	
Prof Ingrid Dennis	:
North West University	
Mr Fortress Netili	:
Council for Geoscience	
Mr Matthys Dippenaar	:
Geology Department, University of Pretoria	
Ms Nancy Motebe	:
Department of Water Affairs	
Dr Kevin Pietersen	:
SLR Consulting	
Dr Kornelius Riemann	:
Umvoto Africa (Pty) Ltd	
Ms Cilla Taylor	:
PCO: Cilla Taylor	

great – considering the difficult economic period. We had presenters and delegates

from all over the world representing developed and developing world views. This year we were also joined by the International Association of Hydrogeologists. The IAH facilitated several meetings as well as the 'Meeting of the IAH Early Career Hydrogeologists'.

IAH Early Career Hydrogeologists (ECH): ± 80 people. Following the initiative set up in Krakow, it was decided to hold another ECH meeting in South Africa. This informal

meeting was led by Dr Judith Flugge of Germany and supported and sponsored by the IAH SA Branch.

Conference statistics	
Total number of people at the conference (<i>including delegates, people manning exhibition stands, media, etc.</i>)	361
Delegates	293
Delegates from outside South Africa (incl in above numbers)	66
<u>Countries represented:</u> Australia, Belgium, Botswana, Cameroon, Canada, Croatia, Czech Republic, Denmark, Dem Rep of Congo, France, Germany, Ghana, India, Lesotho, Mexico, N. Ireland, Namibia, Nigeria, Portugal, Rep of Korea, Senegal, Slovakia, Slovenia, South Africa, South Korea, Spain, The Netherlands, UK, USA, Zambia, Zimbabwe	30
Delegates from Government Departments (DWA and DoA)	60
Delegates from Municipalities	5
Delegates from universities [local & international]- students and academics	42
<u>Programme</u>	
Oral papers	103
Poster Papers	36
<u>Pre-conference workshops</u>	
Water Use Licence Application	35
Artificial Recharge	35
Post-conference technical tour	13
Exhibition stands	27

AWARDS

- The best oral presenter: Prof Kai Witthueser & Dr Nicholas Holden
- Best oral student presenter: Mr Darian Pearce
- Best poster: Dr Paul Auckamp & Dr Martin Holland
- Best student poster: Mr Evan Swartbooi
- Best exhibition: Incedon

The Division also awarded two of its members **HONORARY MEMBERSHIP** for their outstanding service, contribution and dedication to furthering the science and technology of groundwater: Mr Ernst Bertram (DWA) and Dr Johan van der Merwe (IGS)

Conference Workshop on Groundwater Licensing Procedure

Water Use Licence Applications (WULAs)

The workshop was put together by Ms Nancy Motebe of DWA, with assistance by Dr Ingrid Dennis. Registration for this workshop was unpredictable. This workshop was initially arranged to help people (particularly the municipalities) obtain water licences but, despite extensive marketing, municipalities failed to make the required connection. DWA and other Consultancies had good participation.



Conference Course on Managing Artificial Recharge

Managing Artificial Recharge

The workshop commenced with a seated lunch and carried on until early registration in the afternoon of Sunday, 18th September. The workshop was led by Dr Ricky Murray of Groundwater Africa and assisted by Dr Gideon Tredoux. Dr Ricky Murray has been conducting research and implementing Artificial Recharge projects since 1997. He was responsible for developing and rolling out DWA's Artificial Recharge strategy, and was responsible for the hydrogeological design of Windhoek's Artificial Recharge scheme which was the first major scheme in a hard rock aquifer fractured.

Participants were given workshop information on CDs provided by Dr Murray.

OUTCOMES TO THE CONFERENCE

- ISSN 0378-4738 –Water SA Vol. 38 No.3 Special Edition. Guest Editors: S Adams, J Cobbing, I Dennis and K Riemann.
- Stronger International Association for Hydrogeologists (IAH) partnership.
- Capacity Building: GWD Western Cape (R20,000), Central (R20,000) and National Branch (R20,000) all contributed towards sponsored attendance of students at the Conference.

PLANNED ACTIVITIES

June 2012 – Groundwater talk – Prof J MacKay

Professor Jennifer McKay, Professor of Business Law, and Director: Centre for Comparative Water Policies and Law, School of Commerce will talk about groundwater laws and policies in Australia. This talk will take place at the University of Pretoria on 26 June 2012.

July 2012 - Networking Roadshow

The GWD will embark on a Networking Roadshow that will visit the following centres in South Africa:

- 11 July 2012 – Gauteng (UP)
- 13 July 2012 – Cape Town (Lagoon Beach Hotel)
- 16 July 2012 – Durban (UKZN)

The aim of the networking days will be to offer an awareness platform for groundwater and to drive and build further on the capacity and communication between role-players in the sector such as municipalities, consultants, researchers, young GW professionals and students.

The networking days will start with a sponsored seminar (SM Enviro) where a visiting international speaker from Japan will offer insights and also show-case the latest in-situ / monitoring technology available.

An afternoon talk by an invited regional speaker will open the floor to participants to discuss and debate issues of current importance in the sector. This will be followed by a networking evening of marketing, liaison and cocktails.

October 2012 - Groundwater Symposium

Groundwater to Tap water – a municipal focus, Potchefstroom, 15–16 October 2012

Themes:

The groundwater resource
Monitoring and Management
Groundwater treatment
Costing and development

Aims:

This symposium aims to share new knowledge on the topic of groundwater and municipalities as well as to allow for multi-stakeholder panel discussions mainly between researchers, groundwater practitioners and municipal officials. It will further support the hosting of special sessions, side events/workshops on related topics.

Groundwater Conference 2013

The next conference will be held in Durban. Planning for the event is currently underway.

■ FINANCIAL SUMMARY

Each Branch within the Division has a separate bank account and branches have the responsibility to submit annual financial reports to the National Office. All funds raised by the Division are used in the interest of the Division.

BRANCH	STATUS May 2011	STATUS May 2012
<i>National</i>	R 452,133.89	R 228,241.95 (Invest) R 750,089.90 (Current)
<i>Central</i>	R 128,267.98	R 106,692.76
<i>Western Cape</i>	R 178,661.68	R <i>await</i>
<i>Eastern Cape</i>	R 3,996.19	R 3,996.19