THE GEODE

DEPARTMENT OF EARTH SCIENCE STELLENBOSCH *SEPTEMBER 2019* *Issue* 05

Keeping up with THE JONESES

by FRANCOIS BURGER

My classmates and I are currently in our (hopefully) last semester of Earth Science undergraduate studies, provided that we dodge the virus that struck the Proteas in England this year. I can't speak for everyone, but it is not fully how I envisioned it would be. Growing up with stories of how university will be the best period of your life, I dreamt of carefree days, drinking Cream Soda and occasionally identifying rocks as gold-rich or gold-poor. What else could there be? "Just get good matric results, once you're in university nobody will care about marks." Make no mistake, it is definitely the best part of my life thus far, but there is no escaping the need to continue being competitive.

There are just under 8.0×10^9 people on Earth. Multiply that by 0.3 and you have the amount of people that are 'platsak' (jobless, for the souties). Even though only 7% of the world's population have a university degree, people love spreading stories of university graduates using their relatively high level of education for relatively unskilled jobs (Lettere Gebou & Brandewyn, 2019). As geology students, we study diligently due to our natural desire to understand the Earth's processes (of course), but another contributing factor to our late-night microscope sessions is perhaps the fear of joining the $\pm$ 1.72×10^8 'platsak' people, resorting to wandering the sands of Namibia in the hopes of making a quick buck.

This fear is unfounded, though. I believe that we are not keeping up with the Joneses. Instead, if we put in the same effort as what was required for Dr Klausen's igneous course – we are the Joneses. We might sacrifice plenty of Saturdays, but those were for the boys anyway. The real men and women are grafting in the practical lab, to "just get a foot in the door, once you start working you'll have weekends free". Nowadays, you are forced to be competitive, regardless of your personality - this might be one of the biggest lessons we've learnt during our undergraduate journey. The world isn't the same as it was a few generations ago (Oupa, 2010) and going the extra mile might become par for the course, especially once Uncle AI arrives.

On a different note, summer is approaching fast and as Earth Science students we are renowned for our love of the outdoor and aesthetic bodies - to get fit and healthy reaps mental rewards. We are launching a free and informal health & fitness program (anti-smoking competition included), where you receive exercise and dietary guidance (six packs are built in the kitchen). After all, a solitary coal will die alone but a bag of briquets keeps the fire lit. To join the WhatsApp group, please send your name to + 27 60 428 4419.

Good luck with the last semester of the year!

References

Lettere Gebou, B.A., & Brandewyn, R. 2019. The world is my oyster. Journal of De Lapa Regulars 33, 420.

Oupa, G. 2010. How far I had to walk to school every day when I was your age. Precambrian Research 73, 1944-1982.

INTRODUCING THE

RESEARCH ALLIANCE FOR DISASTER & RISK (RADAR)

by PATRICIA ZWEIG

Disaster Risk Studies is an exciting and highly relevant field of scholarship that many students may not be aware of. In today's increasingly risky global environment, this growing field of study - now offered at Universities around the world - offers students from a broad range of disciplines opportunities to undertake interesting research, ranging from seismic hazards to social conflict in urban areas. The Research Alliance for Disaster & Risk Reduction (RADAR) located in the Faculty of Arts and Social Sciences is an independent research centre that focuses on disaster risk studies. The centre runs academic programmes, practitioner-training courses, undertakes disaster research and is the secretariat for Periperi U, a pan-African consortium of twelve Universities providing teaching and training in disaster risk studies in a variety of disciplines and risk contexts across the continent.

RADAR currently hosts a postgraduate module in the department of Geography and Environmental Studies Bachelor of Arts Honours programme, and runs a Masters of Philosophy (MPhil) in Disaster Risk Science and Development. In 2019, RADAR collaborated with the Geography Department in developing a new undergraduate module, *Natural Processes and Hazards*, which ran for the first time this year. A new post-graduate diploma programme in Disaster Risk Studies is due for launch in January 2020. RADAR also provides non-academic training through short courses focusing on enhancing knowledge and understanding of disaster risk, and strengthening community-based risk assessment capabilities in disaster-prone communities.

Establishment and growth over time

RADAR was originally called the Disaster Mitigation for Sustainable Livelihoods Programme (DiMP) when it was established in 1995 at the University of the Western Cape. Establishing disaster risk studies as a new area of study was very challenging. However, the rationale for establishing academic programmes in this new field was inspired by the rapidly expanding risk profile within the southern African region in the 1990s and the need to develop sustainable skilled human capital to address a widening range of disaster risks. This focus on studying disaster risk went against the reactive approach dominant at the time, which focused on providing disaster relief in drought, flood-affected or food insecure communities. Even today the field is still often confused with Disaster Management, which involves the strategies, practices and procedures employed by field practitioners.

DiMP sought to chart a new course by sustainably building capacity to reduce risk, in order to prevent disasters from occurring. The unit was involved in its early days in drafting South Africa's Disaster Management Act (DMA) in 2002, and later the Disaster Management Framework (2005), developed to guide implementation of the DMA. In 1998, with financial support from the Overseas Development Administration (ODA), today known as DFID, DiMP introduced the networked concept of Periperi, or '*Partners Enhancing Resilience for People Exposed to Risks*'. Periperi generated publications and videos that became widely used across Africa (this would later develop further with the establishment of the Periperi U Consortium in 2006).

In 2011, DiMP relocated to the Department of Environmental & Geographical Science at the University of Cape Town. Here it established an Honours module in Disasters & Development, which by 2004 had matured into a defined Disaster Risk Science academic stream at both Honours and Master's levels. In 2011, DiMP moved to Stellenbosch University where it became part of the Department of Geography & Environmental Studies. In 2013, DiMP changed its name to the Research Alliance for Disaster & Risk Reduction (RADAR), which more aptly reflected the collaborative nature of the unit. In 2017, RADAR became an independent Type 2 Centre, no longer part of the Geography and Environmental Studies Department, although continuing to teach into their academic programmes.

What else does RADAR do?

RADAR and its predecessor DiMP now have more than 20 years of experience in research, teaching and training, covering a wide variety of themes and outputs. In addition to extensive research into risks relevant to the Western Cape - for example public health, urban flooding, informal settlement fires and the effects of severe weather events - RADAR's research outputs have been, and continue to be, taken up directly by government and other stakeholders. RADAR has also extended its reach across Africa and beyond, working closely over recent years with the African Union, the African Working Group for Disaster Risk Reduction, World Health Organisation (WHO), United Nations Development Programme (UNDP), and the World Bank, among others.

Examples of RADAR's recent work include:

- In 2012/3, research on future humanitarian trends in southern Africa, commissioned by the Regional Intra-agency Standing Committee (RIASCO) and undertaken in collaboration with other African researchers. The resulting report, *"Humanitarian Trends in Southern Africa: Challenges and Opportunities",* identifies regional and global factors that may impact the lives and livelihoods of southern Africans and the available capacities to address these challenges (*see https://www.preventionweb.net/publications/view/35618*).

- In 2014-2015, RADAR conducted post-event reviews of five severe-weather related disasters in the Western Cape between 2011-2014. The research was undertaken by RADAR in collaboration with the Western Cape Provincial Disaster Management Centre and the Western Cape provincial Departments of Agriculture and Transport and Public Works (see *http://www.riskreductionafrica.org/assets/files/New-Synthesis-Report-14-June-2016.pdf*)

- In 2017, RADAR collaborated with the Western Cape Provincial Disaster Management Centre: Fire & Rescue Services, Santam and an informal settlement community in Wallacedene, to test the use of household smoke alarms as an early warning system to prevent informal settlement fires. Tested initially by engineers from Stellenbosch University's Fire Engineering Research Unit (FireSUN), the selected devices were installed in homes throughout the settlement. No major fires have been reported since the installation and monitoring continues to determine the longer-term effectiveness of these early warning devices (see *https://www.westerncape.gov.za/sites/www.westerncape.gov.za/files/smoke_alarm_project_report_dld_web.pdf*.

- In 2018, funded once again by Santam, RADAR together with the Council for Scientific and Industrial Research (CSIR) and FireSUN, conducted research to understand the June 2017 Knysna Fires – the most destructive fires on record in South Africa - publishing a report, *The Knysna Fires of 2017: Learning from this Disaster,* that is now available online from *https://www.santam.co.za/media/2685028/consolidated-knynsa-fires-report_28_may_final.pdf* .

- In 2006, seeking to advance disaster risk scholarship continentally, a network of higher education institutions was established with several African academic partners - Periperi U. Today RADAR functions as the secretariat of Periperi U and is itself a fully-fledged member of the consortium (see *www.riskredcutionafrica.org*). The partnership has grown over time to include 12 universities in as many African countries, each with its own disciplinary focus on disaster risk, from seismic risk to food security, disaster economics to environmental engineering, urban planning and public health to name a few.

RADAR moving forward

RADAR is currently working with the World Bank on several capacity-building initiatives in Africa and busy planning Periperi U's second African Risk Methods School (ARMS II) in West Africa later this year, building on the success of ARMS I, which ran over two weeks in Dar es Salaam, Tanzania, in September last year. Run in association with the UNDP and the WHO, these new summer schools aim to enhance the skills of academics and other professionals from across the continent who are working in the disaster risk field.

With a small team of nine dedicated staff, RADAR continues to add value, building capacity to reduce risk in a variety of ways, both in South Africa and further afield. There is never a dull moment!

If you want to know more about RADAR, check out their website at *http://www.radar.org.za/programmes-and-short-courses.html*

Introducing the new

ESSEC

MICHELLE VAN DER MERWE
Secretary

TANISHA SCHULTZ
Vice Chairperson
+ Media & Events

FRANCOIS BURGER
Chairperson

ANDREA BAKER
Treasurer

Q: WHAT IMPACT WOULD YOU LIKE TO MAKE ON THE DEPARTMENT?

I had no clue what geology was really about until second semester third year so I guess I'd like that to change! More exposure for the undergrads would be great - whether it's through chats at braais or guest lectures. Getting officially recognized as a Maties Society will hopefully help to secure more funding for things like that.

"Every successful individual knows that his or her achievement depends on a community of persons working together. "

-Paul Ryan

If I had to choose one thing,the impact I'd leave on the department is one of community.

As Tanisha said, building a friendly and sociable community within the department should result in an enjoyable study environment. In the long term I'd like to establish a link with industry leaders via the committee, through which students will eventually use the committee as a platform to apply for internships - "a foot in the door" seems to be vital nowadays.

I envision the treasurer role of the Earth Sciences Society as more than just begging for money. It's about raising the Earth Science Society's profile within industry by connecting the academic pipeline to industry. Industry needs our graduates be suitably skilled and therefore we need to keep up to date with the ever changing skills requirements as we enter the 4th Industrial revolution. Networking is the new CV. Field trips with a crossover of industry and academic staff / students is the best way to network. Using my GSSA and industry contacts, I hope to organise and part fund an annual industry/academic geology field trip to facilitate fun and interesting outings with networking opportunities for the student body.

Humans of Geology

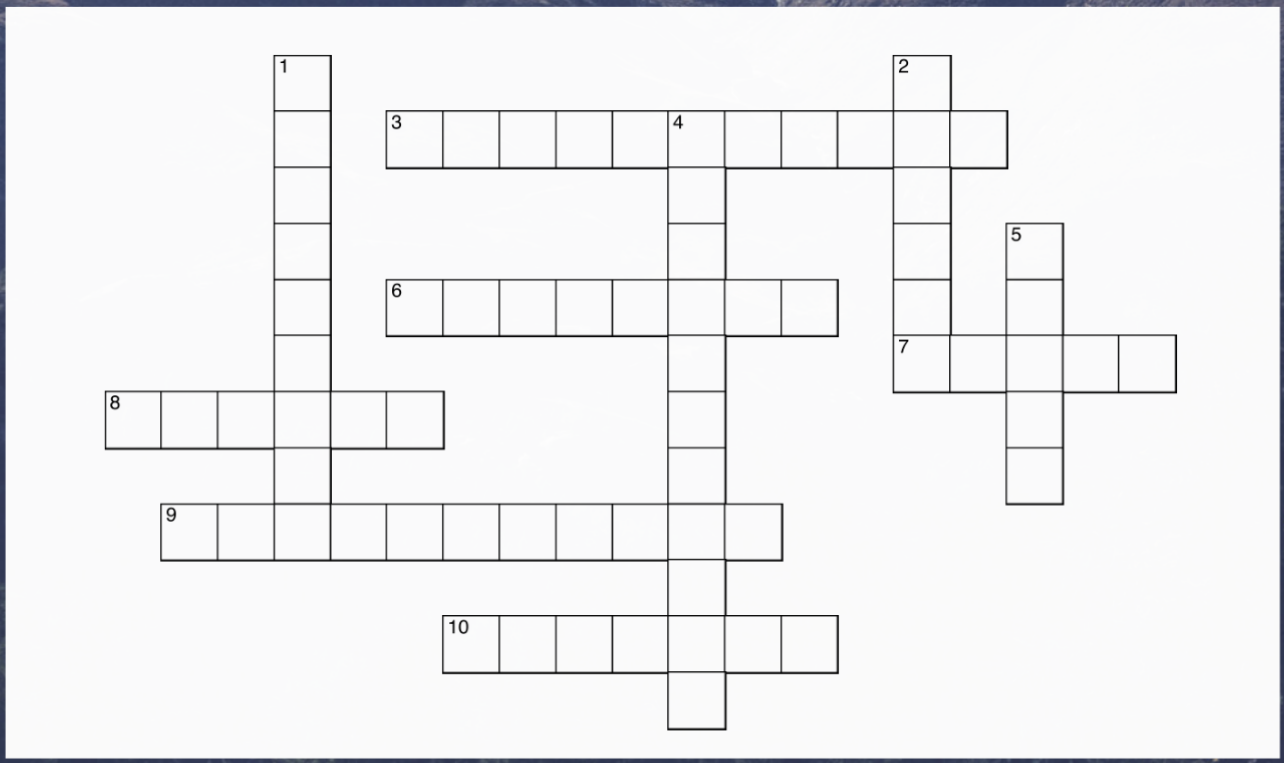
A crossword puzzle

ACROSS

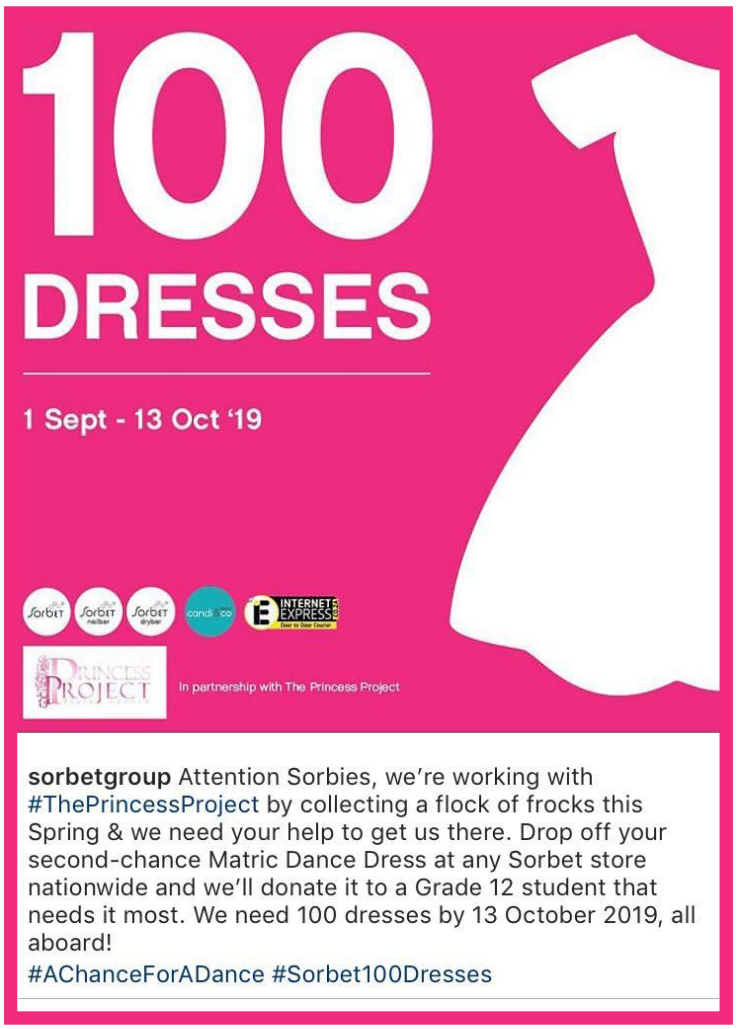
3 Scottish geologist, uniformitarianism
6 Italian geologist, Lochness monster
7 British geologist, first to describe pseudotachylite
8 American taphonomist/sedimentologist, Moros Intrepidus
9 Australian geologist, Australian Academy of Science
10 British geologists, The Great Rift Valley

DOWN

1 American geologist, founder of planetary science
2 First woman to be elected a fellow of the Geological Society of America
4 Dante's Peak
5 American geologist, map of Atlantic Ocean floor



Created by Tanisha Schultz



APOLOGY LETTER

Hi all,

With regards to what occurred during the last departmental braai, I would like to sincerely apologize for the lack of judgement and foresight exercised by myself, Francois Burger. I would like to extend my apologies in particular to Prof Alex Kisters and Mr George Olivier who had put their trust in the ESSEC to host an uneventful braai.

Francois Burger

THE GEODE TEAM

Meet the gems behind The Geode. Here are their responses to the question ***"What did you want to be when you grew up?"***

EDITOR

TAHNEE OTTO

TANISHA SCHULTZ

"I actually wanted to be a firewoman."

LIAM QUINLAN

"A gallant knight! As you can imagine, the modern career prospects turned out to be somehwat dismal."

FRANCOIS BURGER

"I wanted to be a policeman when I was young."

LAYOUT & DESIGN

BIANCA OOSTHUIZEN

"I wanted to do whatever Lara Croft does."