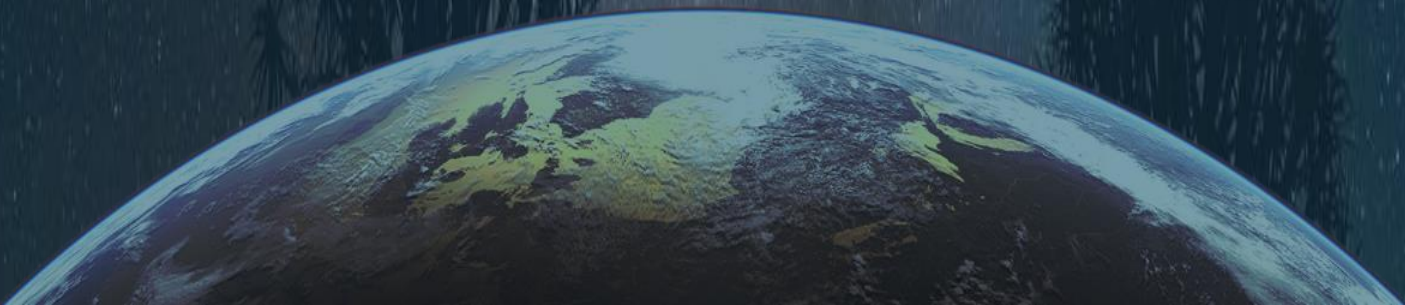




SSAG

SOCIETY OF SOUTH AFRICAN GEOGRAPHERS



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FOREWORD

After nearly three difficult years of navigating COVID-19 lockdowns and varying levels of restrictions, I think we are all very relieved that things have returned to a relative state of normality. Of course this is what is being termed a ‘new normal’ – we are now all far more adept at using Zoom and Teams to meet with one another, hybrid conferences allow us minimize our air miles and squeeze in our presentations during lecturing terms, and for many of us our approaches for geographical research have evolved. Indeed, many members of the SSAG have been at the forefront of helping to develop these new approaches to geographical research and teaching, and this newsletter captures many of these achievements. A few key highlights from the society are discussed below.

Biennial and Student Conference: University of Pretoria 2022

In an attempt to get back in sync with our biennial conferences, the University of Pretoria kindly agreed to host the Biennial Academic and Annual Student Conference in September of 2022. The academic conference was very successfully hosted in hybrid format, with active engagement from both the in-person and the online participants. The students conference was hosted online, allowing a wide range of Honours and Masters students from across South Africa to take part in a conference at almost no cost. We convey a heartfelt thanks to Prof Serena Coetzee, Prof Nerhene Davis, Prof Greg Breetzke, Dr JJ Gregory, Dr Victoria Rautenbach, Mrs Corne van Aardt, Ms Azile Mdleleni and the rest of their team of student assistants.

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At the Gala dinner, the gold medals and fellowships were officially awarded. Congratulations again to the gold medal recipients, Prof Clinton van der Merwe and Prof Serene Coetzee (both UP), and to the new fellows of the SSAG, Prof Luke Sandham (NWU), Prof Ronnie Donaldson (Stellenbosch) and Prof Trevor Hill (UKZN).

The Biennial General Meeting took place during the conference in hybrid format. Prof Zarina Patel was elected to the position of President-Elect. We congratulate her, and thank her for her service to the society.

There will not be a full conference proceedings from the University of Pretoria conference as too few submissions were received – those that did come in are under consideration for publication in the South African Geographical Journal. The proceedings from the Rhodes 2021 conference were very kindly finalised by Prof Luke Sandham, and are available on the SSAG website.

South African Geographical Journal

The SAGJ continues to be successfully led by the two editors-in-chief Prof David Hedding and Prof Ashley Gunter, responsible for physical and human geography submissions respectively. The editors-in-chief have reported to council the change in Taylor and Francis Policy in removing limits on page numbers for each issue of the journal, providing greater latitude. The journal has maintained a relatively stable acceptance rate of 28%, and currently has an impact factor of 1.662. The editors-in-chief are currently calling for nominations for members of the editorial board.



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Writing Workshop

Dr Adrian Nel and Prof Onesimo Mutanga ran another very successful writing workshop during the 2022 University of Pretoria SSAG conference. A total of nine participants were accepted to the workshop, and seven attended. The organisers have noted a decline in participation from students working in the fields of physical geography, and encourage supervisors to make their students aware of this opportunity.

Students and New Professionals Group

The Students and New Professionals Group, currently chaired by Dr JJ Gregory, has had a very successful year running a series of online webinars and hosting an in person social event at the SSAG conference at the University of Pretoria. The group has allowed for a sense of community to develop between students, postdoctoral fellows and early career researchers who are members of the society, and their hard work in this regard is much appreciated.

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STELLENBOSCH UNIVERSITY

The Department of Geography and Environmental Studies in the oldest Department to teach and conduct research in Geography in sub-Saharan Africa. The history of South African geography is the history of Geography at Stellenbosch. Taught as a school subject since 1839, geography evolved into an independent university subject in 1914. The curricular foundation was matured by Dutch Professor Piet Serton upon his 1920 appointment as the first Professor of Geography at Stellenbosch and indeed in South Africa. Serton was chairman until his retirement in 1958 and led the discipline through its 'foundational phase'. From 1920 to 1963, geography was a Bachelor of Arts subject only, since the discipline was initially placed within the Arts Faculty. However, instruction in geography also formed part of natural and economic sciences degrees.

In 1959, Serton was succeeded by Andries Nel, who spearheaded a fundamental, research-driven transformation of the discipline. In 1963, geography became a fully-fledged Bachelor of Science and, in 1970, a Bachelor of Economics subject. With increasing numbers the staff contingent reached a total of nine in 1982 during this 'research development phase'. A series of books, atlases and a notable volume of research articles led to five South African Academy of Science and Arts awards to departmental staff over the years – the most to any single geography department in South Africa. The Department published its own academic journal (South African Journal of Geography) and established its research arm in the Institute for Cartography (later Centre for Geographical Analysis) in 1975; that was the forerunner of the present expertise in geographical information technology (GIT).

The department was initially housed in the Old Main Building, but expanding student and staff numbers necessitated a move to the Natural Sciences building in 1963. From the 1970s the Department invested in and became the South African seat of expertise and infrastructure in cartography, geographical information systems (GIS) and satellite remote sensing.

Since the 1990s trends in the tertiary education sector combined to alter the structure of the geography department fundamentally, during what can be called its 'geographical technology phase'. In 1995 the department altered its name to Geography and Environmental Studies, an independent GIS laboratory was established and the Institute was transformed into a virtual entity – the Centre for Geographical Analysis – with substantial investment, from its own funds, in GIT infrastructure. The Departmental library was amalgamated with the central library in 2003 and, in 2007, the department was amalgamated with the then Department of Geology to form a 'cross-cutting entity' sited in the Chamber of Mines Building. This brief interlude failed to deliver the academic synergies envisaged and the independent Department of Geography and Environmental Studies was reinstated in the same building from 2010.

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The rejuvenated department underwent major expansion during 2009 through two initiatives: a university Overarching Strategic Plan (OSP) award allowing the addition of three academic staff in its GIT division and the incorporation of a new and externally funded Centre for Urban and Regional Innovation and Statistical Exploration (CRUISE) to swell the staff ranks to 14 academic and three support staff.

During its 103 year history as an independent department Geography was led by a remarkably small contingent of professors who achieved considerable prominence in South African Geography. Its influence as a research generator and doctorate incubator extends widely. Geography and Environmental Studies continues its tradition of academic excellence in its newly expanded format. These current staff member take forward this ambition.

***N**ame of department:*

- Department of Geography and Environmental Studies

***H**ead of department:*

- **Professor Gustav Visser**; Urban geography; tourism geography. gvisser@sun.ac.za 021 808 3103

Information about the Geographers and their area of specialisation in the department:

- Prof Ronnie Donaldson; Urban social geography and tourism studies, SA city structure and changes, Tourism landscapes in the countryside, Residential desegregation in SA cities. rdonaldson@sun.ac.za 021 808 2395
- Dr Manfred Spocter; Senior Lecturer - Small-town geographies; Suburban geographies; Geographies of naming; Public space geographies. mspocter@sun.ac.za 021 808 3095.
- Dr Samantha Williams; Lecturer - Natural Resources, Livelihoods and Governance. samanthawilliams@sun.ac.za 021 808 4975.
- Dr Suzanne Grenfell; Senior Lecturer - Processes of sediment transport in rivers and wetland; Processes of wetland formation Quaternary sedimentology of wetlands; Impact of climatic variability and climate change on geomorphic processes; Geomorphology of estuaries and coastal wetlands. sgrenfell@sun.ac.za 021 808 3105
- Dr Jan De Waal; Lecturer - Climate change; Flooding risk assessment; Urban risk research with a particular focus on informal settlements. janniedw@sun.ac.za 021 808 3108

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Geographers continued:

- Prof Adriaan Van Niekerk; Professor and Director of CGA - GIT, Spatial decision support systems. avn@sun.ac.za 021 808 3101
- Dr Eric Mashimbye ; Lecturer - Remote Sensing, Geoinformatics, Agronomy. ericm@sun.ac.za 021 808 9702
- Dr Jaco Kemp; Senior Lecturer - Earth Observation, Synthetic Aperture Radar, Photogrammetry. jkemp@sun.ac.za 021 808 9147.
- Mr Kyle Loggenberg ; Lecturer - high-dimensional data in precision agriculture, crop water stress detection, and proximal remote sensing. kyleloggenberg@sun.ac.za 021 808 3218.
- Mr Curtis Bailey; Lecturer - spatial/statistical modelling of geographic, climatic, ecological and social phenomena. cbailey@sun.ac.za 021 808 3218.
- Dr Danie Du Plessis; CRUISE Director Urban & Regional Planner/Senior Lecturer - Urban planning systems, Urban transformation, Spatial analysis and Modelling of cities and urban systems. ddp@sun.ac.za 021 808 3126
- Dr Herman Geyer; CRUISE - Town & Regional Planner/ Lecturer - Complexity theory; Urban systems; Economic geography. hsgeyerjr@sun.ac.za 021 808 3107.
- Ms Lodene Willemse ; CRUISE Lecturer - Urban and Human Geographer. lodene@sun.ac.za 021 808 9103.
- Dr Anele Horn; CRUISE - Town and Regional Planner/ Senior Lecturer - Urban & regional planning; Development frameworks; Urban growth management / monitoring. anelehorn@sun.ac.za 021 808 9181.
- Mr Garth Stephenson; CGA Manager, GIS & EO analyst - Mapping irrigated areas from earth observation imagery, geographic object-based image analysis, automated land cover / use classification, expert-system, ruleset classification. garth@sun.ac.za 021 808 3112.
- Mr Theo Pauw ; CGA Technical officer, GIS & EO analyst - Remote Sensing: GEOBIA, classification, automation, radar, photogrammetry, pre-processing, GIS: Web-based GIS, cartography. theopauw@sun.ac.za 021 808 3112.
- Ms Jessica Eichhoff ; CGA short course manager, GIS operator & Social media coordinator - Cartography; Digital elevation modelling. eichhoffj@sun.ac.za 021 808 3112.
- Ms Zani Mouton ; CGA GIS & EO operator - Automated land cover/use classification; Applications of machine learning to GIS/remote sensing; Applications of GIS to agriculture; Programming and scripting; Education and teaching. zanimouton@sun.ac.za 021 808 3112.

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Geographers continued:

- Prof Helen De Klerk; Associate Prof - GIS, Spatial analysis, biogeography, species modelling, fire ecology. hdeklerk@sun.ac.za 021 808 9322.
- Dr Zahn Munch; Senior Lecturer - GIS; Spatial decision making. zmunch@sun.ac.za 021 808 9101
- Mr Juan du Plessis; CGA GIS & EO operator - Machine learning assisted projects Water dynamics Digital soil mapping. juandup@sun.ac.za 021 808 3112.
- Mr James Kapp; CGA GIS & EO operator - Programming and scripting Web & App development Climate Modelling. jkapp@sun.ac.za 021 808 3112.
- Ms Caley Higgs; CGA GIS & EO operator - Machine learning Remote sensing GIS. chiggs@sun.ac.za 021 808 3112.
- Mr H Mostert; CGA Operational Manager - Terrain analysis. hanu@sun.ac.za 021 808 3112.
- Dr Tara Southey; Post-doctoral researcher - Climate modelling. tara@sun.ac.za 021 808 2697

Exciting departmental news:

The Department had many highlights during 2022. Here are a few of them.

The Department awards three prizes at the Honours level to top achievers.

- Best BA Honours student in 2022 – Ms Carli van Zyl
- Best BSc Honours student in 2022 – Mr Sean Chater
- Best overall Honours Research Project (W.A. Nieman Prize) in 2022– Ms Carli van Zyl.

In terms of National recognition of research excellence the Society of South African Geographers elected Prof Ronnie Donaldson as a Fellow.

A number of researchers and friends of the Department visited during 2022. These include:

1. Dr András Trócsányi, - Dean of Science at the University of Pécs
2. Professor Sam Agyei-Mensah - Department of Geography and Resource Development, University of Ghana.
3. Dr Ruth Massey - School of Applied Sciences, University of Huddersfield

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Departmental news continued:

4. Assistant Professor Corrine Cash - Department of Geography and Environment, Mount Allison University, Canada
5. Dr James Gregory - University of Pretoria
6. Dr Gretha Groeneveld - University of Pretoria
7. Dr Chris Holdridge - North-West University
8. Dr Adriaan van der Walt - University of the Free State
9. Dr Hannah Herrero - University of Tennessee
10. Professor Mark Read - United States Military Academy West Point

The Department also holds monthly Coffee Talks, an informal discussion with fellow staff members and research students concerning their latest research followed by coffee and eats. A number of these events took place and can be followed on our Facebook page.

The Department has an active social media footprint with loads of additional news and photos and many other events throughout the year. Follow us at [Department of Geography & Environmental Studies, Stellenbosch University | Stellenbosch | Facebook](#)

The Department houses the **Centre for Geographical Analysis (CGA)** that provides a range of consulting services to both Stellenbosch University, the general public and State institutions. Recent commissioned work includes the National Water Use Quantification of Indigenous Forests Project.

South Africa (SA) is classified as a water-scarce country, with an estimated 21% of SA considered arid and 44% regarded as semi-arid. The competition for water resources among land uses is high, with the chief competitors being urban settlements, agriculture, and forestry. In an ongoing WRC project (K5/2966//4), Earth observation (EO) methods are being used to quantify the water use of different commercial forest genera, as well as among different plantation ages, species and regions (see Plantation forest and water use). Such information is not only critical for water resource management, but also for forestry as it will inform stream-flow reduction activities (SFRA). But SFRA decisions cannot be made unless the water use of other vegetation, such as indigenous forestry, is considered. As our research on commercial forest water use calculation from EO data, this project aims to use evapotranspiration (ET) data generated using EO methods to assess water use of indigenous forests. This will enable water use comparisons of variations among forest types, regions, landforms, soils, and seasons. In addition, it will allow for direct comparison with water use estimations of commercial forest plantations and other land uses (e.g., agriculture), which will be critical for informing future stream-flow reduction activities and decisions.

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2022 List of publications:

Departmental news continued:

The Department, through the CGA, also acts as a commercial business incubator for various entities focused on spatial data creation and analysis. TerraClim is the latest product (spin-off company) of this endeavour.

The TerraClim project, originally funded by Winetech and now established as a commercial entity, integrates high-resolution climatic and topographic spatial datasets at a vineyard scale and disseminates these datasets via an online spatial decision support system. The aim of TerraClim is to aid farmers and industry in long-term (e.g. establishment of new vineyards) and seasonal decision-making (e.g. compliment phenology, canopy growth, ripening, yield development monitoring). The back end of the project includes identifying areas suitable for new weather stations placement to improve climate modelling; automated data weather station data ingestion, cleaning, gap filling and rescaling of data dating back 60 years from multiple sources; spatial interpolation of climate surfaces covering key agricultural areas in the Western Cape over seven seasons. More information can be found at www.terraclim.co.za.

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Publications continued:

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MOKHELE M, GEYER HS. A theoretical foundation for investigating the spatial economic attributes of airport-centric developments. *Bulletin of Geography* 2021; **54**:21-31.

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MUCINA L, LOTTER MC, RUTHERFORD MC, VAN NIEKERK A. Forest biomes of southern Africa. *New Zealand Journal of Botany* 2022; **60**(4):377-428.

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- NELL CM, SCHENCK C, DE WAAL JH. Waste characterisation in Stellenbosch Local Municipality, South Africa. *South African Journal for Science and Technology /Suid-Afrikaanse Tydskrif vir Natuurwetenskap en Tegnologie* 2022; **118**(1):Art. #12795, 12 pages.
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- SHEBURAH ESSIEN R, SPOCTER MA. Overcoming Obstacles to the Integration of Informal Actors in Accra's Open-Air Marketplaces. *Urban Forum* 2023; **34**:79-97.
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- SPOCTER MA. 'I dont know why we have gated developments in Ceres': crime, fear, and gated developments in nonmetropolitan towns in the Western Cape province, South Africa. *African Geographical Review* 2022; **41**(3):350-363.
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Publications continued:

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WILLIAMS L, LUCK-VOGEL M. Geographic information system data considerations in the context of the enhanced bathtub model for coastal inundation. *Transactions in GIS* 2022; **26**(7):3074-3089.

VON FINTEL MW, KEMP JN. Small dams: determining the minimum waterbody surface area that can be successfully detected using Sentinel-1 SAR imagery. *South African Journal of Geomatics (formerly South African Journal of Surveying and Geo-Information)* 2022; **11**(2):290-309.

WIENER KD, SCHLEGEL P K, GRENFELL SE, VAN DER WAAL B. Contextualising sediment trapping and phosphorus removal regulating services: a critical review of the influence of spatial and temporal variability in geomorphic processes in alluvial wetlands in drylands. *Wetlands Ecology and Management* 2022; **30**:737-770.

YAKUBU I. From a cluster of villages to a city: Housing politics and the dilemmas of spatial planning in Tamale, Ghana. *Land Use Policy* 2021; **109**:105668, 11 pages.

ZU ERMGASSEN E, LIMA MGB, BELLFIELD H, DONTENVILLE A, GARDNER TA, GODAR J, HAILMYAR R, INDENBAUM R, DOS REIS TNP, RIBEIRO V, ABU I-O, SZANTOI S, MEYFROIDT P. Addressing indirect sourcing in zero deforestation commodity supply chains. *Science Advances* 2022; **8**(17):eabn3132, 15 pages.

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SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

STELLENBOSCH UNIVERSITY

Publications continued:

Proceedings National

CREIGHTON AT, WILLEMSE L. *Determining the socio-demographic and socio-economic factors influencing the the selection of the mode of transport to work in the City of Johannesburg and City of Tshwane.* In: Sandham LA, Hansen C, Meiklejohn KI (eds.) Proceedings of the 2021 Joint Biennial Conference of the Society of South African Geographers and the Southern African Association of Geomorphologists, Makhanda, South Africa, Rhodes University 2022: 34-52.

KRUGER CJ, WILLEMSE L. *Applying the City Development Index (CDI) to measure the quality of life in the local municipalities of the Northern Cape between 2001 and 2011.* In: Sandham LA, Hansen C, Meiklejohn KI (eds.) Proceedings of the 2021 Joint Biennial Conference of the Society of South African Geographers and the Southern African Association of Geomorphologists, Makhanda, South Africa, Rhodes University 2022: 1-7.

MARCUS T, SPOCTER MA. *Household hydro-resilience in a middle-class suburb during a water crisis in Cape Town, South Africa.* In: Sandham LA, Hansen C, Meiklejohn KI (eds.) Proceedings of the 2021 Joint Biennial Conference of the Society of South African Geographers and the Southern African Association of Geomorphologists, Makhanda, South Africa, Rhodes University 2022: 101-114.

VILJOEN VA, SPOCTER MA. *An exploratory foray into visual street art and graffiti in South African cityscapes.* In: Sandham LA, Hansen C, Meiklejohn KI (eds.) Proceedings of the 2021 Joint Biennial Conference of the Society of South African Geographers and the Southern African Association of Geomorphologists, Makhanda, South Africa, Rhodes University 2022: 30-45.

Chapters in Books

MISTRY A, SPOCTER MA. *Production of Edibles and Use of Garden Waste in Domestic Gardens of a Middle-Class Suburb in Cape Town, South Africa.* In: Hardy MJ (ed.) *Exploring Food and Urbanism*, Routledge, Oxon, United Kingdom, 2022: 97-115.

SPOCTER MA. *Transitions in postage stamp iconography from apartheid to democracy in South Africa.* In: Brunn SD (ed.) *Stamps, Nationalism and Political Transition*, Routledge, New York, USA, 2022: 159-172.

Research Reports

DOGAN D, POUCH M, MANDAKOVA T, HLOUSKOVA P, GUO XINYI, WINTER P, CHUMOVA Z, VAN NIEKERK A, MUMMENHOFF K, AL-SHEHBAZ IA, MUCINA L, LYSAK MA. *Corrigendum: Evolution of tandem repeats is mirroring post-polyploid cladogenesis in Heliophila (Brassicaceae).* 2022: 2 pp.

NELL C, SCHENCK C, DE WAAL JH. *Waste characterisation in Stellenbosch Local Municipality, South Africa.* 2022: 12 pp.

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Publications continued:

Doctoral completed

IIRMDU TO. *A chaos theory approach to understanding the impact of the COVID-19 pandemic on tourism businesses in Plateau State, Nigeria*. PhD, 2022. 292 pp. Promotor: DONALDSON SE.

MAFAME T. *Beyond procedural planning: Advancing the exploration of placemaking for urban public space improvements in South Africa*. PhD, 2022. 300 pp. Promotor: HORN AJ.

ZWEIG PJ. *Deconstructing vulnerability: Exploring the lives of young black men in urban informal settlements*. PhD, 2022. 262 pp. Promotor: VISSER GE.

Masters completed

DE FREITAS C. *Event- and seasonal-scale sedimentation patterns within a clastic discontinuous valley-bottom wetland: implications for phosphate retention*. MSc, 2022. 99 pp. Studieleier: GRENPELL SE.

MOUTON R. *Regional mapping of crops under agricultural nets using sentinel-2*. MSc, 2022. 125 pp. Studieleier: VAN NIEKERK A.

MSc and PhD graduations and supervisors:

Zani Mouton, MSc Geo-informatics. Supervisor; Prof A van Niekerk

Catherine-Rose De Freitas, MSc Geography & Environmental studies. Supervisor; Dr S Grenfell.

Siphumelele Mqadi, Masters in Regional Planning. Supervisor; Dr A Horn.

Kholofelo Radingoana, Masters in Regional Planning. Supervisor; Dr A Horn.

Edroy Christians, Masters in Regional Science. Supervisor; Dr H Geyer.

Thendo Mafame, PhD Urban & Regional Planning. Supervisor; Dr A Horn.

Tina Iirmdu, PhD Geography & Environmental studies. Supervisor; Prof R Donaldson.

T Maram, PhD Geography & Environmental studies. Supervisor; Dr A Horn.

Trish Zweig, PhD Geography & Environmental studies. Supervisor; Prof G Visser.

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SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

STELLENBOSCH UNIVERSITY

2022 student numbers:

Link to departmental webpage:

First year :	406
Second year:	470
Third year:	399
Honours:	38
Master's (Cruise incl.):	52
Doctoral (Cruise incl.): :	41

www.sun.ac.za/geography

Changes to their curriculum or course offerings:

A new BSc Honours Physical Geography programme will commence in 2024. Applications for this course of study are now open. (Contact Dr Suzanne Grenfell at sgrenfell@sun.ac.za)

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Name of department:

- Geography Environmental Management and Energy Studies

Head of department:

- Dr. Schoeman DC Lecturer; Waste management, recycling, e-waste & teachers training theas@uj.ac.za 011 559 3226

Information about the Geographers and their area of specialisation in the department:

- Mrs. Block EK; Lecturer- Human Geography & Environmental Education eblock@uj.ac.za 011 559 2173
- Prof. Curtis C; Professor- Biogeochemistry & Aquatic Science cjcurtis@uj.ac.za 011 559 4745
- Ms. Greenberg D; Lecturer- Physical and Environmental Geography dgreenberg@uj.ac.za 011 559 4799
- Prof. Hoogendoorn G; Associate Professor- Tourism Geography ghoogendoorn@uj.ac.za 011 559 4628
- Dr. Kambule N; Lecturer- Energy Studies nkambule@uj.ac.za 011 559 4423
- Prof. Kelso C; Associate Professor - Climate and Environmental History Rural livelihood vulnerability Impacts of climate change on rural livelihoods Environmental ethics and justice Historical climatology ckelso@uj.ac.za 011559 2432
- Mr. Kganyago M; Lecturer - GIS & Remote Sensing mahlatsek@uj.ac.za 011 559 3645
- Dr. Langerman K; Senior Lecturer- Energy Studies, Air Quality Management klangerman@uj.ac.za 011 559 2439
- Dr. Modley L; Senior Lecturer- Environmental Monitoring and Management lee-annm@uj.ac.za 011 559 3928
- Prof. Musakwa W; Associate Professor wmusakwa@uj.ac.za 011 559 2428
- Dr. Mushawemhuka WJ; Lecturer- Tourism and Climate change GIS & Remote sensing williamjm@uj.ac.za 011 559 3889
- Ms. Rabumbulu M; Lecturer- Geomorphology mrabumbulu@uj.ac.za 011 559 3302



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Geographers continued:

- Prof. Rampedi I; Associate Professor- Environmental Management isaacr@uj.ac.za 011 559 2429
- Dr. Sinthumule I; Senior Lecturer- Transfrontier Conservation, Environmental Conservation and Society Border Studies, Environmental Geography, Land Reform and Political Ecology & Traditional ecological knowledge isinthumule@uj.ac.za 011 559 3810
- Ms. Stockigt L; Lecturer- Human Geography lstockigt@uj.ac.za 011 559 4452
- Prof. Tesfamichael SG; Associate Professor- GIS & Remote Sensing sgtesfamichael@uj.ac.za 011 559 3927
- Prof. Yessoufou K; Associate Professor- Environmental Management kowiyouy@uj.ac.za 011 559 2434

Exciting departmental news:

Prof Walter Musakwa has joined the staff of GEMES. Prof Musakwa moved from Town and Regional Planning in FEBE to GEMES in Faculty of Science. GEMES is excited to welcome him as his research interests and teaching experience align well in the department. He has a background in geographic information science, sustainable urban planning, environmental change monitoring, climate change and sustainable livelihoods.

Prof Gijsbert Hoogendoorn (GEMES) published a book titled: "Climate Change and Tourism in Southern Africa"

Prof Kowiyou Yessoufou is now NRF rated C2 .

Prof Yessoufou (GEMES) gave an online public lecture to the department of Biology at North-Minzu University, Yinchuan city, China and spent 3 weeks in Umaru Yaradua University in Katsina State, Nigeria where he presented an additional public lecture

Dr Modley (GEMES) sat on the Panel of Experts at the UJ SDG Short learning program launch on 19 August 2022.

Dr Modley (GEMES) delivered a keynote speech at the Rotary South Africa Club for Women's Day

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Departmental news continued:

Dr Schoeman (GEMES) was invited to deliver a seminar on 21 July 2022 in Zurich, Switzerland on waste pickers role in e-waste recycling at ETH4D (a division of ETH Zurich university). She delivered two papers on the training of teachers in mapwork and GIS at the International Geography Union: Geography Education Commission Conference - Teaching Geography: Past and future challenges on 12-13 July 2022 in Rennes, France. Additionally, Dr Schoeman delivered a paper on how maps and map symbols can be used to teach sustainable development at the European Conference on Arts, Design and Education, on 7-10 July 2022, in Porto, Portugal.

Dr Kambule (GEMES) attended a community engagement event on 19 August 2022 for Mathematics and Science learners (Grade 10 - 12) at an underperforming high school in Soweto (Fidelitas Comprehensive school). The purpose of the event was to primarily encourage learners; share information about university entry requirements; funding and scholarships; and university lifestyle.

Prof Yessoufou (GEMES) and his students spent 1 week in Niani, Limpopo for data collection (left) Prof Musawkwa (GEMES) conducted research with Prof Gugerell from Boku University in Gonarezhou National Park and surrounding communities around Pafuri and Kruger National Park. Their research focuses on human wildlife values and perceptions.

Kyle Van Heyde a PHD student in Environmental Management (GEMES) has his first published work in 2022 Water and Sanitation Africa Magazine, his article can be found on page 24 .

2022/2023 List of publications:

Dlamini, S., Block, E. and Rampedi, I.T., 2022. Understanding students' environmental perceptions and some of their determinants in Gauteng province: a case study at the University of Johannesburg, South Africa. *South African Geographical Journal*, 104(1), pp.89-106

Niemann, H.J., Bezeng, B.S., Orton, R.D., Kabongo, R.M., Pilusa, M. and van der Bank, M., 2022. Using a DNA barcoding approach to facilitate biosecurity: Identifying invasive alien macrophytes traded within the South African aquarium and pond plant industry. *South African Journal of Botany*, 144, pp.364-376.

Malleka, T., Booyens, I. and Hoogendoorn, G., 2022. Urban Crime and Tourism: Curating Safety in Johannesburg Tourist Spaces. *African Journal of Hospitality, Tourism and Leisure*, 11(1), pp.46-59.

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UNIVERSITY OF JOHANNESBURG

Publications continued:

Abrahams, Z., Hoogendoorn, G. and Fitchett, J.M., 2022. Glacier tourism and tourist reviews: An experiential engagement with the concept of "Last Chance Tourism". *Scandinavian Journal of Hospitality and Tourism*, 22(1), pp.1-14.

Chanza, N. and Musakwa, W., 2022. Revitalizing indigenous ways of maintaining food security in a changing climate: review of the evidence base from Africa. *International Journal of Climate Change Strategies and Management*

Sinthumule, N.I., 2022. Gender and sacred natural sites: The role of women in sacred sites protection and management in Vhembe region, Limpopo Province of South Africa. *Global Ecology and Conservation*, 35, p.e02099.

Sinthumule, N.I. and Netshisaulu, K.H., 2022. Wetland Resource Use and Conservation Attitudes of Rural vs. Urban Dwellers: A Comparative Analysis in Thohoyandou, Limpopo Province, South Africa. *Water*, 14(8), p.1290.

Sinthumule, N.I., 2022. Conservation Effects of Governance and Management of Sacred Natural Sites: Lessons from Vhutanda in the Vhembe Region, Limpopo Province of South Africa. *International Journal of Environmental Research and Public Health*, 19(3), p.1067.

Milan, S., Lelario, F., Scrano, L., Ottati, C., Bufo, S.A. and Alpendurada, M.D.F., 2022. Detection of Eight Cannabinoids and One Tracer in Wastewater and River Water by SPE-UPLC-ESI-MS/MS. *Water*, 14(4), p.588

Dlamini, L.N. and Yessoufou, K., 2022. Residents and professionals' perspectives on energy and water consumption while transiting from conventional to sustainable housings in South Africa. *Sustainability*, 14(8), p.4498.

Lemanski, C., 2022. Infrastructural citizenship: conceiving, producing and disciplining people and place via public housing, from Cape Town to Stoke-on-Trent. *Housing studies*, 37(6), pp.932-954

T. Sindane, J. and S. Modley, L.A., 2022. The impacts of poor water quality on the residential areas of Emfuleni local municipality: a case study of perceptions in the Rietspruit River catchment in South Africa. *Urban Water Journal*, pp.1-11.

Yessoufou, K., Ambani, A.E., Elansary, H.O., El-Sabrou, A.M. and Shokralla, S., 2022. Time, mediated through plant versatility, is a better predictor of medicinal status of alien plants. *Diversity*, 14(4), p.286.

Shah, S.A., Husain, M., Rahman, N., Sohail, M., Khan, R., Alataway, A., Dewidar, A.Z., Elansary, H.O., Abu El Maati, L., Yessoufou, K. and Ullah, A., 2022. Insight into the Structural, Electronic, Elastic, Optical, and Magnetic Properties of Cubic Fluoroperovskites ABF₃ (A= Ti, B= Nb, V) Compounds: Probed by DFT. *Materials*, 15(16), p.5684.

Yessoufou, K., Muleba, I. and Rampedi, I.T., 2022. The Test of the Availability Hypothesis Reveals the Needs for Ex-Situ Conservation for Some Protected Area-Restricted Species. *Diversity*, 14(8), p.693.

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SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

UNIVERSITY OF JOHANNESBURG

Publications continued:

Tassadduq, S.S., Akhtar, S., Waheed, M., Bangash, N., Nayab, D.E., Majeed, M., Abbasi, S., Muhammad, M., Alataway, A., Dewidar, A.Z. and Elansary, H.O., 2022. Ecological Distribution Patterns of Wild Grasses and Abiotic Factors. *Sustainability*, 14(18), p.11117.

KC, B. and Leung, X.Y., 2022. Geocaching in Texas state parks: a technology readiness analysis. *Journal of Hospitality and Tourism Technology*, 13(1), pp.182-194.

Schoeman, D.C. and Rampedi, I.T., 2022. Drivers of Household Recycling Behavior in the City of Johannesburg, South Africa. *International Journal of Environmental Research and Public Health*, 19(10), p.6229.

Rampedi, I.T. and Ifegbesan, A.P., 2022. Understanding the determinants of pro-environmental behavior among South Africans: Evidence from a structural equation model. *Sustainability*, 14(6), p.3218.

N'Woueni, D.K. and Gaoue, O.G., 2022. Plant Diversity Increased Arthropod Diversity and Crop Yield in Traditional Agroforestry Systems but Has No Effect on Herbivory. *Sustainability*, 14(5), p.2942.

Horner, R., 2022. Beyond rebranding from international to global? Lessons from geographies of global health for global development. *Area*, 54(2), pp.159-167.

Habib, A., Husain, M., Sajjad, M., Rahman, N., Khan, R., Sohail, M., Ali, I.H., Iqbal, S., Khan, M.I., Ebraheem, S.A. and M. El-Sabrou, A., 2022. Insight into the exemplary physical properties of Zn-based fluoroperovskite compounds $XZnF_3$ (X= Al, Cs, Ga, In) employing accurate GGA approach: a first-principles study. *Materials*, 15(7), p.2669.

Moutouama, J.K. and Gaoue, O.G., 2022. Soil nitrogen mediates the effect of climatic distance on herbivory rates in a tropical herb. *Biotropica*, 54(3), pp.682-690.

Fanteso, B. and Yessoufou, K., 2022. Diversity and determinants of traditional water conservation technologies in the Eastern Cape Province, South Africa. *Environmental Monitoring and Assessment*, 194(3), p.161.

Moutouama, J.K. and Gaoue, O.G., 2022. Altitude-mediated soil properties, not geography or climatic distance, explain the distribution of a tropical endemic herb. *Ecology and Evolution*, 12(2), p.e8572.

Bonomo, M.G., Calabrone, L., Scrano, L., Bufo, S.A., Di Tomaso, K., Buongarzone, E. and Salzano, G., 2022. Metagenomic monitoring of soil bacterial community after the construction of a crude oil flowline. *Environmental Monitoring and Assessment*, 194(2), p.48

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UNIVERSITY OF JOHANNESBURG

Publications continued:

Boihang, M. and Yessoufou, K., 2022. Testing the expectancy-disconfirmation theory: Geography, employment status and household size of local communities determine their perspectives of a local mine business in South Africa. *PloS one*, 17(7), p.e0270815.

Magagula, B.K., Rampedi, I.T. and Yessoufou, K., 2022. Household Pharmaceutical Waste Management Practices in the Johannesburg Area, South Africa. *International Journal of Environmental Research and Public Health*, 19(12), p.7484.

Mamathaba, M.P., Yessoufou, K. and Moteetee, A., 2022. What Does It Take to Further Our Knowledge of Plant Diversity in the Megadiverse South Africa?. *Diversity*, 14(9), p.748.

Dlamini, S., Tesfamichael, S.G., Shiferaw, Y.A. and Mokhele, T., 2020. Socio-demographic determinants of place attachment in Gauteng, South Africa, using partial proportional odds models. *GeoJournal*, pp.1-17.

Mathetsa, S.M., Simatele, M.D. and Rampedi, I.T., 2022. A Water-Centric Approach in the Assessment and Governance of the Water-Energy-Climate Change Nexus in South Africa. *Front. Sustain. Food Syst.* 6: 691704. doi: 10.3389/fsufs

Fundisi, E., Tesfamichael, S.G. and Ahmed, F., 2022. A combination of Sentinel-1 RADAR and Sentinel-2 multispectral data improves classification of morphologically similar savanna woody plants. *European Journal of Remote Sensing*, 55(1), pp.372-387.

Mamathaba, M.P., Yessoufou, K. and Moteetee, A., 2022. What Does It Take to Further Our Knowledge of Plant Diversity in the Megadiverse South Africa?. *Diversity*, 14(9), p.748.

Phogole, B. and Yessoufou, K., 2022. Biodiversity and economy but not social factors predict human population dynamics in South Africa. *Sustainability*, 14(14), p.8668.

Malapane, O.L., Musakwa, W., Chanza, N. and Radinger-Peer, V., 2022. Bibliometric Analysis and Systematic Review of Indigenous Knowledge from a Comparative African Perspective: 1990–2020. *Land*, 11(8), p.1167.

Ifegbesan, A.P., Rampedi, I.T., Ogunyemi, B. and Modley, L.A., 2022. Predicting Pro-Environmental Behaviour amongst Citizens in African Countries: A Cross-National Study amongst Six African Countries. *Sustainability*, 14(15), p.9311.

Bartosiewicz, B. and Marcinczak, S., 2022. Urban structure in transition: evidence from Poland, 1983–2011. *Regional studies*, 56(1), pp.36-47.

Pram, W., Kambule, N. and Adepoju, O., 2022. Probing the Financial Sustainability of Eskom's Open Cycle Gas Turbines (OCGTs) Utilisation (2018–2021). *Sustainability*, 14(16), p.9987.

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SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

UNIVERSITY OF JOHANNESBURG

Publications continued:

Horner, R., 2021. Global value chains, import orientation, and the state: South Africa's pharmaceutical industry. *Journal of International Business Policy*, pp.1-20.

Phogole, B., Kelso, C. and Langerman, K.E., 2022. The effectiveness of household energy transition interventions in a coal-using community on the South African Highveld. *Energy for Sustainable Development*, 71, pp.1-12.

Hammett, D., 2022. Governmentality and comic propaganda: Mighty Man, the black superhero of apartheid. *Political Geography*, 99, p.102742.

Ndou, V. and Rampedi, I.T., 2022. Bibliometric Analysis of Municipal Solid Waste Management Research: Global and South African Trends. *Sustainability*, 14(16), p.10229.

Schoeman, D.C. and Rampedi, I.T., 2022. Household recycling and Millennials: A case study of the city of Johannesburg, South Africa. *Development Southern Africa*, 39(6), pp.813-829.

Hassan, M., Haq, S.M., Ahmad, R., Majeed, M., Sahito, H.A., Shirani, M., Mubeen, I., Aziz, M.A., Pieroni, A., Bussmann, R.W. and Alataway, A., 2022. Traditional Use of Wild and Domestic Fauna among Different Ethnic Groups in the Western Himalayas—A Cross Cultural Analysis. *Animals*, 12(17), p.2276.

Hassan, M., Haq, S.M., Majeed, M., Umair, M., Sahito, H.A., Shirani, M., Waheed, M., Aziz, R., Ahmad, R., Bussmann, R.W. and Alataway, A., 2022. Traditional food and medicine: ethno-traditional usage of fish Fauna across the valley of Kashmir: a western Himalayan Region. *Diversity*, 14(6), p.455.

Rafiq, S., Wagay, N.A., Elansary, H.O., Malik, M.A., Bhat, I.A., Kaloo, Z.A., Hadi, A., Alataway, A., Dewidar, A.Z., El-Sabrou, A.M. and Yessoufou, K., 2022. Phytochemical Screening, Antioxidant and Antifungal Activities of *Aconitum chasmanthum* Stapf ex Holmes Wild Rhizome Extracts. *Antioxidants*, 11(6), p.1052.

Khoja, A.A., Haq, S.M., Majeed, M., Hassan, M., Waheed, M., Yaqoob, U., Bussmann, R.W., Alataway, A., Dewidar, A.Z., Al-Yafarsi, M. and Elansary, H.O., 2022. Diversity, Ecological and traditional knowledge of pteridophytes in the western Himalayas. *Diversity*, 14(8), p.628.

Chavan, S.B., Dhillon, R.S., Sirohi, C., Keerthika, A., Kumari, S., Bharadwaj, K.K., Jinger, D., Kakade, V., Chichaghare, A.R., Zin El-Abidin, T.K. and Mahmoud, E.A., 2022. Enhancing Farm Income through Boundary Plantation of Poplar (*Populus deltoides*): An Economic Analysis. *Sustainability*, 14(14), p.8663.

Khan, H., Sohail, M., Khan, R., Raman, N., Ullah, A., Khan, A., Alataway, A., Dewidar, A.Z., Elansary, H.O. and Yessoufou, K., 2022. Theoretical Investigations into the Different Properties of Al-Based Fluoroperovskite AlMF₃ (M= Cr, B) Compounds by the TB-MBJ Potential Method. *Materials*, 15(17), p.5942.

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SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

UNIVERSITY OF JOHANNESBURG

Publications continued:

- Hadi, A., Singh, S., Rafiq, S., Nawchoo, I.A., Wagay, N.A., Mahmoud, E.A., El-Ansary, D.O., Sharma, H., Casini, R., Yessoufou, K. and Elansary, H.O., 2022. In Vitro Propagation of *Aconitum violaceum* Jacq. ex Stapf through Seed Culture and Somatic Embryogenesis. *Horticulturae*, 8(7), p.599
- Maboa, R., Yessoufou, K., Tesfamichael, S. and Shiferaw, Y.A., 2022. Sizes of atmospheric particulate matters determine the outcomes of their interactions with rainfall processes. *Scientific Reports*, 12(1), p.17467.
- Khan, H., Sohail, M., Rahman, N., Khan, R., Hussain, M., Ullah, A., Khan, A., Alataway, A., Dewidar, A.Z., Elansary, H.O. and Yessoufou, K., 2022. Computational Study of Elastic, Structural, Electronic, and Optical Properties of GaMF₃ (M= Be and Ge) Fluoroperovskites, Based on Density Functional Theory. *Molecules*, 27(16), p.5264
- Ishtiaq, M., Waqas Mazhar, M., Maqbool, M., Alataway, A., Dewidar, A.Z., Elansary, H.O. and Yessoufou, K., 2022. Application of Smart Agricultural Practices in Wheat Crop to Increase Yield and Mitigate Emission of Greenhouse Gases for Sustainable Ecofriendly Environment. *Sustainability*, 14(16), p.10453.
- Sanwlan, N., Evans, C.D., Müller, M., Cherukuru, N. and Martin, P., 2022. Rising dissolved organic carbon concentrations in coastal waters of northwestern Borneo related to tropical peatland conversion. *Science Advances*, 8(15), p.eabi5688.
- Peter, S., Kambule, N., Tangwe, S. and Yessoufou, K., 2022. Quantification of the Impact of Solar Water Heating and Influence of Its Potential Utilization through Strategic Campaign: Case Study in Dimbaza, South Africa. *Energies*, 15(21), p.8283.
- Masebinu, R.O. and Kambule, N., 2022. Electricity consumption data of a middle-income household in Gauteng, South Africa: Pre and Post COVID-19 lockdown (2019-2021). *Data in Brief*, 43, p.108341.
- Mushawemhuka, W., Fitchett, J.M. and Hoogendoorn, G., 2022. Stakeholder perceptions of climate change threats to the Zimbabwean nature-based tourism sector. *Environmental Development*, 44, p.100779.
- Gaeattholwe, V.T. and Langerman, K.E., 2022. The land use impact of renewable energy sprawl in South Africa. *South African Geographical Journal*, pp.1-19.
- Peck, S. and Hammett, D., 2022. 'Our citizenship is being prostituted': The everyday geographies of economic citizenship regimes. *Progress in Human Geography*, 46(5), pp.1131-1148.

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UNIVERSITY OF JOHANNESBURG

Publications continued:

Foti, L., Coviello, D., Zuurro, A., Lelario, F., Bufo, S.A., Scrano, L., Sauvetre, A., Chiron, S. and Brienza, M., 2022. Comparison of sunlight-AOPs for levofloxacin removal: kinetics, transformation products, and toxicity assay on *Escherichia coli* and *Micrococcus flavus*. *Environmental Science and Pollution Research*, 29(38), pp.58201-58211.

Peter, S., Kambule, N., Tangwe, S. and Yessoufou, K., 2022. Assessing the Feasibility and the Potential of Implementing Solar Water Heaters in Dimbaza, a Township in Eastern Cape, South Africa. *Sustainability*, 14(19), p.12502.

Wernecke, B., Langerman, K.E., Garland, R.M. and Feig, G., 2022. Ambient air pollution on the Highveld: An airshed at a watershed moment?. *Clean Air Journal*, 32(1), pp.1-3.

Langerman, K.E., Feig, G.T. and Jaars, K., 2022. Mitigation and Management of Ambient Particulate Matter. In *Airborne Particulate Matter: Source, Chemistry and Health* (pp. 265-300). Singapore: Springer Nature Singapore.

Jombo, S., Adam, E. and Tesfamichael, S., 2022. Classification of urban tree species using LiDAR data and WorldView-2 satellite imagery in a heterogeneous environment. *Geocarto International*, pp.1-24.

Fundisi, E., Tesfamichael, S.G. and Ahmed, F., 2022. A bi-seasonal classification of woody plant species using Sentinel-2A and SPOT-6 in a localised species-rich savanna environment. *Geocarto International*, 37(21), pp.6272-6293.

Tesfamichael, S.G., Shiferaw, Y.A. and Phiri, M., 2022. Monthly geographically weighted regression between climate and vegetation in the Eastern Cape Province of South Africa: Clustering pattern shifts and biome-dependent accuracies. *Scientific African*, 18, p.e01423.

Mompati, M.K., Piketh, S.J., Aas, W., Van Zyl, P.G., Pienaar, J.J. and Curtis, C.J., 2022. Rainwater Chemistry and Total Deposition of Acidity from the Northern Savanna to the Southern Coastal Fynbos of South Africa. *Water, Air, & Soil Pollution*, 233(7), p.275.

Mkhongi, F.A. and Musakwa, W., 2022. Trajectories of deagrarianization in South Africa—Past, current and emerging trends: A bibliometric analysis and systematic review. *Geography and Sustainability*.

Richter, N., Russell, J.M., Amaral-Zettler, L., DeGroot, W., Raposeiro, P.M., Gonçalves, V., de Boer, E.J., Pla-Rabes, S., Hernández, A., Benavente, M. and Ritter, C., 2022. Long-term hydroclimate variability in the sub-tropical North Atlantic and anthropogenic impacts on lake ecosystems: A case study from Flores Island, the Azores. *Quaternary Science Reviews*, 285, p.107525

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UNIVERSITY OF JOHANNESBURG

Publications continued:

Fundisi, E., Tesfamichael, S.G. and Ahmed, F., 2022. Investigating accuracies of WorldView-2, Sentinel-2, and SPOT-6 in discriminating morphologically similar savanna woody plant species during a dry season. *Journal of Applied Remote Sensing*, 16(3), p.034524

Dlamini, S., Tesfamichael, S.G. and Mokhele, T., 2022. A selective review of environmental perceptions, attitudes, place attachment, and their spatial characterisation: contrasting the South African and global perspectives. *Environmental Reviews*, 30(4), pp.552-562.

Ritter, C., Gonçalves, V., Pla-Rabes, S., de Boer, E.J., Bao, R., Sáez, A., Hernández, A., Sixto, M., Richter, N., Benavente, M. and Prego, R., 2022. The vanishing and the establishment of a new ecosystem on an oceanic island—Anthropogenic impacts with no return ticket. *Science of the Total Environment*, 830, p.154828.

Hannonen, O. and Hoogendoorn, G., 2022. Angling tourism: A state-of-the-art review. *Matkailututkimus*, 18(2), pp.6-30

SP, S.P.S. and Langerman, K.E., An exploratory assessment of the effect of urban form metrics and land cover on air quality in Gauteng.

Mbodla, Z., Langerman, K.E. and van Rensburg, N.J., 2022. The effect of COVID-19 on emissions from the transportation sector in Gauteng.

Rana, U., Aman, S., Ashiq, M.N., Iqbal, M.F., Manzoor, S., Mahmoud, M.H.H., Alhadhrami, A., Elansry, H.O., El-Ansari, D.O. and Taha, T.A., 2022. Outstanding electrochemical behavior of reduced graphene oxide wrapped chromium sulfide nanoplates directly grown on nickel foam for supercapacitor applications. *Journal of Sol-Gel Science and Technology*, 103(3), pp.704-712.

Khan, H., Sohail, M., Rahman, N., Khan, R., Hussain, M., Ullah, A., Khan, A., Alataway, A., Dewidar, A.Z., Elansary, H.O. and Yessoufou, K., 2022. Computational Study of Elastic, Structural, Electronic, and Optical Properties of GaMF₃ (M= Be and Ge) Fluoroperovskites, Based on Density Functional Theory. *Molecules*, 27(16), p.5264.

Khan, H., Sohail, M., Khan, R., Raman, N., Ullah, A., Khan, A., Alataway, A., Dewidar, A.Z., Elansary, H.O. and Yessoufou, K., 2022. Theoretical Investigations into the Different Properties of Al-Based Fluoroperovskite AlMF₃ (M= Cr, B) Compounds by the TB-MBJ Potential Method. *Materials*, 15(17), p.5942.

Peck, S. and Hammett, D., 2022. 'Our citizenship is being prostituted': The everyday geographies of economic citizenship regimes. *Progress in Human Geography*, 46(5), pp.1131-1148.

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Publications continued:

Ritter, C., Gonçalves, V., Pla-Rabes, S., de Boer, E.J., Bao, R., Sáez, A., Hernández, A., Sixto, M., Richter, N., Benavente, M. and Prego, R., 2022. The vanishing and the establishment of a new ecosystem on an oceanic island—Anthropogenic impacts with no return ticket. *Science of the Total Environment*, 830, p.154828.

Shah, S.A., Husain, M., Rahman, N., Sohail, M., Khan, R., Alataway, A., Dewidar, A.Z., Elansary, H.O., Abu El Maati, L., Yessoufou, K. and Ullah, A., 2022. Insight into the Structural, Electronic, Elastic, Optical, and Magnetic Properties of Cubic Fluoroperovskites ABF₃ (A= Ti, B= Nb, V) Compounds: Probed by DFT. *Materials*, 15(16), p.5684..

Hassan, M., Haq, S.M., Ahmad, R., Majeed, M., Sahito, H.A., Shirani, M., Mubeen, I., Aziz, M.A., Pieroni, A., Bussmann, R.W. and Alataway, A., 2022. Traditional Use of Wild and Domestic Fauna among Different Ethnic Groups in the Western Himalayas—A Cross Cultural Analysis. *Animals*, 12(17), p.2276.

Ifegbesan, A.P., Rampedi, I.T. and Odumosu, T., 2022. Residents' participation and perception of environmental sanitation program in Ogun East Senatorial District, Nigeria: a mixed-method approach. *International Journal of Environment and Waste Management*, 29(3), pp.291-312.

Nyathi, N.A., Musakwa, W., Delzeit, R. and Kuhn, N.J., 2022. Ecosystem Services in Southern Africa: Current and Emerging Trends—A Bibliometric

MSc & PhD

Graduations and supervisors:

Mncwabe, Khwezi Sibonginhlhla Celiwe MSc Environmental Management. Evaluating the effectiveness of spatial information in EIA reports from a public participation perspective: Case study of selected projects in South Africa. **Supervisor:** Prof IT Rampedi

Motsoeneng, Edisang MSc Environmental Management. assessing the water quality of selected public swimming pools within the Johannesburg area of the Gauteng province, South Africa. Supervisor: Prof IT Rampedi, Co-Supervisor: Dr LS Modley.

Dambuza, Siphesihle Unam MSc Environmental Management. An Evaluation of Selected Corporate Sustainability Reports For Mining Companies Listed On The Johannesburg Securities Exchange. Supervisor: Prof IT Rampedi.

Dlamini, Lindelwa Nonjabulo MSc Environmental Management. Investigating sustainability practices in the South African construction industry: Case study of the Belhar Housing Development Project in the Western Cape Province of South Africa. Supervisor: Prof K Yessoufou.

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MSc

Mashazi, Thandeka Privillage MSc Environmental Management. *Conveying scientific results through art: The case of the Kaalspruit.* **Supervisor:** Dr LS Modley **Co-Supervisor:** Mr P Jacobs (UJ Arts & Culture) **Co-Supervisor:** Prof IT Rampedi.

Mudau, Khuliso Hope MSc Environmental Management. Predicting future trends of concentrations of various criteria pollutants within the Vaal Triangle Airshed Priority Area, South Africa. **Supervisor:** Prof K Yessoufou.

Mashao, Audrey Mashianyane MSc Environmental management). The impacts of wastewater effluent on the urban catchments in Gauteng Province, South Africa: A five-year spatio-temporal analysis. **Supervisor:** Dr LS Modley **Co-Supervisor:** Prof JR Gumbo (University of Venda)

Mashau, Mbuelo Laura MSc Geography (**with distinction**) Militarization and securitization in the Kruger National Park: Perspectives from local communities. **Supervisor:** Dr NI Sinthumule.

Mtegha, Gift MSc Environmental Management. An evaluation of the ISO 14001 Environmental Management System (EMS) at ABC Company: Case study of conceptualisation, implementation, and effectiveness. **Supervisor:** Prof IT Rampedi.

Miner, Kangyang Josiah PhD Environmental Management. A critical evaluation of current e-waste management and recycling practices in the Jos Metropolis in Nigeria. **Supervisor:** Prof IT Rampedi **Co-Supervisor:** Prof AP Ifegbesan (Olabisi Onabanjo University, Nigeria).

Kambule, Nomaswazi MA Geography. Gentrification and South African Townships: Reflections on Orlando West, Soweto. **Supervisor:** Prof G Hoogendoorn **Co-Supervisor:** Prof G Visser (Stellenbosch University)

Mahlangu, Maboku Abner Mphil Energy Studies. The Mining Sector's response to the National Climate Change Response Policy (NCCRP) (2011-2020) **Supervisor:** Dr NE Kambule.

Mohabir, Viaksha Mphil Energy studies. The Efficacy of the Municipal Energy Efficiency and Demand Side Management Programme (2014/2015 to 2017/2018) **Supervisor:** Dr NE Kambule.

Majola, Cebisile Mbalenhle Deborah Mphil Energy Studies. Reducing energy consumption in the mining sector: a case study of a Mpumalanga coal mine. **Supervisor:** Dr K Langerman.

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SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

UNIVERSITY OF JOHANNESBURG

2 022 Student

Numbers:

<i>First years</i>	214
<i>Second years</i>	150
<i>Third Years</i>	78
<i>Honours</i>	49
<i>Masters</i>	75
<i>PhD</i>	31

Link to
departmental page

<https://www.uj.ac.za/faculties/science/geography>

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UNIVERSITY OF THE WITWATERSRAND

Name of department:

Geography, Archaeology and Environmental Studies

Head of department:

- **Professor Paida Mhangara**

Information about the Geographers and their area of specialisation in the department:

- **Sarita Pillay Gonzalez**

Critical and urban geography, including the relationship between state and real estate and how this shapes cities, and the political economy of post-apartheid and Global South cities.

- **Dr Serge Kubanza**

Environmental management and sustainability, with a specific focus on sustainable solid waste management in Sub-Saharan African cities, with an emphasis on South African and Congolese cities

- **Dr Simoné Dahmns-Verster**

Ecotoxicology, environmental science, water pollution, freshwater ecology, zoology, water science, land contamination.

Dr Cletah Shoko

Geospatial sciences

Dr Iqra Atif

The applications of advanced GIS and Remote Sensing for geospatial and numerical modelling of geohazards, climate change and its impact on natural resources for sustainable development and management.

Dr Raeesa Moolla

Hotspot monitoring and modelling of urban-scale air pollution and its impacts on human health.

Dr Mary Evans

Optically Stimulated Luminescence Dating, palaeoenvironmental reconstructions of Quaternary landscapes, river dynamics, climatology and atmospheric processes, science education.

Dr Alex Wafer

Urban and human geography

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JOHANNESBURG



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UNIVERSITY OF THE WITWATERSRAND

Geographers continued:

•Prof Elhadi Adam

Use of remote sensing techniques and machine learning algorithms in monitoring vegetation.

•Prof Jennifer Fitchett

Biometeorology: climatology, tourism and climate change, phenology, climate and health, and palaeoclimatology.

•Prof Mulala Simatele

Environmental management, governance and sustainability, environmental impacts assessments and environmental monitoring systems, coastal and marine resource management and sustainability, climate change adaptation.

•Prof Jasper Knight

Climate and environmental change, geomorphology, landscape resources.

•Prof Stefan Grab

Historical climatology, climate change, environmental change, geo-hazards, geomorphology, mountain environments

• Prof Craig Sheridan

Water and wastewater treatment (AMD, Sewage, Potable water, industrial wastewater)

• Prof Francois Engelbrecht

Director of the Global Change Institute. Climatology, climate modelling and climate futures

• Wendy Phillips

Cartographer

• Natanya Alexander

Senior Administrative Officer

• Sindiswa Tilane

Postgraduate Administrator

• Khanyo Ngubo

Finance Officer

• Norah Museta

Procurement Officer

• Thandizwe Nsimbi

Senior Technician

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SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

UNIVERSITY OF THE WITWATERSRAND

Exciting

departmental news:

Stefan Grab has been appointed as the African coordinator for the Atmospheric Circulation Reconstructions over the Earth (ACRE) initiative. This involves finding and rescuing (through photography and digitization) old weather records. Recent funding has been provided from the World Meteorological Organization (WMO) and Climate Change Services through the European Union funded Copernicus Programme. For more information, or to become part of the southern African team, please contact Stefan at stefan.grab@wits.ac.za

Prof Jennifer Fitchett received the Royal Society of South Africa Meiring Naude Medal, which will be awarded in 2023, and the University of the Witwatersrand Friedel Sellschop Award. She started her term as President of the SSAG in 2022, and has been re-elected in 2023 as the African Councillor of the International Society of Biometeorology.

Prof Craig Sheridan received a Danida Grant for treating AMD of DKK 5 million over three years in collaboration with Copenhagen University, Stellenbosch University and 3 SMMEs. Prof Sheridan's Water JPI project treating greywater in Alex (Euro 840000) completed successfully in November 2022

with a final workshop in Leipzig (collaboration with Helmholtz UFZ (Germany) and Linköping University (Sweden). Prof Sheridan was awarded the Claude Leon Foundation Chair in Water Research from 2022 to 2026 in conjunction with Earth Stewardship in the School of Law. Dr Tamlyn Naidu a current post-doc in CIWaRD in GAES won the DAAD Falling Walls competition in Berlin, was cited by the speaker of the house of parliament.

Dr Simoné Dahms-Verster and Prof Craig Sheridan reached the final stages of being awarded a Water Research Commission (WRC) RDI Grant for 2023-2026. This projects aims to develop a smartphone application based water testing system.

Dr Raesa Moolla has been selected for the Future Professors Programme. She has been awarded CNRS/Wits Collaborative funding for a three year period. She has featured in Forbes magazine as a leading global South Scientist, and has been appointed as an expert panellist to serve on the national South African Air Quality Standards (SAAQIS) council board to review the National Air Quality Guidelines.

Dr Sarita Pillay-Gonzalez was awarded her PhD in 2022.

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2022/2023 List of publications.

- Abrahams, Z., Hoogendoorn, G. and **Fitchett, J.M.** (2022). Glacier tourism and tourist reviews: An experiential engagement with the concept of 'Last Chance Tourism'. *Scandinavian Journal of Hospitality and Tourism*, 22(1), 1-14
- Adamson, G., Nash, D.J. and **Grab, S.W.** (2022). Quantifying and reducing researcher subjectivity in the generation of climate indices from documentary sources. *Climate of the Past*, 18, 1071-1081.
- Adorn, R., **Simatele, D.**, Reid, M. (2022). Addressing the challenges of water-energy-food nexus programme in the context of sustainable development and climate change in South Africa. *Journal of Water and Climate Change*, 13(7), 2761-2779.
- Ali, K., Tamiru, A. and **Adam, E.** (2022). Integrating in situ and current generation satellite data for temporal and spatial analysis of harmful algal blooms in the Hartbeespoort Dam, Crocodile River Basin, South Africa. *Remote Sensing*, 14 (4277), 1-14.
- Beine, K., **Dahms-Verster, S.** and Greenfield, R. (2022). An Integrated biomarker assessment of biochemical responses in a freshwater fish species after vanadium pentoxide exposure. *Fish Physiology and Biochemistry*, 48, 1221-1233.
- Bhagwan, N., **Evans, M.** (2022). A comparative analysis of the application of Fourth Industrial Revolution technologies in the energy sector: A case study of South Africa, Germany and China. *Journal of Energy in Southern Africa*, 33(2), 1-4.
- Bregman, A. and **Knight, J.** (2022). Analysis of a blockstream in the northern Lesotho Drakensberg, southern Africa. *Quaternary International*, 611-612, 41-54.
- Cendrero, A., Remondo, J., Beylich, A., Cienciala, P., Forte, L., Golosov, V., Gusarov, A., Kijowska-Strugała, M., Laute, K., Li, D., Navas, A., Soldati, M., Vergari, F., Zwoliński, Z., Dixon, J., **Knight, J.**, Nadal-Romero, E. and Placzkowska, E. (2022). Denudation and geomorphic change in the Anthropocene; a global overview. *Earth-Science Reviews*, 233, 104186.
- Chabalala, Y.**, **Adam, E.** and Khalid, A. (2022). Machine learning classification of fused Sentinel-1 and Sentinel-2 image data towards mapping fruit plantations in highly heterogenous landscapes. *Remote Sensing*, 14(2621), 1-26.
- Chiloane, C., Dube, T. and **Shoko, C.** (2022). Impacts of groundwater and climate variability on terrestrial groundwater dependent ecosystems: a review of geospatial assessment approaches and challenges and possible future research directions. *Geocarto International*, 37(23), 6755-6779.

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UNIVERSITY OF THE WITWATERSRAND

Publications continued:

Combrink, M., **Fitchett, J.M.**, Bamford, M.K. and Botha, G.A. (2022). A late Quaternary palaeoenvironmental record from Ntsikeni Wetland, KwaZulu-Natal Maloti-Drakensberg, South Africa. *Quaternary International*, 611-612, 55-65

de la Peña, P., Esteban, I., **Evans, M.**, Feathers, J., **Fitchett, J.**, Hodgskiss, T., Stratford, D. and Val, A. (2022) Mwulu's Cave. In Beyin, A., Wright, D.K., Wilkins, J. and Olszewski, D.I. (Eds) *Handbook of Pleistocene Archaeology of Africa*, Springer Nature, Cham.

Derafshi, K., Hoseinzadeh, M.M., Amini, S., **Evans, M.** and Nosrati, K. (2022). Palaeoenvironmental reconstruction based on fluvial terraces and pedogenic carbonate layers in Quaternary: A case study of the Saqqez Basin, Western Iran. *Arabian Journal of Geosciences*, 15(14), 1-22

Dube, T., Rampheri, B.M. and **Shoko, C.** (2022). GIS and remote sensing analytics: assessment and monitoring. In Dalu, T. and Wasserman, R. (Eds.) *Fundamentals of Tropical Freshwater Wetlands*, Elsevier, pp. 661-678

Dzurume, T., Dube, T. and **Shoko, C.** (2022). Remotely sensed data for estimating chlorophyll-a concentration in wetlands located in the Limpopo Transboundary River Basin, South Africa. *Physics and Chemistry of the Earth*, 127(103193), 1-9.

Dzurume, T., Dube, T., Thamaga, K.H., **Shoko, C.** and Mazvimavi, D. (2022). Use of multispectral satellite data to assess impacts of land management practices on wetlands in the Limpopo Transfrontier River Basin, South Africa. *South African Geographical Journal*, 104(2), 193-212.

Fitchett, J.M. and **Swatton, D-A.** (2022). Exploring public awareness of the current and future malaria risk zones in South Africa under climate change: a pilot study. *International Journal of Biometeorology*, 66, 301-311

Fitchett, J.M., **Pandazis, A.** and Pillay, S. (2022). Advance in the timing of the annual migration of the brown-veined white butterfly through Johannesburg, South Africa, over the period 1914-2020. *International Journal of Biometeorology*, 66, 2251-2258

Franchi, F., Cavalazzi, B., **Evans, M.**, Filippidou, S., Mackay, R., Malaspina, P., Mosekiemang, G., Price, A. and Rossi, V. (2022). Late Pleistocene–Holocene Palaeoenvironmental Evolution of the Makgadikgadi Basin, Central Kalahari, Botswana: New Evidence from Shallow Sediments and Ostracod Fauna. *Frontiers in Ecology and Evolution*, 10, DOI: 10.3389/fevo.2022.818417

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Publications continued:

Fraser, K. and **Fitchett, J.M.** (2022). Misinformation and instant access: inconsistent reporting during extreme climatic events, reflecting on Tropical Cyclone Idai. *Weather, Climate and Society*, 14(1), 273-286.

Friedrich, J., Stahl, J., Hoogendoorn, G. and **Fitchett, J.M.** (2022). Locational heterogeneity in climate change threats to beach tourism destinations in South Africa. In Saarinen, J., Lubbe, N. and Moswete, N. (Eds.) *Southern African Perspectives on Sustainable Tourism Management*, Springer, Cham, pp. 199-222.

Grab, S.W. and Nash, D.J. (2022). "But what silence! No more gazelles....." Occurrence and extinction of fauna in Lesotho, southern Africa, since the late Pleistocene. *Quaternary International*, 611-612, 87-101.

Grab, S.W. and Williams, M. (2022). The late 18th century climate of Cape Town, South Africa, based on the Dutch East India Company 'Day Registers' (1773-1791). *Bulletin of the American Meteorological Society*, 103(8), 1-15.

Harvey, P.J. and **Grab, S.W.** (2022). Australian sub-regional temperature responses to volcanic forcing: A critical analysis using CMIP5 model. *International Journal of Climatology*, 42, 6109-6125.

Harvey, P.J. and **Grab, S.W.** (2022). Southern Hemisphere continental temperature responses to major volcanic eruptions since 1883 in CMIP5 models. *Theoretical and Applied Climatology*, 147, 143-157.

Herbert, A.V. and **Fitchett, J.M.** (2022). Palaeoclimate dynamics within the Summer Rainfall Zone of South Africa. *Palaeogeography, Palaeoclimatology, Palaeoecology*, 601, 111134.

Drakensberg-Maloti through quantitative modelling. *Quaternary International*, 611-612: 77-86

Hlahla, S., **Simatele, D.**, Hill, T., Mabhaudhi, T. (2022). Climate-Urban Nexus: A study of vulnerable women in urban areas of KwaZulu-Natal Province, South Africa. *Weather, Climate and Society*, 14, 933-948.

Jackson, C. and **Adam, E.** (2022). A machine learning approach to mapping canopy gaps in an indigenous tropical submontane forest using WorldView-3 multispectral satellite imagery. *Environmental Conservation*, 49, 255-262.

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UNIVERSITY OF THE WITWATERSRAND

Publications continued:

Kganyago, M., Adjorlolo, C. and **Mhangara, P.** (2022). Exploring transferable techniques to retrieve crop biophysical and biochemical variables using Sentinel-2 data. *Remote Sensing*, 14, 1-20.

Kganyago, M., Adjorlolo, C., Sibanda, M., **Mhangara, P.**, Laneve, G. and Alexandridis, T. (2022). Testing Sentinel-2 spectral configurations for estimating relevant crop biophysical and biochemical parameters for precision agriculture using tree-based and kernel-based algorithms. *Geocarto International*, 38, 1-25.

Knight, J. and **Grab, S.W.** (2022). Basalt pseudokarst development in the Lesotho Highlands, southern Africa. *Quaternary International*, 611-612, 29-40.

Knight, J. (2022). Geomorphology and landscapes of the Limpopo River system. In: Eckardt, F. (Eds.) *Landforms and Landscapes of Botswana*. Springer, Cham, pp. 287-298.

Knight, J. (2022). Multiple drivers of Late Holocene paraglacial sediment reworking in Ireland. *Boreas*, 51(1), 136-148.

Knight, J. (2022). Presence, absence, transience: The spatiotemporalities of sand. *Geographies*, 2(4), 657-668.

Knight, J. (2022). Scientists' warning of the impacts of climate change on mountains. *PeerJ*, 10, e14253.

Knight, J.; Abd Elbasit, M.A.M. Characterisation of Coastal Sediment properties from spectral reflectance data. *Applied Sciences*, 12, 6826.

Knight, J. and Burningham, H. (2022). A morphological classification of coastal forelands, with examples from South Africa. *Geomorphology*, 415, 108410.

Knight, J. and **Evans, M.** (2022). Characterising the dynamics of river systems: An example of the Sabie River, South Africa. *Koedoe*, 64(1), a1700.

Knight, J. and **Fitchett, J.M.** (2022). Issues of measuring and interpreting wind direction. *South African Geographical Journal*, 104(1): 35-52.

Knight, J. and Harrison, S. (2022). Climate sensitivity and cryospheric systems. In: Haritashya, U.K. (ed), *Treatise on Geomorphology*, 2nd edition, vol 4. Academic Press, Oxford, pp.616-628.

Knight, J., Abd Elbasit, M.A.M. and Adam, E. (2022). Land degradation in Eritrea and Djibouti. In: Billi, P. (eds) *Landforms and Landscapes of the Horn of Africa*. Springer, Cham, pp.223-232.

Knight, J., Flack-Davison, E., Engelbrecht, S., Visagie, R., Beukes, W., Coetzee, T., Mwale, M. and Ralefala, D. (2022). A literature review analysis of engagement with the Nagoya Protocol, with application to Africa. *South African Journal of Bioethics and Law*, 15(2), 69-74.

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Publications continued:

- Lourenco, M., Fitchett, J.M.,** and Woodborne, S. (2022). Angolan highlands peatlands: Extent, age and growth dynamics. *Science of the Total Environment*, 810, DOI: 10.1016/j.scitotenv.2021.152315
- Magaya, S. and **Fitchett, J.M.** (2022). Approaching positionality in research on indigenous knowledge systems. In Ebhuoma, E.E. and Leonard, L.L. (Eds). *Indigenous Knowledge and Climate Governance*, Springer, Cham, pp. 81-93.
- Mahan, S.A., Rittenour, T.M., Nelson, M.S., Atae, N., Brown, N., DeWitt, R., Durcan, J., **Evans, M.**, Feathers, J., Frouin, M., Guérin, G., Heydari, M., Huot, S., Jain, M., Keen-Zebert, A., Li, B., López, G.I., Neudorf, C., Porat, N., Rodrigues, K., Sawakuchi, A.O., Spencer, J.Q.G. and Thomsen, K. (2022). Guide for interpreting and reporting Luminescence dating ages, *Geological Society of America (GSA), Bulletin*, <https://doi.org/10.1130/B36404.1>
- Mahboob, M. A., Genc, B., & **Atif, I.** (2022). Harnessing the Power of Machine Learning for Mapping of Iron Oxide Mineralization using Sentinel Satellite Spectral Imagery. *Proceedings of the 19th International Bhurban Conference on Applied Sciences and Technology (IBCAST)*, pp. 285-289.
- Maina, M. and **Pillay, S.** (2022). The emotional toll of the “hard: lockdown: an analysis of diary entries from Gauteng, South Africa. *South African Geographical Journal*, 104(3), 328-347.
- Mandishona, E. and **Knight, J.** (2022). Inland wetlands in Africa: a review of their typologies and ecosystem services. *Progress in Physical Geography*, 46(4), 547-565.
- Maphanga, T., Dube, T., **Shoko, C.** and Sibanda, M. (2022). Advancements in the satellite sensing of the impacts of climate and variability on bush encroachment in savannah rangelands. *Remote Sensing Applications: Society and Environment*, 25, 100689.
- Mavidza, A., **Grab, S.W.** and **Engelbrecht, F.** (2022). Twentieth century precipitation trends in the upper Mzingwane sub-catchment of the northern Limpopo basin, Zimbabwe. *Theoretical and Applied Climatology*, 149, 309-325.
- Mpanza, M., **Adam, E.** and **Moolla, R.** (2022). The potential health costs of PM10 impacts on a gold mine village during company liquidation: An analysis of 2013-2017. *Minerals*, 12(169), 1-19.
- Mudau, N. and **Mhangara, P.** (2022). Towards understanding informal settlement growth patterns: Contributions to SDG reporting and spatial planning. *Remote Sensing Applications: Society and Environment*, 27, 1-12.
- Mushawemhuka, W., **Fitchett, J.M.** and Hoogendoorn, G. (2022). Stakeholder perceptions of climate change threats to the Zimbabwean nature-based tourism sector. *Environmental Development*, 14, 100779

SSAG NEWS 2022/23

SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

UNIVERSITY OF THE WITWATERSRAND

Publications continued:

Ndebele, N.E., **Grab, S.W.** and Hove, H. (2022). Wet season rainfall characteristics and temporal changes for Cape Town, South Africa, 1841-2018. *Climate of the Past*, 18, 2463-2482.

Nkhwanana, N., **Adam, E.** and Ramoelo, A. (2022). Assessing the utility of Sentinel-2 MSI in mapping an encroaching *Serephium plumosum* in South African rangeland. *Applied Geomatics*, 14, 435-449.

Noome, K. and **Fitchett, J.M.** (2022). Quantifying the climatic suitability for tourism in Namibia using the tourism climatic index (TCI). *Environment, Development and Sustainability*, 24, 5094-5111.

Nurmahomed, N., Ragen, A.K. and **Sheridan, C.M.** (2022). Performance intensification of constructed wetland technology: a sustainable solution for treatment of high-strength industrial wastewater. *Water Science and Technology*, 85(6), 1765-1782.

Nurmahomed, N., Sobhun, T., Ragen, A.K. and **Sheridan, C.M.** (2022). Performance of a constructed wetland treating synthetic greywater. *Bioresource Technology Reports*, 17, 100930.

O'Donovan, C., **Adam, E.**, Torres Cruz, L.A. (2022). Remote sensing of the decant pond of tailings dams: Insights from a South African case study. *Journal of the Southern African Institute of Mining and Metallurgy*, 122(4), 167-172.

Olatoyan, J.O., Neumann, F.H., Orijemie, E.A., Sievers, C., **Evans, M.**, Mvelase, S., (2022). Archaeobotanical evidence for the emergence of pastoralism and farming in southern Africa. *Acta Palaeobotanica*, 62(1), 50-75

Petherick, L., **Knicht, J.**, Schulmeister, J., Bostock, H., Lorrey, A., **Fitchett, J.**, Eaves, S., Vandergoes, M.J., Barrows, T.T., Barrell, D.J.A., Eze, P.N., Hesse, P., Jara, I.A., Mills, S., Newnham, R., Pedro, J., Ryan, M., Saunders, K.M., White, D., Rojas, M. and Turney, C. (2022). An extended last glacial maximum in the Southern Hemisphere: A contribution to the SHeMax project. *Earth Science Reviews*, 231, 104090.

Rampheri, M.B., Dube, T., **Shoko, C.**, Marambanyika, T. and Dhau, I. (2022). Local community attitudes and perceptions towards benefits and challenges associated with biodiversity conservation in Blouberg Nature Reserve, South Africa. *African Journal of Ecology*, 60(3), 769-779.

SSAG NEWS 2022/23

SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

UNIVERSITY OF THE WITWATERSRAND

Publications continued:

Nyoni, N.M.B., **Grab, S.W.**, Archer, E. and Hetem, R. (2022). Perceived impacts of climate change on rural poultry production: a case study in Limpopo Province, South Africa. *Climate and Development*, 14, 389-397.

Roffe, S.J., Steinkopf, J. and **Fitchett, J.M.** (2022). South African winter rainfall zone shifts: A comparison of seasonality metrics for Cape Town from 1841-1899 and 1933-2020. *Theoretical and Applied Climatology*, 147, 1229-1247.

Roshan, G., Sarli, R. and **Fitchett, J.M.** (2022). Urban Heat Island and Thermal comfort of Esfahan City (Iran) during COVID-19 Lockdown. *Journal of Cleaner Production*, 352: 131498.

Saarinen, J., **Fitchett, J.M.** and Hoogendoorn, G. (2022). Climate Change and Tourism in Southern Africa. *Routledge*, London.

Shikwambe, L., Mokgoja, B. and **Mhangara, P.** (2022). A qualitative assessment of the trends, distributions and sources of methane in South Africa. *Sustainability*, 14, 1-13.

Sibiya, N., Sithole, M., Mudau, L. and **Simatele, D.** (2022). Empowering the voiceless: securing the participation of marginalised groups in climate change governance in South Africa. *Sustainability*, 14(7111), 1-20.

Simbarashe, J., **Adam, E.**, Byrne, M. and Newete, S. (2022). Assessing the intraurban differences in vegetation coverage and surface climate in a heterogenous area. *Transactions of the Royal Society of South Africa*, 77(1), 1-10.

Smith, J., **Sheridan, C.**, van Dyk, L., Harding, K.G. (2022). Critical evaluation of the chemical composition of acid mine drainage for the development of statistical correlations linking electrical conductivity with acid mine drainage concentrations. *Environmental Advances*, 8, 100241

Snyman, P. and **Fitchett, J.M.** (2022). Phenological advance in the South African Namaqualand Daisy first and peak bloom: 1935-2018. *International Journal of Biometeorology*, 66(4), 699-717.

Thamaga, K., Dube, T. and **Shoko, C.** (2022). Advances in satellite remote sensing of the wetland ecosystems in Sub-Saharan Africa. *Geocarto International*, 37(20), 5891-5913.

SSAG NEWS 2022/23

SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

UNIVERSITY OF THE WITWATERSRAND

Publications continued:

Thomas, G., **Sheridan, C.** and Holm, P.E. (2022). A critical review of phytoremediation for acid mine drainage-impacted environments. *Science of the Total Environment*, 811, 152230

Tsoka, J., **Knight, J.** and **Adam, E.** 2022. Predicting the distribution of farm dams in rural South Africa using GIS and remote sensing. In: Mandal, S., Maiti, R., Nones, M. and Beckedahl, H.R. (eds), *Applied Geomorphology and Contemporary Issues*. Springer, Cham, pp. 427-439.

Van der Walt, A.J. and **Fitchett, J.M.** (2022). Extreme Temperature Events (ETEs) in South Africa: a review. *South African Geographical Journal*, 104(1), 70-88

Webb, S.J., **Knight, J.**, **Grab, S.W.**, Enslin, S., Hunt, H. and Maré, L. (2022). Magnetic evidence for lightning strikes on mountains in Lesotho as an important denudation agent. *36th International Conference on Lightning Protection (ICLP)*, 2022, pp. 500-503,

Zinke, J., Watanabe, T.K., Rühs, S., Pfeiffer, M., **Grab, S.W.**, Garbe-Schönberg, D. and Biastoch, A. (2022). 334-year coral record of surface temperature and salinity variability in the greater Agulhas Current region. *Climate of the Past*, 18, 1453-1474.

MSc and PhD graduations

and supervisors:

Colbert Jackson, PhD Geography: “The remote sensing of forest canopy gaps in a selectively logged submontane tropical forest reserve in Kenya”. Supervisor: Prof Elhadi Adam.

Gumani Tshimomola, PhD Geography: “Treasury’s role in South Africa’s political economy: a study of an institution at the centre of class project in the era of transition”. Supervisors: Prof Patrick Bond, Prof Melanie Samson and Dr Alex Wafer.

Diane Beverley, MSc Geography (Research): “Spatial analysis into the cultural and palaeoenvironmental factors impacting the archaeological funerary landscape of the Sahara in Garamantian times”. Supervisor: Prof Jasper Knight

Mark Maimane, MSc Geography (Research): “Landslide susceptibility mapping using geospatial techniques for eThekweni, KwaZulu-Natal, South Africa”. Supervisor: Prof Jasper Knight.

Tamzyn Smith, MSc Geography (Research), with distinction: “Applying the CVIT to tourism in South Africa”. Supervisor: Prof Jennifer Fitchett.

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SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

UNIVERSITY OF THE WITWATERSRAND

MSc and PhD graduations and supervisors continued:

Annabel Fenton, MA Geography (Research), with distinction: Grounding “Locations in the Sky”: An analysis of domestic work and Post-Apartheid urban living in the apartment blocks of Northern Johannesburg”. Supervisors: Prof Jennifer Fitchett, Dr Richard Ballard (GCRO)

Kestrel Raik, MSc Geography (Research): “Tracking pollution deposition from coal-fired power stations in South Africa over the past 150 years using diatoms as a proxy”. Supervisors: Prof Jennifer Fitchett, Prof Chris Curtis (UJ GEMES)

Mazozo Mahlangu, MSc Geography (Research): “Events-based small-town tourism: Exploring the Chrissiesmeer tourism sector under environmental and climate challenges”. Supervisor: Prof Jennifer Fitchett.

Odwa Mtembu, MSc Geography (Research): “Mapping the extent and change of gully erosion in the Rosendal region, eastern Free State”. Supervisor: Dr Cletah Shoko.

Zandile Mahlangu, MSc Geography (Research): “Occupational exposure and spatial distribution of BTEX concentrations at Lanseria International Airport. Supervisor: Dr Raesa Moolla.

Kayla Mac Connachie, MSc Geography (Research) with distinction: “A proxy rainfall record for the Namib Desert using $\delta^{13}\text{C}$ analysis on *Acacia erioloba* rings”. Supervisors: Prof Stephan Woodborne (iThemba), Prof Jennifer Fitchett

Caroline Mfopa, MSc Geography (Research): “Projected changes in the seasonality of rainfall and temperature over southern Africa under low mitigation”. Supervisor: Prof Francois Engelbrecht.

Lesetja Lekoloane, MSc Geography (Research): “Evaluation of climate model simulations of boundary layers in the southern Hemisphere”. Supervisor: Prof Francois Engelbrecht.

Nthabiseng Sebetlela, MSc GIS and RS (Coursework and Research Report): “Job accessibility in Gauteng: measuring and visualizing location-based travel time”. Supervisor: Dr Cletah Shoko

Chido Jakata, MSc GIS and RS (Coursework and Research Report): “Mapping and monitoring the impacts of climate variabilities on rangelands in northern Dardur, Sudan”. Supervisor: Dr Cletah Shoko.

Roxanne-Pyal Parthab, MSc GIS and RS (Coursework and Research Report): “Testing the use of Worldview-2 data in detecting the spread of *Fusarium dieback* in urban tree species in the city of Johannesburg, South Africa”. Supervisor: Dr Cletah Shoko.

Unathi Dada, MSc Environmental Science (Coursework and Research Report): “The use of indigenous knowledge systems to predict extreme weather events and take precautions: exploring the case of tropical cyclone Eloise”. Supervisor: Prof Jennifer Fitchett.

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SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

UNIVERSITY OF THE WITWATERSRAND

MSc and PhD graduations and supervisors continued:

Maitshoko Tumane, MSc GIS and RS (Coursework and Research Report): “Using spatial interpolation methods to map out climate extremes over the past 30 years: A Case Study of the Batswana Community”. Supervisors: Prof Jennifer Fitchett, Prof Amanda Esterhuysen and Dr A van der Walt (UFS Geography).

Jabulani Jele, MSc GIS and RS (Coursework and Research Report): “Spatio-temporal modelling of COVID-19 incidence in Bulawayo, Zimbabwe.” Supervisor: Dr Iqra Atif

Velile Moyo, MSc GIS and RS (Coursework and Research Report): “An integrated GIS based multi-criteria decision analysis (MCDA) approach to model COVID-19 vulnerability in Gauteng, South Africa”. Supervisor: Dr Iqra Atif

Graeme Dor, MSc GIS and RS (Coursework and Research Report): “Mapping transit-oriented economic and social impacts of Gauteng’s post-Apartheid spatiality: An analysis of precarious workers associated with the casual worker’s advice office.

Lindelani Mbulaheni, MSc Environmental Science (Coursework and Research Report): “Assessment of water quality status of the Woestalleen wetland before and after rehabilitation.” Supervisors: Prof Chris Curtis (UJ GEMES) and Prof Jennifer Fitchett.

2022 student numbers

1st year:	135
2nd year:	55
3rd year :	33
Honours:	38
Masters – Coursework Research Report:	24
Masters – Research:	41
PhD:	70

Changes to their curriculum or course offerings:

From 2023, the School of Geography, Archaeology and Environmental Studies at the University of the Witwatersrand is offering a BSc Hons in Environmental Studies, and an MSc in Environmental Science.

Link to departmental webpage:

<https://www.wits.ac.za/gaes/>

SSAG NEWS 2022/23

SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

UNIVERSITY OF MPUMALANGA

Name of department:

School of Biology and
Environmental Sciences

Head of department:

Prof S. Mini Urban Geography
Simphiwe.mini@ump.ac.za
0130020205

Information about the Geographers and their area of specialisation in the department:

• **Mr. S. Nsukwini**
Environmental conservation & society,
Community-based natural resource
management, Tourism studies, Political
ecology, and Rural development.
sakhile.nsukwini@ump.ac.za 0130020191

• **Prof W. Chingombe**
Environmental Geomorphology, Physical
Geography, Water Resource Management,
Geotourism. wisemen.chingombe@ump.ac.za
0130020221

• **Mr. M Maya**
Land degradation, Land-use changes and
Resource mapping. mafuza.maya@ump.ac.za
0130020265

• **Ms T Khoza**
Support staff. thobile.khoza@ump.ac.za
0130020283

Exciting departmental news:

Prof. W. Chingombe organised a field trip for honours students to the Panorama Route and the Makhonjwa Heritage Site (Barberton Geotrail).

Prof S. Mini was appointed as the Head of the School with effect from 1 January 2022 taking over from Professor Dan Parker.

Dr. Giddy and Mr. Nsukwini organised a field trip for honours students registered for the *Integrated Environmental Management and the Advanced Human-Environment Interaction* modules to Kruger National Park



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SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

UNIVERSITY OF MPUMALANGA

Departmental news Continued:

Two honours students under the supervision of Mr. Nsukwini presented their research projects at the SSAG student conference hosted by the University of Pretoria.

Mr. Nsukwini attended the ***One Health: Elephant Management*** workshop for two weeks (1-16 October 2022) at Utrecht University, Netherlands, and the University of Bologna, Italy.

Prof. W. Chingombe attended the 5th GSCC at the University of Free State in January/February 2023.

Mr. Nsukwini is currently working on a collaborative project with Sheffield University, Department of Geography working with Prof Daniel Hammett on a project focusing on *exploring the intra-national geographies of knowledge production within Human Geography in the South African academy*.

Ms. Payal Mehta presented a seminar at the Faculty of Agriculture and Natural Sciences

Conference

Presentations 2022

Nsukwini, S. Land restitution and co-management of protected areas in South Africa: The case of KwaGumbi Community, KwaZulu-Natal. Navigating Complex Pluriversal Relations: Indigeneity, Natural, Resources Governance and Intercontinental Relations in the 21st century, 5-7 July 2022 University of Pretoria.

Nsukwini, S. Luaba, K. & Bob, U. An Assessment of Human-wildlife conflicts and attitudes of local communities towards the conservation of wildlife in South Africa and Zambia. SAWMA Conference 4 – 9 September 2022: Conservation 50 years from now.

Nsukwini, S. & Bob, U. The contribution of agriculture to the livelihood needs of rural communities surrounding protected areas in South Africa. Symposium of Contemporary Conservation Practice, 30 Oct- 5 Nov 2022, Ezemvelo KZN Wildlife, Howick, KZN

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SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

UNIVERSITY OF MPUMALANGA

MSc and PhD graduations and supervisors:

Maseko, K. MSc. Smallholder maize farmers' perception of climate change in Ehlanzeni District, Mpumalanga Province, South African. Supervisor; Dr J Ndoro. Co Supervisor: Prof W Chingombe

- BSHG406 Advanced Climatology and Meteorology
- BSHG407 Integrated Environmental Management
- BSHG408 Advanced urban studies
- BSHG409 Advanced studies of human-environment interactions

Postgraduate (NQF level 9)

- MSc (Generic)
- Master of Arts in Geography

Postgraduate (NQF level 10)

- PhD Thesis

2022 student numbers

Undergraduate (NQF Level 5, 6 and 7)

- GOG101 Geography 101
- GOG102 Introduction to Human Geography 102
- GOG201 Geography 201
- GOG202 Economic and Development Geography 202
- GOG301 Urban Geography 301
- GOG302 Geography 302

Postgraduate (NQF Level 8)

- BSHG401 Research Methodology
- BSHG402 Research Report
- BSHG403 Philosophy of Science and Indigenous Knowledge Systems
- BSHG404 Advance Remote Sensing
- BSHG406 Advanced studies of Environmental Systems, Processes and Landscapes in Southern Africa

Level	2022	2023
First-year	288	265
Second-year	164	194
Third year	41	80
Honors	08	08
Masters	1	2
PhD	0	0

Link to departmental webpage

<https://www.ump.ac.za/Study-with-us/Faculties-and-Schools/Faculty-of-Agriculture-and-Natural-Sciences/School-of-Biology-and-Environmental-Sciences.aspx>

SSAG NEWS 2022/23

SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

NORTH -WEST UNIVERSITY

Name of department:

Department of Geography and Environmental Science (Mahikeng Campus)

- Dr. Wayde Pandy, Tourism Geography
- Dr. Sammy Bett (Principal Technician), Earth Observation & GIS
- Ms. Namhla Mkiva (Senior Technician), Environmental Science and Management

Head of department:

- Prof. Sheldon Strydom

Information about the Geographers and their area of specialisation in the department:

- Professor Lobina Palamuleni, Environmental Science and Management
- Professor Chris Munyati, Earth Observation & GIS
- Professor Sheldon Strydom, Applied Climatology & Meteorology
- Mr. James Drummond, African Development, Rural Geography, & Creative Economy
- Ms. Nisa Ayob, GIS & Climate Change
- Ms. Ncobile Nkosi, Air Quality
- Ms. Nicole van Gessellen, Ecotoxicology & Zoology

Exciting departmental news:

Prof. Strydom awarded NRF Y2 rating.



SSAG NEWS 2022/23

SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

NORTH -WEST UNIVERSITY

2022/2023 List of publications:

- Mahamba C and **Palamuleni L** (2022): Antimicrobial Activity of Sunflower (*Helianthus annuus*) Seed for Household Domestic Water Treatment in Buhera District, Zimbabwe. *International Journal of Environmental Research and Public Health* 2022, 19, 5462. <https://doi.org/10.3390/ijerph19095462>
- Palamuleni LG**, Plessis YD and Bakuwa RC (2022): Response to Water Scarcity: Gender Analysis of the Motivation Factors Toward Water Conservation Behaviour in the Workplace. *Frontiers in Water* 4:930681. doi: 10.3389/frwa.2022.930681.
- Mubbin M, **LG Palamuleni**, Ruhiiga TM and SA Bokhar (2022): Integration of local knowledge systems and decision on land use allocation among rural households in South Africa, *Present Environment and Sustainable Development*, Vol 16(1)DOI: <https://doi.org/10.47743/pesd2022161014>
- Nde SC, Bett SK, Mathuthu M, **Palamuleni L** (2022): Anthropogenic Land Use and Land Cover Change as Potential Drivers of Sediment Sources in the Upper Crocodile River, North-West Province, South Africa. *International Journal of Environmental Research and Public Health* 2022, 19, 13313. <https://doi.org/10.3390/ijerph192013313>
- Munyati C**, Economon E and Malahlela OO (2022): Differentiating grazing-induced rangeland grass nutrition status in situ using near infrared reflectance, *Advances in Space Research*, 70(10): 3137-3155.
- Munyati C** (2022): Detecting the distribution of grass aboveground biomass on a rangeland using Sentinel-2 MSI vegetation indices, *Advances in Space Research*, 69(2): 1130-1145.
- Munyati C** (2022): Influence of grazing intensity on nutrient concentrations in grass tissue: Evidence from two savannah grass species, *Joint XXIV International Grassland and XI International Rangeland Virtual Congress Kenya 2021, 25th - 29th October 2021, Volume II, Congress Poster Proceedings*, pp. 83-87, ISBN 978-9966-30-094-2.
- Ncoyini Z, Savage MJ, **Strydom S** and Clulow AD (2022): Long-term reference evapotranspiration trend and causative factors analysis in the sugarbelt area of the midlands of KwaZulu-Natal, South Africa. *South African Journal of Plant and Soil*, 39:3, 204-212, DOI: 10.1080/02571862.2022.2069874.
- Ncoyini Z, Savage MJ and **Strydom S** (2022): Limited access and use of climate information by small-scale sugarcane farmers in South Africa: A case study. *Climatic Services*. <https://doi.org/10.1016/j.cliser.2022.100285>.

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SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

NORTH -WEST UNIVERSITY

Publications Continued:

Drummond JH and Rogerson CM (2022):
Adventure tourism in the Apartheid era:
skydiving in Mafikeng-Mmbatho. *African
Journal of Hospitality, Tourism and Leisure*,
11, 587-594,
<https://doi.org/10.46222/ajhtl.19770720.244>.

MSc and PhD graduations and supervisors:

FE Tshabalala: Residential class-based
comparative analysis of household dumping
in Gauteng, South Africa. Supervisor: Prof
Lobina Palamuleni.

TC Mashego: Remotely sensing historical
fire frequency and its effects on savanna
vegetation cover: A case study in Mafikeng
Game Reserve. Supervisor: Prof Chris
Munyati.

MS Mathole: Evaluating the effects of
proximity to highways on common grazed
savannah grass species. Supervisor: Prof
Chris Munyati.

PhD:

HN Kekana: Towards an environmental
sustainability framework of informal
settlements. Supervisor: Prof Lobina
Palamuleni

2021 student numbers:

<i>Foundation Phase</i>	51
<i>First years</i>	180
<i>Second years</i>	90
<i>Third years</i>	50
<i>Honours</i>	50
<i>Masters</i>	40
<i>PhD's</i>	3

Link to departmental webpage:

<https://natural-sciences.nwu.ac.za/geography-environmental-management/staff>

SSAG NEWS 2022/23

SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

UNIVERSITY OF THE FREE STATE

Name of department:

- Department of Geography

Head of department:

- Prof Samuel Adelabu

Information about the Geographers and their area of specialisation in the department:

- **Dr Pululu Mahasa** (Lecturer) – Water demand management, medical waste management and aeolian geomorphology.
- **Dr Melissa Hansen** (Lecturer) – Political ecology, environmental politics, conservation, spatial development, development studies, sustainability science, society and environment and environmental governance.
- **Dr Jay le Roux** (Senior Lecturer) – Land degradation assessment, mapping and monitoring, specifically in spatial modelling of soil erosion risk. Sediment transport and hydrological connectivity, using hydrological models, such as soil and water assessment tool, GIS and remote sensing techniques from catchment to national scale.
- **Dr Rajab Matamanda** (Senior Lecturer) – Climate change adaptation and planning, environmental planning, applied systems analysis, human settlements planning and management.
- **Dr Mbali Pewa** (Lecturer) – Gender and development as well as waste management in deprived areas.
- **Prof Samuel Adelabu** (Professor) – Remote sensing and GIS applications to vegetation, urban development, water analysis, land use and land cover changes, ecological assessment, climate change, disaster risk analysis, agricultural production, semi-arid and mountain environments etc.
- **Prof Geoffrey Mukwada** (Professor) – Climate change and mountain environments, rural livelihoods as well as natural resource management and conservation.
- **Dr Mischka Dunn** (Lecturer) – Land use management, planning education and spatial planning.

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SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

UNIVERSITY OF THE FREE STATE

Geographers continued:

- **Dr Elizabeth Rudolph** (Lecturer) – Process geomorphology and fieldwork techniques in data collection. Geomorphological mapping and landscape analysis. Dating techniques in earth surfaces processes and denudation rates (e.g. cosmogenic nuclide exposure). Glacial and peri-glacial geomorphology in particular sub-Antarctic Antarctic and high mountain environments. Education and communication in Geography, including the use of Virtual Reality technology.
- **Dr Adriaan van der Walt** (Senior Lecturer) – Biometeorology and climatology, specifically the influence and impact of climate variability on the human and animal population, as well as extreme temperature event impacts and drivers thereof. Geographic information systems, including the mapping and geospatial application on climate variability and influences thereof.
- **Dr Sifiso Xulu (Senior Lecturer)** – Geospatial application on climate variability and its influence on natural resources, restoration ecology and land-use change.
- **Ms Eldalize Kruger** (Lecturer) – Environmental management and monitoring, environmental awareness and education.

- **Ms Tobeka Mehlokhulu** (Lecturer) – Township development studies, land issues and sustainable rural livelihoods.
- **Ms Ntebohiseng Sekhele** (Lecturer) – Climate change, montane rural communities and conservation conflicts.
- **Ms Marike Stander** (Lecturer) – Heavy metal contamination of sediments, sediment provenance studies and environmental monitoring.
- **Mr Solomon Zonde** (Lecturer) - Vegetation ecology, mountain environment, climate change, natural resource management, rangeland science and landscape ecology

Exciting departmental news:

Dr Jay le Roux received a C2 NRF-rating. This brings the total number of NRF-rated scientists in the Geography Department to four (excluding research fellows). One of Dr le Roux's master's students, Mr Ayabonga Gangathele, received the 'Best Student Presentation' at the National Wetland Indaba that took place at the Golden Gate Highlands National Park, Free State from 24-27 October 2022 (<https://indaba.org.za/>). Ms Zandile Mncube, a PhD candidate in the Department at Qwaqwa, won second prize for her presentation at the Qwaqwa Campus Research Conference from 29-30 September 2022.

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SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

UNIVERSITY OF THE FREE STATE

Departmental news continued:

Prof Geoffrey Mukwada is the coordinator of the Mountain-to-Mountain Programme between Appalachian State University and UFS. As part of this, meteorological stations were set up in the Maloti-Drakensberg Mountains to monitor the climate of the highly fragile environment using a Wireless Sensor Network (WSN).

Mrs Tobeka Mehlomakhulu was appointed as an adjudicator for the Master's Bronze Medal award from the South African Geographical Journal.

Dr Abraham Matamanda was appointed as the Editor of the Town Planning Journal published by the UFS. His appointment to this editorial position was effected from 1 September 2022. Dr Abraham Matamanda also co-edited a special issue "Feeding the Growing cities of sub-Saharan Africa," in *Frontiers in Sustainable Food System Journal*.

Dr Matamanda was also appointed as an executive member of the South African Research Chair Initiative (SARChI) chair in City Regions; chaired by Prof Ivan Turok at the UFS. Additionally, Dr Matamanda was selected to be part of the second cohort of the Future Professoriate Programme at the UFS. In July 2022, Dr Matamanda was invited by the University of Zimbabwe, Department of Architecture and Real Estate to facilitate a writing workshop with postgraduate students reading for their Master's and Doctoral degrees.

Dr Adriaan van der Walt was invited to be a plenary speaker at the 8th South Asia Heat Health Information Network Master Class with a talk titled 'Heat Stress Mitigation and Adaption Perspectives in South Africa', 20 May 2022. The presentation took place online. He was also nominated for the Outstanding Review Award in 2021 for the South African Science Journal (SAJS) and selected as an Associate Editor Mentee of the South African Journal of Science Mentor Programme for the period 2022-2023.

2022 List of publications:

Adagbasa, E.G., Adelabu, S.A. & Okello, T.W. 2022. Application of deep learning with stratified K-fold for vegetation species discrimination in a protected mountainous region using Sentinel-2 image. *Geocarto International* 37(1): 42–162.

Adagbasa, E.G. & Mukwada, G. 2022. Mapping vegetation species succession in a mountainous grassland ecosystem using Landsat, ASTER MI, and Sentinel-2 data. *PloS one*, 17(1), p.e0256672.

Adams, L.D., Martin G.D., Downs, C., Clark, V.R., Thabethe, V., Raji, I., & Steenhuisen, S. 2022. Seed dispersal by frugivores and germination of the invasive alien shrub *Pyracantha angustifolia* (Franch.) C.K. Schneid. in Free State Province, South Africa. *Biological Invasions* 24: 2809-2819.

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Publications continued :

Adeyeye, D., Olusola, A.O., Orimoloye, I.R., Singh, S. & Adelabu, S.A. 2022. Carbon footprint assessment and mitigation scenarios: a benchmark model for GHG indicator in a Nigerian University. *Environment, Development and Sustainability* 0: 1-22.

Boardman, J. 2022. Footpath erosion: assessment, extent and impacts with especial reference to the UK. *Geography* 107(2):60-69.

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Clark, V.R., Burrows, J., Turpin, B., Balkwill, K., Lötter, M., & Siebert, S. 2022. The Limpopo-Mpumalanga-Eswatini Escarpment-extra-ordinary endemic plant richness and extinction risk in a summer rainfall Montane region of Southern Africa. *Frontiers in Ecology and Evolution* 10: 765854-1 - 765854-18.

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Denoon-Stevens, S.P., Andres, L., Jones, P., Melgaco, L., Massey, R.T, & Nel, V.J. 2022. Theory versus practice in planning education: The view from South Africa. *Planning Practice and Research* 37(4): 509-525.

Fashae, O., Obateru, R., Olusola, A.O. & Dragovich, D. 2022. Factors controlling gully morphology on the quartzite ridges of Ibadan, Nigeria. *CATENA* 212: 106127-1 - 106127-15.

Fashae, O., Fatayo, O. & Olusola, A.O. 2022. Riparian health conditions of headwater streams in Southwestern Nigeria. *International Journal of River Basin Management* 2022: 1-12.

Favis-Mortlock, D., Boardman, J., Foster, I. & Shephard, M. 2022. Comparison of observed and DEM-driven field-to-river routing of flow from eroding fields in an arable lowland catchment. *CATENA* 208. DOI: 10.1016/j.catena.2021.105737

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Publications continued :

Filho W.L., Ternova L., Fayyaz, M.M., Abubakar, I.R., Kovaleva, M., Donkor, F.K., Anuga, S.W., Matamanda, A.R., Djekic I., Umar I.A., Olooto, F.M., Meirelles, M., Nagy, G.J., May, J., May, M., Ebhuoma, E. & Begum H. 2022. An analysis of climate change and health hazards: results from an international study. *International Journal of Climate Change Strategies and Management*. DOI: 10.1108/IJCCSM-08-2021-0090.

Fitchett, J.M. & Van der Walt, A.J. 2022. Research in Africa to tackle the climate change crises, *QUEST Science for South Africa* 18(1).

Foster, I., Boardman, J., Evans, J., Copeland-Phillips, R., Vadher, A., Wright, S., Collins, A. & Manning, C. 2022. Anthropogenic sediment traps and network dislocation in a lowland UK river. *Earth Surface Processes and Landforms* 47: 143-158.

Gomes-da-Silva, J., Filardi, F.L.R., Barbosa, M.R.V., Baumgratz, J.F.A. & Vidal Junior, J.D.D., et al. 2022. Brazilian Flora 2020: Leveraging the power of a collaborative scientific network. *Taxon* 71(1): 178-198.

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Jombo, S.S., Adam, E., Byrne, M. & Newete, S. 2022. Assessing the intraurban differences in vegetation coverage and surface climate in a heterogeneous area. *Transactions of the Royal Society of South Africa* 77(1): 1 - 10.

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Kofler, C., Mair, V., Comiti, F., Zebisch, M., Schneiderbauer, S. & Steger, S. 2022. Towards a sediment transfer capacity index of rock glaciers: Examples from two catchments in South Tyrol, (Eastern Italian Alps). *CATENA* 216: 106329-1 - 106329-14.

Kofler, C., Mair, V., Comiti, F., Zebisch, M., Schneiderbauer, S., & Steger, S. 2022. Towards a sediment transfer capacity index of rock glaciers: Examples from two catchments in South Tyrol, (Eastern Italian Alps). *CATENA* 216(A). DOI: 10.1016/j.catena.2022.106329.

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SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

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Publications continued :

Lefulebe, B. E., Van der Walt, A.J. & Xulu, S. 2022. Fine-scale classification of urban land use and land cover with machine learning strategies in the City of Cape Town, South Africa. *Sustainability* 14, 9139. DOI: 10.3390/su14159139.

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Magadzire, T., Hoell, A., Nakalembe, C. & Tongwane, M.I. 2022. Editorial: Recent advances in agrometeorological analysis techniques for crop monitoring in support of food security early warning. *Frontiers in Climate* 4: 950447-1 - 950447-3.

Mapuru, M.J., Olusola, A.O. & Adelabu, S.A. 2022. From fossil-dependent energy to a clean, non-polluting energy: wind farms in Maluti-A-Phofung municipality, South Africa. *Development Southern Africa* 39(6): 973-989.

Mararakanye, N., Le Roux, J.J., & Franke, A.C. 2022. Long-term water quality assessments under changing land use in a large semi-arid catchment in South Africa. *Science of the Total Environment* 818(151670). DOI: [10.1016/j.scitotenv.2021.151670](https://doi.org/10.1016/j.scitotenv.2021.151670)

Musosa, L., Shekede, M.D., Gwitira, I., Chirisa, I., Tevera, D. & Matamanda, A.R. 2022. Auditing the spatial and temporal changes in urban cropland in Harare Metropolitan Province, Zimbabwe. *African Geographical Review*. DOI: 10.1080/19376812.2022.2128834.

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SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

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Publications continued :

Matamanda, A.R., Mphambukeli, T.N. & Chirisa, I. 2022. Exploring water-gender-health nexus in human settlements: The burden on women and the girl-child. *Cities & Health*. DOI: 10.1080/23748834.2022.2136557.

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Matamanda, A.R., Mandebvu-Chaora, C. & Rammile, S. 2022. The interplay of urban agriculture and spatial (in) justice in Harare, Zimbabwe. *Land Use Policy*. 105, 106029. DOI: 10.1016/j.landusepol.2022.106029.

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Mishra, H., Pandey, B., Mukwada, G., De Los Rios, P., Nigam, N. & Sahu, N. 2022. Trapped within nature: climatic variability and its impact on traditional livelihood of Gaddi transhumance of Indian Himalayas. *Local Environment*: 2162025:1 - 2162025:17.

Mncube, Z., Adelabu, S.A. & Adagbasa, E.G. 2022. Is eThekweni metropolitan municipality (EMM) experiencing light pollution?: A remote sensing analysis of nighttime data of EMM, South Africa. *Spatial Information Research* 2022: 1 - 13.

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SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

UNIVERSITY OF THE FREE STATE

Publications continued :

Obateru, R., Fashae, O., Osakunih, O. & Olusola, A.O. 2022. Hydraulic geometry influences some water quality parameters in a tropical headwater basin in southwestern Nigeria. *Acta Geophysica* 2022: 1-10.

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Ogunjo, S., Olusola, A.O. & Orimoloye, I. 2022. Association between weather parameters and SARS-Co V-2 confirmed cases in two South African cities. *GeoHealth* 6 (e2021GH000520): 1-16.

Onaolapo, T.F., Okello, T.W., Adelabu, S.A. & Adagbasa, E.G. 2022. Change in the urban landscape of the Drakensberg Mountain region, South Africa: A case study of Phuthaditjhaba. *Mountain Research and Development* 42(3): R63 - R74.

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Orimoloye, I.R., Belle, J.A., Orimoloye, Y.M., Olusola, A.O. & Ololade, O.O. 2022. Drought: a common environmental disaster. *Atmosphere* 13(1): 111.

Peerbhay, K., Adelabu, S.A., Lottering, R. & Singh, L. 2022. Mapping carbon content in a mountainous grassland using SPOT 5 multispectral imagery and semi-automated machine learning ensemble methods. *Scientific African* 17: e01344-1 - e01344-9.

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Rudolph, E. M., Hedding, D. W., & Nel, W. 2022. A spatial model of Marion Island's palaeo-ice extent. *Antarctic Science* 1–9. DOI: 10.1017/S0954102022000293.

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SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

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Publications continued :

Pulley, S., Zhang, Y., Copeland-Phillips, R., Vadher, A., Foster, I., Boardman, J. & Collins, A. 2022. A reconnaissance survey of channel bank particulate phosphorus concentrations, controls and estimated contributions to riverine loads across England. *Hydrological Processes* 36: e4785-1 - e14785-12.

Ranjan, O., Rani, U., Anand, S., Pandey, B., Mukwada, G., De Los Rios, P., Akyuz, D., & Chaudhary, A. 2022. Spatial-temporal analysis of physio-climatic changes in Tawang-Chu River Basin, Eastern Himalaya in India. *International Journal of Ecology and Environmental Sciences* 49: 217 – 230.

Rudolph, E. M., Hedding, D. W., de Bruyn, P. J. N. & Nel, W. 2022. An open access geospatial database for the sub-Antarctic Prince Edward Islands. *South African Journal of Science* 118(9/10), Art. #12302. DOI: 10.17159/sajs.2022/12302.

Shikwambana, L., Kganyago, M., & Xulu, S. 2022. Analysis of wildfires and associated emissions during the recent strong ENSO phases in Southern Africa using multi-source remotely-derived products. *Geocarto International* 2023: 1–17.

Sibanda, W., Hansen, M.M., & Mukwada, G. 2022. Rethinking woman experiences in water and sanitation projects in Tongogara refugee camp, Zimbabwe. *International Journal of Social Science Research and Review* 5(6): 320 – 333.

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Sibanda, W., Mukwada, G. & Hansen, M.M. 2022. Disaster (Un)preparedness under cyclone Idai: Revisiting women activities in water and sanitation at tongogara refugee camp, Zimbabwe. *Cogent Social Sciences* 8: 2137964-1 - 2137964-19.

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SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

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Publications continued :

Van Der Walt, A.J., & Fitchett J. 2022. Extreme Temperature Events (ETEs) in South Africa: A review. *South African Geographical Journal* 104(1): 70–88. DOI: 10.1080/03736245.2021.1907219.

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Zhanda, K., Garutsa, N., Dzvimbo, M.A. & Mawonde, A. 2022. Women in the informal sector amid COVID-19: implications for household peace and economic stability in urban Zimbabwe. *Cities and Health* 6 (1): 37-50.

Books/Chapters in Books:

Adagbasa, E.G., Adelabu, S.A. & Okello, T. 2022. Ecological vulnerability assessment to Grassland fires in a protected mountainous area using Remote Sensing and GIS. First edition. In *Remote sensing of African mountains. Geospatial tools toward sustainability*. S. Adelabu, A. Ramoelo, A. Olusola & E. Adagbasa (Eds). Cham: Springer. pp 67-81.

Boardman, J., Poesen, J. & Evans, M. 2022. Slopes: soil erosion. In *The History of the Study of Landforms or the Development of Geomorphology. Volume 5: Geomorphology in the Second Half of the Twentieth Century*. T. Burt, A. Goudie & H. Viles (Eds). Geological Society of London. pp. 241-255.

Dzvimbo, M.A., Matamanda, A.R., Mawonde, A. & Magijani, F. 2022. Exploring climate change impacts on smallholder farmers in Mhondoro-Ngezi District, Zimbabwe. In *Handbook of climate change across the food supply chain*. W.L. Filho, I. Djekic, S. Smetana & M. Kovaleva (Eds.). Cham: Springer Nature. pp 381-402.

Karakadzai T., Matamanda A.R., & Chirisa I. (2022). Rainwater harvesting for water security in informal settlements: techniques, practices, and options. In: *The Palgrave Encyclopedia of Urban and Regional Futures*. L.W Filho, A.M. Azul, F. Doni & A.L. Salvia (Eds). Cham: Palgrave Macmillan.

Matamanda, A.R., Kohima, J.M., Nel, V., & Chirisa, I. 2022. Climate change adaptation and planning education in southern Africa. In *Planning cities in Africa*. G.A. Gebregiorgis, S. Greiving, A.H. Namangaya, W. Kombe (Eds). Cham: Springer Nature.

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SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

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Publications continued :

Matamanda A.R., Nel, V., Dunn, M., Mgwele, A., Rammile, S., Leboto-Khetsi, L., Kohima, J.M., & Ngo, P.B. 2022. Sustainable development goals and urban health challenges in informal settlements of Mangaung Municipality, South Africa. In: *Handbook of Sustainability Science in the Future: Policies, Technologies and Education by 2050*. W.L. Filho, A.M. Azul, F. Doni & A.L. Salvia (Eds). Cham: Springer Nature.

Matamanda, A.R., Nel, V., Chanza, N., Leboto-Khetsi, L., Mangara, F., & Paradza, P. 2022. The political economy of COVID-19 pandemic: lessons learned from the responses of local government in sub-Saharan Africa. In *Local Government and the COVID-19 pandemic*. C. Nunes Silva (Eds) Cham: Springer Nature. pp 103-128.

Matamanda, A.R. 2022. Are we there yet? Prospects and barriers to implementing smart city initiatives in Harare, Zimbabwe. In *Sustainable and smart spatial planning in Africa: Case studies and solutions*. C. Chavunduka (Eds). New York: CRC Press.

Matamanda, A.R., Chirisa, I., Rammile, S., & Marais, M. 2022. *Housing and Technology: A special focus on Zimbabwe*. Cham: Springer Nature.

Mofokeng, D.O., Olusola, A.O., Adelabu, S.A. 2022. Development of lightning hazard map for fire danger assessment over mountainous protected area using Geospatial technology. First edition. In *Remote sensing of African mountains: Geospatial tools toward sustainability*. S. Adelabu, A. Ramoelo, A. Olusola & E. Adagbasa (Eds) Cham: Springer. pp 131-156.

Ogunjo, S., Olusola, A.O. & Olusegun, C. 2022. Bivariate copula modelling of precipitation and river discharge within the Niger basin. In *Soil-Water, agriculture, and climate change: Exploring linkages*: S.K. Dubey, P.K. Jha, P.K. Gupta, A. Nanda & V Gupta (Eds). pp 93-106.

Olusola, A.O., Onafeso, O., Fashae, O. & Adelabu, S.A. 2022. Geomorphological analyses of third-order basins in Southwestern Nigeria. First Edition. In *Drainage basin dynamics: An introduction to Morphology, Landscape and Modelling*. P.K. Shit, B. Bera. A. Islam, S. Ghosh & G. Bhunia (Eds). Cham: Springer Nature. pp. 455-475.

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SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

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Publications continued :

Onaolapo, T.F., Okello, T. & Adelabu, S.A. 2022. Evaluating settlement development change, pre, and post-1994 in the Drakensberg Mountains of Afromontane region, South Africa. First edition. In *Remote sensing of African mountains: Geospatial tools toward sustainability*. S. Adelabu, A. Ramoelo, A. Olusola & E. Adagbasa (Eds). Cham: Springer. pp. 171-192.

Olusola, A.O. & Adelabu, S.A. 2022. Implications of rainfall variabilities in light of climate change on crop production in the Sudan-Sahelian Belt of Nigeria. In *Water-Energy-Nexus in the ecological transition*. V. Naddeo, K. Choo & M. Ksibi (Eds). pp 103-106.

Olusola, A.O., Oluwatola, A., Akpoterai, L., Ogunjo, S., Olusegun, C. & Adelabu, S.A. 2022. Flood assessment along lower Niger river using Google Earth Engine. In *Soil-Water, agriculture, and climate change: Exploring linkages*: S.K. Dubey, P.K. Jha, P.K. Gupta, A. Nanda & V Gupta (Eds). pp 329-343.

Mukwada, G. & Mutana, S. 2022. Surviving the limits imposed by a changing climate: The case of urban drought and water supply sustainability in Phuthaditjhaba. First edition. In *Sustainable futures in Southern Africa's mountains: Multiple perspectives on an emerging city*. A. Membretti, S. Taylor & J. Delves (Eds). Cham: Springer. pp. 75-89.

Mukwada, G. 2022. Current crisis and future woes: The case of climate change in the Drakensberg Mountains region of Southern Africa and its socio-economic impacts on the region. In *Mountain Landscapes in Transition*. U. Schickhoff, R.B. Singh & S. Mal (Eds). Cham: Springer. pp. 449-467.

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Semela, M, Olusola, AO, Adelabu, SA & Ramoelo, A. 2022. Montane grasslands: Biomass estimations using remote sensing techniques in Africa. First edition. In *Remote sensing of African mountains Geospatial tools toward sustainability*. S. Adelabu, A. Ramoelo, A. Olusola & E. Adagbasa (Eds). Cham: Springer. pp 1-18.

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Publications continued :

Le Roux, J.J., Morake L., Anderson R.L., van der Waal, B. & Hedding, D.W. 2022. Intra-gully mapping of the largest documented gully network in South Africa using UAV photogrammetry: Implications for restoration strategies. *Progress in Physical Geography* 46(5): 772-789. DOI: 10.1177/03091333221101057.

Magadzire, T., Hoell, A., Nakalembe, C. & Tongwane, M.I. 2022. Editorial: Recent advances in agrometeorological analysis techniques for crop monitoring in support of food security early warning. *Frontiers in Climate* 4: 950447-1 - 950447-3

2022 student numbers:

Honours	20
Masters	24
Doctoral	29

Link to departmental webpage:

www.ufs.ac.za/geography

MSc and PhD graduations and supervisors:

MSc

Bosman, B.L. - M.Sc. in Geography (with distinction): Supervisor Dr J.J. le Roux

Mncube, Z. - M.Sc. in Environmental Geography: Supervisor Prof S.A. Adelabu

Morake, L. - M.Sc. in Geography: Supervisor Dr J.J. le Roux

Mukwevho, R. - M.Sc. in Geography: Supervisor Dr A van der Walt

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SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

UNIVERSITY OF LIMPOPO

Name of department:

- Department of Geography and Environmental Studies

Head of department:

- Izelque Botha

Information about the Geographers and their area of specialisation in the department:

- **Prof HC Chikoore:** Meteorology & Climate
- **Prof MR Ramudzuli:** Resource Perception and Management, Sustainable Development, Tourism
- **Prof I Dhau:** Natural Resources Management, Environmental Modelling, Crop Disease Monitoring, GIS & Remote Sensing Applications
- **Dr JM Letsoalo:** Waste Management, Tourism Studies, Sustainable Resource Development
- **Dr D Klopper:** Atmospheric Science, Human-Environment Interactions
- **Dr A De Lange:** Atmospheric Science, Meteorology, Climatology, Air Quality, Air pollution Dispersion
- **Ms MC Mothapo:** Risk & Vulnerability Assessments, Aerial Photography, Cartography, GIS & Remote Sensing Applications
- **Mr MM Marais:** Economic & Real Estate Geography, Environmental Science & Impact Management, Urban Design & Settlement Resilience, Trans-disciplinary Peri-Urban Studies
- **Ms I Botha:** Science Communication, Perceptions around environmental issues, Environmental Impact Assessments & Management, Public Participation
- **Mr M Sebaiwa:** Natural Resources Management, Ecotoxicology, Ecological Risk Assessments, Emerging Pollutants Detection & Quantification
- **Ms F Lindeque:** Air Quality Management, Sustainable Energy Use, Environmental Impacts on Human Health.
- **Mr FM Mashao:** GIS & Remote Sensing, Environmental & Crop Modelling, Precision Agriculture, Climate Change, Rangelands Management
- **Ms T Mugwena:** GIS & Remote Sensing & their Applications in Conservation, Vegetation Monitoring & Social Sciences



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SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

UNIVERSITY OF LIMPOPO

Exciting departmental news:

Clodean Mothapo: University of Limpopo Vice Chancellor Awards 2022: Best Upcoming Teacher in the School

Farina Lindeque: University of Limpopo Vice Chancellor Awards 2022: Best overall established community engagement scholar in the University

Izelque Botha: EAPASA Best Environmental Lecturer 2020-2022

Frederick Mashao: HPW Access Right Now Award 2023

2022/2023 List of publications:

Kom Z, Nethengwe NS, Mpandeli S, **Chikoore H** (2022) Indigenous knowledge indicators employed by farmers for adaptation to climate change in Rural South Africa. *Journal of Environmental Planning and Management* <https://doi.org/10.1080/09640568/2022/2086854>

Sengani, F, **Mashao, FM** and Allopi, D (2022) An integrated approach to develop a slope susceptibility map based on a GIS-based approach, soft computing technique and finite element formulation of the bound theorems. *Transportation Geotechnics* 2022, 36, 100818 <https://doi.org/10.1016/j.trgeo.2022.100818>

Nelson, WC, Hoffmann, MP, May, C, **Mashao, F**, Ayisi, K, Odhiambo, J, Bringham, T, Feil, JH, Bakhsh, SY, Abdulai, I and Rötter, RP (2022) Tackling climate risk to sustainably intensify smallholder maize farming systems in southern Africa. *Environmental Research Letters* 2022, 17, 075005 <https://doi.org/10.1088/1748-9326/ac77a3>

Mbombi, MO, Muthelo, L, Mphekgwane, P, **Dhau, I**, Tlouyamma, J, Nemuramba, R, Mashaba RG, Mothapo, K and Maimela, E (2022) Prevalence of COVID-19 Vaccine Hesitancy in a Rural Setting: A Case Study of DIMAMO Health and Demographic Surveillance Site, Limpopo Province of South Africa. *Journal of Respiration* 2022, 2(2), 101-110 <https://doi.org/10.3390/jor2020008>.

Peter M. Mphekgwana, Masenyani O. Mbombi, Livhuwani Muthelo, Joseph Tlouyamma, Rathani Nemuramba, Cairo Ntimana, Katlego Mothapo, **Inos Dhau** and Eric Maimela (2022) Overweight Prevalence among Rural Adolescents by Household Head Obesity and Socio-Economic Status in Limpopo, South Africa. *Children* 2022, 9(11), 1728 <https://doi.org/10.3390/children9111728>

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Singo MV, Chikoore H, Engelbrecht FA, Ndarana T, Muofhe TP, Mbokodo IL, Murungweni FM and Bopape MM (2023) Projections of future fire risk under climate change over the South African savanna Stochastic Environmental Research and Risk Assessment, In press.

Ndarana T, Lekoloane LE, Rammopo TS, Reason CJC, Bopape MM, Chikoore H and Engelbrecht FE (2023) Downstream development during South Atlantic Ocean anticyclones. Climate Dynamics, <https://doi.org/10.1007/s00382-023-06717-7>.

Mbokodo IL, Bopape MM, Ndarana T, Mbatha SM, Muofhe TP, Singo MV, Xulu NG, Mohomi T, Ayisi KK and H Chikoore (2023) Heatwave variability and structure in South Africa during summer drought. Climate, 11, 38. <https://doi.org/10.3390/cli11020038>.

Xulu NG, Chikoore H, Bopape MM, Ndarana T, Muofhe TP, Mbokodo IL, Munyai RB, Singo MV, Mohomi T, Mbatha SMS, Mdoka ML (2023) Cut-off lows over South Africa: A Review. Climate, 11, 59, <https://doi.org/10.3390/cli11030059>

Nemukula MM, Sigauke C, Chikoore H and A Bere (2023) Modelling drought risk using bivariate spatial extremes: Application to the Limpopo Lowveld region of South Africa. Climate, 11, 46, <https://doi.org/10.3390/cli11020046>

MSc and PhD graduations and supervisors:

Chokoe SA. 'Assessing and documenting the use of indigenous knowledge systems in weather and seasonal climate forecasting: A case study of Moletjie villages in Limpopo Province, South Africa". MSc Geography. **Supervisor:** Dr BM Petja

Makwela TR 'An assessment of the impact of declining water quality on tourism: A case study of Loskop Dam, Mpumalanga Province, South Africa. MSc Geography. **Supervisor:** Prof MR Ramudzuli

2022 student numbers:

First Year	116
Second Year	80
Third Year	89
Fourth Year	76
Honours	10
Masters	24
Doctoral	3

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Name of department:

- Geography, Geoinformatics and Meteorology

Head of department:

Professor Serena Coetzee.

Information about the Geographers and their area of specialisation in the department:

- Dr. Adeleke Adedayo; Lecturer- Geoinformatics (Geodesy, Surveying) adedayo.adeleke@up.ac.za 0124203536
- Prof. Archer Emma; Associate Professor- Sustainable agriculture/managed ecosystems and climate in Africa emma.archer@up.ac.za 012 420 2881
- Prof Beckedahl Heinz; Extraordinary Lecturer-Geomorphology, wetland studies hbeckedahl@gmail.com +268 (0) 2518 8859
- Dr. Beraki Asmerom; Extraordinary Lecturer- Meteorology aberaki@csir.co.za
- Dr. Botai Joel; Extraordinary Lecturer - Atmospheric modelling, remote sensing Joel.botai@weathersa.co.za 012 423 9096
- Prof. Breetzke Gregory; Associate Professor- Geography of crime (GIS) greg.breetzke@up.ac.za 012 420 4318
- Dr. Chirima George; Extraordinary Lecturer – Geoinformatics ChirimaJ@arc.agric.za 012 310 2672
- Prof Dougil Andy; Extraordinary Professor – Environmental Science A.J.Dougill@leeds.ac.uk
- Dr. Claassen Marius; Extraordinary Lecturer- Environmental science, ecology mclaasse86@gmail.com
- Prof. Coetzee Serena; Professor, Director: CGIS, HoD- Geoinformatics (spatial data infrastructures) serena.coetzee@up.ac.za 012 420 3823
- Prof. Combrinck Ludwig; Extraordinary Professor- Geodesy ludwig@hartrao.ac.za 012 301 3224
- Dr. Cooper Antony; Extraordinary Lecturer- Geographical Information Science (GISc) theory and applications acooper@csir.co.za 012 841 4121
- Prof. Davis Nerhene; Ass Prof, Human geography (land reform) Nerhene.davis@up.ac.za 012 420 2882



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Geographers Continued:

- Prof. Dyson Liesl; Associate Professor- Meteorology Liesl.dyson@up.ac.za 012 420 2469
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- Dr. Feig Gregor; Extraordinary Lecturer- Environmental science gregor@saeon.ac.za
- Dr Gregory JJ; Lecturer- Urban Geography (urban and neighbourhood change) jj.Gregory@up.ac.za 012 420 2016
- Prof. Garland Rebecca Associate Professor - Air quality, atmospheric composition, and impacts rebecca.garland@up.ac.za 012 420 4127
- Dr. Hansen Christel; Lecturer- Geomorphology, applied GIS christel.hansen@up.ac.za 012 420 4215
- Prof. Haussmann Natalie; Associate Professor - Bio-geomorphology Natalie.haussmann@up.ac.za 012 420 4049
- Mrs Hill Liesl; Extraordinary Lecturer- Aquatic ecosystem health assessment & management, freshwater ecotoxicology liesl.hill@gmail.com
- Dr. Jordan Winifred; Extraordinary Lecturer- Meteorology Winifred.Jordaan@weathersa.co.za
- Mr. Katumba Samy; Lecturer- Geoinformatics Samy.katumba@up.ac.za 012 420 4943
- Mr. Kruger Andries; Extraordinary Lecturer- Meteorology Andries.kruger@weathersa.co.za 012 367 6016
- Prof. Landman Willem; Professor- Meteorology Willem.landman@up.ac.za 012 420 3713
- Mr. Loubser Michael; Lecturer- Geomorphology michael.loubser@up.ac.za 083 328 5754
- Prof. Ndarana Thando; Associate Professor - Meteorology thando.ndarana@up.ac.za 012 420 5164
- Mrs. Pretorius Erika; Senior technical assistant- Geoinformatics Erika.pretorius@up.ac.za 012 420 3737
- Prof. Romoelo Abel; Director: Centre for Environmental Studies Geo-information Science (remote sensing), earth observation abel.ramoelo@up.ac.za 012 420 2017
- Dr Rautenbach Victoria; Lecturer- Cartography, Geoinformatics (GIS), Databases, Human-computer Interaction victoria.rautenbach@up.ac.za

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UNIVERSITY OF PRETORIA

Geographers Continued:

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- Dr. Tsele Philemon; Senior Lecturer- Geoinformatics (remote sensing)
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- Dr. van Aardt Isa; Extraordinary Lecturer- Meteorology ivanaardt@vodamail.co.za
- Dr van der Merwe Barend; Lecturer- Application of AI in Geography
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- Dr van Deventer Heidi; Extraordinary Lecturer- GIS, geomorphology, freshwater ecosystems hvdeventer@csir.co.za
- Dr Wright Caradee; Extraordinary Lecturer- Public health, geography
cwright@mrc.ac.za
- Mrs Mahlangu Popi; Lab Assistant
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- Mrs Sandra Wilkinson; Departmental Administrator – Student administration
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- Mrs van Aardt Corne; Departmental Administrator -Human Resources and Finance administration
Corne.vanaardt@up.ac.za 012 420 2489
- Mr Snyman Lourens; Senior Cartographer- Geospatial Information Services
lourens.snyman@up.ac.za 082 376 4063

E*xciting departmental news:*

We welcome Rebecca to our team

[Prof. Rebecca Garland](#) recently joined the University of Pretoria as an Associate Professor at the Department of Geography, Geoinformatics and Meteorology. She is an [NRF](#)-rated researcher with over 20 years' experience in research in the atmospheric science, atmospheric biogeochemistry, atmospheric chemistry, and climate change fields.

Her research interests focus on improving our understanding of air quality and atmospheric composition, and their impacts, in southern Africa using a variety of tools and data streams. Many of her projects have also worked at the science-policy interface, working to provide a strong evidence base for air quality management in South Africa, with newer projects increasingly working across Africa. Currently, she is Coordinating Lead Author for the Climate and Clean Air Coalition (CCAC) and UNEP

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[Integrated Assessment of Air Pollution and Climate Change in Africa](#) that will provide a framework of actions to improve air quality across the continent.

She is active in national and international working groups, with an aim to support and grow the atmospheric science community across Africa. This includes her roles as Co-Editor of the [Clean Air Journal](#), Vice President of the [South African Society for Atmospheric Sciences](#), Scientific Steering Committee of the [International Global Atmospheric Chemistry \(IGAC\) Project](#), and in the development and growth of the IGAC regional working group [African Group on Atmospheric Science \(ANGA\)](#). Additionally, she is a member of the steering committee member of [AfricAir](#) and [MAP-AQ](#), as well as acting on the Science Advisory Group of the GAW Urban Research Meteorology and Environment ([GURME](#)) project and [CCAC](#).

Prof. Garland received her PhD in Chemistry from the University of Colorado, Boulder (USA) focusing on laboratory studies of aerosol particles. Her PhD research focused on the impact of particle composition on chemistry and water uptake as well as developing empirical parameterizations for the relationship between aerosol particle composition, water uptake and optical properties. During her PhD she was also a graduate researcher at the Earth Systems Laboratory in NOAA (USA). She was a postdoctoral research in the Biogeochemistry Department at the Max Planck Institute for

Chemistry (Germany), where she focused on field studies of the optical and biological properties of aerosol particles. After her postdoc, she was a AAAS Science and Technology Policy Fellow working as an analyst in the Office of Energy Efficiency and Renewable Energy in Washington DC, USA. Prof Garland joined the Council for Scientific and Industrial Research (South Africa) in 2011. Working in the Climate and Air Quality Modelling Group, she established the current atmospheric composition, and climate change and health research areas in the group, as well as led the research focusing on aerosol particle impacts on climate in southern Africa.

We welcome Sandra to our team!

Please meet Mrs Sandra Wilkinson, Departmental Administrator in the Department of Geography, Geoinformatics and Meteorology who was appointed in December 2022.

New NRF ratings

[Prof Gregory Breetzke](#) received a B2 rating from the National Research Foundation (NRF) of South Africa in the field of social sciences with a specialization in spatial criminology. His research has generally focused on two main themes: crime seasonality and the spatial and temporal stability and concentration of crime patterns (both in South Africa and internationally).

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Departmental news continued:

Prof Thando Ndarana was awarded C1 rating.
Prof Nerhene Davis was awarded C2 rating.
Dr Victoria Rautenbach was awarded Y rating.

Meteorology staff and students present at the 13th International Conference on Southern Hemisphere Meteorology and Oceanography (ICSHMO)

The conference was held from 8-17 February 2022 in Wellington New Zealand but was hosted as a fully virtual conference. The conference themes included Atmospheric processes and observations, Weather and extreme events, Air quality and pollution, Climate and climate change, Modelling and prediction and Science Communication, Education & Outreach. Eight students and staff from GGM were involved with the conference. The presentations were diverse, Prof Willem talked about patterns between South American and South African rainfall during El Niño–Southern Oscillation. Dr Thando and two of his students talked about Rossby waves and how they influence weather systems over South Africa. Prof Liesl introduced Africânes to the meteorology community while two of her students presented on extreme weather over South Africa. Charlotte McBride presented on extreme temperature records from a climatology point of view while Christina Liesker talked about supercells over the Highveld. Social scientist also had an presence as Elizabeth Viljoen, PhD student of Prof Liesl and Dr Nerhene presented on the

efficacy of communication of warnings during Tropical cyclone Eloise.

Strong NAS Representation at the XXIV ISPRS Congress in Nice, France

The International Society for Photogrammetry and Remote Sensing (ISPRS) is a non-governmental organisation devoted to the development of international cooperation for the advancement of photogrammetry and remote sensing and their applications. The ISPRS is a member of the International Science Council and its scientific interests include photogrammetry, remote sensing, spatial information systems and related disciplines, as well as applications in cartography, geodesy, surveying, natural, Earth and engineering sciences, and environmental monitoring and protection.

Six delegates from the University of Pretoria's Faculty of Natural and Agricultural Sciences travelled to Nice, France, to participate in the XXIV ISPRS Congress which ran from 6-11 June 2022. The Congress takes place every four years and was originally scheduled for 2020. Due to the pandemic, two virtual events were arranged in 2020 and 2021, and the ISPRS community was very excited to finally have a face-to-face Congress in 2022.

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***D**epartmental news continued:*

A daily keynote and more than 1,500 papers were presented. A special forum track addressed hot topics in panel discussions.

UP delegates contributed to the state-of-the-art on current trends in science, technology and business and had the opportunity to meet and network with experts and cross-fertilize with peers from all over the world.

[Dr Adedayo Adeleke](#), a lecturer in the Department of Geography, Geoinformatics and Meteorology, presented one of his Honours student's research projects, titled "Developing Spatial Decision Support System to Assess Traffic Congestion in the City of Johannesburg".

The poster by Azile Mdleleni, a PhD student in Geoinformatics, showed how one can visualise life in an informal settlement of South Africa using web maps and story maps. This research was supervised by [Dr Victoria Rautenbach](#) and [Prof Serena Coetzee](#). Azile also participated as a panel member on the forum about openness and innovation in Geomatics and Earth Observation.

Nicholas de Kock presented a poster titled "Towards an Open Source Python Library for Automated Exploratory Spatial Data Analysis (ESDA)". This was a result of his Honours project, which evolved into his current research for his MSc Geoinformatics, supervised by Dr Victoria Rautenbach.

The Python library resulting from this research enables the user to generate a detailed ESDA report using one line of code - a process that previously required numerous lines of code and constant user input.

The library can be viewed and downloaded [here](#). Nicholas was a finalist for the prestigious CATCON 8 (Computer Assisted Teaching CONtest), which aims to promote the development and dissemination of effective and user-friendly, open-source and preferably non-commercial software designed and used specifically for computer-assisted teaching.

Renate Thiede and [Prof Inger Fabris-Rotelli](#) exhibited a poster and co-presented their research titled "An Informal Road Detection Neural Network for Societal Impact in Developing Countries". Renate is a PhD student and part-time lecturer in the Department of Statistics, supervised by Prof Pravesh Debba (CSIR), Prof Christopher Cleghorn (WITS) and Prof Inger Fabris-Rotelli (UP Department of Statistics), who is an incoming group member for the Working Group on Spatial Data Analysis, Statistics and Uncertainty Modelling in [ISPRS Technical Commission IV, Spatial Information Science](#). This research created a training dataset of informal roads for the purpose of training a neural network to extract informal roads in remote sensing imagery.

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D*epartmental news continued:*

Informal roads are created by human movement without government approval and typically occur in and around informal settlements. As such, information on these roads is not typically available to government authorities. Extracting information on these roads is critical for improving service delivery and accessibility

for the residents of informal settlements. The presentation and poster discussed the process of data collection and quality control, as well as preliminary results from the neural network, which shows an improvement over existing neural networks trained on formal roads.

[Prof Serena Coezee](#) represented South Africa at the ISPRS General Assembly and co-organized the forum titled “Openness and Innovation in Geomatics and Earth Observation” with Prof Maria Brovelli from the Politecnico di Milano, Italy. Organisations all over the world are increasingly considering the adoption of open-source software and open data. In the geospatial domain, this is no different, and the last few decades have seen significant advances in this regard. Openness has changed the way in which geospatial data is collected, processed, analysed and visualised, leading to many innovative solutions based on open geospatial technologies. Despite changing global political power balances and looming trade wars resulting in some countries to ‘close up’,

in most parts of the world there is a strong sentiment towards openness linked to scientific activism by citizens and a trend by governments to publish open data. The panel discussed if and how openness will continue into the foreseeable future, and how the concept and practice of openness would be impacted by deep learning, big data and cloud computing developments. Panel members included seasoned academics and the younger generation of students and researchers, as well as representatives from the United Nations, the European Joint Research Centre, the European Space Agency, the Open Geospatial Consortium, and NGOs and companies actively working with open-source software and open data.

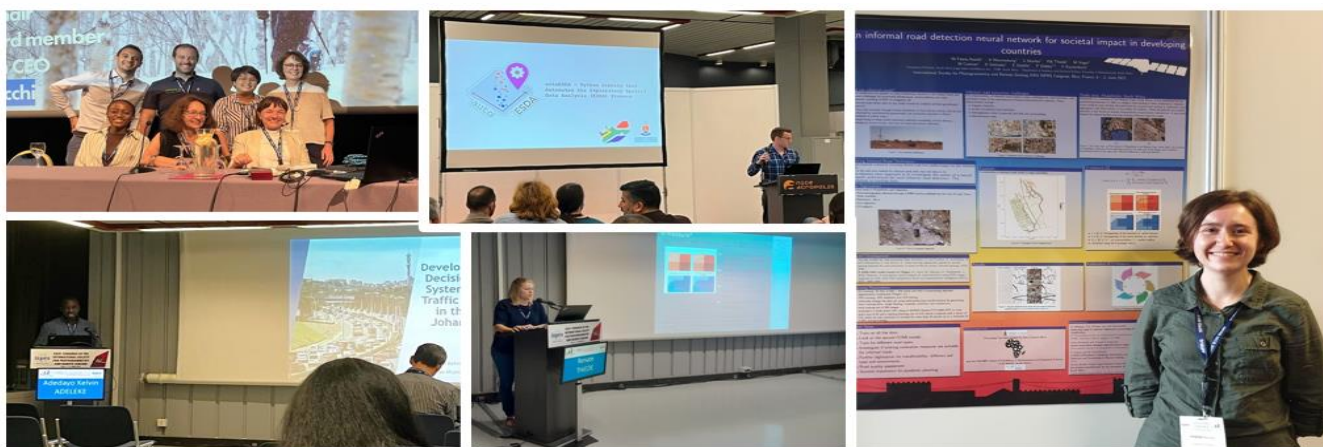
The participation of Serena was partially funded by the NRF Community Engagement Project (grant number 116250). Adedayo’s participation was funded by a grant from the UP Research Development Programme. Inger was funded by NRF and Renate was funded by the VP Congress Funding Programme. Azile, Nicholas, and Renate were also recipients of the TIF (The ISPRS Foundation) travel grant.

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D*epartmental news continued:*



Top left: Azile Mdleleni and Prof Serena Coetzee were both panellists on the forum titled “Openness and Innovation in Geomatics and Earth Observation”.

Top Middle: Nicholas De Kock presenting at the CATCON 8 competition.

Right: Renate Thiede with their poster on “An Informal Road Detection Neural Network for Societal Impact in Developing Countries”.

Bottom Middle: Prof Inger Fabris-Rotelli presenting their paper “An Informal Road Detection Neural Network for Societal Impact in Developing Countries”.

Bottom Left: Dr Adedayo Adeleke presenting his research titled “Developing Spatial Decision Support System to Assess Traffic Congestion in the City of Johannesburg”.

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SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

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Departmental news continued:

Cognitive Geomatics project kicks off between UP and two international universities

'Cognitive Geomatics – Digital teaching to create awareness of intercultural differences in sense of place using Germany, South Africa and Kenya as case studies' is a project of the Baden-Württemberg-STIPENDIUM for students - BWS plus, a programme of the Baden-Württemberg Stiftung. The project runs from March 2022 until February 2025 and is financed with an amount of €140,000.

A previous project, 'Geomatics and Participation', successfully established a long-term cooperation between the [Karlsruhe University of Applied Sciences \(HKA\)](#) in Germany and the University of Pretoria (UP) in South Africa. With this new Cognitive Geomatics project, which kicked off in March this year, they are expanding the network to include the [University of Nairobi \(UoN\)](#) in Kenya. The project will widen the thematic discourse to be more interdisciplinary – apart from geo(infor)matics, students from the social sciences and cultural media management will also be involved.

According to Professor Serena Coetzee, Head of the [UP Department of Geography, Geoinformatics and Meteorology](#) and one of the three Principal Investigators in the project, "Rapid advances in information and

communication technologies, together with the increasing availability of processing options in the cloud, are leading to significant increases in data. Future use and analysis of the location-based aspect of such big data is expected to lead to a boom in geomatics, implying that increasingly not only geomatics specialists will work with such data. "At the same time, it is becoming increasingly evident that the mere positioning of objects based on geographic coordinates does not do justice to the subjective experiences of space and the world around us. Sense of place, however, differs from one culture to another and is closely linked to locality and authenticity. This raises questions about the nature of the interplay between the way we think about and perceive physical space (our mental maps) and the use of high-tech methods for measuring, analysing and visualising our environment (in the virtual world), which can be described as cognitive geomatics. The individual cultural differences are also of interest in teaching and learning."

The project officially started with a workshop on 'Sense of Place - Web Mapping' on 7 and 8 April at the HKA, bringing together six lecturers from the three cooperating universities and 13 HKA students. In the winter semester 2022/23, HKA students designed and developed digital teaching materials as part of their course work, using web mapping technologies, and aimed at teaching different aspects of spatial awareness.

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***D**epartmental news continued:*

During the workshop, they presented their material, which was critically reviewed by the project partners from Africa and a larger group of students, not only from geomatics. Workshop participants originated from eight different countries. The meaning of 'sense of place' was traced, and web mapping possibilities for interactive, dynamic spatial visualisation of statistical data or for sharing one's ideas were shown. The two days were a successful start to the new project, as student participants had the opportunity to experience cooperation and exchange with South Africa and Kenya. In contrast, the project partners were inspired for further project work, which will primarily take place virtually.



Mental mapping as an introduction to 'sense of place', the theme of the workshop

Baden-Württemberg-STIPENDIUM

The Baden-Württemberg-STIPENDIUM supports the international exchange of students and vocationally qualified people. Since 2001, it has enabled more than 25 000 young people from Baden-Württemberg to gain experience abroad and allowed scholarship holders from other countries to visit Baden-Württemberg. Approximately 1,500 young people receive a Baden-Württemberg-STIPENDIUM each year. www.bw-stipendium.de

Baden-Württemberg-STIPENDIUM for University Students – BWS plus

With the Baden-Württemberg-STIPENDIUM for University Students – BWS plus, the Baden-Württemberg Stiftung supports innovative joint projects between universities from Baden-Württemberg and their international partners. The programme is endowed with approximately 1.2 million euros annually. Since 2011, more than 100 BWS plus projects have been supported at universities in Baden-Württemberg.

The Baden-Württemberg Stiftung advocates a vital Baden-Württemberg with a high quality of life for all its residents. It helps pave the way for advanced technological progress, high-quality education, and a responsible relationship with fellow human beings. The Baden-Württemberg Stiftung is one of the major foundations in Germany.

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Departmental news continued:

It is the only foundation which exclusively and above party lines invests in the future of the state of Baden-Württemberg – and thus in the future of its citizens. www.bwstiftung.de

We congratulate our exceptional achievers

The Department would like to congratulate our graduates on their respective outstanding achievements. Six of our students were recognised for their academic achievements and social involvement at the Faculty of Natural and Agricultural Sciences Dean's Exceptional Achiever's Function, which was held 25 May, 18:00-19:00.



1st row, f.l.t.r. Bhavani, Kayla, Luna; 2nd row, f.l.t.r.

Michelle, Nic, Ryan, Zeenat

[Zeenat Patel](#), a recent recipient of the SSAG Jubilee Bursary, was awarded a prize for the best undergraduate student in either BSc Geography or BSc Environmental Science. Ryan Naamdheew received the prize for the honours category. Luna Asefaw Girmay received the prize for the best undergraduate student in BSc Geoinformatics, with the Honours category awarded to Kayla Theron. The Johan and Sophy van Heerden Floating Trophy for the student who achieved the highest average mark for meteorology modules on 2nd and 3rd-year level was awarded to Bhavani Brijlal, with Michelle Cordier receiving the award for being the best Honours student in meteorology. Nicholas de Kock received the Cameron Green Award for Departmental Participation for participating and contributing to all aspects of the department.

BScHons student Thuli Ntlatleng wins the 2022 Esri Young Scholar Award

Thulaganyo Ntlatleng, who completed her BScHons Geoinformatics degree in our department last year, was recently announced as the winner of the [Esri Young Scholar Award](#) for 2022. She received the award for her Honours project, titled Possible Wind Power in South Africa's Economic Hub: A GIS Based Multi-Criteria Decision Analysis of the Potential of Wind Farm Development in the Gauteng Province of South Africa. She joins previous winners from our department, the most recent one being Azile Mdleleni who [won the award](#) in 2020.

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Departmental news continued:

For her project, Thuli utilised spatial Multi-Criteria Decision Analysis (MCDA) to identify suitable sites for wind power generation in the Gauteng Province. Sites were evaluated for wind factors, terrain gradient, proximity to electric gridlines, proximity to roads and railways, and proximity to urban areas. The Analytical Hierarchy Process (AHP) was used to assign weights to the criteria, to create a hierarchy in the decision model. AHP was completely modelled from literature instead of the common approach of a gathering of industry experts that assign importance score the criteria. The thresholds, buffer zones, exclusionary areas, and suitability scores were also sourced from various literature. The results of this study confirm the findings of the Council for Scientific Research i.e., there is no potential for large-scale wind farms in the Gauteng Province. With the unique application of Multi-Criteria Decision Analysis, only small areas were deemed suitable for wind farm development. Thuli was supervised by [Dr Christel Hansen](#) and [Dr Adedayo Adeleke](#).

Honours student recipient of the SSAG Jubilee Bursary Award 2022

Zeenat Patel, who is currently enrolled in her BSc Honours in Geography and Environmental Sciences in our department,

was awarded the Jubilee Bursary from the [Society of South African Geographers](#) for 2022. Her current Honours project, under the supervision of [Dr Natalie Haussmann](#) in our Department, and Prof Peter le Roux from the [Department of Plant and Soil Sciences](#) is preliminarily titled Microtopography and Drakensberg Alpine Grassland Vegetation Characteristics at Witsieshoek, South Africa.

Her project makes use of data from Prof le Roux's NRF-funded, multi-year project titled 'Examining the impacts of climate change in the Drakensberg'. The study site is located at approximately 2 500 meters above sea level in the Witsiehoek region, close to the Sentinel Peak. The specific focus of Zeenat's project is on how topographic variables such as slope aspect, slope angle, soil depth, and rockiness affect species richness, total vascular plant cover, and species composition on a fine, 1x1m, scale.

Student receives SSAG Outstanding Honours Research Award for 2022

[Kayla Theron](#), who graduated with her BScHons Geoinformatics this year, was recently awarded the SSAG Outstanding Honours Research Award for 2022 from the [Society of South African Geographers](#). She received the award for her Honours project, completed in 2021, entitled A street segment analysis of crime in Khayelitsha, South Africa. Her project was completed under the supervision of [Professor Greg Breetzke](#).

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Kayla Theron was also selected to participate in the University Partnership to Grow Administration and Education (UPGRADE) Internship program at Florida International University (FIU). The objectives of the internship are to draw on FIU curricula to build specific skills, link up with experts at FIU to improve research outcomes, and get exposure to international best practices in postgraduate research. It presents an opportunity for Kayla to learn new skills and prioritize the publication of her research in scientific journals with FIU staff co-authorship.

Student receives SSAG Bronze Medal

Christina Thaele was awarded the prestigious [2022 SSAG Master's Bronze Medal](#) for her MSc entitled "Characteristics of warm season supercell thunderstorms over the Gauteng and Mpumalanga Provinces of South Africa". The Bronze Medal is awarded to the best geography MSc completed by a research dissertation within a given year in South Africa.

In the dissertation, Christine provides a radar climatology of supercell thunderstorms over the highveld of South Africa, the first study of this kind to be undertaken in South Africa. She also provides a step-by-step guide on how to identify supercell thunderstorms on

radar and has already disseminated this information to South African weather forecasters in a workshop held at the University of Pretoria. Listing the dates on which supercell thunderstorms occurred now opens the door for numerous further research opportunities.

She conducted this research under the guidance of [Prof Liesl Dyson](#) and Mr Erik Becker from Centre for Climate Research Singapore.

Society of South African Geographers – Gold Medalists 2022

The Society of South African Geographers (SSAG) Gold Medal, which is awarded in recognition of meritorious contribution to Geography in Southern Africa, grants honorary lifelong membership of the Society. The SSAG has awarded two Gold Medal Awards, to Dr Clinton van der Merwe and Prof. Serena Coetzee, both from the University of Pretoria.

Serena Coetzee is Professor and Head of the Department of Geography, Geoinformatics and Meteorology, and has a C1 NRF rating. She has an impressive publication record, collaborating with researchers from at least 20 countries. She has supervised and inspired a new generation of spatially skilled postgraduates, contributing to the development of science through her roles on Editorial Boards and as a reviewer for a

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variety of journals and panels. She has led several applied projects that have had positive impacts on industry, policy, and communities. The Gold Medal award is recognition of Prof. Coetzee's significant contributions to the field of spatial data infrastructure.

Dr Clinton van der Merwe has established himself as a geographer through his contributions to debates and discussions on heritage. In parallel, he has made a major contribution to Geography Education, as a teacher, as an educator of teachers, and as founding editor of the Journal of Geography Education in Africa (JoGEA). He is a founding member of the Southern African Geography Teacher's Association (SAGTA), and the South African National Geography Olympiad (SANGO). The Gold Medal Award is recognition of Clinton's research and teaching in the field of Tourism Geography; and his contributions to SSAG.



Dr Richard Ballard (SSAG Past President); Prof. Serena Coetzee (UP)
and Prof. Jennifer Fitchett (SSAG President)



Dr Richard Ballard (SSAG Past President); Dr Clinton van der Merwe (UP)
and Prof. Jennifer Fitchett (SSAG President)

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Departmental news continued:

Prof Reyers plays an instrumental role in UN's latest Human Development Report

Prof Belinda Reyers, Professor of Sustainability Science in the Faculty of Natural and Agricultural Sciences, has spent the past three years working with the team behind the [UN Human Development Report](#) as a member of their Advisory Group and a member of the High-Level Advisory Panel on the [Special Report on Human Security](#).

This annual Human Development Report ([HDR 2021-22](#)) titled: "Uncertain Times, Unsettled Lives: Shaping our Future in a Transforming World" was released in September and demonstrated how multiple layers of uncertainty are stacking up and interacting to unsettle life in unprecedented ways.

Prof Reyers explained, "These days, we seem to reel from one crisis straight into another while also dealing with what the report calls a new "uncertainty complex" of sweeping social and economic shifts, dangerous planetary changes, and concerning increases in polarisation. It comes, therefore, as no surprise that the report finds that the Human Development Index, an annual measure of a nation's health, education, and standard of living, has declined globally for two years in a row, falling back to its 2016 levels,

reversing much of the progress made over the past decade towards the Sustainable Development Goals. These declines are being felt everywhere, with 90% of the world's countries reporting a decrease in human development.

As a South African researcher working on understanding and engaging with the complex interdependencies and relationships connecting people and the planet, Prof Reyers has been able to help ensure the reports bring in more integrated perspectives on human development to acknowledge the importance of climate change, biodiversity loss, environmental degradation and pollution on human development and inequality. As she made clear in her presentation at the [launch of the 2020 HDR](#) hosted by the Prime Ministers of Sweden and Barbados and the President of South Africa, "these are no longer just environmental risks; they are now some of the most important development risks facing the world" She has also been able to support more integrative and systemic perspectives navigating our way through these crises and uncertainties to, as the report says: "reimagine our futures, to renew and adapt our institutions and to craft new stories about who we are and what we value".

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*D*epartmental news continued:

As someone who is committed to improving our scientific and political abilities to recognise, make visible and reimagine the complex social-ecological interdependencies linking people as individuals, but also as collectives, with species and ecosystems of all types, conditions, and at all scales, Prof Reyers has been grateful to be included in the process of developing these reports. She has also used the process to inform and shape her current research. As she gets to conclude in the report, it is “in making clear how these interconnections shape identities, cultures, relationships, minds, mental and physical wellbeing and ultimately freedoms and choices in dynamic ways, [that] science and policy can overcome problematic divisions between environment and development to focus instead on the quality of relationships connecting people and planet and the reconfigurations of relationships needed to enhance capacities to

Seasonal Forecast Worx & climate research

Read our monthly updates on weather prediction for the SADC region on our website: <https://www.up.ac.za/geography-geoinformatics-andmeteorology/article/2872667/seasonal-forecast-worx>.

The archive of previous predictions is also available there. Also read about [Dr Mary Funke Olabanji's](#) work on how [smallholder farmers are aware of climate change, but are still struggling to adapt](#), and [Professor Rebecca Garland's](#) work on why the [air in South African Highveld cities smells foul in the winter](#). You can access daily rainfall for South Africa [here](#).

New book on Remote Sensing of African Mountains-Geospatial Tools Toward Sustainability

[Prof Abel Ramoelo](#), [Director for the Centre for Environmental Studies, University of Pretoria](#) was one of the Guest Editors for the book entitled “[Remote Sensing of African Mountains: Geospatial Tools Toward Sustainability](#)”. The book was co-edited with academics from the [University of Free State](#) led by [Prof Samuel Adelabu](#). It was sought to (1) encourage the use of remote sensing techniques to study mountain environments; 2) examine the role climate change is playing within the mountain systems; and 3) raise awareness about mountain ecosystem management and sustainability to inform policy. The summary of the book is presented below as published.

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About the published book “This edited volume focuses on the use of remote sensing techniques to assess and monitor mountainous ecosystems in Africa, with a focus on tracking changes related to climate change and human activity. The book is timely, as the interaction of mountain environmental dynamics with conservation and sustainability is an under-researched issue. The chapters in this volume use remotely sensed data to study a variety of topics related to mountains and their ecosystems, including but not limited to vegetation, energy systems, environmental hazards, ecosystem services, diseases, climatic shifts, geological formations, and geomorphological dynamics. The ability to monitor, assess and analyze mountainous regions is aided by the availability of remote sensing products such as optical and microwave sensors and low-cost unmanned aerial vehicles (UAVs). The works presented here push the frontier of knowledge on mountain studies and will help shape local, national, and global assessments and policies, including efforts toward achieving the African Agenda 2063. The book will interest researchers and students in remote sensing, geography, ecology, and sustainability, as well as government organizations and conservation specialists.”

Could green spaces be a crime-fighting tool for South African cities?

South Africa is a global crime hotspot. But, as residents put up higher walls to stay safe, a new South African study suggests that greenspaces can be an important tool in creating safe and sustainable cities.

International research shows that green spaces such as public parks lower crime because they boost mental health and community cohesion, but is this true in the crime hotspot that is South Africa?

Professor [Gregory Breetzke](#), from UP's [Department of Geography, Geoinformatics and Meteorology](#), is part of a team of researchers who investigated the effects of [urban green spaces on crime rates in South Africa](#), the first of its kind in the Global South.

The study found that for every 1% increase in total green spaces, violent crime decreased by 1.2%, and property crime decreased by 1.3%. The researchers accounted for factors such as income inequality, unemployment, land use, and property value in order to find the real effect greenspaces have on crime and rule out that lower crime rates near greenspaces are simply a coincidence.

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"Using advanced statistical methods, we showed that there is a reduction in the risk of property and violent crime for an increase in green space at the police precinct level," says Prof Breetzke. "We had fantastic data, which was a big selling point of our study."

The researchers collected ten years' worth of crime statistics data from over 1 000 police precincts and noted all the greenspaces for each area.

Interestingly, the study found that having more trees in your area apparently increased property crime rates.

But this statistic tells only half the story. "If you just look at an aerial photograph of a poor neighbourhood in South Africa, it generally has much less greenery than affluent neighbourhoods, which are more often targeted for property crime," Prof Breetzke says. In other words, affluent areas are hotspots for crimes like house burglaries, and these areas also generally have more trees.

Interestingly, the team found that greenspaces had no effect on reported sexual crimes, but this could be linked to poor reporting of sexual crimes in South Africa and the crime statistics reported by the [South African Police Service \(SAPS\)](#).

"A major issue in South Africa is the underreporting of crime, particularly for sexual crimes," says Prof Breetzke. "We could only use the data that we had, the official data from the South African Police Service statistics."

The researchers recommend that urban planners make use of greenspaces as an important part of many other crime reduction initiatives in addition to the known benefits of urban greenspaces.

2022 List of publications:

Category: Journal Article

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Mangani T, Marquart A, Chirima JG, Kellner K (2022): Grass species diversity response to brush packing in semi-arid rangelands of South Africa. *Journal of Arid Environments*, 207 (104832), pp. 1 - 9.

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Nkosi V, Mathee A, Blesic S, Kapwata T, Kunene Z, du Preez D, Garland R, Wright CY (2022): Exploring Meteorological Conditions and Human Health Impacts during Two Dust Storm Events in Northern Cape Province, South Africa: Findings and Lessons Learnt. *Atmosphere*, 13 (3), pp. 1 - 17.

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- Effossou KA, Cho MA, Ramoelo A, Cho M (2022): Mechanisms and consequences of benefit sharing from oil palm agribusiness plantations establishment in South Comoé Region, Côte d'Ivoire. *Journal of Agriculture and Rural Development in the Tropics and Subtropics*, 123 (1), pp. 63 - 73.
- Schaab G, Adams S, Coetzee SM (2022): Drawing attention via diversity in thematic map design, as demonstrated by student maps of Northern South Africa. *International Journal of Cartography*, 8 (2), pp. 243 - 264.
- Botai C, Botai OJ, Murambadoro M, Zwane N, Adeola AM, de Wit J, Adisa O (2022): Scope, trends and opportunities for socio-hydrology research in Africa: A bibliometric analysis. *South African Journal of Science*, 118 (1/2), pp. 1 - 8.
- Coetzee SM, Carow S, Snyman LF (2022): A Review of Maps in PhDs: Is Your Map Worth a Thousand Words?. *Cartographic Journal*, 59 (2), pp. 150 - 164.
- Effossou KA, Cho MA (2022): Land tenure conflict and agribusiness development in sub-Saharan Africa. *South African Geographical Journal*, 104 (2), pp. 155 - 176.
- Bopape MM, Engelbrecht F, Maisha R, Chikoore H, Ndarana T, Lekoloane L, Thatcher M, Mulovhedzi P, Rambuwani G, Barnes M (2022): Rainfall Simulations of High-Impact Weather in South Africa with the Conformal Cubic Atmospheric Model (CCAM). *Atmosphere*, 13 (12), pp. 1 -24.
- Henrico SJ, Coetzee SM, Cooper AK (2022): Qualitative insights into the acceptance of QGIS in South Africa. *Transactions In Gis*, 26 (8), pp. 3295 - 3314.
- Van Schalkwyk L, Blamey R, Dyson LL, Reason C (2022): A Climatology of Drylines in the Interior of Subtropical Southern Africa. *Journal of Climate*, 35 (19), pp. 2809 - 2828.

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Publications Continued:

- Musetsho K, Chitakira M, Ramoelo A (2022): Ecosystem Service Valuation for a Critical Biodiversity Area: Case of the Mphaphuli Community, South Africa. *Land*, 11 (10), pp. 1 – 16
- Shamaoma H, Chirwa WP, Ramoelo A, Hudak A, Syampungani S (2022): The Application of UASs in Forest Management and Monitoring: Challenges and Opportunities for Use in the Miombo Woodland. *Forests*, 13 (11), pp. 1 - 27.
- Effossou KA, Cho M, Cho MA, Ramoelo A (2022): Impacts of conflicting land tenure systems on land acquisition by agribusiness developers in Côte d'Ivoire. *Journal of Agribusiness and Rural Development*, 63 (1), pp. 25 - 39.
- Mangani (Modungwa) RT, Mangani R, Chirima JG, Khomo L, Truter WF (2022): Using mulching to reduce soil surface temperature to facilitate grass production. *Heliyon*, 8 (12), pp. 1 - 7.
- Tsele PL, Ramoelo A, Qabaqaba M, Mafanya M, Chirima JG (2022): Validation of LAI, chlorophyll and FVC biophysical estimates from sentinel-2 level 2 prototype processor over a heterogeneous savanna and grassland environment in South Africa. *Geocarto International*, 37 (26), pp. 14355 - 14378
- Paton-Walsh C, Emmerson K, Garland R, Keywood M, Hoelzemann J, Huneus N, Buchholz R, Humphries R, Altieri K, Schmale J (2022): Key challenges for tropospheric chemistry in the Southern Hemisphere. *Elementa-Science of the Anthropocene*, 10 (1), pp. 1 - 35.
- Vincent K, Archer E, Soares M, Dougill A, Funk C (2022): Editorial: Extreme Events in the Developing World. *Frontiers in Climate*, 4 (867505), pp. 1 - 3.
- Leadley P, Gonzalez A, Obura D, Krug C, Londono-Murcia M, Millette K, Radulovici A, Rankovic A, Shannon L, Archer E (2022): Achieving global biodiversity goals by 2050 requires urgent and integrated actions. *One Earth*, 5 (6), pp. 597 - 603.

Category: Chapter in Book

- Mathapelo S, Olusola A, Adelabu S, Ramoelo A (2022): Montane Grasslands: Biomass Estimations Using Remote Sensing Techniques in Africa. Edition:1st In S. Adelabu & A. Ramoelo & A. Olusola & E. Adagbasa (eds.), *Remote Sensing of African Mountains, Switzerland, Switzerland: Springer Nature*. (pp. 1-18). 978-3-031-04855-5.
- Langerman K, Feig G, Feig G, Jaars K (2022): Mitigation and Management of Ambient Particulate Matter. Edition:1st In S. Sonwani & A. Shukla (eds.), *Airborne Particulate Matter, Singapore, Singapore: Springer Nature*. (pp. 265-300). 978-981-16-5387-2

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***P**ublications Continued:*

van Deventer H (2022): Fifty years of remote sensing of mapping and monitoring the impacts of global change on wetlands in South Africa. Edition:1st In B. Petja (ed.), *Climate Change Impacts on Water Resources: Implications and Practical Responses in Selected South African Systems, South Africa*, Pretoria: Water Research Commission. (pp. 73-97). 978-0-6392-0174-0.

Botai OJ, Botai C, Ncongwane K, Adeola A, de Wit J, Petja B (2022): Projected climate change impacts on water-linked sectors. Edition:1st In B. Petja (ed.), *Climate Change Impacts on Water Resources: Implications and Practical Responses in Selected South African Systems, South Africa: Water Research Commission*. (pp. 8-46). 978-0-6392-0174-0.

Napier M, Cooper AK, Holloway J, Thanjekwayo L, Graham N, le Roux A (2022): A tale of two pathways: How the low-end Gauteng residential property market may be shaped either by state-driven supply or by a more enabled private sector. Edition:1st In A. Karam & F. Viruly & C. Kariuki & V. Akujuru (eds.), *Understanding African Real Estate Markets*, United States, New York: Routledge. (pp. 135-157). 978-0-429-27925-6.

Beckedahl HR, Jones J, Hardenbicker U (2022): Soil Piping: Problems and Prospects. Edition:1st In S. Mandal & R. Maiti & M. Nones & H. Beckedahl (eds.), *Applied Geomorphology and Contemporary Issues*, Switzerland, Switzerland: Springer Nature. (pp. 217-243). 978-3-031-04532-5.

Category: Conference Contribution

Belelie M, Mosia N, Klopper D, Garland R, Language B, Burger R, Piketh S (2022): Atmospheric Transport of Iron-rich dust to Henties Bay and the Adjacent Benguela current. *Proceedings of the 2022 Conference of the National Association for Clean Air*, 05-Oct-2022 - 07-Oct-2022.

Naidoo M, Garland R, Perumal S (2022): A dynamic implementation of the US EPA unpaved roads dust emissions methodology. *Proceedings of the 2022 Conference of the National Association for Clean Air*, 05-Oct-2022 - 07-Oct-2022.

Perumal S, Thambiran T, Garland R, Klimont Z, Gomez-Sanabria A, Burger R, Annegarn H, Doring D, John J, Kiesewetter G (2022): A Critical Assessment of current policies that will drive future emissions in Johannesburg, Ekurhuleni, and Tshwane. *PROCEEDINGS OF THE 2022 CONFERENCE OF THE NATIONAL ASSOCIATION FOR CLEAN AIR*, 05-Oct-2022 - 07-Oct-2022.

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***P**ublications Continued:*

Mapuru MJ, Haussmann NS, Hansen CD (2022): Exploring determinants of aardvark burrow locations at Rietvlei Nature Reserve, South Africa. Proceedings of the Joint Biennial Conference of the Society of South African Geographers and the Southern African Association of Geomorphologists, 06-Sep-2022 - 08-Sep-2022.

Maliage M, Maliage M, Garland R, Dyson LL (2022): Synoptic weather systems and trends in meteorological variables associated with significant dust storm events over South Africa. 36th ANNUAL CONFERENCE OF THE SOUTH AFRICAN SOCIETY FOR ATMOSPHERIC SCIENCES, 31-Oct-2022 - 01-Nov-2022.

Feig G, Smart K, Toucher M, De Buys A (2022): The Expanded Freshwater and Terrestrial Environmental Observation Network (EFTEON): development of research infrastructure for long term interdisciplinary research. 36th Annual Conference of the South African Society for Atmospheric Sciences, 31-Oct-2022 - 01-Nov-2022.

Mahlobo D, Ndarana T, Engelbrecht F (2022): Investigating trends in the Hadley Cell using the CMIP6 models. 36th ANNUAL CONFERENCE OF THE SOUTH AFRICAN SOCIETY FOR ATMOSPHERIC SCIENCES, 31-Oct-2022 - 01-Nov-2022.

Muofhe T, Engelbrecht F, Ndarana T (2022): Recent trends of the SH westerlies in response to the ozone recovery. 36th ANNUAL CONFERENCE OF THE SOUTH AFRICAN SOCIETY FOR ATMOSPHERIC SCIENCES, 31-Oct-2022 - 01-Nov-2022.

***M**Sc and PhD graduations and supervisors:*

Masters

Liesker, C.G. (2022) *Characteristics of warm season supercell thunderstorms over the Gauteng and Mpumalanga Provinces of South Africa*. MSc (Meteorology). Supervised by Dyson, L.L and Becker, E.H. (Centre for Climate Research Singapore, Singapore)

Mahamba, N. (2022) *Developing a hydropower atlas for South Africa*. MSc (Geoinformatics). Supervised by Hansen, C.D.

Maina, B.A.J. (2022) *Assessing an exploratory digital environment for learning about southern African precolonial urbanism in space and time: a case study for Seoke, the capital of the Bangwaketse*. MSc (Geoinformatics). Supervised by Coetzee, S.M & Rautenbach, V-J.

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Mapuru, M.J. (2022) Understanding the two-way interactions between aardvark (*Orycteropus afer*) burrowing and the surrounding landscape characteristics at Rietvlei Nature Reserve, South Africa. MSc (Geography). Supervised by Haussmann, N.S and Hansen, C.D.

Mdleleni, A. (2022) Perceptions about the value of addresses and address data in South Africa. MSc (Geoinformatics). Supervised by Coetzee, S.M. and Rautenbach, V-J.

Nevhufumba, L.N. (2022) The impact of land use management and biodiversity conservation within and adjacent to the Magalies Ridge in Mamelodi, Tshwane District, South Africa. MSc (Environment and Society). Supervised by Archer, E.R.M. and Chirwa, W.P.

Sadiki, M.M. (2022) Predicting mire distribution using species distribution models (SDMs) and GISc: a case study of the Prince Edward Islands (PEIs). MSc (Geoinformatics). Supervised by Hansen, C.D. and Greve, M.

Doctorate

Effossou, K.A. (2022) Land acquisition for agribusiness development in South Comé region, Cote d'Ivoire. PhD (Environmental Management). Supervised by Cho, M.A and Ramoelo, A.

Groenewald, G. (2022) Towards a standardised approach in cross-national spatial crime research: A case study analysis. PhD (Geography). Supervised by Breetzke, G.

Hlela, S.B.P. (2022) Towards understanding geographic information competencies: The case of decision-making in environmental impact assessments in South Africa. PhD (Geography). Supervised by Coetzee, S.M and Cooper, A.

Mashaba-Munghemezulu, Z.O. (2022) The utility of Sentinel-1 and Sentinel-2 remote sensing products for monitoring smallholder maize farms in support of the Sustainable Development Goals. PhD (Geoinformatics). Supervised by Chirima, J.G.

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2022 student numbers:

Degree	Enrolled 2022
BSc: Geography & Environmental Sciences	108
BSc: Geoinformatics	50
BSc: Meteorology	36
BScHons: Geography and Environmental Science	15
BScHons: Geoinformatics	21
BScHons: Meteorology	10
BSocSciHons: Geography and Environmental Science	5
MA: Environment and Society	10
MA: Geography	1
MSc: Environment and Society	3
MSc: Environmental Management	19
MSc: Geography	5
MSc: Geoinformatics	22
MSc: Meteorology	12
PhD: Air Quality Management	2
PhD: Environment and Society (Science)	5
PhD: Environmental Management (Science)	8
PhD: Geography (Science)	11
PhD: Environment and Society (Humanities)	1
PhD: Geography (Humanities)	3
PhD: Geoinformatics	13
PhD: Meteorology	11
TOTAL	371

Changes to the curriculum or course offerings:

Comprehensive information on all our degree program offerings can be found at <https://www.up.ac.za/geography-geoinformatics-and-meteorology/article/20918/academic-programmes>.

Geography & Environmental Science: The BSc Geography and BSc Environmental Sciences degree offers 7 areas of specialisation. These are 5 majors in the natural sciences, namely 1) Ecology, 2) Geoinformatics, 3) Meteorology, 4) Plant Science, and 5) Soil Science. Two majors are offered in the humanities, namely 6) Anthropology, and 7) Heritage and Cultural Tourism.

Geoinformatics: The BSc Geoinformatics and BScHons Geoinformatics degrees are accredited by the South African Geomatics Council.

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Changes to the curriculum
continued:

Meteorology: The BSc Meteorology degree offers 5 areas of specialisation. These are majors in 1) Applied mathematics, 2) Geography and environmental science, 3) Geoinformatics, 4) Statistics, and 5) Zoology.

The BSc Meteorology and BScHons Meteorology degrees are *BIP-M compliant according to the World Meteorological Organization (WMO)*.

***L**ink to departmental webpage:*

<https://www.up.ac.za/geography-geoinformatics-and-meteorology>
or www.up.ac.za/ggm

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Name of department:

- Geography and Environmental Studies & Tourism

Head of department:

- Associate Professor Bradley Rink

Information about the Geographers and their area of specialisation in the department:

- **Prof Bradley Rink**, Associate Professor
Bradley is a human geographer, focusing his research and teaching on mobilities, urban place-making, identities, and tourism. His research foregrounds mundane and subaltern mobilities to make them visible in the everyday movements and circulations of African cities. Through his research, teaching and community engagement, he aims to better understand mobilities and the relationships they articulate between urban dwellers and the cities in which they live.

- **Prof Shirley Brooks**, Associate Professor
Shirley is a human geographer focusing on human-environment relationships, in particular postcolonial landscapes of conservation and land in Southern Africa. She teaches in the fields of nature-society relations and the political geography of land.

In addition to working within a political ecology framework, she is interested in the quintessentially geographical theme of landscape meanings and contestations. Together with her students, she has explored Human and Non-human Geographies, focusing on Wilderness and Wildness as well as Animal Geographies.

- **Dr Mbulisi Sibanda**, Senior Lecturer
Mbulisi is a Senior Lecturer specialising in GIScience and Earth Observation Data Applications. He is a rated researcher by SA National Research Foundation with research interests in GIScience and Geospatial Data Applications in monitoring plant water use and productivity analysis, resource modelling as well as land-use change. His recent research projects as the research leader and a researcher are in the application of GIScience and Geospatial Data in Water Utilisation for Poverty Reduction and Wealth Creation in Agriculture. These projects are based on his recent research interest in the application of drone technologies in monitoring smallholder croplands. He teaches mostly physical and quantitative techniques in Geography.



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Geographers continued:

- **Dr Mark Boekstein**, Research Fellow

Mark's main interest in both teaching and research is tourism, particularly tourism's potential to contribute to economic development. While his teaching focuses on the planning, development, and marketing of sustainable, community-based tourism, his research interests include health and wellness tourism and the use of thermal springs for healing purposes, and English language learning as a tourist attraction. He also has an interest in developments around Cape Town as a gateway for tourism to Antarctica and the sub-Antarctic islands.

- **Dr Mandy Carolissen**, Lecturer

Mandy is a physical geographer with teaching and research interests in integrated water resource management, catchment hydrology, ecosystem services, and the dynamic physical processes that shape our landscapes. Her current research focuses on understanding the spatial and temporal availability of water and storage of a depression wetland (using in-situ hydrological data and remote sensing), and to relate these to ecosystem services.

- **Dr Michael Dyssel**, Lecturer

Michael's research and teaching interests include conservation and environmental management, urban-ecological challenges, the impacts of tourism, and mapwork. As a way of bridging (sub) disciplinary boundaries in Geography, transdisciplinary and multi-methods research and teaching approaches underpin his work.

- **Dr Tinashe P. Kanosvamaha** Lecturer

Tinashe is an urban geographer in the department. His research interests are drawn from a broad range of socio-spatial issues including, urban governance, livelihood strategies of the urban poor, urban food security, urban food systems, and neoliberal urbanism. His current research focuses on political gardening within the context of neoliberal urbanism in global South cities. He has previously served as a Teaching Assistant and Part-time Lecturer in the department. Dr Tinashe Kanosvamaha has also received the 'Best Paper Award' by the Society's Student and Young Professionals group (SnP).

- **Mr David Frenchman**, Senior Officer

David is the IT administrator in the Department and part of the Academic Support Staff in the Faculty. His work relates primarily to managing both undergraduate and postgraduate computer laboratories. However, he also offers GIS support to staff and students. He is solely responsible for the installation and maintenance of GIS software in the laboratories. GIS support involves compiling and issuing datasets for research and publications.

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Geographers continued:

• **Mr Logan Platjies**, Administrative Officer

Logan was appointed as Administrator in the Department in 2020, having worked in the Recruitment Office, Afrikaans Dept, isiXhosa Dept and now at the Geography, Environmental and Tourism Studies Dept at UWC since 2015. Previously, he worked at UNISA and in the private sector at Shell Oil, but it is the academic environment that he has become attached to.

• **Prof Daniel Tevera**, Extraordinary Professor

Daniel's research is located at the interface of Human Geography and Development Studies with Southern Africa as the geographical focus. His early work focused on livelihoods and spatial strategies in the informal economy, migration geographies, and environmental security. However, it is the domain of food and the city that his recent work focuses on. He has served as an expert participant in policy debates around Temporary Labour Migration Schemes in small countries (Commonwealth), African migration (United Nations Economic Commission for Africa), and Migration Policy Framework for Africa (African Union). For three successive years, Daniel organised field trips for third-year and honours students to the hotly contested Philippi Horticultural Area (PHA).

• **Prof Jonathan Crush**, Extraordinary Professor

More details on Jonathan and his research can be found here:

<https://www.balsillieschool.ca/jonathan-crush/>

• **Dr Erin Torkelson**, Postdoctoral Fellow

Erin is a human geographer interested in the collision between normative assumptions about cash transfers as public goods and the lived experience of cash transfers as private debts in the Global South. Her work sits at the intersection of political economy, development studies, critical race theory, feminist kinship studies, and postcolonial science and technology studies. Her current project, Bantustan Banking, explores how a preeminent, state-sponsored cash transfer programme has become a means of racialised and gendered dispossession in post-apartheid South Africa. She examines the everyday practices by which poor, black South African women navigate their entitlements to social assistance against the pressures of expropriation built into the payment system.

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Exciting departmental news:

Geographers continued:

- **Ms Mercia Southon**, Lecturer

Mercia is a Tourism Geographer who joined the department in February 2023 specialising in human geography and tourism development. Mercia is interested in analysing contemporary tourism development patterns with the use of different geographical components across the global South. Her current work focuses on how socio-political and economic changes in a post-apartheid South Africa contributes to rural change and the development of rural tourism. Research interests: rural tourism, land-use change and tourism, game farming and tourism, tourism planning and debates in global niche tourism.

- **Mr Lindokuhle Khumalo**, Associate Lecturer

Lindokuhle is a human geographer who joined the department in January 2023 focusing on society and nature relations. His research interests include human dimensions of conservation, environmental justice, land issues, the informal sector and decolonial geographies. Lindokuhle has a project underway that studies land reform beneficiary communities in the South African province of KwaZulu-Natal who have voluntarily committed large tracts of their land to nature conservation. Through the lens of political ecology, he investigates the impacts of conservation on their livelihoods and environmental behaviour.

Prof Bradley Rink and an international team was awarded funding in 2022 through the Trans-Atlantic Platform (T-AP) for Social Sciences and Humanities for a three-year project entitled *Impact of COVID19 on livelihoods, mobility and accessibility of marginalised groups* (ICOLMA). The interdisciplinary project will explore and compare the impact of the COVID19 pandemic on the mobility, accessibility and livelihoods of marginalised groups in Cape Town (South Africa), Ruhr Area (Germany) and São Paulo (Brazil) through a mixed methods approach in order to understand the changing roles of physical access for urban marginalised groups in pandemic times.

In March 2022 a PhD degree (Geography) was conferred to departmental staff member **Dr Mandy Carolissen** in the autumn graduation Ceremony at UWC.

In June 2022 it was announced that 2021 Bachelor of Arts Honours student **Aidan Africa** from the Department of Geography, Environmental Studies & Tourism was chosen as one of two winners of the Society of South African Geographers (SSAG) Outstanding Honours Research Award for 2022. Mr Africa's Honours project entitled 'Sense of Place: Gentrification experiences of Bo-Kaap's long-term residents' was supervised by Extraordinary Prof Daniel Tevera and focused

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Departmental news continued:

on the unique Bo-Kaap Cape Muslim community who remained in the area despite apartheid forced removals.

In September 2022 a PhD degree (Geography) was conferred to departmental staff member **Dr Tinashe Kanosvambira** at UWC's spring graduation ceremony.

The SSAG Student and Young Professionals group (SnP) Executive Committee awarded the SSAG SnP Best Paper Award to **Dr Tinashe Kanosvambira** in the wake of the Society's biennial conference.

Dr Mandy Carolissen was appointed in November 2022 to serve as a member for the new term of the **Western Cape Provincial Geographical Names Committee (WCPGNC)**. In addition to her appointment, Dr Carolissen took part in a workshop organised by the South African Geographical Names Council and the Department of Sport, Arts and Culture on 9, 10 and 11 November 2022. The workshop was part of a capacity building and awareness campaign entitled *Transformation of the Heritage Landscape Through the Standardisation of Geographical Names*.

In December 2022 a PhD degree (Geography) was conferred to departmental staff member **Dr Michael Dyssel** in the December graduation ceremony at UWC.

Dr Mbulisi Sibanda was selected in December 2022 as one of two recipients of the African Plant Nutrition Institute (APNI) **Precision Agriculture Young Scientist Award**. The award was presented during a special session at the AFCPA conference host site in Nairobi and virtually on 9 December 2022. The Institute partners with governments, NGOs, agribusiness, scientists, farmers, and other stakeholders who share its vision of enhanced plant nutrition for a resilient and food-secure Africa. APNI aims to use its expertise in plant nutrition to improve crop performance through better management of plant nutrients and enhanced soil health. Implementing better plant nutrient management practices will lead to productive and sustainable landscapes, and prosperous livelihoods in Africa.

In December 2022 **Prof Bradley Rink** along with an international team of scholars and activists from UWC, University of Durham (UK) and **Transaid** (UK) have been awarded funding from the Volvo Research and Educational Foundations (VREF) in the amount of SEK 500 000 for a one-year project entitled *Investigating Young Men's Experiences of Walking to the 'bus' in Low Income Neighbourhoods of Cape Town and London*. The project uses a community-based peer research methodology in a comparative study across both cities.

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2022/2023 List of publications:

Kanosvamhira TP. (2023). How do we get the community gardening?: grassroots perspectives from urban gardeners in Cape Town, South Africa. *Journal of Cultural Geography*.

<https://doi.org/10.1080/08873631.2023.2187509>

Kanosvamhira TP. (2023). Urban agriculture and the sustainability nexus in South Africa: Past, current and future trends. *Urban Forum*.

<https://doi.org/10.1007/s12132-023-09480-4>

Kanosvamhira, TP. & Tevera, D. (2022). Food resilience and urban gardener networks in Sub-Saharan Africa: What can we learn from the experience of the Cape Flats in Cape Town, South Africa?, *Journal of African and Asian Studies*, 57(5):1013-1026.

<https://doi.org/10.1177/00219096211043919>

Kanosvamhira TP. & Tevera, D. (2022). Urban community gardens in Cape Town, South Africa: navigating land access and land tenure security. *GeoJournal*.

<https://doi.org/10.1007/s10708-022-10793-3>

Rink, B. (2022). Public space on the move: Mediating mobility, stillness and encounter on a Cape Town bus. *Urban Studies*.

<https://doi.org/10.1177/00420980221088123>

Rink, B. (2022). Seeing tourism landscapes: Teaching tourism at the confluence of theory and practice. In Joppe, M., Edelman, J. & Flaherty, J. (Eds), *Teaching Tourism: Innovative, values-based learning experiences for transformative practices*. Cheltenham: Edward Elgar Publishers.

Rink, B. (2022). 'Tourist mobilities and climate change', in J. Saarinen, J. Fitchett, and G. Hoogendoorn (Eds), *Climate Change and Tourism in Southern Africa* (pp. 117-119). Abingdon: Routledge.

Rink, B. (2022). Cultures of flying and low-cost carriers in Southern Africa: Accessible air travel for all? In W. Lin & J-B Fretigny (Eds.), *Low-cost aviation: society, culture and environment* (pp. 83-97). Elsevier.

Rink, B. (2022). Capturing amaphela: Negotiating township politics through shared mobility. *Geoforum*, 136: 232-241.
<https://doi.org/10.1016/j.geoforum.2020.06.010>

Bock, Z., Mnyaka, P., Oyowe, O, and **Rink, B.** (2022). What makes for a 'good university': Dialogue from a southern faculty. *Working Papers in Urban Language & Literacies*, <https://wpull.org/product/wp301-what-makes-for-a-good-university-dialogue-from-a-southern-faculty/>

Mugiyo, H., Chimonyo, V.G.P., Kunz, R., **Sibanda, M.**, Nhamo, L., Masemola, C.R., Modi, A.T. and Mabhaudhi, T., 2022. Mapping the spatial distribution of underutilised crop species under climate change using the MaxEnt model: A case of KwaZulu-Natal, South Africa. *Climate Services*, 28, p.100330.

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Publications continued:

Brewer, Kiara, Alistair Clulow, **Mbulisi Sibanda**, Shaeden Gokool, John Odindi, Onesimo Mutanga, Vivek Naiken, Vimbayi G. P. Chimonyo, and Tafadzwanashe Mabhaudhi. 2022. "Estimation of Maize Foliar Temperature and Stomatal Conductance as Indicators of Water Stress Based on Optical and Thermal Imagery Acquired Using an Unmanned Aerial Vehicle (UAV) Platform." *Drones* 6 (7):169.

Masenyama, Anita, Onesimo Mutanga, Timothy Dube, Tsitsi Bangira, **Mbulisi Sibanda**, and Tafadzwanashe Mabhaudhi. 2022. "A systematic review on the use of remote sensing technologies in quantifying grasslands ecosystem services." *Giscience & Remote Sensing* 59 (1):1000-25. doi: 10.1080/15481603.2022.2088652.

Gumede, Nokwanda, Onesimo Mutanga, and **Mbulisi Sibanda**. 2022. "Mapping leaf area index of the Yellowwood tree species in an Afromontane mistbelt forest of southern Africa using topographic variables." *Remote Sensing Applications: Society and Environment* 27:100778. <https://doi.org/10.1016/j.rsase.2022.100778>.

Royimani, Lwando, Onesimo Mutanga, John Odindi, **Mbulisi Sibanda**, and Sindiso Chamane. 2022. "Determining the onset of autumn grass senescence in subtropical sourveld grasslands using remote sensing proxies and the breakpoint approach." *Ecological Informatics* 69:101651. doi: <https://doi.org/10.1016/j.ecoinf.2022.101651>

Mngadi, Mthembeni, John Odindi, Onesimo Mutanga, and **Mbulisi Sibanda**. 2022. "Estimating aboveground net primary productivity of reforested trees in an urban landscape using biophysical variables and remotely sensed data." *Science of the Total Environment* 802:149958. <https://doi.org/10.1016/j.scitotenv.2021.149958>.

Brewer, Kiara, Alistair Clulow, **Mbulisi Sibanda**, Shaeden Gokool, Vivek Naiken, and Tafadzwanashe Mabhaudhi. 2022. "Predicting the Chlorophyll Content of Maize over Phenotyping as a Proxy for Crop Health in Smallholder Farming Systems." *Remote Sensing* 14 (3):518.

Maphanga, Thabang, Timothy Dube, Cletah Shoko, and **Mbulisi Sibanda**. 2022. "Advancements in the satellite sensing of the impacts of climate and variability on bush encroachment in savannah rangelands." *Remote Sensing Applications: Society and Environment* 25:100689. <https://doi.org/10.1016/j.rsase.2021.100689>.

Mngadi, Mthembeni, John Odindi, Onesimo Mutanga, and **Mbulisi Sibanda**. 2022. "Quantitative remote sensing of forest ecosystem services in sub-Saharan Africa's urban landscapes: a review." *Environmental monitoring and assessment* 194 (4):242. doi: 10.1007/s10661-022-09904-x.

Gwate, Onalenna, Hlengiwe Dube, **Mbulisi Sibanda**, Timothy Dube, Bright Chisadza, and Ben Nyikadzino. 2022. "Understanding the influence of land cover change and landscape pattern change on evapotranspiration variations in Gwayi catchment of Zimbabwe." *Geocarto International*:1-17. doi: 10.1080/10106049.2022.2032386

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SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

UNIVERSITY OF WESTERN CAPE

Publications continued:

Ndlovu, Helen S., **Mbulisi Sibanda**, John Odindi, Siphiwokuhle Buthelezi, and Onesimo Mutanga. 2022. "Detecting and mapping the spatial distribution of *Chromoleana odorata* invasions in communal areas of South Africa using Sentinel-2 multispectral remotely sensed data." *Physics and Chemistry of the Earth, Parts A/B/C* 126:103081.

<https://doi.org/10.1016/j.pce.2021.103081>.

Sithole, S., **Tevera, D.**, & Dinbabo, M. F. (2022). Cross-border food remittances and mobile transfers: The experiences of Zimbabwean migrants in Cape Town, South Africa. *Eutopia. Revista de Desarrollo Económico Territorial*, Number 22:10-32.

<https://doi.org/10.17141/eutopia.23.2022.579>

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Musosa, L., Shekede, M., Gwitira, I., Chirisa, I., **Tevera, D.** & Matamanda, A. (2022). Auditing the spatial and temporal changes in urban cropland in Harare metropolitan Province, Zimbabwe, *African Geographical Review*.

<https://doi.org/10.1080/19376812.2022.2128834>

Ribeiro-Barros, A., **Tevera, D.**, L. Goulao, L. and Tivana, L. (eds) (2022). Food Systems Resilience. IntechOpen Series, Volume 1 (212 pages).

<http://dx.doi.org/10.5772/intechopen.95206>

Tevera, D. (2022) Secondary Cities and Urban Agriculture in Sub-Saharan Africa, In: Riley, L., and Crush, J. (Eds). Book: Transforming Urban Food Systems in Secondary Cities in Africa, Palgrave Macmillan, pp. 133-147.
<https://doi.org/10.1007/978-3-030-93072-1>

Tevera, D. (2022). 'Citizen and Pariah', Book authored by: Vanya Gastrow, 2022. Johannesburg: Wits University Press, 233 pages; ISBN: 978-1-77614-739-7 (pbk); ISBN: 978-1-77614-740-3 (hbk), *African Human Mobility Review*, 8(2):6-7.

Tevera, D. (2022) 'Expanding Boundaries: Borders, Mobilities and the Future of Europe–Africa Relations', Book authored by: Jussi Laine, Innocent Moyo, and Christopher Changwe Nshimbi, (eds.), 2021. London: Routledge, 277 pages; ISBN: 978-0-36753921-4 (hbk), *African Human Mobility Review*, 8(1):6-8.

Torkelson, E. (2022) Deserving and Undeserving Welfare State: Cash Transfers and Struggles for Hegemony in South Africa. *Journal of Southern African Studies*.

James, D., Neves, D. and **Torkelson, E.** (2022) Savings, Investment, Borrowing: A South African Perspective on Thrift. In Thrift and Its Paradoxes: A Household and Political Economy. Edited by Catherine Alexander and Daniel Sosna. Oxford: Berghahn.

Torkelson, E., May, A. and Marchant, M. (2022) "Net1 and CPS: Welfare Profiteers." In The Unaccountables: The Powerful Politicians and Corporations who Profit from Impunity. Edited By Michael Marchant, Mamello Mosiana, Ra'eesa Pather, and Hennie van Vuuren. Cape Town, RSA: Jacana.

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UNIVERSITY OF WESTERN CAPE

MA and PhD graduations and supervisors:

MA:

Zina Jacobs, *Territory and exclusion:
Contestations over space in Mitchell's Plain*
(Supervisor: Prof Brooks)

PhD:

Dr Mandy Carolissen, *Spatial and temporal
variations of inundation and their influence on
ecosystem services from a shallow coastal lake.
A case study of Soetendalsvlei in the Nuwejaars
catchment, South Africa* (Supervisor: Prof
Dominic Mazvimavi)

Dr Tinashe Kanosvambira, *Urban community
gardens and urban justice in the Cape Flats of
Cape Town* (Supervisor: Prof Daniel Tevera)

Dr Michael Dyssel, *Conservation and resource-
use relations: An analysis of the feasibility of
protected area expansion in the Western Cape*
(Supervisor: Dr Richard Knight)

2022 student numbers

Undergraduate:	715 students
Honours:	9 students
Masters:	23 students
PhD:	8 students

Changes to the curriculum or course offerings:

New Remote Sensing module: In 2022 the Department launched a new module (GES330) *Introduction to the Principles of Remote Sensing* coordinated and taught by Dr Mbulisi Sibanda.

Link to departmental webpage:

<https://www.uwc.ac.za/study/all-areas-of-study/departments/departments-of-geography-environmental-studies-and-tourism/overview>

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SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

SOL PLAATJE UNIVERSITY

Name of department:

- Physical and Earth Sciences (Geography Unit)

Head of department:

- Dr J.S. Sefadi (Dr M. Manjoro is the Academic Unit Leader of the Geography Unit)

Information about the Geographers and their area of specialisation in the department:

- **Prof. Mohamed A. M. Abd Elbasit** (BSc, DipIT, MSc, PhD), Associate Professor-Geospatial Sciences and Physical Geograhly.
- **Dr. T.A. Kabanda** (PhD, MSc, BScHons, BSc), Senior Lecturer-Geospatial Sciences and Environmental Sciences
- **Dr M. Manjoro** (PhD, MSc, BScHons, BScEd), Senior Lecturer, Physical Geography and Environmental Sciences

- **Dr T. Mafame** (BSc, BA.Hons, PGDip, MPhil, MDP, PhD) Lecturer – Urban, Rural, & Human Geography
- **Mr J. Hlatywayo** (MSc; MCom ,BSc Hons, Dip Ed), Lecturer-Human Geography and Environmental Sciences.
- Mr A.Masana (BSc, BSc. Hons) - Laboratory Technician, Geography.

2022/2023 List of publications:

Shen, Enshuai, Gang Liu, Mohamed AM **Abd Elbasit**, Xiaoyun Zhan, Qian Feng, Chenxi Dan, Hongqiang Shi, Xiangyu Chen, Qiong Zhang, and Zhen Guo. "Comparison of a laser precipitation monitor, piezoelectric transducer and particle imaging transient visual measurement technology under simulated rainfall in laboratory conditions." *Journal of Hydrology* 610 (2022): 127978.

Araya, T., Mlahlwa, A.V., **Elbasit, M.A.A.** and Newete, S.W., 2022. The impact of Tamarix invasion on the soil physicochemical properties. *Scientific Reports*, 12(1), p.5750.



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Publications Continued:

Li, H., Gu, J., Liu, G., **Abd Elbasit, M.A.**, Hu, F., Zou, T., Wang, L., Zhang, Q. and Guo, Z., 2022. Effects of raindrop temperature on the contributions of slaking and mechanical striking to aggregate disintegration during splash erosion. *Soil and Tillage Research*, 224, p.105518.

Shi, H., Xiao, H., Liu, G., **Abd Elbasit, M.A.**, Zheng, F., Zhang, Q., Zhang, Y. and Guo, Z., 2022. Identifying interrill, rill, and ephemeral gully erosion evolution by using rare earth elements as tracers. *Journal of Hydrology*, 612, p.128271.

Knight, J., **Abd Elbasit, M.A.** and Adam, E., 2022. Land Degradation in Eritrea and Djibouti. In *Landscapes and Landforms of the Horn of Africa: Eritrea, Djibouti, Somalia* (pp. 223-232). Cham: Springer International Publishing.

Mohajane, C. and **Manjoro, M.**, 2022. Sediment-associated heavy metal contamination and potential ecological risk along an urban river in South Africa. *Heliyon*, p.e12499.

Kabanda, T.H., 2022. Using land cover, population, and night light data to assess urban expansion in Kimberley, South Africa. *South African Geographical Journal*, 104(4), pp.539-552.

Kabanda, T.H. and Whata, A., 2022. Monitoring urban dynamics using time-series satellite imagery in Dodoma, Tanzania. *African Geographical Review*, pp.1-16.

Conference Presentations

Manjoro, M and Mohajane C (2022), Sediment-associated heavy metal contamination and potential ecological risk along an urban river in South Africa. Paper presented at the *International Association of Hydrological Sciences (IAHS) – Commission on Continental Erosion (ICCE) International Symposium on River sediment quality and quantity: environmental, geochemical and ecological perspectives*, 17 - 21 October 2022, Bydgoszcz, Poland (hybrid conference).

Changes to their curriculum or course offerings:

BSc.Hons Physical Sciences (Geography) started in 2023 with 2 students

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SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

UNIVERSITY OF CAPE TOWN

Name of department:

- Environmental and Geographical Science

Head of department:

- F D Eckardt, BSc Hons KCL MSc Cranfield DPhil Oxon

Information about the Geographers and their area of specialisation in the department:

- South African Research Chair in Climate Change: B C Hewitson, BSc Cape Town MSc PhD Penn State
- Professor and South African Research Chair in Environmental and Social Dimensions of the Bio-economy: R P Wynberg, BSc Hons MSc MPhil Cape Town PhD Strathclyde

Professors:

- M New, BSc Hons Cape Town MPhil PhD Cantab Emeritus Professors:
- R F Fuggle, BSc Hons UED Natal MSc Louisiana PhD McGill
- S Parnell, BA Hons HDE PG MA PhD Witwatersrand
- M R Sowman, MSc PhD Cape Town

Emeritus Professor and Senior Research Scholar:

- M E Meadows, BSc Hons Sussex PhD Cantab FRSSG FRSSAf

Honorary Professors:

- B Chase, BA Portland MSc Sheffield DPhil Oxon
- W J Gutowski, BSc Yale PhD MIT

Associate Professors:

- B J Abiodun, MTech FUTA Lic Uppsala PhD FUTA
- P Anderson, BSc Hons PhD Cape Town
- Z Patel, BSc Hons MSc Natal PhD Cantab
- G Ziervogel, BSc Hons Rhodes DPhil Oxon

Senior Lecturers:

- J Battersby, BSc Hons London MA Newcastle DPhil Oxon
- S Daya, BA Hons Cape Town MA PhD Durham
- K J Winter, BA Hons Cape Town MA London PhD Cape Town



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Geographers Continued:

- P Mbatha, BSocSc Hons UKZNMSocSc PhD
Cape Town

Lecturers:

- S Scheba, MPhil Cape Town PhD Manchester
- J R von Holdt, BSc Unisa MPhil PhD Cape Town

Researchers:

- M J van Niekerk
- Honorary Research Associates:
- D Fig, BA Cape Town BSc Hons PhD LSE
- R Hill, BSc Civil Eng PhD Cape Town

Honorary Research Affiliate:

- E W Bergh, BSc Hons PhD Cape Town
- **Chief Science Officer:**
- C Jack, BSc Hons PhD Cape Town
- I Pinto, Licenciatura Maputo MSc PhD Cape Town

Honorary Associate Professor:

- S Lwasa, MSc Netherlands Masters PhD Uganda

CLIMATE SYSTEM ANALYSIS GROUP

Director:

- B C Hewitson, BSc Cape Town MSc PhD Penn State

Deputy Director:

- C Jack, BSc Hons PhD Cape Town

Researchers:

- O Crespo, MSc Montpellier PhD Toulouse
- P Johnston, BSc Hons HDE Stell MSc PhD
Cape Town
- C Lennard, BSc Hons MSc PhD Cape Town
- A McClure, BSc Hons MSc Rhodes
- M Tadross, BSc Hons Newcastle PhD Cantab
- P Wolski, MSc Krakow PhD Amsterdam

Exciting

departmental news:

Appointment of P T Z Sabela-Rikhotso, BSc Hons Cape Town MSc UFS PhD NWU

MSc and PhD

graduations and

supervisors:

PHD:

Day Kirsten, **Supervisor:** Patel,Zarina

Maoyi Molulaqhoora, Supervisor:
Abiodun,Babatunde Joseph

Naik Myra, Supervisor: Abiodun,Babatunde Joseph

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UNIVERSITY OF CAPE TOWN

Graduations Continued:

Ribeiro Vera, Supervisor: Ramutsindela, Maano Freddy

MSc

Antonopoulos Helen, Supervisor: Meadows, Michael Edward

Armitage Michael, Supervisor: Meadows, Michael Edward

Donkin Paige, Supervisor: Abiodun, Babatunde Joseph

Dubazana Yakhuluntu, Supervisor Meadows, Michael Edward

Makinde Akintunde, Supervisor: Abiodun, Babatunde Joseph

Nicklin Emily, Supervisor: Winter, Kevin John

Widegger Abigail, Supervisor: Anderson, Pippin

Taylor Salwah, Supervisor: Meadows, Michael Edward

Dyers Grant, Supervisor: Johnston, Peter Allison

Nkoma Tsungai, Supervisor: Crespo, Olivier Brice

Ochs Tobias, Supervisor: Mbatha, Philile

Thwala Setsabile, Supervisor: Methner, Nadine
Adetitun Busuyi, Supervisor: Johnston, Peter Allison

Mayembe Rose, Supervisor: Norton, Marieke

Nkata Zimkita, Supervisor: Rennkamp, Britta

Vicedom Stefan Klaus, Supervisor: Wynberg, Rachel Paula

Wise Carly, Supervisor: Anderson, Pippin

Campbell Andrea, Supervisor: Holden, Petra Brigitte

Dipura Romeo, Supervisor: Oldfield, Sophie Elaine

Jackson Jinty, Supervisor: Oldfield, Sophie Elaine

Nakkungu Mildred, Supervisor: Selmeczi, Anna

Quarcoo Joseph, Supervisor: Haysom, Gareth Duff

Link to departmental webpage:

<https://science.uct.ac.za/departments-egs>

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SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

UNIVERSITY OF VENDA

Name of department:

- Geography and Environmental Science

Head of department:

- Dr. Nthaduleni Samuel Nethengwe; Geospatial Technologies, Climate Science /change/adaption and green economy/transport. Mainstreaming GIS and RS into flood vulnerability assessment, gully erosion extraction, green economy (energy and transport) land reform, land use change, climate change adaption, sustainability analysis, rural livelihoods and urban organization.



Information about the Geographers and their area of specialisation in the department:

- Dr T Nelwamondo; Senior Lecturer - Eco-Tourism; Settlement Development and Urbanisation
tshililo.nelwamondo@univen.ac.za
- Dr NV Mudau; Senior Lecturer - Rural Geography virginia.mudau@univen.ac.za
- Dr MJ Mokgoebo; Senior Lecturer- Biogeography map work, quantitative and qualitative research methods.
matjutla.mokgoebo@univen.ac.za
- Mr E Kori; Lecturer- Geomorphology
edmore.kori@univen.ac.za
- Ms KH Netshisaulu; Lecturer- Population and Demography
khathu.mathivha@univen.ac.za
- Mr F. Dondofema,; Chief Lab Technician. GIS and Remote Sensing, Ecology farai.dondofema@univen.ac.za



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UNIVERSITY OF VENDA

Geographers continued:

- Mr. AP Nekhavhambe; Part-time Lecturer Human/Environmental Geography
Ailwei.nekhavhambe@univen.ac.za
- Ms N. Dlamini; Part-time Lecturer – Climatology. Nohlaha.dlamini5@gmail.com
- Dr. F. Murungweni; Lecturer - Applications of modern technologies (such as RS and GIS) to various societal issues
Florence.murungweni@univen.ac.za
- Dr. E. Stam; Senior Lecturer Ecology.
Ed.stam@univen.ac.za
- Dr. L Mugwedi; Senior Lecturer - Restoration ecology; Ecosystem-based adaptation; ecosystem services; Invasive alien plant ecology and management
Lutendo.mugwedi@univen.ac.za
- Dr. R. Mudzielwana; Senior Lecturer - Environmental Chemistry
Rabelani.mudzielwana@univen.ac.za
- Dr. J. Steyn; Senior Lecturer - Agroecology and rangeland ecology and management
eunit@univen.ac.za
- Mr. R. Mulaudzi; Lecturer - Environmental Economics, Environmental Pollution and Ecotoxicology.
Ratshalingwa.mulaudzi@univen.ac.za
- Dr O. Malahlela; Senior Lecturer - Geospatial information sciences (Remote sensing and GIS) applications
Oupa.malahlela@univen.ac.za
- Dr. H Moyo; Senior Lecturer - Plant ecology, resource ecology, community-based natural resource management, and sustainability in savanna socio-ecological systems. Hloniphani.Moyo@univen.ac.za
- Ms. M.G Maponya; nGAP Lecturer – Geoinformatics.
Grace.Maponya@univen.ac.za
- Dr. E. Mugari; SAF-ADAPT Postdoc Fellow - Climate Change Adaptation.
Mugarie@gmail.com
- Prof. J. Edokpayi; Associate Professor - Environmental Pollution Monitoring and Management, Environmental Engineering and Public Health.
Joshua.Edokpayi@univen.ac.za

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UNIVERSITY OF VENDA

Geographers continued:

GES STAFF:2023

A



B



Row A, L-R: Dr. NS Nethengwe, Dr. L.Mugwedi,
Mr F. Dondofema, Dr. J. Steyn; Dr. T. Nelwamondo;
Mr. E. Kori; Mr. E. Mugari(Postdoc); Mrs K.
Netshisaulu.

Row B, L-R: Dr. MJ Mokgoebo; Dr. R.
Mudzielwana, Dr. F. Murungweni; Dr. E. Stam;
Dr. O. Malahlela; Ms . G. Maponya; Prof J.
Odokpayi; Mr. R. Mulaudzi; Dr. NV Mudau and
Dr H. Moyo



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UNIVERSITY OF VENDA

Exciting departmental news

The Department of Geography and Environmental Sciences is part of the Transdisciplinary Education Collaboration for Transformation in Sustainability (TRANSECTS) Project. Other project partners include Vhembe Biosphere Reserve, Garden Route Biosphere Reserve, biosphere reserves in Canada and Germany, Rhodes University, Nelson Mandela University, University of the Witwatersrand, University of Pretoria, University of Mpumalanga, Agricultural Research Council and the South African National Parks. TRANSECTS brings together researchers, students, and practitioners working in UNESCO Biosphere Reserves from the Global North and South to offer unparalleled opportunities for intercultural learning through shared international training experiences and comparative analysis. The Project Director is Professor Maureen Reed from the University of Saskatchewan in Canada, and the South African Co-Director is Professor Eureka Rosenberg from Rhodes University. The Department of Geography and Environmental Sciences will host colleagues from Canada, Germany, Rhodes University and Nelson Mandela University from 25 to 28 March 2023. The purpose of the visit is to discuss initiatives that will lead to long-term collaborations between the global north and the global south biosphere reserves and universities.

On 28 March, Professor Maureen Reed will give a public lecture on relationships with local communities in biosphere reserves.

Alliance for Collaboration on Climate and Earth Systems Science (ACCESS)'s 40th Habitable Planet Workshop

From 05 to 15 July 2023, the Department of Geography and Environmental Sciences will host ACCESS's 40th Habitable Planet Workshop (HPW) at the University of Venda. The HPW employ an innovative curriculum which uses South Africa's globally unique physical/biological and cultural landscapes to introduce 3rd and 4th-year students (from a diverse range of field from mathematics to sociology/law) to the concept of Earth System Science. This is done through a combination of lectures, computer exercises, creative arts, peer discussion and field excursions to tell the story of why the Earth is habitable and why South Africa is such a special place in it. The workshop also aims to expose scholars to the range of transferable skills and various study and career choices available in Earth System Science. The workshop will be attended by 50 participants from all South African universities

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UNIVERSITY OF VENDA

Departmental news continued:

Groundwater Dependent Ecosystems (GDEs) and Biodiversity in the Khakea/Bray Transboundary Aquifer. 2020-2023.

The study is based on the understanding that groundwater plays an important role in sustaining below and above-ground aquatic ecosystems, such as wetlands and rivers. Groundwater management and planning are critical for the sustainability of GDEs which are impacted when the groundwater regime changes to exceed the natural bounds of natural variation. Impacts come from abstraction for irrigation and human consumption and reduced groundwater recharge resulting from land use change and climate change. There is clearly a need for conceptual and quantitative assessments of how groundwater interacts with the GDEs. In the SADC region, little research has been undertaken to delineate the GDEs and to assess their interactions with groundwater and the impacts of anthropogenic changes to the groundwater systems on GDEs. Unsustainable abstractions and deterioration in the quality present a threat to the sustainability of the GDEs. The Khakea/Bray Transboundary Aquifer is experiencing a rapid increase in abstraction for agriculture and domestic use. Transboundary aquifers in particular can be problematic given the lack of joint transboundary management, resulting in abstractions that impact the integrity of the GDEs. This study seeks to examine the key aspects of GDEs in the Transboundary Aquifer (TBA) of Khakea/Bray Dolomite shared by Botswana and South Africa.

The trophic structure of the middle Kruger National Park temporary pans is a case study of the Shingwedzi and Letaba pan systems. 2020-2023. Univen Niche Area Funding. Senior Researcher.

The proposed study aims to explore the nature by, and the extent to, which transfers of organic matter between aquatic-terrestrial habitats in the Shingwedzi and Letaba pan systems sustain aquatic faunal communities. The study will also identify the aquatic food web's major components (species), contribute to biodiversity information, and identify keystone species in the protected area. With passive leaching of dissolved organic carbon (DOC) from leaf litter having been found to be a major source of energy in wetlands, floodplains, streams and lakes/reservoirs fuelling microbial food chains, thus, we want to understand what is supporting the high biomass and diversity of animals in the pan wetlands. Thus, this project's main aim/objective is to quantify the extent to which terrestrial resources maintain pan-wetland food webs and how this is influenced by wooded, grassland and/or human activities.

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UNIVERSITY OF VENDA

Departmental news continued:

Vhembe District Municipality GIS Week 2022

In partnership with the University of Venda, VDM (Development Planning Department) conducted four (4) events from Monday, 19 to 21 April at UNIVEN and Biaba, respectively. The event was attended by schools selected by the Department of Basic Education Vhembe District. The invited schools were established and clustered based on the regions and Local municipalities within VDM. The event was aimed at Grades 10-12 Geography educators and learners. The event targeted schools from deep rural areas. Schools brought 20 learners each, 2 SGB members and 3 geography educators. Forty five schools (23 Vhembe West and 22 Vhembe East) and 598 Geography Grade 10-12 learners attended the event. The district transported them from their schools to their respective venues and catered for them. VDM transported the learners from their schools to the individual venues and provided catering. The DGES represented the University of Venda, the Executive Dean's Office, the Directorate of community engagement and the Univen Marketing department.

In contrast, the department was described by curriculum advisors and teachers. The GIS Unit represented our partner, the Vhembe District Municipality, in the district. Invited are sector departments and the private sector.

Statistical Report of Attendance of the GIS Week

Date	Venue	Learners	Stakeholders	Educators & SGB	Total
19-20.04.2022	Univen	303	50	47	400
21-22.04.2022	Makhado CPD	295	44	53	392
Total		598	94	100	792

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SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

UNIVERSITY OF VENDA

Departmental news continued:

Towards establishing a Village Concept to aid rainwater harvesting in the Vhembe District Municipality. 2022 -2023. University of Venda Community Engagement Directorate.

The village concept project (VCP) is designed to promote community development and student capacity-building initiatives. The VCP is a voluntary, non-political, non-governmental project that aims to provide sustainable improvement of the living conditions in underprivileged communities at the village level and develop students' capabilities. Key aspects of these projects are the full participation of the local communities and students from different cultures and disciplines. VCPs are intersectional, meaning that the project activities interlink sectors such as education, agriculture, health, water and sanitation, forestry, and the environment. It is a requirement that the villagers actively participate in all phases of the project from the initial planning through to evaluation.

2022/2023 List of publications:

Akinyemi, SA., Hower, JC., Madukwe, HY., Bengba B. Nyakuma e , Mohammed B. Nasirudeen, Timileyin A. Olanipekun, **Mudzielwana, R. Mugeru W. Gitari**, Luis F.O. Silva. 2022. Geochemical, mineralogical, and petrological characteristics of the Cretaceous coal from the middle Benue Trough Basin, Nigeria: Implication for coal depositional environments. *Energy Geoscience* 3 (2022) 300-313.

Netshituni, V. T., Cuthbert, R. N., **Dondofema, F.**, & Dalu, T. (2022). Effects of wildfire ash from native and alien plants on phytoplankton biomass. *Science of The Total Environment*, 834, 155265.

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SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

UNIVERSITY OF VENDA

Publications continued:

- Dalu, T., Cuthbert, R. N., Makhuvha, L., **Dondofema, F.**, & Wasserman, R. J. (2022). Assessing variation in below-ground organic matter dynamics in the Ramsar-declared Nylsvley Wetland system, South Africa. *Chemistry and Ecology*, 1-19.
- Mpakairi, K. S., Dube, T., **Dondofema, F.**, & Dalu, T. (2022). Spatiotemporal variation of vegetation heterogeneity in groundwater-dependent ecosystems within arid environments. *Ecological Informatics*, 69, 101667.
- Keates, C., Conradie, W., Dalu, T., **Dondofema, F.**, Riddel, E. S., & Wasserman, R. J. (2022). Phylogenetic placement of the enigmatic Floodplain water snake, *Lycodonormorphus obscuriventris* FitzSimons, 1964. *Koedoe*, 64(1), 9.
- Nethengwe, N.S.** 2022. Transport Modes and the Green Economy. In Odiyo, J., Bikam, P and J.Chakwizira (eds.), *Green Economy in the Transport sector: A case study of Limpopo province, South Africa. Switzerland:Springer*. ISBN 978-3-030-86177-3 ISBN 978-3-030-86178-0 (eBook) <https://doi.org/10.1007/978-3-030-86178-0>.
- Dalu, M. T., Cuthbert, R. N., Ragimana, P., Gunter, A. W., **Dondofema, F.**, & Dalu, T. (2022). Assessing human perceptions towards large wood in river ecosystems following flooding experiences. *River Research and Applications*.
- Manyanya, T., Teerlinck, J., Somers, B., Verbist, B., and **Nethengwe, NS.** 2022. Sentinel-Based Adaptation of the Local Climate Zones Framework to a South African Context. *Remote Sens.* 2022, 14, 3594. <https://doi.org/10.3390/rs14153594>.
- Munzhelele, E., Gitari, W., W.B. Ayinde, W., and **Mudzielwana, R.** 2022. Synthesis, characterization of Ce³⁺ doped poly (paraphenylenediamine) composite for fluoride, arsenite and pathogens removal in aqueous solutions. *Reactive and Functional Polymers* 176 (2022.) 105297. <https://doi.org/10.1016/j.reactfuncpolym.2022.105297>.
- Mutshekwa, T., Mugwedi, L., Wasserman, R. J., Cuthbert, R. N., **Dondofema, F.**, & Dalu, T. (2022). Pesticides drive differential leaf litter decomposition and mosquito colonisation dynamics in lentic conditions. *Science of The Total Environment*, 156320.
- Dalu, T., Cuthbert, R. N., Methi, M. J., **Dondofema, F.**, Chari, L. D., & Wasserman, R. J. (2022). Drivers of aquatic macroinvertebrate communities in a Ramsar-declared wetland system. *Science of the Total Environment*, 818, 151683.

SSAG NEWS 2022/23

SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

UNIVERSITY OF VENDA

Publications continued:

Dalu, T., **Stam, E.**, Ligege, M. and Cuthbert, R. 2022. Highways to invasion: Powerline servitudes as corridors for alien plant invasions. *Afr J Ecol.* 2023;00:1–9.

Adedayo Ayodeji Lanrewaju , Abimbola Motunrayo Enitan Folami, Saheed Sabiu , **Joshua Nosa Edokpayi** and Feroz Mahomed Swalaha. Global public health implications of human exposure to viral contaminated water. 2022. *Frontiers in Microbiology* (Review), DOI 10.3389/fmicb.2022.981896.

Zenhom E. Salem, Abdelaziz ElNahrawy , Abdullah M. Attiah and **Joshua N. Edokpayi.** 2022. Vertical and spatial evaluation of the groundwater chemistry in the Central Nile Delta Quaternary aquifer to assess the effects of human activities and seawater intrusion. *Frontiers in Environmental Science.* DOI 10.3389/fenvs.2022.961059.

Hlatshwayo,T., **Stam, E.**, Collinson-Jonker, W.J., and Dawood, A. 2022. An inventory of amphibian roadkill in the western Soutpansberg, Limpopo province, South Africa. *AFRICAN JOURNAL OF HERPETOLOGY.* <https://doi.org/10.1080/21564574.2022.2115154>.

Mugari E, Nethengwe NS. 2022. Mainstreaming Ecosystem-Based Disaster Risk Reduction: Towards a Sustainable and Just Transition in Local Development Planning in Rural South Africa. *Sustainability.* 2022; 14(19):12368.<https://doi.org/10.3390/su141912368>.

Munyai, L. F., **Dondofema, F.**, Bada, K., Mutoti, M. I., & Gumbo, J. R. (2022). Satellite-derived estimation of chlorophyll-a on harmful algal blooms (HABs) in selected dams of Vhembe District, Limpopo Province. *International Journal of Environmental Impacts*, 5(4), 362-374.

Mutshekwa, T., Cuthbert, R. N., Mugwedi, L., Wasserman, R. J., **Dondofema, F.**, & Dalu, T. (2022). Behavioural Responses and Mortality of Mozambique Tilapia *Oreochromis mossambicus* to Three Commonly Used Macadamia Plantation Pesticides. *Water*, 14(8), 1257.

Sikhwari, T., **Nethengwe, N.S,** Sigauke, C and Chikoore, H. 2022. Modelling of extremely high rainfall in Limpopo province of South Africa. *Climate*, 10, 33. <https://doi.org/10.3390/cli10030033>.

Netshituni, V. T., Cuthbert, R. N., **Dondofema, F.**, & Dalu, T. (2022). Assessing the effects of native and alien plant ash on mosquito abundance. *Ecology and Evolution*, 12(10), e9371.

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Publications continued:

Makherana, F., Cuthbert, R. N., Monaco, C. J., **Dondofema, F.**, Wasserman, R. J., Chauke, G. M., ... & Dalu, T. (2022). Informing spread predictions of two alien snails using movement traits. *Science of the Total Environment*, 811, 152364.

Segun A. Akinyemi, Ph.Da, Olajide F. Adebayo, Henry Y. Madukwe, Ayobami T. Kayode , Adeyinka O. Aturamu , Olusola A. OlaOlorun , Bemgba B. Nyakuma, Aliyu Jauro , **Wilson M. Gitari , Rabelani Mudzielwana**, James C. Hower. 2022. Elemental geochemistry and organic facies of selected cretaceous coals from the Benue Trough basin in Nigeria: Implication for paleodepositional environments. *Marine and Petroleum Geology* 137 (2022) 1054902.

Munyai, L. F., Dalu, T., Wasserman, R. J., Mugwedi, L., **Dondofema, F.**, O'Brien, G., & Cuthbert, R. N. (2022). Functional Responses and Additive Multiple Predator Effects of Two Common Wetland Fish. *Water*, 14(5), 699.

Makherana, F., Cuthbert, R. N., **Dondofema, F.**, Wasserman, R. J., Chauke, G. M., Munyai, L. F., & Dalu, T. (2022). Distribution, drivers and population structure of the invasive alien snail *Tarebia granifera* in the Luvuvhu system, South Africa. *River Research and Applications*.

Mpakairi, K. S., Dube, T., **Dondofema, F.**, & Dalu, T. (2022). Spatial Characterisation of Vegetation Diversity in Groundwater-Dependent Ecosystems Using In-Situ and Sentinel-2 MSI Satellite Data. *Remote Sensing*, 14(13), 2995.

Simbarashe J., Mohamed A. M. Abd Elbasit Anesu D. Gumbo, A.D and **Nethengwe, NS.** 2023. Remote Sensing Application in Mountainous Environments: A Bibliographic Analysis. *Int. J. Environ. Res. Public Health* 2023, 20, 3538. <https://doi.org/10.3390/ijerph20043538>.

MSc and PhD graduations and supervisors:

MAKHERANA FHATUWANI. MSc ECOLOGY. Assessing environmental factors structuring populations and movement dynamics of the invasive snail

Tarebia granifera in a subtropical Austral reservoir Supervisor: Dr T Dalu [University of Mpumalanga] Co-Supervisors : Dr RN Cuthbert [GEOMAR/Queens Belfast University, UK] Mr F Dondofema [UNIVEN]

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MSc and PhD graduations and supervisors continued:

MUDAU UNARINE. MSc ECOLOGY. Small-Scale Farmers' Perception on Sustainable Agriculture: The Case of Vhembe District Municipality, Limpopo Province, South Africa. Supervisor: Dr L Mugwedi (UNIVEN) Co-Supervisors : Mr.L Mukwevho [University of Mpumalanga]

MUTHIVHI FULUFHELO FAITH . MSc ECOLOGY. Assessing the spatio-temporal variation of phytoplankton productivity of Nandoni Reservoir in Vhembe district using remote sensing and GIS. Supervisor: Dr Tatenda Dalu [University of Mpumalanga] Co-Supervisors : Mr F Dondofema [UNIVEN] & Dr MJ Mokgoebo [UNIVEN]

NDOU TSHIANEO MELDA. MSc GEOGRAPHY. Poaching of the endangered cycads species *Encephalartos transvenosus* in the Limpopo Province, South Africa. Supervisor:Dr EM Stam (UNIVEN) Co-Supervisor : Prof MP Tshisikhawe (UNIVEN)

NELWAMONDO FHUMULANI. MSc GEOGRAPHY. Analysis of peri-urban household solid waste management system: a case study of Lwamondo village. Supervisor:Dr N.V Mudau [UNIVEN] Co-Supervisor : Mr M.J Mokgoebo [UNIVEN]

TSHITAVHE TANGANEDZANI. MSc GEOGRAPHY. Effects Of Climate Variability On Citrus Production And Rural Livelihoods In Mopani District Municipality, South Africa. Supervisor:H. Chikoore [UL] Co-Supervisor : E. Kori [UNIVEN]

2023 student numbers:

First year 625

Second year 450

Third year 360

Honours 45

Masters 15

Doctoral 6

Changes to the curriculum or course offerings:

The Department of Geography and Environmental Sciences introduced Bachelor of Environmental Sciences in Disaster Risk Reduction Qualification in 2022.

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UNIVERSITY OF VENDA

***L**ink to*

departmental
webpage:

<https://www.univen.ac.za/faculties/science-engineering-and-agriculture/geography-and-environmental-sciences/>

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SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

UNIVERSITY OF SOUTH AFRICA

Name of department:

Department of Geography

Head of department:

- Dr Shandu Nenwiini

Information about the Geographers and their area of specialisation in the department:

Prof Gunter, A	Professor	Urban Geography Distance Education	Dr De Jager, AE	Senior Lecturer	Teaching and learning in Geography; Urban geography, services provision, Tourism, quality of life
Prof Hedding, DW	Professor	Geomorphology	Dr Dirsuweit, T	Senior Lecturer	Urban Geography; Geographies of Gender; Food Studies; Political Geography
Prof Horn, AC	Professor	Urban and Social Geography	Dr Nenwiini, SC	Senior Lecturer	Climatology
Prof Nicolau, MD	Professor	Citizen driven socio-economic change, poverty and quality of life, migration studies	Dr Pewa, M	Senior Lecturer	Human Geography; Waste Management
Dr Du Plessis, A	Associate Professor	Hydro Geography	Dr Radingoana, MP	Senior Lecturer	Greywater reuse Food security Waste management
Prof Pretorius, RW	Associate Professor	Teaching and learning in Geography	Mr Anderson, R	Lecturer	Geomorphology
Prof Schmitz, P	Associate Professor	Spatial analysis GIS	Mrs Carow, S	Lecturer	GIS
			Mrs Coetzee, R	Lecturer	Environmental Geography; ODEL within the context of geography and e-learning

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Information about the Geographers and their area of specialisation

Continue:

Fulltime			Contract		
Mr Greyling, C	Lecturer	Geomorphology	Ms de Vries, L	Lecturer	Urban Geography Human Geography Parks and Public Space
Mr Khanye, B	Lecturer	Settlement Geography	Dr Manuel, K	Lecturer	Urban Geography, Migration Studies
Mrs Khotoo, A	Lecturer	Human Geography	Mr Mbhamali, TW	Lecturer	Environmental Sciences Atmospheric Sciences Hydrology Spatio-temporal Analysis
Ms Lombard, A	Lecturer	Environmental and Tourism Geography	Mr Munyai, RB	Lecturer	Risk hazard and vulnerability Weather and Climate variability Population dynamics and demography
Mr Mafanya, M	Lecturer	Geographic Information Systems Remote Sensing Geospatial analysis	Postdoctoral Fellows		
Mrs Mashau, SJ	Lecturer	Rural Geography, Gender equity studies	Dr Dalu M	NRF Postdoc Fellow	Environmental Geography ODEL
Ms Motene, S	Lecturer	Environmental geomorphology GIS	Dr Kusena W	UNISA Postdoc Fellow	Environmental Geography
Ms Mulibana, L	Lecturer	Urban Geography	Academic Associate		
Ms Pienaar, R	Lecturer	Geography of education	Prof Liebenberg L	Associate Fellow	Historical Maps Cartography
Mr Schoeman, R	Lecturer	Urban Geography	Administration		
Mr Tshabalala, S	Lecturer	Urban Geography Local government and development	Ms S Kuhlase	Administrative Officer	
Mr Ramasunga, P	Junior Lecturer	Land and agrarian reform, livelihoods, renewable energy, human settlement and land use	Mr L Thenga	Administrative Officer	
Ms Lotz, CE	Technical Assistant	Environmental degradation Rehabilitation	Ms H Steenkamp	Secretary	

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Exciting departmental news:

Staff News

- After 10 years at UNISA, Dr Manuel resigned to take up a position in the corporate sector
- Mr RB Munyai left UNISA to join the University of Limpopo
- Dr Radingoana joined the Department as a Senior Lecturer
- Dr Pewa joined the Department as a Senior Lecturer

Journal Editing

- The Journal of Geography Education in Africa with Dr Dirsuweit as Editor-in-Chief was given DHET accredited.
- <https://upjournals.up.ac.za/index.php/jogea>
- The South African Geographical Journal Prof Hedding (Physical Geography) and Prof Gunter (Human Geography) are joined Editor-in-Chief of the journal.
- Prof Schmitz is the Editor-in-Chief of the South African Journal of Geomatics

Research Associates

- Prof Liebenberg: As a B rated scientist, Prof Liebenberg has continued her Emeritus Professor with the department and continued publishing high impact papers on historical cartography.

2022 List of Publications:

Coetzee, S., Carow, S. and Snyman, L., 2022. A Review of Maps in PhDs: Is Your Map Worth a Thousand Words?. *The Cartographic Journal*, 59(2), pp.150-164.

Mafanya, M., Tsele, P., Zengeya, T. and Ramoelo, A., 2022. An assessment of image classifiers for generating machine-learning training samples for mapping the invasive *Campuloclinium macrocephalum* (Less.) DC (pompom weed) using DESIS hyperspectral imagery. *ISPRS Journal of Photogrammetry and Remote Sensing*, 185, pp.188-200.

Tsele, P., Ramoelo, A., Qabaqaba, M., **Mafanya, M.** and Chirima, G., 2022. Validation of LAI, chlorophyll and FVC biophysical estimates from sentinel-2 level 2 prototype processor over a heterogeneous savanna and grassland environment in South Africa. *Geocarto International*, pp.1-24.

Mashabela, K., Dube, T., Mollel, M.H.N., Letsoalo, J.M. and **Radingoana, M.P.**, 2022. Assessing accessibility and availability of portable water supply in selected communities of Lepelle-Nkumpi local municipality, Limpopo province of South Africa. *Physics and Chemistry of the Earth, Parts A/B/C*, 127, p.103181.

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2022 List of Publications:

Prinsloo, F.C., **Schmitz, P.** and **Lombard, A.**, Integrated Energy, Environmental and Economic Analysis for Floating Photovoltaics with Welf Nexus Sustainability Indicators.

Hamann, C. and **Horn, A.C.**, 2022. Socio-economic inequality in the City of Tshwane, South Africa: a multivariable spatial analysis at the neighborhood level. *GeoJournal*, 87(3), pp.2001-2018.

du Plessis, A., 2022. Persistent degradation: Global water quality challenges and required actions. *One Earth*, 5(2), pp.129-131.

Ngebe, S., Malunda, K.B. and **Du Plessis, A.**, 2022. Utility of geospatial techniques in estimating dam water levels: insights from the Katrivier Dam. *Water SA*, 48(2), pp.151-160.

Leal Filho, W., Kovaleva, M., Tsani, S., Țîrcă, D.M., Shiel, C., Dinis, M.A.P., **Nicolau, M.**, Sima, M., Fritzen, B., Lange Salvia, A. and Minhas, A., 2022. Promoting gender equality across the sustainable development goals. *Environment, Development and Sustainability*, pp.1-22.

Dzawanda, B., Matsa, M. and **Nicolau, M.**, 2022. A catastrophic threat to the already vulnerable towards 2030: Impact of COVID-19 lockdown on livelihood outcome of informal cross border traders in Gweru, Zimbabwe. *Social Sciences & Humanities Open*, 6(1), p.100316.

Kusena, W., Chemura, A., Dube, T., **Nicolau, M.D.** and Marambanyika, T., 2022. Landuse and landcover change assessment in the Upper Runde sub-catchment, Zimbabwe and possible impacts on reservoir sedimentation. *Physics and Chemistry of the Earth, Parts A/B/C*, 126, p.103105.

Leal Filho, W., Lange Salvia, A., Abubakar, I.R., Mifsud, M., Azadi, H., Sharifi, A., LeVasseur, T., Luetz, J.M., Velazquez, L., Singh, P. and **Pretorius, R.**, 2022. Impacts of the COVID-19 Pandemic on Routines of Higher Education Institutions: A Global Perspective. *Sustainability*, 14(21), p.14105.

Pretorius, R.W., Nicolau, M., Resch, K., Amorim, J.P. and Dima, G., 2022. Higher education and the acceleration of the sustainable development goals in Africa. *International Journal of Sustainability in Higher Education*, 22(7).

Rudolph, E.M., **Hedding, D.W.**, De Bruyn, P.J. and Nel, W., 2022. An open access geospatial database for the sub-Antarctic Prince Edward Islands. *South African Journal of Science*, 118(9-10), pp.1-8.

Rudolph, E.M., **Hedding, D.W.** and Nel, W., 2022. A spatial model of Marion Island's palaeo-ice extent. *Antarctic Science*, 34(5), pp.365-373.

Cramer, M.D., **Hedding, D.W.**, Greve, M., Midgley, G.F. and Ripley, B.S., 2022. Plant specialisation may limit climate-induced vegetation change to within topographic and edaphic niches on a sub-Antarctic island. *Functional Ecology*, 36(10), pp.2636-2648.

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2022 List of Publications:

- le Roux, J., Morake, L., van der Waal, B., **Leigh Anderson, R.** and Hedding, D.W., 2022. Intragully mapping of the largest documented gully network in South Africa using UAV photogrammetry: Implications for restoration strategies. *Progress in Physical Geography: Earth and Environment*, 46(5), pp.772-789.
- Pourret, O., Anand, P., Bots, P., Cottrell, E., Dosseto, A., **Gunter, A., Hedding, D.W.**, Ibarra, D.E., Irawan, D.E., Johannesson, K. and Labidi, J., 2022. Evolution of diversity in the editorial boards of *Geochimica et Cosmochimica Acta* and *Chemical Geology*. *European Science Editing*.
- Monsanto, D., **Hedding, D.**, Durand, S., Teske, P. and Van Vuuren, B., 2022. Landscape Genetics Of A Springtail Endemic To Marion Island.
- Xu, Z., Li, T., Li, G., **Hedding, D.W.**, Wang, Y., Gou, L.F., Zhao, L. and Chen, J., 2022, July. Effects of evapotranspiration on $\delta^7\text{Li}$ of stream water—A case study from the Chinese Loess Plateau. In 2022 Goldschmidt Conference. **GOLDSCHMIDT**.
- Breetzke, G.D., **Hedding, D.W.** and Pijper, L., 2022. The academic staff profile of Geographers at higher education institutions (HEIs) in South Africa: the challenges for transformation. *Journal of Geography in Higher Education*, 46(2), pp.222-240.
- Xu, Z., Li, T., Li, G., **Hedding, D.W.**, Wang, Y., Gou, L.F., Zhao, L. and Chen, J., 2022. Lithium isotopic composition of soil pore water: Responses to evapotranspiration. *Geology*, 50(2), pp.194-198.
- Li, G., Yang, R., Xu, Z., Hartmann, J., **Hedding, D.W.**, Li, X., Ernst, R.E., Li, Z.H., Zou, H., Li, Z. and Chen, J., 2022. Oxygen isotopic alteration rate of continental crust recorded by detrital zircon and its implication for deep-time weathering. *Earth and Planetary Science Letters*, 578, p.117292.
- Raghuram, P., Madge, C., Rienties, B., **Gunter, A.** and Breines, M., 2022. Facilitating Equitable Access and Quality Education for Development: South African International Distance Education, 2016-2019.
- Dalu, M.T., Cuthbert, R.N., Ragimana, P., **Gunter, A.W.**, Dondofema, F. and Dalu, T., 2022. Assessing human perceptions towards large wood in river ecosystems following flooding experiences. *River Research and Applications*, 38(7), pp.1296-1304.

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UNIVERSITY OF SOUTH AFRICA

2022/2023 List of publications:

Dalu, M.T., Mukhuwana, O., Cuthbert, R.N., Marambanyika, T., **Gunter, A.W.**, Murungweni, F.M. and Dalu, T., 2022. Understanding communities' perceptions, demographics and uses of wetlands in Vhembe Biosphere Reserve, South Africa. *Wetlands Ecology and Management*, pp.1-14.

McKay, T., Fakudze, N. and **Gunter, A.**, 2022. The middle remains missing: class exclusion from the urban rental market in suburban Johannesburg. *Acta Academica*, 54(1), pp.113-133.

Mittelmeier, J., **Gunter, A.**, Raghuram, P. and Rienties, B., 2022. Migration intentions of international distance education students studying from a South African institution: unpacking potential brain drain. *Globalisation, Societies and Education*, 20(4), pp.523-541.

Tshabalala, S. and **Gunter, A.**, 2022. Technologies of Government and Policy Implementation in Small Towns Economic Development Plans in Mpumalanga, South Africa. In *The Routledge Handbook of Small Towns* (pp. 361-372). Routledge.

Liebenberg, E., 2022. 'I Will Open a Path into the Interior (of Africa), or Perish': David Livingstone and the Mapping of Africa. *The Cartographic Journal*, 58(1), pp.29-49.

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MSc and PhD *graduations and* *supervisors:*

PhD in Geography

T. Wepener. Lived experiences and geographical consciousness: A study of five Namibian schools. Prof R.W. Pretorius.

E.T. Ayele. Children and Youth Migration to Hawassa City of Ethiopia in the Pursuit of Livelihoods. Prof A. Gunter.

E. Mazhindu, The Political Economy of Peri-urban Transformation in Zimbabwe in Conditions of Globalisation: a case study of Harare. Dr B. Mbibi.

Ay Wudu, Urban expansion and its impact on peri-urban areas: The case of Debre Berhan Town, Amhara regional state, Ethiopia. Prof A.C Horn.

MSC Geography

K. Kubiku. Mining Industry and the Pro-Poor Growth in South Africa: The case of Platinum Mining in Mogalakwena, Limpopo. Prof S. Mini.

P. Moyo. An Assessment of the Contribution of Mobile Money Towards the Formalisation of Remittances Between Johannesburg (South Africa) and Bulawayo (Zimbabwe). Dr T Dirsuweit.

F. Tusehera. Exploring demographic implications on neo-liberal waste management planning: A case study of Sondela Informal settlement of Rustenburg Local Municipality in South Africa. Prof A. Gunter.

M. Eshun. Land Reforms, Land Use Planning and Sustainable Livelihoods in the Akuapem North Municipality in the eastern region of Ghana. Prof S. Mini.

RT Rischards. Environmental Education and Awareness Reflected in Learners' Environmental Attitudes, Knowledge and Behaviour at the Junior Secondary School Level - a case study of six schools in Cape Town. Prof A.C Horn

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2022 student numbers:

First years	7238
Second years	3436
Third years	386
Honours	71
Masters	64
PhD's	53

Link to departmental webpage:

<https://www.unisa.ac.za/sites/corporate/default/Colleges/Agriculture-&-Environmental-Sciences/Schools,-departments,-centres-&-units/School-of-Ecological-and-Human-Sustainability/Department-of-Geography>

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SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

GAUTENG CITY-REGION OBSERVATORY

Gauteng City-Region Observatory

The GCRO is not a teaching and learning Geography department, but is an urban research unit with a focus on Gauteng. Institutionally, it is a partnership between the University of Johannesburg (UJ); the University of the Witwatersrand (Wits University); the Gauteng Provincial Government (GPG); and South African Local Government Association (SALGA). It employs an interdisciplinary grouping of researchers including a number of graduates of Geography programmes.

Head of organisation:

- *Rashid Seedat*

GCRO researchers

- Richard Ballard, Human Geographer with a focus on spatial transformation.
- Christina Culwick Fatti, Geographer researching the intersection of environmental and social systems.
- Graeme Gotz, Urban Researcher with a particular interest in governance.
- Christian Hamann, Geographer focusing on urban desegregation.
- Ebrahim-Khalil Hassen, Economist with an interest in public policy analysis and inclusive economies.
- Samkelisiwe Khanyile, Geographer researching post mining landscapes.
- Gillian Maree, Urban Planner specialising in sustainability and environmental management.
- Shamsunisaa Miles-Timotheus, Demographer with an interest in population studies and sexual and reproductive health.
- Sthembiso Pollen Mkhize, Human Geographer with an interest in geographies of sexuality and youth health.

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GAUTENG CITY-REGION OBSERVATORY

Organisational news

GCRO researchers continued:

- Thembani Mkhize, Planner interested in urban governance and social issues.
- Mamokete Modiba, Planner researching the governance of informal enterprises.
- Ngaka Mosiane, Human Geographer with an interest in urban peripheries.
- Darlington Mushongera, Planner researching the governance of infrastructure.
- Brian Murahwa, Planner with an interest in urban and regional planning, migration and religious urbanism.
- Laven Naidoo, Geographer using Earth Observation technologies to measure environmental indicators.
- Yashena Naidoo, Geographer using Geoinformatics to measure social indicators.
- Pedzisai Ndagurwa, Demographer with an interest in family demography and population health.
- Cher Petersen, Geographer and Geologist who uses satellite images to the effects of rainfall.

Global event: A highlight of 2022 was GCRO's [participation in the World Urban Forum](#) (WUF), held in Katowice, Poland under the theme "Transforming our Cities for a Better Urban Future". The event is hosted biennially by UN-Habitat, an agency of the United Nations focusing on urbanisation and sustainable development. Between 26 and 30 June 2022, WUF 11 attracted 17 000 people (in-person and virtually) from 155 countries, making it the premier get-together for urbanists from all spheres of government, civil society, academia and the private sector. There were some 400 events featuring 700 speakers drawn from a wide array of organisations attending the event. The GCRO was represented by Executive Director; Rashid Seedat, who participated in various engagements at WUF, including a dialogue on 'Cities for Future' where long term plans for city-regions were discussed.

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SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

GAUTENG CITY-REGION OBSERVATORY

- ***Organisational news Continued.***
- GCRO's Executive Director, Rashid Seedat, [participated in the inaugural meeting of the Forum of African Regions](#), hosted by United Cities and Local Governments of Africa – along with the government of Morocco and a host of Moroccan sub-national government representative bodies on 08-09 September 2022 in the city of Saidia, Kingdom of Morocco.
- Partnerships: The GCRO has been [certified as a member of UN-Habitat's Global Urban Observatory Network \(GUO-Net\)](#). GUO-Net is a global information and capacity-building network of local, national, and regional urban observatories which is convened by UN-Habitat, a member of the United Nations family.
- The GCRO, in collaboration with the Centre for Sexualities, AIDS, and Gender and Social Impact Insights Africa [hosted a four-part online seminar series](#) from 6 October to 17 November 2022, to establish the importance of nuancing the measurement of sex, gender and/or sexuality in social survey research conducted in South Africa.
- The GCRO, in partnership with the Gauteng Department of Cooperative Governance and Traditional Affairs and Urban Planning (Gauteng COGTA & Urban Planning), [hosted a one-day symposium](#) on spatial transformation and Gauteng Spatial Development Framework on 18 August 2022.
- Two GCRO senior researchers, Dr. Mamokete Modiba and Dr. Darlington Mushongera [graduated with PhDs from Planning at Wits University](#). GCRO GIS intern, Cher Petersen, [graduated with a BSc Honours in Geography in the Science faculty at Wits University](#).

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GAUTENG CITY-REGION OBSERVATORY

2022/23 Publications and research outputs. GCRO Research Reports, Occasional Papers and Monthly outputs

[Ballard, R. and Hamann, C. \(2022\)](https://doi.org/10.36634/BMTK9909). 'Gauteng's urban land cover growth: 1990-2020' Map of the Month. Gauteng City-Region Observatory. March 2022.
<https://doi.org/10.36634/BMTK9909>

[Ballard, R. and Mapukata, S. \(Eds.\). \(2022\)](https://doi.org/10.36634/KDEW3665). South African urban imaginaries: Cases from Johannesburg. GCRO Research Report 13. Gauteng City-Region Observatory.
<https://doi.org/10.36634/KDEW3665>

[Crankshaw, O. and Ballard, R. \(2022\)](https://doi.org/10.36634/RUIG3018). The geography of desegregation in Johannesburg. Map of the Month. Gauteng City-Region Observatory. June 2022.
<https://doi.org/10.36634/RUIG3018>

[Culwick Fatti, C. and Khanyile, S. \(2023\)](https://doi.org/10.36634/EGZT1696). Justice implications of household access to alternative water and electricity. Vignette 43. Gauteng City-Region Observatory. February 2023.
<https://doi.org/10.36634/EGZT1696>

[Götz, G., Maree, G. and Hamann, C. \(2022\)](https://doi.org/10.36634/UACP7309). Economic impacts of COVID-19. Map of the Month. Gauteng City-Region Observatory. April 2022.
<https://doi.org/10.36634/UACP7309>

[Khanyile, S. and Ballard, R. \(2022\)](https://doi.org/10.36634/OJKJ3430). Language diversity in Gauteng. Map of the Month. Gauteng City-Region Observatory. September 2022.
<https://doi.org/10.36634/OJKJ3430>

[Mkhize, S.P. and Hamann, C. \(2022\)](https://doi.org/10.36634/CJIG5885). Risk of depression and socio-economic status. GCRO Map of the Month. Johannesburg: Gauteng City-Region Observatory.
<https://doi.org/10.36634/CJIG5885>

[Mosiane, N. and Götz, G. \(2022\)](https://doi.org/10.36634/SVRW2580). Governing the GCR series: Displaced urbanisation or displaced urbanism? Rethinking development in the peripheries of the GCR. GCRO Provocation 8. April 2022.
<https://doi.org/10.36634/SVRW2580>

[Mosiane, N. and Murray, J. \(2022\)](https://doi.org/10.36634/TDLT5932). 'Economic and commuting connections in the northern GCR' Gauteng City-Region Observatory. February 2022.
<https://doi.org/10.36634/TDLT5932>

[Mushongera, D., Nyuke, S. and Khanyile, S. \(2022\)](https://doi.org/10.36634/CSNP9525). Electricity interruptions in the GCR. Map of the Month. Gauteng City-Region Observatory. April 2022.
<https://doi.org/10.36634/CSNP9525>

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GAUTENG CITY-REGION OBSERVATORY

Publications Continued:

[Naidoo, L., Main, R., Cho, M., Maree, G., Naidoo, Y. and Petersen, C. \(2022\).](#) Distribution of Green Carbon across the GCR. Map of the Month. Gauteng City-Region Observatory. July 2022. <https://doi.org/10.36634/YJWK5182>

[Petersen, C., Dlamini, L. and Maree, G. \(2022\).](#) Water Interruptions in Gauteng. GCRO Map of the Month. Johannesburg: Gauteng City-Region Observatory. <https://doi.org/https://doi.org/10.36634/EEUU8751>

[Seedat, R., Naidoo, Y., Patel, Y., Tayob, M. S. and Petersen, C. \(2022\).](#) Distribution of Muslim prayer facilities across the City of Johannesburg. Map of the Month. Gauteng City-Region Observatory. August 2022. <https://doi.org/10.36634/BNOG9523>

Journal articles, book chapters and books

[Ballard, R. and Barnett, C. \(eds\) \(2022\).](#) The Routledge Handbook of Social Change. Routledge.

[Ballard, R. and Barnett, C. \(2022\).](#) 'Apprehensions of Social Change'. In Richard Ballard and Clive Barnett (Eds.), The Routledge Handbook of Social Change. Routledge.

[Ballard, R. \(2022\)](#) 'Everyday resistance: theorising how the "weak" change the world'. In Richard Ballard and Clive Barnett (Eds.), The Routledge Handbook of Social Change. Routledge.

[Chatterji, T., Götz, G., Harrison, P., Moore, R. and Roy, S. \(2022\).](#) 'Capacity in Motion: Comparative COVID-19 Governance in India and South Africa'. *Territory, Politics, Governance*. Online first DOI <http://dx.doi.org/10.1080/21622671.2022.2154829>

[Culwick Fatti, C. \(2022\).](#) 'Towards just sustainability through government-led housing: Conceptual and practical considerations'. *Current Opinion in Environmental Sustainability*, 54, 101150. <https://doi.org/10.1016/j.cosust.2022.101150>

[Culwick Fatti, C. and Patel, Z. \(2022\).](#) 'In pursuit of just sustainability: Decision-making and conflicting rationalities in government-led housing projects'. *Local Environment*. Online first. DOI: [10.1080/13549839.2022.2136636](https://doi.org/10.1080/13549839.2022.2136636)

[Hamann, C. and Horn, AC. \(2022\):](#) 'Socio-economic inequality in the City of Tshwane, South Africa: A multivariable spatial analysis at the neighborhood level'. *GeoJournal* 87(2022), 2001–2018. <https://doi.org/10.1007/s10708-020-10346-6>

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Publications Continued:

- Hatcher, A. M., Mkhize, S. P., Parker, A. and de Kadt, J. (2022). 'Depressive symptoms and violence exposure in a population-based sample of adult women in South Africa'. *PLOS Global Public Health*, 2(11), e0001079. <https://doi.org/10.1371/journal.pgph.0001079>
- Li, X., Wessels, K., Armston, J., Hancock, S., Mathieu, R., Main, R., Naidoo, L., Erasmus, B. and Scholes, R. (2023) First validation of GEDI canopy heights in African savannas. *Remote Sensing of Environment*, 285(113402); <https://doi.org/10.1016/j.rse.2022.113402>
- Katumba, S., de Kadt, J., Orkin, M., Fatti, P. (2022) 'Construction of a Reflective Quality of Life Index for Gauteng Province in South Africa', *Social Indicators Research*, 164, 373–408. <https://doi.org/10.1007/s11205-022-02945-2>
- Khanyile, S. and Culwick Fatti, C. (2022). 'Interrogating park access and equity in Johannesburg, South Africa'. *Environment and Urbanization*, 34(1), 10–31. <https://doi.org/10.1177%2F09562478221083891>
- Mkhize, S.P. and Maharaj, P. (2023). Heteronormativity in Health Settings: Realities of LGBT Youth's Access to Healthcare in South Africa. In: Naidoo, K., Adeagbo, O., Li, X. (eds) *Young People, Violence and Strategic Interventions in Sub-Saharan Africa. Clinical Sociology: Research and Practice*. Springer, Cham. https://doi.org/10.1007/978-3-031-20679-5_6
- Modiba, M. and Mkhize, S.P. (2022) 'Changes in socio-economic characteristics of formal and informal workers in Gauteng, South Africa: Evidence from the 2017/18 and 2020/21 Quality of Life Surveys', *Southern African Journal of Demography*, 22(1): 126–173.
- Mosiane, N. (2022). 'Mobility, Access and the Value of the Mabopane Station Precinct'. *Urban Forum*, 33:537–560. <https://doi.org/10.1007/s12132-021-09454-4>
- Matjomane, M. (2022). 'From the margins of the state to quasi-state bureaucrats: The shifting nature of street trader leaders' agency in Tshwane, South Africa'. in Pezzano, A., Pioppi, D., Sathiyah, V. and Frassinelli, PP. (eds.) *The Question of Agency in African Studies*, UniorPress, Napoli. <https://doi.org/10.6093/978-88-6719-243-4>

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GAUTENG CITY-REGION OBSERVATORY

Publications Continued:

Mushongera, D., Ngwenya, P. and Zikhali, P. (2022). Multidimensional Poverty in Postapartheid South Africa. In: The Palgrave Handbook of Global Social Problems. Palgrave Macmillan, Cham.
https://doi.org/10.1007/978-3-030-68127-2_171-1

Wessels, K., Li, X., Bouvet, A., Mathieu, R., Main, R., Naidoo, L., Erasmus, B. and Asner, G.P. (2023). 'Quantifying the sensitivity of L-Band SAR to a decade of vegetation structure changes in savannas'. *Remote Sensing of Environment*, 284 (113369);
<https://doi.org/10.1016/j.rse.2022.113369>

Parker, A. and Khanyile, S. (2022). 'Creative writing: Urban renewal, the creative city and graffiti in Johannesburg', *Social & Cultural Geography*. Online first. DOI: [10.1080/14649365.2022.2134580](https://doi.org/10.1080/14649365.2022.2134580).

Van Deventer, H., Linstrom, A., Naidoo, L., Job, N., Sieben, E.J.J and Cho, M.A. (2022). 'Comparison between Sentinel-2 and WorldView-3 sensors in mapping wetland vegetation communities of the Grassland Biome of South Africa, for monitoring under climate change'. *Remote Sensing Applications: Society and Environment*, 28(100875): 1-16
<https://doi.org/10.1016/j.rsase.2022.100875>

Van Deventer, H., Linstrom, A., Durand, J.F., Naidoo, L. and Cho, M.A. (2022). 'Deriving the maximum extent and hydroperiod of open water from Sentinel-2 imagery for global sustainability and biodiversity reporting for wetlands'. *WaterSA*, 48(1): 75–89.
<https://doi.org/10.17159/wsa/2022.v48.i1.3883>

Organisational webpage:
www.gcro.ac.za

Subscribe to our mailing list at the bottom of the webpage to receive news, map of the month and other outputs.

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MEMBERS AFFILIATED TO SSAG

NOT WORKING IN GEOGRAPHY DEPARTMENTS

Dr Rakhee Lakhraj-Govender

No affiliation/ unemployed/actively seeking employment/not affiliated

rakhee.lg@gmail.com

- 17 October 2022: Accepted Past Global Changes (PAGES) Early Career Network (ECN): Africa Regional Representative.
- 5 October 2022: Presented at Future Earth's General Assembly as part of my nomination to Governing Council.
- 23 June 2022: Presented and moderated the session on "Challenges and solutions to the climate crisis in Africa with a focus on water resources" at Sustainability Research and Innovation Congress (SRI2022). As session organiser, our SRI2022 session proposal was accepted and successful **scholarship** to attend was obtained. Conference: 20-24 June 2022 at Future Africa, University of Pretoria.
- **February 2022**: Participated in SRI Inkundla: Science-Policy Collaboration in Low- and Middle-Income Countries - Lessons from Africa.
- **23 January 2022-June 2022**: Future Earth: Pathways Initiative Forum
- **Abstract accepted** Southern African Mountain Conference 2022 (SAMC): "Spatio-temporal temperature trends on selected southern African mountains" 14-18th March 2022. *Unable to attend due to lack of research funds.*
- **Abstract accepted**: International Geographical Union (IGU) in July 2022: "Global south: Gender equality in the context of the climate crisis" *Unable to attend due to lack of research funds.*
- Submitted manuscript: "Spatio-temporal temperature trends at selected southern African mountains and the implications for achieving sustainable development goals"

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Courses

- November 2022: UN CC Learn courses @COP27: Adaptation, Early Warning Systems and System Change.
- 24 October 2022- 1 November 2022: Generating impact in complex natural resource contexts. Co-design and development of transdisciplinary research projects in a Global North/South perspective Leibniz Centre for Tropical Marine Research (ZMT) in collaboration with the Leibniz Research Network “Science for Sustainable Development” and the project LeNa Shape (Research in social responsibility - design, impact analysis, quality assurance).
- 9 June 2022: R Essential Training: Wrangling and Visualizing Data (LinkedIn).

Attended

- **31 May 2022:** Global Centre on Adaptation “Putting water at the centre of adaptation: An Urgent Need for a Strategy for Transformative Change”
- **19 May 2022:** Department of Fisheries, Forestry and Environment (DFFE) Communicating IPCC AR6 South African authors contributions.
- **5 May 2022:** Effective and practical adaptation strategies for climate change. SACNASP CPD points. Prof Stephanie Midgley discussed agriculture and Prof. Sylvester Mpandeli (Executive Manager Water Research Commission) discussed water and climate change adaptation strategies.

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Dr Julia Kathryn Giddy

School of Tourism and Hospitality, University of Johannesburg juliag@uj.ac.za

In 2022 I moved from the University of Mpumalanga to the University of Johannesburg and was promoted to Senior Lecturer. I continue to be involved in the DHET NRF Future Professors Programme, coordinated by Prof Jonathan Jansen. Through my SSAG centenary award, I was able to complete the first portion of a longitudinal project exploring transformation in South African domestic nature-based tourism. I also had a Special Issue published in *Tourism Geographies on Tourism, Digital Technology and Geographies of Inequality*. I was also appointed to the editorial boards of *Tourism Geographies* and *Tourism Development & Planning*. I presented at the AAG Annual Conference, the IGU Conference in Paris, the SSAG Conference in Pretoria and the Critical Tourism Studies Conference in Vietnam.

A list of publications and graduated students from 2022:

- Frenzel, F., **Giddy, J.K.** & Frisch, T. (2022). Digital Technology, Tourism and Geographies of Inequality. *Tourism Geographies*, 24(6-7), 923-933.
- Giddy, J.K., Rogerson, C.M. & Rogerson, J.M. (2022). Rural Tourism Firms and the COVID-19 Environment. *GeoJournal of Tourism and Geosites*, 41(2), 343-353.
- **Giddy, J.K.** (2022). Uber and Employment in the Global South – Not so decent work. *Tourism Geographies*, 24(6-7), 1022-1039.
- **Giddy, J.K.** (2022). Sustainable Adventure Tourism in Practice: The case of Stormsriver Adventures in South Africa. In I.Booyens and P. Brouder (Eds), *Handbook of Innovation for Sustainable Tourism*. Edward Elgar Publishing, 230-249.

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Solly Mosidi

Environmental Education of Southern Africa (serve as Council Member and a Treasurer)

smosidi@mweb.co.za

I am Executive Director: Community Service at the Midvaal Local Municipality (Gauteng Province). We are dealing with issues of Environmental Management, waste management and Air quality management amongst other things.

I was a member of conference organising committee for the Environmental Education Association of Southern Africa, (EEASA's 40th conference), held from 23 – 27 August 2022 at the University of Namibia in Windhoek, Namibia. The theme was, **“Education for a post Covid-19 recovery and attaining the SDGs: Reconsiderations, challenges and opportunities.”**

I presented a paper titled. **"A state of unintended unethicity caused by moral blindness: Case of waste management in Midvaal Local Municipality.**

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STENGEL Ingrid Ursula, Dr. rer. nat.

NamibGeoVista GeoConsult & Imaging CC (owner/ director)

(2) Advisorial position (adjunct faculty prof): Dept of Geo-Spatial Sciences & Technology, Namibian University of Science & Technology (NUST), Windhoek. ingrid@namibgeovista.com

I supply tailor-made satellite and orthophoto data processing including hyperspectral, radar and DEM data outputs and related maps with detailed, specialized annotations. As a geomorphologist I also offer geomorphological/ weathering/ vulnerability analyses and advice on the ancient, now arid, landscapes of Namibia. GIS applications and data conversions to/from sometimes unusual coordinate systems have become an important service, too. Clients come from exploration, civil engineering, farming, and tourism. I am also serving as a local tourguide for geomorphological, geoarchaeological, geological/paleontological sites of southern Namibia

Publications

MILLER R. McG., KRAPF C., HOEY T., FITCHETT J., NGUNO A.-K., MUYAMBAS R., NDEUTEPO A., MEDIALDEA A., WHITEHEAD A. & STENGEL I. (2021):

A sedimentological record of fluvial-aeolian interactions and climate variability in the hyperarid northern Namib Desert, Namibia. - South African Journal of Geology 2021, Vol. 124,3, pp. 575-610.

<https://doi.org/10.25131/sajg.124.0008>

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Prof. Clinton David van der Merwe

University of Pretoria, Faculty of Education, Department of Humanities Education.
clinton.vandermerwe@up.ac.za

Clinton van der Merwe was promoted to Associate Professor in January 2023. He is the founding editor of the *Journal for Geography Education in Africa* (JoGEA) and is an avid parkrunner. Clinton enjoys teaching Geography Pedagogy and supervises various postgraduate students in Education as well as in Cultural (and heritage) Tourism. Clinton was awarded the SSAG Gold Medal in 2022. Clinton is an Executive Member of the Southern African Geography Teachers' Association (SAGTA).

van der Merwe, Clinton D. (2022). A fresh, holistic, new and desperate need to understand climate change and tourism in southern Africa. *South African Journal of Science*, 118(9-10), 1.
<https://dx.doi.org/10.17159/sajs.2022/14188>

Sizwe Njpaha (MEd)
Zetta van Eck (PhD)



UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

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DEPARTMENT OF ENVIRONMENTAL SCIENCE, UNISA

Prof Munyaradzi Chitakira

Dept of Environmental Science, UNISA. chitam1@unisa.ac.za

Munya takes keen interest in sustainable agriculture. Google scholar:

https://scholar.google.com/citations?hl=en&user=HpvLA6cAAAAJ&view_op=list_works&sort_by=pubdate

Publications

Muzorewa, W., & Chitakira, M. (2022). Evaluating the role of climate smart agriculture towards sustainable livelihoods in Mutare district, Zimbabwe. *Future of Food: Journal on Food, Agriculture and Society*, 10(1).

Chitakira, M., Nhamo, L., Torquebiau, E., Magidi, J., Ferguson, W., Mpandeli, S., ... & Mabhaudhi, T. (2022). Opportunities to improve eco-agriculture through transboundary governance in transfrontier conservation areas. *Diversity*, 14(6), 461.

Donkor, F. K., & Chitakira, M. (2022). Nexus of Water, Sanitation, and Hygiene (WASH) and Sustainable Development Goals. In *Clean Water and Sanitation* (pp. 453-461). Cham: Springer International Publishing.

Musetsho, K. D., Chitakira, M., & Ramoelo, A. (2022). Ecosystem Service Valuation for a Critical Biodiversity Area: Case of the Mphaphuli Community, South Africa. *Land*, 11(10), 1696.

Muzorewa, W., & Chitakira, M. (2022). *An Evaluation of Mechanisms for Adopting Climate Smart Agriculture to Ensure Sustainable Livelihoods in Zimbabwe* (No. 9357). EasyChair.

Mr Sibongiseni Hlabisa

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DEPARTMENT OF ENVIRONMENTAL SCIENCE, UNISA

Mr Maarten Jordaan

Dept of Environmental Science, UNISA. Jordam@unisa.ac.za

Maarten specializes in using GIS and RS for research. Google Scholar:
<https://scholar.google.com/citations?user=Steu6IoAAAAJ&hl=en&oi=ao>

Publications

Nel, R., Mearns, K. F., Jordaan, M., & Goethals, P. (2022). The role of modelling in resource management within the livelihood-conservation nexus: A socio-ecological systems approach to Sand Forest harvesting, Northern KwaZulu-Natal. *Ecological Informatics*, 69, 101600.

Prof Llewellyn Leonard

Dept of Environmental Science, UNISA llewel@unisa.ac.za

Llewellyn is interested in tourism, social justice, sustainability and rural communities.

Publications

Matshusa, K., & Leonard, L. (2023). Geoheritage Threats in South African National Parks. *Tourism and Hospitality*, 4(1), 202-213.

Matshusa, K., & Leonard, L. (2023). Proposed Governance Model for Geotourism and Geoheritage in South Africa and the Implications for Africa. *Geoheritage*, 15(1), 19.

Leonard, L. (2023). Climate change, mining development and residential water security in the uMkhanyakude District Municipality, KwaZulu-Natal, South Africa: a double catastrophe for local communities. *Local Environment*, 28(3), 331-346.

Musavengane, R., & Leonard, L. (2022). COVID-19 impacts on tourism: Southern Africa's experiences. *Development Southern Africa*, 39(1), 1-2.

Musavengane, R., Leonard, L., & Mureyani, S. (2022). Doing tourism in Southern Africa amid the coronavirus pandemic: Navigating political, socio-economic and environmental inequalities. *Development Southern Africa*, 39(1), 3-19

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DEPARTMENT OF ENVIRONMENTAL SCIENCE, UNISA

Publications Continue .. Leonard

- Matshusa, K., & Leonard, L. (2022). Exploring strategies for management of disasters associated with illegal gold mining in abandoned mines: A case study of Ekurhuleni Metropolitan Municipality. *Jàmbá-Journal of Disaster Risk Studies*, 14(1), 1237.
- Leonard, L. (2022). Climate Change Impacts and Challenges of Combating Food Insecurity in Rural Somkhele, KwaZulu-Natal, South Africa. *Sustainability*, 14(23), 16023.
- Matshusa, K., & Leonard, L. (2023). Geoheritage Threats in South African National Parks. *Tourism and Hospitality*, 4(1), 202-213.
- Musavengane, R., & Leonard, L. (2022). Tourism's impacts in conservation areas in Sub-Saharan Africa: in search of equity in an unequal world. In *Handbook of Tourism Impacts* (pp. 212-227). Edward Elgar Publishing.
- Leonard, L. (2022). Innovating towards a critical reflexive approach to political ecology for ecological justice and sustainable tourism. In *Handbook of Innovation for Sustainable Tourism* (pp. 293-309). Edward Elgar Publishing.
- Ebhuoma, E., & Leonard, L. (Eds.). (2022). *Indigenous Knowledge and Climate Governance: A Sub-Saharan African Perspective*. Springer Nature.
- Leonard, L., & Musavengane, R. (2022). The future of community-based tourism amid socioeconomic and political conflicts in Southern Africa. In *Conservation, Land Conflicts, and Sustainable Tourism in Southern Africa* (pp. 199-210). Routledge.
- Leonard, L. (2022). An alternative governance approach towards addressing the intersection between mining developments and impacts on tourism and conservation sites in Southern Africa. In *Conservation, Land Conflicts, and Sustainable Tourism in Southern Africa* (pp. 17-32). Routledge.

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Prof Tracey McKay

Dept of Environmental Science, UNISA mckaytjm@unisa.ac.za

Tracey is interested in urban sustainability, tourism and education research. She is also heavily involved in helping honours students complete their research projects. In 2022, her first PhD student, D Machard graduated from UNISA. Google scholar

https://scholar.google.com/citations?hl=en&user=W4RGh6UAAAAJ&view_op=list_works&sortby=pubdate

Publications

Sekamane, T, Nel, W; McKay, T and Tantoh, H 2023: Community perceptions of the social impacts of the Metolong Dam and Reservoir in Lesotho, *Land Use Policy*
<https://doi.org/10.1016/j.landusepol.2022.106495>

Tantoh, H. B., McKay, T. M., & Mbetiji, M. M. (2022). Toward improved river basin management for sustainable community-based water supply systems and community development in North-West Cameroon. *Community Development*, 1-21.
<https://doi.org/10.1080/15575330.2022.2155674>

McKay, T, and Hendricks, D: 2022: Pitiful rooftop PV uptake in sunny South Africa: A policy, funding and service delivery perspective, *Frontiers in Sustainable Cities, section Urban Energy End-Use*, vol 4,
<https://www.frontiersin.org/articles/10.3389/frsc.2022.969040/full>

McKay, T, Fakudze, N., and Gunter A, 2022: The middle remains missing: class exclusion from the urban rental market in suburban Johannesburg, *Acta Academica* 54(1)
<https://doi.org/10.18820/24150479/aa54i1/6>

Jingura, V., McKay, T and Simpson, Z 2022: Student satisfaction with private tertiary education provision in South Africa, *International Journal of African Higher Education*, Vol 9 (1) 116-141 <https://doi.org/10.6017/ijahe.v9i1.15239>

De Vries, L, Kotze, N and McKay, T: 2022 Parks, Participation and the Parkrun: The 'move-it' 'move-it' Parkrun revolution in South Africa, *South African Geographical Journal*, Vol 104 pages 382-396 <https://doi.org/10.1080/03736245.2022.2087727>

Mnguni, P and McKay, T 2022: A divided schooling system: The spatial nature of secondary education in Ladybrand, Free State, South Africa, *South African Geographical Journal*
<https://doi.org/10.1080/03736245.2022.2035249>

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Prof Kevin Mearns

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Prof Mearns takes a keen interest in sustainability in the tourism field. His Google scholar profile: <https://scholar.google.com/citations?user=4TqUk54AAAAJ&hl=en&oi=ao>

Publications

- Muzirambi, J. M., Naylor, S., & Mearns, K. (2022). A review of post-restitution land rights agreement conflicts and their resolution at & Beyond Phinda Private Game Reserve in KwaZulu-Natal, South Africa. *Conservation, Land Conflicts, and Sustainable Tourism in Southern Africa*, 101-118.
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