Appendix C1: CV for John Pallett (Environmental Assessment Practitioner)

CURRICULUM VITAE

JOHN RICHARD PALLETT



Born: 13 October 1960

Cell: +264 81 2402528

Email: jpallett@afol.com.na

I specialise in evaluating environmental issues and providing ecological and biodiversity advice for the benefit of managers, decision-makers and the lay public. This encompasses environmental assessments and compilation of publications on environmental issues. My work experience includes liaising with people on different levels such as rural communities, scientific researchers, engineers and directors in government departments, to improve management of natural resources for greater long-term benefit.

I have science qualifications in zoology and geology, experience in social engagement and research, a sharp eye for detail, and a keen interest in the natural sciences and conservation. I draw on my skills in writing, presentations and editing, to provide information that must be simple yet accurate, so that issues of natural resource management are correctly conveyed and understood.

Qualifications

- Accredited with the Environmental Assessment Professionals Association of Namibia (EAPAN) as a Practitioner, Lead Practitioner and Reviewer.
- Integrated Environmental Management certificate, University of Cape Town, 1991.
- B.Sc Honours Zoology cum laude, University of the Witwatersrand, 1986.
- B.Sc Zoology and Geology, University of the Witwatersrand, 1984.
- Joint Matriculation Board certificate, St. Stithians College, Johannesburg, 1977.

Work experience

Time period	Institution, role and experience
July 2018 - present	Co-Director, Resilient Environmental Solutions cc (RES). Manage and conduct Environmental Impact Assessments (EIAs)
Oct 2008 - present	 Principal Scientist, Southern African Institute for Environmental Assessment (SAIEA) Coordinate and compile Strategic Environmental Assessments (SEAs) and natural resource management projects; Guide and review Environmental Impact Assessments (EIAs); Give training in EIA, SEA and Sustainable Development, in Namibia and other African countries.
Nov 1992- Sep 2008	 Environmental Practitioner at Desert Research Foundation of Namibia (DRFN) and its consulting arm Environmental Evaluation Associates of Namibia (Pty) Ltd (EEAN). Coordinate the Publications, Library and Information Management Desk – write, compile and manage information materials; Coordinate the Energy Desk, focussed on renewable energy; Consultant for EEAN, provide biodiversity specialist input to EIAs; Facilitate community-based management of water and rangeland resources.
1992 - present	 Freelance editor and author Editor of Red Data Assessment of Carnivores of Namibia. Editor/author of books on the Cuando River, Namib Desert, !Nara melons, southern African water, and the Sperrgebiet. Edit scientific and lay publications for various clients: GIZ (Basin Management Training Manual, Guidance to the Forest Act) Research and Information Services of Namibia (RAISON) (profiles of North-Central Namibia, Kavango) Unam Multidisciplinary Research Centre (project reports) Lars Andersson (Ph.D thesis). Co-author of Life Science textbooks.
Nov 1987 – Oct 1992	 Curator of Mammals at the State Museum of Namibia, Windhoek. Study behavioural interactions between yellow mongoose and Cape ground squirrels. Facilitate community participation in controlling bubonic plague in north-central Namibia. Conduct mammal survey of West Caprivi in conjunction with Ministry of Environment and Tourism. Expand and curate the mammal scientific collection.

Project experience

V	D : (
Year,	Project			
company				
2023 RES	EIA of the proposed Huab Under Canvas tourist camp near Khorixas, Kunene Region. For Ultimate Safaris.			
2022 RES	EIA of proposed Upgrade of Airstrip on Farm Aandstêr. For NamibRand Nature Reserve, Hardap Region.			
2022, 2023 Independent	Local Expert in King Charcoal Surveillance Audits to FSC Forest Management Standard for Namibia, as part of SGS Audit Team. For SGS South Africa.			
2022 RES	EIA of the proposed ELSH Crematorium at Nubu Industrial Park, Windhoek. For ELSH Cremation Services cc.			
2019-2022 RES	EIA of the proposed Ondili Waterberg Lodge , Otjozondjupa Region. For Ondili Lodge Management (Pty) Ltd			
2019-2022 RES	EIA of the Proposed Opuwo Abattoir Upgrade , Kunene Region. For Ministry of Agriculture, Water and Land Reform.			
2021-2022 SAIEA	Rapid Strategic Environmental Assessment of Namibia's Central Marine Spatial Plan. Led by SAIEA for GIZ.			
2022 SAIEA	External review to IFC standards of EIA: Proposed Wind Power Plant near Rosh Pinah . For Envirodynamics.			
2020 - 2022 SAIEA	Revision of the Forest Act and Regulations. For GIZ.			
2021 SAIEA	External review to IFC standards of EIA: Proposed Wind Power Plant near Lüderitz . For Envirodynamics.			
2018, 2019, 2023	Namibian guide for Aaniiih Nakoda College – Namibia Study Course on Livestock and Wildlife in Namibia. Two-week field trip in July 2018, July 2019. For Aaniiih Nakoda College, Montana, USA.			
2019 - present RES	EIA of the Proposed establishment of the Africa Millimetre Telescope on Gamsberg Plateau . For Stichting Katholieke Universiteit and Radboud University, The Netherlands.			
2019 SAIEA	Team member in the Strategic Environmental and Socio-economic Impact assessment of Walvis Bay Corridor Group Corridors for Development of Namibia into a Logistics Hub for Southern Africa. For GIZ.			
2019 RES	EIA of a Lodge Complex on Farm Oberland near Etosha National Park, Kunene Region. For Ondili Lodge Management (Pty) Ltd			
2019 SAIEA	External review to IFC standards of EIA: Encroacher Bush Biomass Power Project in Namibia. For NamPower.			
2019 SAIEA	EIA of Biological control of alien invasive cactus plants in Namibia. For Namibian Chamber of the Environment.			

Year, company	Project			
2019 SAIEA	Environmental and Social Management Framework for the Human-Wildlife Conflict Management Project. For WWF Namibia			
2018 RES	EIA of 8 EPLs in Omaheke Region . For Trans Kalahari Copper Namibia (Pty) Ltd.			
2018 SAIEA	External review of EIA: Polihali Dam and associated infrastructure EIA, Lesotho. For Lesotho Highlands Development Authority			
2017 IEC	Fauna & flora specialist for EIA: Proposed export abattoir in Outjo . EIA led by Quivertree Consulting CC, for Fu Hai Trading Enterprises.			
2017 SAIEA	External review to IFC standard of EIA: Concentrated Solar Power facility near Arandis in the Erongo Region. For NamPower.			
2017 SAIEA	External review of EIA: 3D Seismic Surveys in Petroleum Exploration License Areas (PEL) 82 and 83, Namibia. For GALP			
2017 SAIEA	External review of EIA: Bumbuna II Hydroelectric Project, Sierra Leone. For Joule Africa.			
2016-2017 IEC	EIA of Right-of-way servitude and operations of Reiser Taxidermy, Brakwater.			
2015-2017 SAIEA	Team leader for the Strategic Environmental Assessment of the Omaheke Integrated Regional Land Use Plan. Led by SAIEA for the Ministry of Lands and Resettlement.			
2016 SAIEA	External review of EIA: Proposed pipeline from the Temane Liquids Processing Facility to a Floating, Storage and Offloading Unit in Inhambane Province, Mozambique. For Sasol Petroleum Mozambique Limitada.			
2016 SAIEA	Environmental input to Oranjemund Integrated Urban Spatial Development Framework . For Stubenrauch Planning Consultants.			
2016 SAIEA	Environmental input to Helao Nafidi Integrated Urban Spatial Development Framework. For Stubenrauch Planning Consultants.			
2016 SAIEA	External review of Environmental, Social and Health Impact Assessment for the Freetown International Airport Project . For Ministry of Trade and Aviation, Sierra Leone.			
2015-2016 SAIEA	Team leader for the Strategic Environmental Assessment of Large-scale bush thinning and value-addition activities in Namibia. For the Gesellschaft für Internationale Zusammenarbeit (GIZ).			
2015 SAIEA	Review of the current Social and Environmental status , regulatory and institutional frameworks governing the extractive industry in Namibia. Contribution to the Country Mining Vision, as a component of the African Mining Vision and the SADC Protocol on Mining, for UNDP Namibia.			

Vaar	Drainet			
Year,	Project			
2014-2015	Team Leader for SEA of the Master Plan for the International Logistics			
SAIEA	Hub in Namibia. For the Japan International Cooperation Agency.			
2014 IEC	Bird specialist for the EIA of the 400 kV Power Line from Ruacana to Oshivelo. Led by EnviroDynamics for NamPower.			
2014 IEC	Bird specialist for EIA of the Proposed Okanjande graphite mine and exploration activities. Led by EnviroDynamics for Gecko Graphite.			
2014-2015 SAIEA	Team leader for the Strategic Environmental Assessment of the Zambezi Integrated Regional Land Use Plan. For the Ministry of Lands and Resettlement.			
2013-2014 SAIEA	Team leader for the Strategic Environmental Assessments of the Tourism Sector for the NamPlace Projects in the Greater Sossusvlei – Namib Landscape Area and the Greater Fish River Canyon Landscape Area. For the Ministry of Environment and Tourism.			
2013 SAIEA and EMS	Namibian consultant for the project The Application of Economic Instruments for Waste Oils and Used Lead Acid Batteries in Namibia. Led by EMS Consulting (Belgium) for the Africa Institute.			
2013 SAIEA	External review of EIA: Proposed changes to Husab Mine . EIA conducted by SLR for Swakop Uranium (Pty) Ltd.			
2013 SAIEA	Team member in the project Management Plan for the Proposed Bwabwata-Okavango Ramsar Site . For the Ministry of Environment and Tourism.			
2013 SAIEA	Team leader for the Strategic Environmental Assessment of the Kavango Integrated Regional Land Use Plan . For the Ministry of Lands and Resettlement.			
2012 SAIEA	Team leader for the Strategic Environmental Assessment of the Hardap Integrated Regional Land Use Plan. For the Ministry of Lands and Resettlement.			
2012 SAIEA	Trainer to Construction staff for Upgrade of Road MR125 Singalamwe-Kongola-Linyanti-Liselo . For Road Construction Company.			
2012 SAIEA	Capacity assessment of EIA sector and SEA Training Workshop for Guinea Environment Bureau (<i>Bureau Guineen d'Etudes et d'Evaluation de Environnement</i>)			
2011 SAIEA	Compilation of Park Management Plans for the coastal parks (Namib-Naukluft, Dorob and Skeleton Coast National Parks) for Nacoma. For Ministry of Environment and Tourism.			
2011 SAIEA	Provide guidance on EIA and SEA, and facilitate SEA Training Workshop for Sierra Leone Environmental Protection Agency (SLEPA).			
2011 SAIEA	Team member for EIA Scoping for Vision Industrial Park , Swakopmund. For Gecko Namibia (Pty) Ltd.			

Year,	Project
company	i Toject
2010-11 SAIEA	Country specialist for the Strategic Environmental Assessment of the Karas Integrated Regional Land Use Plan . Led by Planung+Umwelt for the GIZ and Ministry of Lands and Resettlement.
2010 SAIEA	Team leader for the Strategic Environmental Assessment of CBEND replication (Combating Bush Encroachment for Namibia's Development). For the National Planning Commission Secretariat.
2009-10 SAIEA	Biodiversity specialist in the Strategic Environmental Assessment of the Central Namib Uranium Rush . For Ministry of Mines and Energy.
2009 SAIEA	Trainer in the Training Course for Communal Land Boards on Sustainable Development and Environmentally Sound Decision-making. Led by Legal Assistance Centre and SAIEA for Ministry of Environment and Tourism.
2008-09 SAIEA	Policy Review for Namibia's Country Pilot Partnership for Integrated Sustainable Land Management Support and Adaptive Management in Namibia. For Ministry of Environment and Tourism.
2008-09 SAIEA	Compilation of Process Framework for the NACOMA Project . For the Ministry of Environment and Tourism.
2008 EEAN	Project coordinator of Valencia Environmental Monitoring . For Valencia Uranium Ltd
2007-08 EEAN	EIA of Proposed Visitor's Centre for the Sperrgebiet National Park . Input to Feasibility Study undertaken for Succulent Karoo Ecosystem Programme (SKEP), led by Nina Maritz Architects.
2007-08 EEAN	Project coordinator for Rössing Biodiversity Assessment as part of Rössing Mine Expansion EIA team, led by Ninham Shand.
2007-08 EEAN	EIA of Proposed Uranium Mine at Goanikontes . Ecology component of the EIA led by Alexandra Speisser Environmental Consultants, for Bannerman Mining Resources Namibia.
2007 EEAN	EIA of Powerlines associated with Trekkopje Uranium Project and desalination plant at Wlotzkasbaken. With Turgis Consulting, for Uramin.
2007 EEAN	EIA of EPL 3573 Trekkopje Uranium Project . With Colin Christian and Associates, for Uramin.
2007 DRFN	Project coordinator for Biomass National Symposium as part of the Renewable Energy and Energy Efficiency Capacity Building Project (Reeecap).
2006-07 EEAN	EIA of Kavango Biofuels Project . Research and review component of the EIA led by Colin Christian and Associates, for Prime Investments (Ltd).
2006-08 EEAN	Environmental Control Officer inspection at Trekkopje Uranium Project . For Directorate of Environmental Affairs, Ministry of Environment and Tourism.

Year,	Project
company	
2005-07 DRFN	Assistant team leader for Participatory Poverty Assessment of Karas Region. With Desert Research Foundation of Namibia, for National Planning Commission.
2005-2006 EEAN	EIA of Proposed railway line from Katima Mulilo to the coast . With Urban Dynamics, for Ministry of Works, Transport and Communication.
2005 EEAN	EIA of Proposed powerlines from Kudu power station at Uubvley to Obib Substation. Terrestrial ecology component of the EIA led by Envirodynamics, for Nampower.
2005 EEAN	EIA and Environmental Management Plan of Proposed Kudu CCGT power station at Uubvley . Terrestrial ecology component of the EIA led by Envirodynamics and CSIR, for Nampower.
2005 EEAN	EIA and route selection for Proposed 132 kV power line from Kokerboom to Namib substations. Terrestrial ecology component of the EIA led by Envirodynamics, for Nampower.
2004-06 EEAN	EIA component of Prefeasibility Study of a future port facility in the vicinity of Cape Fria-Angra Fria. With Technology Systems and Management, (Pty) Ltd, for Ministry of Works, Transport and Communication.
2004 EEAN	Team leader for Regional and local-level capacity assessment under the National Capacity Needs Self-Assessment for Global Environmental Management (NCSA) project. For Directorate of Environmental Affairs, Ministry of Environment and Tourism.
2002-2003 EEAN	EIA of Regional Rural Water Supply Development Plan for Kavango Region. In partnership with Lund Consulting Engineers for Directorate of Rural Water Supply, Ministry of Agriculture, Water and Rural Development (MAWRD).
2001 Private	Assessment of seals and sealing in Namibia. For the Wildlife Society of Namibia.
2001-2002 EEAN	Researcher for State of the Environment Report on Waste Management in Namibia. Led by EEAN for Ministry of Environment and Tourism.
2001-2002 EEAN	EIA of Upgrading of Power Supply to Windhoek Central Business District. In partnership with Bicon Namibia Consulting Engineers, for City of Windhoek.
2000-2002 EEAN	EIA of Elimination of River Crossings in Sam Nujoma Drive . With Klein Windhoek Valley consortium (Africon, Lund Consulting Engineers, Stewart Scott Namibia, EEAN) for City of Windhoek.
2000 EEAN	EIA of Upgrading of Windhoek-Aris road at Kruin. In partnership with Stewart Scott Namibia for Namibia Roads Authority.
1999 EEAN	EIA of Upgrading of Ondangwa-Oshikango road. In partnership with Weder Meyer Louw Consulting Engineers, for Namibia Roads Authority.

Year,	Project
company	
1999	EIA of Ruacana South Rural Water Supply Scheme. In partnership with
EEAN	Alexander and Becker Consulting Engineers, for Directorate of Rural Water Supply, MAWRD.
1999	EIA of Okakarara East Rural Water Supply Scheme. In partnership with
EEAN	Stewart Scott Namibia, for Directorate of Rural Water Supply, MAWRD.
1993	EIA of Upgrading of Trans-Caprivi Highway . In partnership with VKE
EEAN	Namibia Consortium Consulting Engineers, for Department of Transport, Ministry of Works, Transport and Communication.
1990 State Museum	Mammal survey of West Caprivi . Input to the biodiversity and social profile of West Caprivi Game Park, for the Ministry of Wildlife, Conservation and Tourism, Namibia.

Abbreviations:

Appleviation	5.
CSIR	Council for Scientific and Industrial Research, South Africa
DRFN	Desert Research Foundation of Namibia
EEAN	Environmental Evaluation Associates of Namibia
EIA	Environmental Impact Assessment
EMS	Environmental Management Systems Consulting
ERM	Environmental Resources Management
IEC	Independent Environmental Consultants
MAWRD	Ministry of Agriculture, Water and Rural Development
MET	Ministry of Environment and Tourism
RES	Resilient Environmental Solutions cc
SAIEA	Southern African Institute for Environmental Assessment
SEA	Strategic Environmental Assessment

Publications - books and electronic publications

NCE, LCMAN, MEFT (eds) 2022. Conservation status and Red List of the terrestrial carnivores of Namibia. Edited by J Pallett and G Thomson. Namibian Chamber of Environment; Large Carnivore Management Association of Namibia; Ministry of Environment, Forestry and Tourism; Windhoek, Namibia.

Atlas of Namibia Team, 2022, *Atlas of Namibia: its land, water and life*, Namibia Nature Foundation, Windhoek.

Pallett J, Mukuumbuta-Guillemin I, Mendelsohn J. 2022. *Cuando State of the Basin Report*. Namibia Nature Foundation, Windhoek, and WWF Zambia, Lusaka.

Pallett JR, Osborne TO. 2015. Kori Bustard. In: Simmons RE, Brown CJ and Kemper J. *Birds to watch in Namibia: red, rare and endemic species*. Pp 55-57. Ministry of Environment and Tourism, and Namibia Nature Foundation, Windhoek. http://the-eis.com/elibrary/search/10433

Scott HA, Shaw JM, Pallett JR. Ludwig's Bustard. In: Simmons RE, Brown CJ and Kemper J. *Birds to watch in Namibia: red, rare and endemic species*. Pp 52-54. Ministry of Environment and Tourism, and Namibia Nature Foundation, Windhoek. http://the-eis.com/elibrary/search/10434

Birch C (ed). 2015. *Development of an inventory of ecosystem services in Namibia*. Department of Environmental Affairs, Ministry of Environment and Tourism, Windhoek. Contributing authors: Harper-Simmonds L, Mendelsohn J, Roux JP, Pallett J, Brown C, Middleton A, Kruse J.

Turpie, J., Midgley, G., Brown, C., Barnes, J., Pallett, J., Desmet, P., Tarr, J., Tarr, P. 2010. *Climate change vulnerability and adaptation assessment for Namibia's biodiversity and protected area system.* GEF/UNDP, Windhoek, Namibia.

SAIEA. 2009. *Impact assessment case studies from southern Africa*. E-book, www.saiea.com/Case_study_book_09.htm

Seely, M. & Pallett, J. 2008. *Namib – secrets of a desert uncovered*. Venture Publications, Windhoek.

Henschel, J., Dausab, R., Moser, P. & Pallett, J. (Eds.) 2003. *!Nara: Fruit for development of the Khuiseb Topnaar*. Namibia Scientific Society, Windhoek, Namibia.

Marais, A.L. & Pallett, J. 2002. *Human and healthy: Life Science for Namibia Grade 10*. Out of Africa Publishers, Windhoek, Namibia

Marais, A.L. & Pallett, J. 2000. Fur and feathers: Life Science for Namibia Grade 9. Out of Africa Publishers, Windhoek, Namibia.

Marais, A.L. & Pallett, J. 1998. *Green and growing: Life Science for Namibia Grade 8*. Out of Africa Publishers, Windhoek, Namibia.

Heyns, P., Montgomery, S., Pallett, J. & Seely, M. (Eds.) 1998. *Namibia's Water: a decision makers' guide*. Department of Water Affairs, Ministry of Agriculture, Water and Rural Development, and Desert Research Foundation of Namibia. https://www.ircwash.org/resources/namibias-water-decision-makers-guide

Pallett, J. (Ed.) 1997. Sharing water in southern Africa. Desert Research Foundation of Namibia, Windhoek.

Pallett, J. (Ed.) 1995. The Sperrgebiet: Namibia's least known wilderness. An environmental profile of the Sperrgebiet or Diamond Area 1, in south-western Namibia. Namdeb and Desert Research Foundation of Namibia, Windhoek.

Publications - scientific papers

Silva JP, Marques A, Bernardino J, Allinson T, Andryushchenko Y, Dutta S, Kessler M, Martins R, Moreira F, Pallett J, Pretorius MD, Scott HA, Shaw J, Collar, N. 2022. The effects of powerlines on bustards: How best to mitigate, how best to monitor? *Bird Conservation International*, 1-14. doi:10.1017/S0959270922000314

Pallett J, Simmons RE, Brown CJ. 2022. Staggered towers on parallel transmission lines: a new mitigation measure to reduce collisions of birds, especially bustards. Namibian Journal of Environment 6 A: 14-21. https://nje.org.na/index.php/nje/article/view/volume6-pallett

Wassenaar, T.D., Henschel, J.R., Pfaffenthaler, M.M., Mutota, E.P., Seely, M.K. and Pallett, J. 2013. Ensuring the future of the Namib's biodiversity: ecological restoration as a key management response to a mining boom. *Journal of Arid Environments* 93:126-135. http://www.sciencedirect.com/science/article/pii/S0140196312001681

Henschel, J.R., Pallett, J., Berry, C., Griffin, M., Hachfeld, B., Makuti, O. & Seely, M.K. 2006. Checklists of the flora and vertebrates of Gobabeb. *Journal of the Namibia Scientific Society* 54: 31-58.

Henschel, J.R. Mtuleni, V., Pallett, J. & Seely, M.K. 2003. The surface dwelling arthropod fauna of Gobabeb with a description of the long-term pitfall trapping project. *Journal of the Namibia Scientific Society 51*: 65-92.

Dickman, C.R., Mannheimer, C. & Pallett, J.R. 1994. Dietary selectivity of the spotted eagle owl, *Bubo africanus*, in sand dunes of the western Kalahari. *Cimbebasia* 14: 31-36.

Rasa, O.A.E., Wenhold, B., Howard, P., Marais, A.L. & Pallett, J.R. 1992. Reproduction in the yellow mongoose revisited. *South African Journal of Zoology* 27(4): 192-195.

Kinahan, J., Pallett, J.R., Vogel, J., Ward, J.D. & Lindeque, M. 1991. The occurrence and dating of elephant tracks in the silt deposits of the lower !Khuiseb River, Namibia. *Cimbebasia* 13: 37-4.

Pallett, J.R. & Grobler, H.J.W. 1990. Mammal survey of west Caprivi, April 1990. Internal report, Ministry of Wildlife, Conservation and Tourism, Namibia.

Taylor, P.J., Campbell, G.K., van Dyk, D., Watson, J.P., Pallett, J.R. & Erasmus, B.H. 1990. Genic variation in the yellow mongoose (*Cynictus penicillata*) in southern Africa. *South African Journal of Science* 86: 256-262.

Pallett, J.R. & Passmore, N.I. 1988. The significance of multi-note advertisement calls in a reed frog *Hyperolius tuberilinguis*. *Bioacoustics* 1:13-23. https://www.tandfonline.com/doi/abs/10.1080/09524622.1988.9753071

Administrative details

Date and place of birth: 13 October 1960, Johannesburg.

Identity Number: 601013 00654 Citizenship: Namibian

Family status: Married to Anna Louise Marais

Two daughters, ages 24 and 27

Home address 10 Schuckmann Str

Avis, Windhoek

Postal address P O Box 90709

Windhoek

Telephone and Fax No: (061) 220579

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email address: ipallett@afol.com.na

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Tax and VAT number 1488564-01-5

Appendix C2: CV for Fredrika Shagama (Environmental Assessment Practitioner)

PERSONAL DETAILS

Full Names: Fredrika Ndeutala Shagama

Profession: Hydrogeologist / Geohydrologist &

Environmental Assessment Practitioner (Consultant)

Cellphone No: +264 (0) 81 407 5536

Email address: fshagama@gmail.com

Posta Address: P. O. Box 27318, Windhoek, Namibia

Nationality: Namibian



PROFESSIONAL PROFILE, CORE SKILLS AND EXPERTISE

Fredrika is an Environmental and Water Consultant with over 8 years of experience in Groundwater and Environmental Consulting, with experience both in Namibia, South Africa and the Czech Republic. She is passionate about the environment and water resources who can work either as an individual or in a team. Her core skills are in Hydrogeology (Groundwater exploration, Supply, Drilling supervision, and Impact Assessment), Geotechnical investigation phase 1, Proposal and Project Technical Report Compilation. Although Fredrika is a geological engineer (Hydrogeologist) by qualification and experience, she has also gained experience in conducting Environmental Impact Assessments (EIAs) and compilation of Environmental Management Plans (EMPs), facilitating EIA Consultation meetings and Stakeholders' Engagement, as well as incorporating specialists' inputs to EIA Reports that are both funded locally or internationally.

PROFESSIONAL MEMBERSHIPS (AFFILIATIONS)

- International Association of Hydrogeologists Full Member, No.139790 https://iah.org/wp-content/uploads/2019/05/IAHSpring2019Newsletter-web.pdf on page 19
- Namibian Hydrogeological Association Member, http://namhydro.com/wp/members/
- Environmental Assessment Professionals of Namibia (EAPAN) Ordinary member practitioner, http://eapan.org/registered-members, Membership No. 183.

PROFESSIONAL COURSES OR TRAININGS ATTENDED

- Groundwater Flow Modelling with GMS (MODFLOW, MODPATH) by AQUAVEO at VSB-Technical University of Ostrava, June 2015
- Groundwater Investigations and Supply Assessment for Technical Reporting and EIA Report Compilation,
 GCS Water & Environment Consultants & GCS Namibia (Pretoria, 2016 & Windhoek, 2016)
- Hydrocarbon Contamination Assessment (Field Procedures and Report Writing), GCS Water & Environment Consultants (Pretoria, 2016)
- Social Impact Assessment: Stakeholders & Community Engagement Training and Procedures (GCS Namibia, 2017)

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EDUCATIONAL QUALIFICATIONS

Educational Institution	Qualification obtained	Study period
	PhD. Student: Civil Engineering (Geotechnics & Environmental Hydrogeology)	2020 (ongoing)
VSB - Technical University of Ostrava, Czech Republic	MSc. Geological Engineering (Cum Laude) – with a primary focus in Hydrogeology	2013 - 2015
	<u>Thesis title</u> : Groundwater Pollution Transport from Tsumeb Copper Smelter in Namibia	
	Professional course attended: Groundwater Flow Modelling with GMS (MODFLOE, MODPATH) by AQUAVEO at VSB-Technical University of Ostrava, June 2015	
VSB - Technical University of	BSc. Geological Engineering	2010 - 2013
Ostrava, Czech Republic	Mini thesis title: Water Quality Prediction in the Skorpion Mine Pit Lake in Namibia	
Charles University in Prague, Marianske Lazne Study Centre (UJOP), Czech Republic	Certificate Level B2 , Czech Language for academic purposes	2009
University of Namibia	BSc. Environmental Science & Geology – studies ended upon obtaining a scholarship to study in the Czech Republic	2008 – 2009

LANGUAGES

Language	Speaking	Reading	Writing
English	Excellent	Excellent	Excellent
Oshiwambo	Excellent/Native	Excellent/Native	Excellent/Native
Czech	Excellent	Excellent	Excellent

EMPLOYMENT RECORD

Since starting her professional career over 8 years ago, Fredrika has been involved in numerous groundwater (hydrogeological), geotechnical, Environmental Impact Assessment projects. Groundwater projects have been focusing on groundwater investigation for new water supply sources, groundwater impact assessment and monitoring. The specific groundwater, geotechnical and environmental project responsibilities range from proposal writing, technical

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report compilation, environmental assessment public meeting facilitation, site visits (fieldwork) & supervision, environmental compliance monitoring on sites and project management. The projects have been mainly based in different areas in Namibia, with groundwater projects (monitoring) and hydrocarbon contamination assessments that were based in Limpopo Province and Gauteng (Johannesburg), early 2016, respectively. Since January 2020, under her PhD Study Department of Geotechnics & Underground Engineering (VSB – TU Ostrava) in the Czech Republic, Fredrika has been involved in some technical projects responsible for Groundwater (Data) Management projects for Czech environmental and water management firms/organizations as part of the University-Industry collaborations.

Fredrika has been employed as per order of employment record below:

Period

Name of Employer, Position and Responsibilities

01 Aug 2020 to date

Serja Hydrogeo-Environmental Consultants CC (Self-Founded)

Position: Principal Hydrogeologist and Environmental Assessment Practitioner (EAP)

Responsibilities: Conducting Groundwater (Hydrogeological) Studies (Exploration and Impact Assessment), Groundwater Monitoring, Project Management, Technical & Financial Proposal Compilation, Technical Report compilation, Environmental Impact Assessments (EIAs) and Management Plans, Compiling project technical reports for Groundwater studies (as a specialist's input to EIAs) and adding input into projects' Environmental Management Plans (EMPs) where needed, Renewal of Environmental Clearance Certificates (ECCs) and Conducting Environmental Monitoring (Compliance Auditing) as well as Mentoring/Training of Environmental and Water Management graduates (young consultants)

1 Jan 2020 to date

VSB - Technical University of Ostrava, Ostrava

Position: PhD Student: Assistant Hydrogeologist / Groundwater Modeller and Researcher

Responsibilities: Conducting Research on Water, Geotechnical and Environmental Technical (Industrial) Projects, Data Preparation and Analysis, Numerical Surface Water and Groundwater Modelling (using MIKE SHE and GMS: MODFLOW, respectively – In Training)

1 Apr 2019 to Independent Water and Environmental Consultant, Windhoek / Ostrava date

Responsibilities: Conducting Groundwater studies, Environmental Impact Assessments, advising clients on Environmental and Water management, Project Management, compiling project proposal and technical reports for Groundwater studies (including reports for water permit applications) and Environmental Impact Assessments (EIAs) and Environmental Management Plans (EMPs).

Major Association/Collaborations

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Highlight: Contracted by the African Development Bank (AfDB) with four other independent consultants for a 3.5-month project under the Ministry of Agriculture, Water and Land Reform (MAWLR) for the Namibia Water Sector Support Programme's Strategic Environmental & Social Assessment (SESA) Duration: August 2019 to November 2019. https://www.afdb.org/sites/default/files/documents/environmental-and-social-assessments/namibia water sector support program nwssp phase 1 esmf p-na-e00-005.pdf.

1 Jan 2019 – 30 Excel Dynamic Solutions (Pty) Ltd, Windhoek June 2023

Position: Associate Consultant / Technical Advisor - Hydrogeology and EIAs

Responsibilities: Conducting Groundwater (Hydrogeological) studies, Groundwater Monitoring, Project Management & Staff management, Technical compilation of Groundwater studies and EIA reports and EMPs, Training and mentoring of young Consultants.

3 Aug 2015 – 31 GCS Water Environmental Engineering Namibia (Pty) Ltd (GCS Namibia), Windhoek Dec 2018

Position: Country Hydrogeologist, Environmental Assessment Practitioner (EAP) and Safety, Health & Environmental (SHE) Officer

Responsibilities: Conducting Groundwater (Hydrogeological), Geological & Geochemical studies, Geotechnical investigations, Groundwater Monitoring, Air Quality Monitoring, Project Management, Proposal and Technical Report writing and Environmental Impact Assessments & Environmental Management Plans. Further responsibility included training of junior geologists and environmental assessment practitioners and ensuring health and safety implementation in the office.

1 06 Jul 2014 – 30 Dundee Precious Metals Tsumeb (DPMT), Tsumeb Sept 2014

Position: Intern Geologist / Hydrogeologist in the Environmental Department (under the Supervision of GCS Water & Environmental Consultants (Pty) Ltd)

Responsibilities: Measuring Groundwater Levels, Water Sampling and Preservation.

SOME OF THE KEY PROJECTS UNDERTAKEN (INCLUDING CLIENTS, RESPONSIBILITIES AND PERIOD/YEAR) INFRASTRUCTURAL (ROADS, WATER, TELECOMMUNICATIONS) AND MINING RELATED ENVIRONMENTAL ASSESSMENT STUDIES (EIAS AND WATER STUDIES)

 Hydrogeological Assessment for the Proposed Upgrade Low Volume Seal (LVS) Bitumen Road for DR3425-DR3447-DR3400 (155km: Sikanduko-Ncaute-Ndonga Linena) in the Kavango East Region: A Part of the Environmental & Social Impact Assessment Study. Client: D&P Consulting Engineers, Archetype Project Consultants, & Tweya Consulting Engineers (DAT-Joint Venture) for Roads Authority of Namibia.

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Responsibilities: Site/route Visit & Assessment, Groundwater Supply Assessment, Selected stakeholder/public familiarization (pre-consultation meetings), compilation of the Water Supply Assessment Report. **Year**: 2024.

- Hydrogeological Impact Assessment for the Proposed Aquaculture Project and associated Activities near
 Henties Bay Town in the Erongo Region, Namibia. Client: EnviroPlan Consulting CC for Blue Ridge
 Aquaculture Africa (Pty) Ltd. Responsibilities: Site visit & assessment, and Compilation of the Water
 Resources (Hydrogeological) Impact Assessment Report. Year: 2024.
- Hydrological & Hydrogeological Assessment Study for the Upgrading and Subsequent Operation of a Fleet
 Management Fuel Station in Windhoek, Khomas Region. Client: Namibia Environmental Consultants CC
 for the City of Windhoek. Responsibilities: Site visit & assessment, and Compilation of the Water
 Resources (Hydrogeological) Impact Assessment Report. Year: 2023/2024.
- Environmental & Social Impact Assessment Studies for the Ruacana South Phase 1 & Katima-Ngoma Phase 3 &4 and the Reservoir Rural Water Supply Schemes in the Omusati and Zambezi Regions as part of the Namibia Water Sector Support Program (NWSSP). Namibia. Client: Ministry of Agriculture, Water and Land Reform (MAWLR). Responsibilities: Baseline Assessments, Facilitation of Stakeholders Engagement, Compilation of ESIA Reports & ESMPs. Year: 2023.
- Hydrogeological Assessment Study for the Construction of Otavi Primary School in Otavi, Otjozondjupa Region. Client: I.D Building Contractors CC. Responsibilities: Hydrogeological Baseline Assessment, Site Visit & Assessment, and Compilation of the Hydrogeological Assessment Report. Year: 2023
- Groundwater Supply Assessment and Environmental & Social Impact Assessment (ESIA) for the Upgrade to Low Volume Bituminous Seal Standard of the DR3425 Neaute to Karukuvisa Road (87km) in the Kavango East and West Regions. Client: D&P Consulting Engineers, Archetype Project Consultants, & Tweya Consulting Engineers (DAT-Joint Venture) for Roads Authority of Namibia. Responsibilities: Site/route Visit & Assessment, Groundwater Supply Assessment, Stakeholder/public engagement (consultation meetings facilitation), compilation of the Water Supply Assessment & ESIA Reports and ESMP. Year: 2023.
- Environmental and Social Scoping Assessments for the Proposed Mineral Prospecting and Exploration Activities on two Exclusive Prospecting Licenses (EPL) No. 8955 situated North of Opuwo Town and 8967 located northwest of Sesfontein in the Kunene Region, Namibia. Client: Max Kefas Nuseb (under OMAVI Geotechnical & Environmental Services). Responsibilities: Environmental impact assessments, public & stakeholders' engagement/consultation, Site visits and assessments, compilation of the two EIA Reports and Environmental Management Plans (EMP). Year: 2023.
- Environmental Scoping Assessment (ESA) Study for the Proposed Prospecting and Exploration Activities on
 Two Exclusive Prospecting Licenses (EPLs) No. 8779 & 8780 located northwest of Sesfontein and EPL-8770
 near Opuwo Town in the Kunene Region, Namibia. Client: Tamarillo Investments (Pty) Ltd.
 Responsibilities: Environmental impact assessments, public & stakeholders' engagement/consultation, Site
 visits, compilation of the two EIA Reports and Environmental Management Plans (EMP). Year: 2023.
- Environmental Scoping Assessment (ESA) Study for the Proposed Prospecting and Exploration Activities on
 Exclusive Prospecting License (EPL) No. 8838 at Warmbad Settlement in the //Kharas Region, Namibia.
 Client: Mistletoe Investments Pty Ltd. Responsibilities: Environmental baseline assessment, public &
 stakeholders' engagement/consultation compilation of the EIA Report and Environmental Management Plan
 (EMP). Year: 2023.

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- Environmental & Social Impact Assessment (ESIA) for the Upgrade to Low Volume Bituminous Seal Standard
 of the DR3425 Neaute to Karukuvisa Road (87km) in the Kavango East and West Regions. Client: D&P
 Consulting Engineers, Archetype Project Consultants, & Tweya Consulting Engineers (DAT-Joint
 Venture) for Roads Authority of Namibia. Responsibilities: Site/route Visit & Assessment, Groundwater
 Supply Assessment, Stakeholder/public engagement (consultation meetings facilitation), compilation of the
 ESIA Report & ESMP. Year: 2023.
- Environmental Impact Assessment (EIA) Studies for the Proposed Dewatering of the Underground Mine through Asis West (AW) and Asis Far West (AFW) shafts and Underground Exploration & Mining Activities and on Mining Licenses (MLs) No. 73B, 16 & 9 at the Kombat Mine in the Otjozondjupa Region, Namibia. Client: Trigon Mining Namibia (Pty) Ltd (under Excel Dynamic Solutions (Pty) Ltd). Responsibilities: Environmental impact assessments, public & stakeholders' engagement/consultation, Site visit, Assessment, compilation of the two EIA Reports and Environmental Management Plans (EMPs), and application of the Groundwater abstraction permit. Year: 2022/2023.
- Environmental Scoping Assessments (ESAs) Studies for the Proposed Prospecting and Exploration Activities
 on Exclusive Prospecting License (EPL) No. 7582 located North of Omaruru and EPL-8788 west of Uis in the
 Erongo Region. Client: Tarah Hainana. Responsibilities: Environmental impact assessments, public &
 stakeholders' engagement meeting, Site visits & Assessments, compilation of the EIA Reports and EMPs.
 Year: 2023.
- Environmental Impact Assessment (EIA) Study for the Establishment of Urban Agricultural Activities on Extension 5 in Karibib, Erongo Region. Client: Karibib Town Council (under Excel Dynamic Solutions (Pty) Ltd). Responsibilities: Environmental impact assessment, public & stakeholders' engagement, Site visit & Assessment, compilation of the EIA Report and EMP. Year: 2022/2023.
- Development of the Comprehensive Environmental Management Plan (EMP) for the Existing Effluent
 Treatment Plant in Lüderitz, //Karas Region, Namibia. Client: Lüderitz Town Council under Excel Dynamic
 Solutions (Pty) Ltd. Responsibilities: Project Supervision of 2 interns / graduates working on the project, Site
 Visits and Assessment, Compilation of the Comprehensive EMP. Year: Year: 2022-2023.
- The Physical Environmental Baseline (Soils, Geology, Hydrogeology and Hydrology) for Aquacultural
 Activities in Dolphin Beach Aqua Park, Walvis Bay in the Erongo Region and for the Maricultural Project Site
 in Swakopmund, Erongo Region. Client: KPM Environmental Consultants. Responsibilities: The Baseline
 Write-Up of Physical Environment (Soils, Geology, Hydrogeology and Hydrology). Year: 2022/2023.
- Desktop Water Resources Assessment as part of the Environmental Impact Assessment (EIA) for the
 proposed Irrigation Activities in Divundu Settlement, Kavango East Region. Client: I.N.K Enviro Consultants
 cc. Responsibilities: Baseline Assessment of surface & groundwater resources and Compilation of Water
 Resources Impact Assessment Report. Year: 2023
- Hydrogeological (Groundwater) Exploration Study for the siting of 2 new boreholes on Portion 2 of Farm
 Omapyu South II No. 76 near Omaruru in the Erongo Region. Client: Mr. G. Narib. Responsibilities: Desktop
 Study, Borehole siting, compilation of the Desktop & Siting Report. Year: 2022/2023.
- Geohydrological/Hydrogeological Assessment Report as part of the Environmental Impact Assessment (EIA) for the Proposed Mining Activities on the Mining Licence (ML) No. 247 (ML-247) located northeast of Karibib in the Erongo Region, Namibia. Client: Africa Big Rhino Mining (Pty) Ltd. Responsibilities: Site visit,

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Assessment, compilation of the Groundwater Assessment Report. **Year:** 2022. The compilation of the Technical Report for the Application of Groundwater Abstraction & Use Permit. **Year:** 2023.

- Hydrogeological Assessment Study for the proposed New Landfill within the Karibib Townlands of the Erongo Region, Namibia. Client: Karibib Town Council. Responsibilities: Site visit, Data collection & analysis, compilation of the Groundwater Impact Assessment Report. Year: 2022.
- Amendment of the Environmental Impact Assessment (EIA) & Development of the Environmental Management Plan (EMP) for the Road Design for the Proposed Upgrade to Bitumen Standard of the DR3633 Tsandi-Omugulugombashe road (22km) in the Omusati Region, Namibia. Client: D&P, Archetype and Tweya (DAT-Joint Venture) for Roads Authority of Namibia. Responsibilities: Updating the EIA Reprot and EMP to incorporate the borrow pits. Year: 2022.
- Desktop Hydrological & Hydrogeological Assessment Study for the Construction (Establishment) and
 Operation of a Bulk Fuel Storage Facility at the Eros Airport, Windhoek in the Khomas Region, Namibia.
 Client: Central Oil Namibia (Pty) Ltd. Responsibilities: Compilation of the Water Resources Impact
 Assessment Report. Year: 2022.
- Socio-economic Impact Assessment (and Action Plan) for B2Gold Otjikoto Mine (current status and mine closure preparation) in the Otjozondjupa Region, Namibia. Client: Southern African Institute for Environmental Assessment (SAIEA) for B2Gold Namibia. Responsibilities: Conducting Employee Interviews (One-on-One) / Socio-Economic Surveys with the B2Gold Namibia (Otjikoto Mine) employees from the Mining, and Environmental Departments / Sections (for the representative sample of 330 employees).
 Year: 2022
- Hydrogeological Impact Assessment Report for the Proposed Establishment of a Mixed Residential and Commercial Property Development (Avis Ridge) at Avis Dam of the Klein Windhoek Suburb, Windhoek – Khomas Region, Namibia. Client: OMAVI Geotechnical & Geo-Environmental Consultants cc for KHD Investments CC. Responsibilities: Site visit, Data collection & analysis, compilation of the Groundwater Assessment Report. Year: 2022
- Feasibility Study: Upgrading Scenario for MR033 Mata-Mata Border Post Gochas -Stampriet (291 Km) in the
 Hardap Region and small part of //Karas Region, Namibia. Client: Archetype Project Consultants, D&P
 Consulting Engineers & Amir Consulting Services (ADA-Joint Venture) for Roads Authority.
 Responsibilities: Site Visit & Assessment, Hydrogeological Impact Assessment, Co-Author of the
 Environmental & Social Impact Assessment (ESIA) Report & Management Plan (ESMP). Year: 2022
- The Strategic Environmental Assessment (SEA) for the Windhoek Municipal Council (City of Windhoek). In the Khomas Region: Strategic Planning for 2020 to 2023. Client: Windhoek Municipal Council (City of Windhoek). Responsibilities: Compilation of the Hydrogeological (Groundwater) Baseline Status Quo, Impact Assessment & Implementation. Year: 2021-2023.
- Environmental Scoping Assessment Study for the Proposed Mineral Prospecting & Exploration Activities on five (5) Exclusive Prospecting Licenses (EPLs) No. 8655, 8656, 8664, 8671 & 8672 located northeast of Gobabis in the Omaheke Region, Namibia. Client: Noronex Exploration and Mining Company Pty Ltd, under Excel Dynamic Solutions (Pty) Ltd. Responsibilities: Site visit & Assessment, Facilitation of Public Participation & Engagement and Compilation of Environmental Assessment Report & EMP. Year: 2022
- Comprehensive Environmental Management Plans (EMPs) for the Existing Solid Waste Dumpsites: Rehoboth
 in the Hardap Region and Rundu in the Kavango East Region, Namibia. Client: Rehoboth Town Council &

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Rundu Town Council under Excel Dynamic Solutions (Pty) Ltd. **Responsibilities**: Site Visits & Assessments, Data Collection & Analysis, Compilation of Comprehensive EMPs, Project Supervision of the interns / environmental trainees on the projects, and Project Documents Review. **Year:** 2022

- Environmental Impact Assessment (EIA) Study and Development of an Environmental Management Plan (EMP) for the Proposed Oniipa Town Solid Waste Dumpsite in the Oshikoto Region, Namibia. Client: Oniipa Town Council under Excel Dynamic Solutions (Pty) Ltd. Responsibilities: Site Selection, Visit & Assessment, Facilitation of Public/Stakeholders Consultation & Engagement (including Consultation Meetings), Compilation of the EIA Report & EMP, Project Supervision of the intern / environmental trainee on the project, and Project Documents Review. Year: 2022 ongoing.
- Environmental Management Plan (EMP) for the Existing Rehoboth Solid Waste Dumpsite in Hardap Region, Namibia. Client: Rehoboth Town Council under Excel Dynamic Solutions (Pty) Ltd. Responsibilities: Project Supervision of 4 interns / graduates working on the projects, Site Visit and Assessment, Data Collection, and Project Documents Review. Year: 2022.
- Environmental Impact Assessment (EIA) Study for the Oxidation Ponds and Sewage Treatment Plant in Eenhana Town, Ohangwena Region, Namibia. Client: Eenhana Town Council under Excel Dynamic Solutions (Pty) Ltd. Responsibilities: Project Supervision of 4 interns / graduates working on the projects, Site Visits and Assessments, Project Documents Review. Year: 2022-ongoing
- Development of the Environmental Management Plan (EMP) for the Existing Effluent Treatment Plant in Lüderitz, //Karas Region, Namibia. Client: Lüderitz Town Council under Excel Dynamic Solutions (Pty) Ltd. Responsibilities: Project Supervision of 4 interns / graduates working on the projects, Site Visits and Assessments, Project Documents Review. Year: 2022 -current. Year: 2022.
- Environmental and Social Impact Assessment (ESIA) for the Upgrade of the Ohangwena II Wellfield Water Supply Scheme in the Ohangwena Region, Namibia. Client: NamWater under Outrun Consultants cc. Responsibilities (Subcontractor): Preliminary Public & Stakeholders' Consultation Meetings Facilitation, Site Visit and Assessments. Year: 2022.
- Baseline Water Resources Assessment & Environmental and Social Impact Assessment (ESIA) for the
 Upgrade of the Ohangwena II Wellfield Water Supply Scheme in the Ohangwena Region, Namibia as part
 of the Namibia Water Sector Support Program (NWSSP). Client: Namibia Water Corporation Limited
 (NamWater) (under Outrun Consultants CC and Element Consulting Engineers). Responsibilities:
 Public & Stakeholders' Consultation Meetings Facilitation (6 meetings), Site Visit & Assessments, and
 contributing author of the ESIA documents. Year: 2022-2023.
- Development of the Environmental Compliance Guideline Manual for the Flexible Land Tenure System (FLTS)
 Implementation by the Relevant Authorities in Namibia. Client: Ministry of Agriculture, Water and Land
 Reform (supported by GIZ Namibia under D&P Engineers and Environmental Consultants.
 Responsibilities: Compilation of the Guideline Manual and preparation of the Draft FLTS Manual Presentation.
 Year: 2022.
- Environmental Scoping Assessment (ESA) Study for the Construction, Operation and Decommissioning of a New Waste Dumpsite for the Helao Nafidi Town Council, Ohangwena Region, Namibia. OMAVI Geotechnical
 & Geo-Environmental Consultants CC (O. B. O Helao Nafidi Town Council). Responsibilities:
 Compilation of the ESA Report and Environmental Management & Rehabilitation Plan (EMRP). Year: 2022

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- Environmental Assessment for the proposed prospecting and exploration activities on Exclusive Prospecting
 Licenses (EPLs) No. 8234 & 8323 near Aus, EPL 8350 between Tses & Asab and Gibeon in the //Karas
 Region and Hardap Region, respectively. Client: Dwyka Investment CC. Responsibilities: Site visits &
 Assessments, Facilitation of Public Participation & Engagements and Compilation of Environmental
 Assessment Reports & EMPs and Project Management. Year: 2022
- Renewal, Amendment and Transfer of the Environmental Clearance Certificate (ECC) for the Continued Operation of the Existing Walvis Bay Stone Processing Facility on Farm No. 38 and Reclamation / Rehabilitation of an Abandoned Quarry within the Walvis Bay Rural Constituency, Erongo Region, Namibia. Client: OMAVI Geotechnical & Geo-Environmental Consultants CC (O. B. O BC Stone Products Namibia (Pty) Ltd). Responsibilities: Compilation of the ECC Renewal, Transfer & Amendment Applications, Environmental Overview, Management & Rehabilitation Plan (EMRP), Public/Stakeholder Updated & Consultation Facilitation, and Site visit & assessment. Year: 2022
- Environmental Assessment for the Proposed Construction and Operation of Four Oxidation Ponds in the Tses
 Village, //Karas Region. Client: Dunamis Consulting Engineers & Project Managers (Pty) Ltd.
 Responsibilities: Site visit & Assessment, Facilitation of Public Participation and Compilation of
 Environmental Assessment Report & EMP as well Bi-Annual Environmental Monitoring. Year: 2021 2023
- Geohydrological Assessment for the Proposed Upgrade to Bitumen Standard of the DR1953 Karibib-Otjimbingwe Road (56km) in the Erongo Region, Namibia: Road Construction Water Supply. Client: Tweya Consulting Engineers for Roads Authority of Namibia. Responsibilities: Data collection & analysis, compilation of the Groundwater Report. Year: 2021
- Geohydrological Assessment for the Proposed Upgrade to Bitumen Standard of the DR3616 Tsandi-Onesi-Epalela road (48km) in the Omusati Region, Namibia: Road Construction Water Supply. Client: D&P, Archetype and Tweya (DAT-Joint Venture) Consulting Engineers for Roads Authority of Namibia. Responsibilities: Data collection & analysis, compilation of the Groundwater Report. Year: 2021
- The Strategic Environmental Assessment for the Windhoek Municipal Council (City of Windhoek) for the period of 2020 to 2030 in the Khomas Region, Namibia. Client: Windhoek Municipal Council (under Excel Dynamic Solutions (Pty Ltd). Responsibilities: Groundwater Baseline & Assessment Component and Legal Framework Review. Year: 2021 -2022
- Detailed Environmental Assessment for the proposed exploration and mining of dimension stone on Mining Claims No. 71609 to 71617 near Arandis in the Erongo Region, Namibia. Client: OMAVI Geotechnical & Geo-Environmental Consultants CC (O.B.O Okonde Mining and Exploration CC). Responsibilities: Facilitation of Public Participation, Compilation of Environmental Assessment Report & EMP and incorporating specialists' input into the Report and EMP. Year: 2021
- Desktop Geohydrological Assessment (DGA): Proposed Groundwater Abstraction for Agricultural activities
 along the Orange River between Oranjemund (Namdeb Mining area) and Rosh Pinah in the Oranjemund
 Constituency, //Karas Region, Namibia. Client: KPM Environmental Consulting (O.B.O Oranjemund
 Constituency Office). Responsibilities: Baseline Geohydrological Assessment, Data Analysis and
 Compilation of the Report. Year: 2020
- Hydrogeochemical Data Management of Potential Hydrocarbon Contamination Areas for the Kladno District
 Project in the Central Bohemian Region, Czech Republic. Client: Green Gas DPB a.s (under the VSB

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- Technical University of Ostrava). **Responsibilities**: Groundwater and soil chemistry Data Analysis in Preparation for Reporting & Database entry. **Year:** 2020
- Groundwater Data Management for the Prackovice D8 (highway) Landslide Project in the Litoměřice District,
 Ústí nad Labem Region of the Czech Republic. Client: Czech Geological Survey under VSB-Technical
 University Ostrava projects. Responsibilities: Borehole Data Analysis in Preparation for Reporting &
 Numerical Modelling. Year: 2020
- Environmental Scoping Assessment (ESA) Studies for the Proposed Exploration Activities of Dimension Stone
 and Industrial Minerals on Exclusive Prospecting Licenses (EPLs) 6139 and 7008 near Karibib in the Erongo
 Region, Namibia. Client: OMAVI Geotechnical & Geo-Environmental Consultants CC (O.B.O Agulhas
 Mineral Resources CC & Naris Mineral Resources CC, respectively). Responsibilities: Facilitation of
 Public Participation and Engagements, Site visits & assessments, Compilation of Environmental Assessment
 Reports & EMPs. Year: 2020
- Desktop Water Resources Assessments as part of the two Environmental Impact Assessments (EIAs) for the
 Embankment of Muzii and Nankuntwe Combined School Platforms in the Zambezi Region, Namibia. Client:
 I.N.K Enviro Consultants (O.B.O Zambezi Regional Council). Responsibilities: Baseline Assessment of
 surface & groundwater resources and Compilation of Water Resources Risk Assessment Reports. Year: 2020
- Desktop Geohydrological Assessment (DGA) as part of the Environmental Impact Assessments (EIA) The Proposed Eco-Friendly Seawater Desalination Plant in Henties Bay, Erongo Region, Namibia. Client: Namib Eden Trading CC. Responsibilities: Desktop Study and Compilation of the Water Impact Resources Report. Year: 2019/2020
- Desktop Geohydrological Assessments as part of the Environmental and Social Impact Assessments (ESIAs) for the Proposed Pilot Desalination Plants in Bethanie Town and Grünau Settlement in the //Karas Region, Namibia. Client: KPM Environmental Consulting (O.B.O NamWater). Responsibilities: Baseline Geohydrological Assessment, Data Analysis and Compilation of the two Reports. Year: 2019
- A Strategic Environmental and Social Assessment (SESA) / Environmental and Social Management Framework (ESMF) for the Namibia Water Sector Support Program (NWSSP), Namibia. Client: African Development Bank Group (AfDB) with the Ministry of Agriculture, Water and Land Reform (MAWLR). Responsibilities: Baseline Hydrogeological and Environmental Assessment, Reports & Framework Compilation, Key Stakeholders Engagement, and Internal Documents Review. Year: 2019/2020
- Environmental Assessment (EA) for the proposed Construction and Operation of a Wastewater Treatment
 Plant for Linus Shashipapo Secondary School in the Kavango East Region, Namibia. Client: Dunamis
 Consulting Engineers & Project Managers. Responsibilities: Project Management, Site visit &
 Assessment, Facilitation of Public Participation (including public meeting) and Compilation of Environmental
 Assessment Report & EMP. Year: 2019
- Hydrogeological Assessment and Groundwater Abstraction and Use Permit Application & Environmental Scoping Assessment for the proposed Lucerne Irrigation Scheme on Farm Klein Nabas 137 (Marlo Portion) near Stampriet, Hardap Region, Namibia. Client: Green Team Consultants (O.B.O Jonkheer Boerdery Pty Ltd). Responsibilities: Site visit and assessment, Compilation of Desktop Groundwater Report and Technical Report for Groundwater Permit application and Environmental Assessment Report & EMP. Year: 2019

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- Hydrogeological Study for the Expansion of Tsumeb Smelter Monitoring network (new boreholes) in the
 Oshikoto Region, Namibia. Client: Dundee Precious Metals Tsumeb (DPMT). Responsibilities: Borehole
 siting (geophysical survey), Drilling & borehole construction supervision& data analysis. Year: 2018
- National Environmental Assessment for the MTC Namibia 100% Population Coverage: Proposed new 554 network towers / sites in all the Regions of Namibia. Client: Mobile Telecommunications Limited (MTC Namibia). Responsibilities: Facilitation of (Northern Regions) Regional Focused Consultation Meetings, Compilation of 14 Draft & 14 Generic EMPs, Site visits, Landscape (soil, topography, hydrology, and geohydrology) specialist, and Environmental Assessment Reports. Year: 2017-2018
- Updating of the Numerical Groundwater Flow Model for the Lower Kuiseb River Aquifers near Walvis Bay,
 Erongo Region, Namibia. Client: Namibia Water Corporation Limited (NamWater). Responsibilities: CoTraining of NamWater Project Staff (Modelling) and Data Collection & Collation, assisted with the updating of
 the numerical model, and overall Model Update Report Compilation. Year: 2018
- Groundwater Monitoring as part of Environmental Audit and Groundwater abstraction & use permit license renewal for Okatji Mine, Erongo Region, Namibia. Client: Okatji Marble Mine cc. Responsibilities: Compilation of Groundwater Abstraction Permit Report, Training of mine personnel on EMP implementation and groundwater level measurement & sampling and Environmental monitoring report. Year: 2017/2018
- Dust monitoring for Otjozondu Mine for a period of 6 months (Aug 2017 to Jan 2018). Client: Otjozondu Mining
 (Pty) Ltd. Responsibilities: Training of Site Personnel on bucket installation at site, Monitoring and Monthly
 Air Quality Report Compilation. Year: 2017-2018.
- Baseline Air Quality Assessment for the proposed establishment and operation of an incinerator in Ongwediva,
 Oshana Region. Client: Ongwediva Town Council for Excel Dynamic Solutions Pty Ltd. Responsibilities:
 Site visit, air quality survey and compilation of the Baseline Air Quality Report (under the Supervision of
 Quentin Hurt/SkySide). Year: 2017
- Oranjemund Water Sustainability Study Phase 1 & 2, //Karas Region, Namibia. Client: Freedthinkers.
 Responsibilities: Data Analysis, Hydrogeochemical Component & Report Compilation (contributing author).
 Year: 2017
- Geohydrological Investigation of the Groundwater Resources at Outjo and the Possible Impact of the
 Development of 60 New Residential Plots in the Kunene Region, Namibia. Client: Municipality of Outjo.
 Responsibilities: Field Investigation, Project Management, Data collection & Analysis Technical Report
 Compilation and Client Liaison. Year: 2016
- Groundwater Quality Assessment for Sambyu Village Water Supply Scheme, Kavango East Region, Namibia.
 Client: Iliso Consulting Namibia O.B.O NamWater. Responsibilities: Groundwater sampling, Site visit, Groundwater impact assessment, Compilation of groundwater quality report and Project management. Year: 2017.
- Groundwater Monitoring and Sampling for the De Brochen Project in the Limpopo Province, South Africa.
 Client: Anglo American Platinum. Responsibilities: Groundwater Level measurement, Surface water sampling. Year: 2016
- Environmental Hydrocarbon Contamination Assessments Phase 1 for Interchain Logistics and Nulaid Fuel Stations in Johannesburg, Gauteng Province, South Africa. Client: SASOL. Responsibilities: Site Inspection, Measurement of water levels in tank observation wells, Soil Augering, sampling and co-reporting.
 Year: 2016

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- Groundwater Pollution and Level Monitoring and Sampling. Client: Dundee Precious Metals Tsumeb (DPMT) in the Oshikoto Region, Namibia. Responsibilities: Hydrocensus, Borehole profiling and Data analysis. Year: 2015 to 2017
- Skorpion Zinc Mine Closure Plan in the //Karas Region, Namibia. Client: Skorpion Zinc (Pty) Ltd.
 Responsibilities: Compilation of Mine Closure Report, Geochemical and Groundwater input, Integrating specialists' inputs in EIA report. Year: 2015

KEY ENERGY INFRASTRUCTURE PROJECTS' ENVIRONMENTAL ASSESSMENT STUDIES

- Environmental Impact Assessment (EIA) Supplementary Study to meet IFC Standards Proposed Construction and Operation Of a 55MW Solar Photovoltaic (PV) Plant and Associated Infrastructures on a Portion of Portion 2 of Farm Klein Spitskop No. 153 near Keetmanshoop, ||Kharas Region. Client: SolNam Energy (Pty) Ltd. Responsibilities: Compilation of the Background Information Document (BID), facilitation of public & stakeholders' engagement/consultation meeting, Site visit and assessment, Compilation of the Stakeholder Engagement Plan (SEP), supplementary EIA Report and Environmental Management Plan (EMP). Year: 2023.
- Bi-Annual Environmental Monitoring (October 2023 onwards) for the Construction of the Cleanergy Green
 Hydrogen Demonstration Plant (GHDP) in Walvis Bay Town of the Erongo Region, Namibia. Client:
 Cleanergy Solutions Namibia (Pty) Ltd (a JV between Ohlthaver & List and CMB.TECH).
 Responsibilities: Site Visit & Auditing, Observations, conducting personnel interviews on Environmental
 Compliance, and Compilation of the Monitoring Report. Year: 2023.
- Environmental Impact Assessment Study and Development of the Environmental Management Plan for the
 proposed Cleanergy Green Hydrogen Demonstration Plant Environmental Impact Assessment, Walvis Bay,
 Namibia. Client: Client: Cleanergy Solutions Namibia (Pty) Ltd (a JV between Ohlthaver & List and
 CMB.TECH). Responsibilities: Project Consultant under SRK Consulting South Africa) (Pty) Ltd. Year: 2022.
- Environmental Impact Assessment (EIA) for the Environmental Clearance Certificate (ECC) of the Construction and operational activities of a 5-megawatt (MW) Solar (Photovoltaic) Power Plant and ongoing Bi-Annual Environmental Monitoring in Okatope, Oshikoto Region, Namibia. Client: Unisun Energy (Pty) Ltd (Enertronica Santerno Group (Italy)). Responsibilities: Environmental Clearance Certificate Renewal Report, Site Visit, Environmental Compliance Check, Project Management, and Continued Environmental auditing. Year: 2021 to date.
- Environmental Impact Assessment (EIA) amendment for the ECC of the 22.80 Mega-Watt (MW) Trekkopje Solar (Photovoltaic) Park and ongoing Bi-Annual Environmental Monitoring near Arandis in the Erongo Region, Namibia. Client: Sertum Energy Namibia Pty Ltd. Responsibilities: Compilation of the ECC Renewal Report/Updating the EMP, Site Assessment, Project Management, and Continued / Ongoing Bi-Annual Environmental Auditing. Year: 2020 to date.
- Comprehensive Draft Environmental Management Plan (EMP) for the Operations and Maintenance of the
 Existing 3-Megawatt (MW) Solar Photovoltaic (PV) Park within the Townlands of Arandis in the Erongo Region,
 Namibia: An Application for Environmental Clearance Certificate (ECC). Client: OLC Arandis Solar Energy
 Pty Ltd. Responsibilities: Site Visit & Auditing, Compilation of the Comprehensive EMP and Project
 Management. Year: 2022.

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Environmental Scoping Assessment (ESA) for the Proposed Construction and Operation of a 125km 33kv
Overhead Power Distribution Line from Maroelaboom to Mangetti Dune in the Otjozondjupa Region. Client:
Central North Regional Electricity Distributor (CENORED). Responsibilities: Environmental impact
assessment, public & stakeholders engagement, Site/route visit, Assessment, compilation of the EIA Report
and EMP. Year: 2020.

 Environmental Assessments of two 66 kV powerlines for the Solar PV sites near Keetmanshoop, //Karas Region and Mariental, Hardap Region, Namibia. Client: GreeNam Electricity (Pty) Ltd. Responsibilities: Compilation of Environmental Assessment Reports & EMPs and Public Consultation. Year: 2017.

REFERENCES

Mrs. Eloise Carstens (Former GCS Namibia Country Manager)

Environmental Management and Authorization Unit

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Mr. Sheldon Husselmann (Former Senior Environmental Assessment Practitioner: GCS Namibia)

Environmental Management an Authorization Unit

Email: shusselmann@gmail.com

Mr. Kobus Troskie (GCS Johannesburg: Previous Technical Supervisor)

Water Resources, Oil and Gas Sub-Unit

Tel: +27 (11) 803 5726, Email: kobus@gcs-sa.biz

Prof. Ing. Nad'a Rapantova, CSc. (Professor and PhD Study Supervisor)

Department of Geotechnics & Underground Engineering (Faculty of Civil Engineering): VSB – Technical University of Ostrava, Czech Republic

Email: nada.rapantova@vsb.cz

Certification:

I, the undersigned, certify that to the best of my knowledge and belief, these data correctly describe me, my educational qualifications, and professional experience.

Astroforma)

Signature

Date: 10 March 2024

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PROFESSIONAL MEMBERSHIP 2024

This is to certify that

Fredrika Shagama

Is a registered member of EAPAN under the following membership category

"PRACTITIONER"

The state of the s

President

Secretary

Alfatiet

Membership No: 183

Valid from 01 January 2024 to 31 December 2024