

PROF. DR. KLAUS KELLNER

Curriculum Vitae

1. CONTACT DETAILS

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2. ACADEMIC AND PROFESSIONAL QUALIFICATIONS

1995: PhD (North-West University)
Title: Plantgroeidinamika tydens die prosesse van herstel en degradasie in 'n gedeelte van die grasveld- en Karoo-bioom van Suid Afrika/*Vegetation dynamics regarding the processes of restoration and degradation in parts of the grassland and Karoo biomes of South Africa*

1986: MSc (North-West University)

1980-1978: BSc, BSc Hons and HTD (University of Pretoria)

1974: Matriculated at Centaurus High School, Windhoek, Namibia

3. CAREER HISTORY

Present –1988: Lecturer, Senior Lecturer, Associate Professor and Professor at the North-West University, Faculty of Natural and Agricultural Sciences

1987 – 1983: Lecturer at the Teachers Training College in Windhoek, Namibia & University of Namibia (Part time)

1982: High School teacher

4. SHORT RESUME

Prof Dr Klaus Kellner is a C3 rated researcher (re-rated till end of 2022) by the National Research Foundation (NRF) in South Africa, in the field "Conservation and Management of Ecosystems and Biodiversity".

He has been working at the North-West University for the last 27 years, as lecturer, mentor, supervisor and researcher and has supervised and co-supervised many post-graduate studies. His fields of expertise include vegetation dynamics, land degradation and desertification, restoration ecology and range condition assessment of mainly the arid- and semi-arid lands. The impacts of climate, different land-use strategies, loss in biodiversity, vegetation regression and anthropogenic factors, are used to identify indicators for the construction of simulation models for long-term

decision making. The effects of implementing restoration strategies, especially after bush encroachment control are studied in the arid- and semi-arid Savannas.

Prof Kellner is currently and was the leader or Principle Investigator (PI) of several international projects carried out in Southern Africa. This includes the Desert Margins Program (DMP), the Kalahari Namib Project (KNP), PRACTICE (Prevention and Restoration Actions to Combat Desertification), IDESSA (An Integrative Decision Support System for Sustainable Rangeland Management in southern African Savannas) etc. He has contributed to three Chapters for IPBES deliverables (Intergovernmental Platform on Biodiversity and Ecosystem Services) and represents South Africa at the UNCCD (United Nations Convention to Combat Desertification) as the STC (Science and Technology Correspondent) in the CST (Committee on Science and Technology). He has represented South Africa at the COP's (Conference of Parties) for the UNCCD for the last 14 years. He is also a member of the National Coordinating Body (NCB) for UNCCD matters at the Department of Environmental Affairs (DEA) and leads research projects regarding land degradation, desertification, bush encroachment and sustainable land management (SLM) for the DEA (Department of Environmental Affairs) and DAFF (Department of Agriculture, Forestry and Fisheries) in South Africa. He serves on different National and International committees regarding land degradation, desertification and restoration ecology and has done work for UNEP, SAFGRAD-AU (Semi-Arid Food Grain Research and Development of the African Union) and several committees of the UNCCD regarding his field of expertise.

Prof Kellner served as Co-chair on the Advisory Group for the Provision of Scientific Advice (AGSA) on DLDD (Desertification, Land Degradation and Drought) matters for the UNCCD and was part of the SPI (Science and Policy Interface) committee for the UNCCD till September 2017.

He is an honorary member of the Land Rehabilitation Society of Southern Africa (LaRSSA) (2014), was the president and chairperson of the Trust and now only a member of the GSSA (Grassland Society of South Africa), the president of the Arid Zone Ecology Forum (AZEF) and is currently a member of the Society of Ecological Restoration (SER).

He has done many consultancies regarding advice about SLM and restoration at national and international level. In 2010 and 2015, he received the award as the "International Researcher of the year" from the North-West University for contributions in policy and advisory bodies, related societies and managerial level, international panels, subject related journals, conferences and organisations at national and global level. In 2007, he was selected as one of the top 10% and in 2009 and 2010 as one of the top 20% researchers at the North-West University in South Africa.

Prof Kellner's research outputs since 2008 include the author- or co-authorship of 12 chapters in books, 23 peer-reviewed scientific papers and 80 conference presentations.

5. RESEARCH & ACADEMIC INTERESTS AND OUTPUTS

The most important aims of my career include the training and capacity development and the participation in research and development projects on an international level. The latter includes the collaboration with other scientists, managers and land users in my field of expertise, as well as the teaching and supervision of under- and post-graduate students, the training and capacitation of

agricultural extension officers, land users and environmental managers. I have participated in many research and development projects and have supervised over 37 MSc and 5 PhD post-graduate students since 2001. In 2017 alone, I was the supervisor of six MSc studies who completed their post-graduate studies.

6. OTHER WORK ACHIEVEMENTS & PROJECT INVOLVEMENT (Present - 2008)

1. Project Leader; DEA: Bush Expert (present–2017)

We are currently developing the *Bush Expert* program for the Department of Agriculture (DEA) to assess and evaluate bush control and rehabilitation practices in order to improve ecosystem services in parts of the North-West and Limpopo Provinces. The *Bush Expert* program forms part of the NRM (Natural Resource Management) programme of the DEA (i.e. mainly the Working for Water and Working for Ecosystems projects).

2. Project Leader; NRM/DEA: Working for Water (present–2012)

In 2012 I was appointed as the project leader for the National Resource Management / Department of Environmental Affairs (NRM/DEA) Working for Ecosystems project: *Impacts of land management and rehabilitation practices on the ecosystem services after the control of woody plants (bush control) in the Taung area, North-West Province*. Funded by the DEA, the project entails the monitoring of regrowth of the woody species after bush control, as well as the implementation of possible restoration technologies to improve the forage production potential in the area. The project is carried out by an MSc student, Ms Reamogetswe Olebogeng (Lebo) Mokgosi and will be finalized in 2017.

3. Project Leader; DLDD Projects (ongoing)

I am the leader of several national and international projects with regard to Desertification, Land Degradation and Drought (DLDD) matters, as well as the restoration and rehabilitation of degraded rangelands.

On a national level these include projects funded by:

- National Research Foundation (NRF),
- Department of Agriculture, Forestry and Fisheries (DAFF)
- Department of Environmental Affairs (DEA)
- Provincial Department of Agriculture, Conservation, Environment and Land Affairs (DACEL)

On an international level projects are funded by:

- United Nations Environmental Program (UNEP)
- Global Environment Facility (GEF),
- National Geographic Conservation Trust
- European Commission (EC)
- Ministry of Environment and Tourism of Namibia
- Several private organizations

4. Project Leader; Research for Advanced Seed Company (present–2010)

In collaboration with University of Pretoria, the NWU is testing different indigenous grass seed types for the rehabilitation of mine tailing facilities and the restoration of degraded rangelands in different soil types. The rehabilitation projects are carried out by post-graduate students under my supervision and will continue until 2018.

5. Roster for independent experts; UNCCD (present–2008)

I am currently representing South Africa at COP and CST meetings at the UNCCD as an independent expert for the Committee for Science and Technology (CST).

6. National Science and Technology Correspondent (STC) (present–2008)

During the last 6 COPs (Conference of Parties) for the UNCCD I have represented South Africa and the DEA in the Committee for Science and Technology (CST).

7. Chair/President & African Representative; CST UNCCD (2011–2009)

During the 8th session of the CST (Committee on Science and Technology) for the UNCCD (United Nations Convention to Combat Desertification) held in Buenos Aires in 2009, I was elected as the Chair (also referred to as President) of the CST Bureau until 2011. I was not only the Chairman of the CST Bureau which is represented by the 5 UNCCD regions and 195 countries of the world that have ratified the Convention, but was also the regional representative for the African continent in the CST Bureau.

8. UNCCD-SPI Member; African Representative (2017–2013)

I am a member of the UNCCD-SPI (United Nations Convention to Combat Desertification – Science-Policy Interface) committee, which was formed after UNCCD-COP 11 in Windhoek. Only 22 experts on a global level serve on this committee and I was elected by the UNCCD Secretariat as the African representative. The UNCCD-SPI committee was reviewed in September 2017.

9. National UNCCD steering committee for South Africa (present–1993)

I serve on the National UNCCD steering committee for South Africa since 1993, now called the National Coordination Committee (NCB for the UNCCD). This includes providing advice for the National Action Program (NAP) of the UNCCD in South Africa, as well as developing reports for the CST and CRIC (Committee for the Review of the Implementation of the Convention). I was appointed as the independent reviewer of the South African National Action Plan (NAP) in 2017.

10. Co-Chair; Ad Hoc Working Group for Scientific Advice (AGSA) for the UNCCD (2013–2011)

I was the Co-Chair of Ad Hoc Working Group for Scientific Advice (AGSA) for the UNCCD. AGSA consisted of 12 global experts regarding UNCCD matters and was formed to design and provide new mechanisms for science-policy communication based on the best available scientific evidence, thereby organizing international, interdisciplinary scientific advice that supports the UNCCD process.

11. South African Representative as appointed by DEA; IPBES (ongoing)

I currently represent South Africa and the DEA at IPBES (Intergovernmental Platform on Biodiversity and Ecosystem Services) and am the lead author/contributing author in three IPBES deliverables; (1) Chapter 3 of deliverable 3a, regarding *Methodological Assessment of Scenarios and Modelling of Biodiversity and Ecosystem Services*, (2) Chapter 7 of deliverable 2b, regarding the *Regional/sub-regional assessment for biodiversity and ecosystem services* and (3) Co-author for IPBES deliverable 3bi, regarding *the Thematic assessment on Land Degradation and Restoration*.

12. Independent Reviewer; Rehabilitation/Restoration Projects, Kuwait (2014–2007)

As part of a review panel of 12 international scientists selected by the Governing Council of the UNCC (United Nations Compensation Commission) we were charged with the evaluation of rehabilitation/restoration projects implemented by the State of Kuwait's Programme of Environmental Awards.

13. Independent Reviewer; Terrestrial Cluster on Monitoring and Assessment (M&A) (2008)

Reviewed projects funded by the UNCC for claims made by the Kuwait National Focal Point (KNFP) for Terrestrial Restoration.

14. Evaluator; LADA (2010)

In 2010, I was appointed by UNEP to carry out the Terminal Evaluation for the LADA program (Land Degradation Assessment in Dry Lands). This multinational project was carried out by 6 countries in the world (China, Cuba, Senegal, Tunisia, Argentina and South Africa). UNEP was the implementing agency and the FAO (Food and Agriculture Organisation) the executing agency.

15. Project Advisor; Community Based Rangeland Management, Botswana (2013–2011)

The *Demonstration Project on Community-based Rangeland Management* in Botswana was carried out by UNOPS in the UNDP-GEF program *Development and Adaption of a Strategic Action Programme for Balancing Water Uses and Sustainable Natural Resources Management in the Orange-Senqu River Basin* (so called ORASECOM Project).

16. Steering Committee Member; Kalahari Namib Project (2015 - 2017)

I am a member of the Kalahari Namib Project (KNP) steering committee (till 2016). The KNP is funded by GEF (Global Environment facility), implemented by UNEP and executed by IUCN (International Union for the Conservation of Nature) and carried out between Namibia, Botswana and South Africa. The title of this international project is: *Enhancing decision-making through interactive Environmental Learning and Action in the Molopo-Nossob River basin in Botswana, Namibia and South Africa*.

17. Principle Investigators (PI); IDESSA (2017–2012)

I am one of the Principle Investigators (PI) for IDESSA (An Integrative Decision Support System for Sustainable Rangeland Management in southern African Savannas). This project forms part of the German Government BMBF (*Bundes Ministerium für Bildung und Forschung*) SPACES program (Science Partnerships for the Assessment of Complex Earth Systems Processes). Other PI's include Prof David Ward University of Kwazulu Natal (UKZN-SA), Prof Kerstin Wiegand of the Georg August University of Goettingen in Germany, Prof Thomas Nauss and Bernard Seeger of the Phillips University in Marburg, Germany.

18. Project Leader; BMBF Project (2013–2008)

Together with Prof Kerstin Wiegand, I was the leader of a BMBF funded project, regarding *Analysing Desertification Processes in Arid and Semiarid Rangelands in Southern Africa from Plant to Landscape Scales*. This project was carried out as part of the NRF (National Research Foundation) - South Africa/Germany Science and Technology agreement in South Africa and formed part of Mr Sebastian Hanss from the University of Jena in Germany's MSc.

19. National Co-ordinator; DMP (2010–2009 & 2006–2003)

I was appointed as the National Co-ordinator for the Desert Margins Programme (DMP), in South Africa for a 6 year period (2003–2006 and 2009–2010). The DMP was funded by the GEF, implemented by UNEP and executed by ICRISAT (International Crops Research Institute for Semi-Arid Tropics). This project was carried out between 9 countries in Africa and included Namibia, Botswana and Zimbabwe in the southern Africa. As the National Coordinator of the DMP in South Africa, we received the Millennium ICRISAT Science Award in 2004 as an outstanding partner in the CG centres.

20. National Co-ordinator; PRACTICE - South Africa (2009–2012)

PRACTICE (Prevention and Restoration Actions to Combat Desertification): An Integrated Assessment, was a project carried out by 16 institutions in 12 countries over 5 continents from 2009 to 2012. South Africa was the only country in Africa and a major partner regarding the 2 demonstration sites that were selected for this study. Study sites were located in the Molopo

area of the North-West Province and Mier area of the Kalahari in the Northern Cape Province. The project was funded by the European Commission (EC) and administered by the CEAM Foundation in Valencia, Spain (*Centro de Estudios Ambientales del Mediterráneo* or Center for Environmental Studies of the Mediterranean).

21. Principle Investigator (PI); Natural Resource Management (NRM), DEA (2017–2015)

I am currently the Principle Investigator (PI) for Component 2 for a project in the Natural Resource Management (NRM) Programme funded by DEA; *An investigation into the effects of the NRMP ecosystem interventions on the following ecosystem properties: soil erodibility, soil water, soil carbon and vegetation structure*. The project leader is Dr Anthony Mills of C4 – Eco Solutions in Stellenbosch. Scientists from the Nelson Mandela Metropolitan University (NMMU), Stellenbosch University (SU) and North-West University (NWU) collaborate in the project.

22. Project Leader; NRF Projects (2015–2013)

In collaboration with the Dr Patrik Klintenberg from the Desert Research Foundation of Namibia (DRFN), I was the South African project leader for the NRF funded South Africa/Namibia Science and Technology agreement project regarding the *Impacts of different land use and land cover changes for climate change adaptation* under the NRF theme *Environmental & Climate Change, Invasive Species and Indigenous Knowledge Systems*.

23. Project Leader: Agricultural Master Plan for the Royal Bafokeng Nation (2010–2011)

Along with a team from the NWU and the ARC-ISCW, vegetation surveys and mapping for the grazing and browsing potential were done in order to create an *Agricultural Master Plan for the Royal Bafokeng Nation in the North-West Province*.

24. Evaluator; GEF, SLM OP 15 Programme (2007)

I was appointed by UNEP to carry out the Terminal Evaluation of the Medium Sized project, *Global Support to Facilitate the Early Development and Implementation of Sustainable Land Management Programmes (SLM) and Projects under the GEF Operational Programme Number 15 (OP15)*. OP15 was then a newly designated GEF focal area program on land degradation and desertification.

25. FIXMOVE (2009–2007)

Myself and Dr Theunis Morgenthal from the ARC's (Agriculture Research Council) Institute for Soil Climate and Water (ISCW) were appointed by the Department of Agriculture, Forestry and Fisheries (DAFF) to develop a new methodology for the monitoring of vegetation dynamics and range condition change. The project entitled *Development of a vegetation sampling methodology for fixed site natural resource monitoring in South Africa: "FIXMOVE"* took place at 1000 fixed points in all biomes of South Africa.

26. Member; Environmentech CSIR (2010)

In 2010 I formed part of a team of scientists from Environmentech of the CSIR (Council for Scientific and Industrial Research) in South Africa, as well as the Integrated Environmental Consultants Namibia (IECN) and other participating countries in SADC countries (Southern African Development Community), regarding *Land degradation and desertification in SADC countries*. Monitoring technologies were tested in northern Namibia and the Molopo in South Africa to determine the woody density and rangeland condition.

27. Visiting Researcher, Georg-August University of Göttingen (2015)

In 2015 I was invited to be a visiting researcher at the Department of Ecosystem Modelling of the Georg-August University of Göttingen, Germany (4–31 May).

28. Independent Reviewer; NRF reviews and evaluation directorate (2015)

I acted as an independent reviewer for rating applicants for the NRF's Reviews and Evaluation directorate.

29. Other Projects

Several other projects which I led and supervised that were carried out by post-graduate students include, to mention a few: (1) *Plant and soil survey monitoring for the sustainable integrated development framework for the Heritage Park in the North-West Province*. The project was carried out from 2008–2010 and was financed by the North West Parks and Tourism Board of the North-West Province, (2) *Monitoring and evaluation of re-mined gold Tailings with reference to soil function and Vegetation stability*, a projects financed by Chemwes Mining through Frazer Alexander Rehabilitation Company (2007–2008), (3) *Population dynamics after the control of Stoebe vulgaris (bankrupt bush) in the Hartebeesfontein area of the North West Province, South Africa*. This project was financed by DAFF in the LandCare programme (2006–2010), (4) *The Implementation of Selected Technologies to Enhance the Restoration of indigenous tree species in the Deforested Riparian areas in the Mapungubwe National Park in South Africa*. This project was financed by National Geographic Conservation Trust, Washington, D.C., USA (2009–2010).

30. Many other projects were carried out by post-graduate students under my supervision to monitor and assess the rehabilitation of revegetated mine tailing facilities for different mining houses, the types and status of invasive species in SA, as well as determining the range condition and forage production for other scientific and training organisations. Currently my research concentrates of land degradation issues in the arid-and semi-arid Savannas of Southern Africa in the North-West and Limpopo Provinces, as well as Botswana and Namibia, particularly bush encroachment, the restoration after bush encroachment control and SLM (Sustainable Land Management).

7. CURRENT MSc & PhD STUDENTS (2016 - 2018)

1. Co-supervisor: Maximillian Hesselbarth on *Spatial patterning of key woody species in relation to bush density – A comparative assessment in semi-arid and mesic savannas, South Africa*. Maximillian Hesselbarth is from Georg-August University, Gottingen, Germany. 2017
2. Supervisor: Miss Reamogetswe Olebogeng Mokgosi on *Impacts of land management and restoration practices on the ecosystem services after the control of woody plants in the Taung area, North West Province, South Africa*. 2017.
3. Supervisor: Mr Jaco H. Fouchè on *Landscape function in bush thickened and –controlled areas of the semi-arid savanna in the Molopo region, South Africa*. 2016-2017.
4. Supervisor for Mr J.P. Naudè on *Composition and structure of woody vegetation after bush control in the Savanna rangelands of the Molopo, South Africa*. 2017–2018.
5. Supervisor for Mr J.J. Pelser on *Evaluation of selected restoration technologies in degraded areas of the Mokala National Park, South Africa*. 2016-2017.
6. Supervisor: Mr H. Tautè on *The evaluation of five coated and non-coated grass species for the rehabilitation of mine tailings in South Africa*. 2016–2017.
7. Co-supervisor: Mr Oliver Limberger on *Subproject B2 of the joint SPACES-project IDESSA*. Mr Oliver Limberger is from Georg-August University, Goettingen, Germany. 2017
8. Co-supervisor (MSc): Mr August Kruger in *The evaluation of two coated grass species for the rehabilitation of two gold, and one platinum mine tailings in South Africa*. 2017

9. Supervisor (MSc): Ms A. Esterhuizen (nee Kruger) in *The effect of fire on savanna vegetation dynamics in the semi-arid Molopo Bushveld region of the North-West Province, South Africa*. 2016-2018.
10. Supervisor (MSc): Mr Elvis Choma on *Examining the availability of biomass and the potential for Value adding products in Molopo region of North-West Province*.
11. Promotor (PhD): Ms Modungwa Reletile Tshepiso on *The evaluation of restoration technologies after bush control to improve ecosystem services in the Lephalale district, Limpopo Province, South Africa*.
12. Promotor (PhD): Ms Elna van den Berg on *Assessing the history and drivers of bush encroachment using historical aerial photographs and satellite images in the northern region of South Africa*.
13. Promotor (PhD): Ms Tshegofatso Keritebetse Sebitloane on *Restoration technologies after bush encroachment control and socio-economic impacts in the Taung region of South Africa*.

8. CHAPTERS IN BOOKS

1. **Kellner, K.**, Von Maltitz, G., Seely, M., Athlapheng, J & Lindeque, L. 2018. South African arid lands: current status and future prospects. (*In* Guar, M.K. & Squires, V.R., eds. Climate variability impacts on land use and livelihoods in drylands. Cham: Springer. p. 243-260) [eBook]
2. Pichs-Madruga, R.M., Obersteiner, M., Cantele, M., Ahmed, M.T., Cui, X., Cury, P., Fall, S., **Kellner, K.** & Verburg, P. 2016. Building scenarios and models of drivers of biodiversity and ecosystem change. (*In* Ferrier, S., Ninan, K.N., Leadley, P., Alkemade, R., Acosta, L.A., Akçakaya, H.R., Brotons, L., Cheung, W.W.L., Christensen, V., Harhash, K.A. et al. eds. IPBES, 2016: Methodological assessment of scenarios and models of biodiversity and ecosystem services. Bonn, Germany: Secretariat of the Intergovernmental Platform for Biodiversity and Ecosystem Services. pp 102-145).
<http://pure.iiasa.ac.at/13883/1/Building%20scenarios%20and%20models%20of%20drivers%20of%20biodiversity%20and%20ecosystem%20change.pdf> Date of access: 15 Sept. 2017.
3. Contributing author and reviewer: **Kellner, K.**
UNCCD (United Nations Convention to Combat Desertification) 2013. The economics of desertification, land degradation and drought: methodologies and analysis for decision-making. Background document. UNCCD 2nd Scientific Conference: 9-12 April organized by the UNCCD & GRF, Bonn, Germany. Bonn: UNCCD.
<https://pdfs.semanticscholar.org/1e94/a848517ae0eca3ef1f893c84cbd74468ffe7.pdf> Date of access: 14 Sept. 2017.
4. Contributing author and reviewer: **Kellner, K.**
Poulsen, L., ed. 2013. Costs and benefits of policies and practices addressing land degradation and drought in the dry lands. White Paper II UNCCD 2nd Scientific Conference. 9-12 April 2013. Bonn, Germany.
https://sustainabledevelopment.un.org/content/documents/888White_Paper_2.pdf Date of access: 14 Sept. 2017.
5. Moussa, A.S., Van Rensburg, L., **Kellner, K.** & Bationo, A. 2008. Soil indicators of rangeland degradation in a semi-arid communal district in South Africa. (*In* Lee, C & Schaaf, T., eds. The Future of dry lands. International scientific conference on desertification and drylands research. 19-21 June 2006. Tunis, Tunisia. Cham: Springer. p. 383-393). [eBook]

6. **Kellner, K.,** & Bosch, O.J.H. 2003. The value of local and indigenous knowledge for the development of information systems for conservation management (*In* Lemons, J., Victor, R. & Schaffer, D. eds. *Conserving biodiversity in arid regions: best practices in developing nations*. New York, N.Y.: Springer. p. 105-118).
7. Meyer, T., **Kellner, K.** & Viljoen, C. 2003. Land transformation and soil quality (*In* Magold, S., Kalule-Sabiti, M. eds. *North West province state of the environment report: overview 2002*. Mafikeng: Department of Agriculture, Conservation and Environment, North West Province. http://soer.deat.gov.za/dm_documents/19_Full_Overview_Print_zWCET.pdf Date of access: 15 Sept. 2017.
8. **Kellner, K.** & Van der Merwe, J.P.A. 2000. Data base and expert system for rangeland restoration: a community participation approach. (*In* Ringrose, S. & Chanda, R. eds. *Towards sustainable management in the Kalahari region: some essential background and critical issues*. Gaborone: Directorate of research and development, University of Botswana. p. 156-165).
9. **Kellner, K.** & Booysen, J. 2000. ISPD - integrated system for plant dynamics: a descision support system for rangeland management. (*In* Ringrose, S. & Chanda, R. eds. *Towards sustainable management in the Kalahari region: some essential background and critical issues*. Gaborone: Directorate of research and development, University of Botswana).
10. **Kellner, K.** & Booysen, J. 1999. Modelling populations and community dynamics in Karoo ecosystems. (*In* Dean, R.J.W. & Milton, S. eds. *The Karoo: ecological patterns and processes* Cambridge: Cambridge University Press, p. 224 – 230).
11. **Kellner, K.** 1998. Guidelines for the rehabilitation after control of alien plants and bush encroachment species. (*In* Campbell, P.L., Kellner, K., Mappedoram, B., Findlay, J., Henderson, L. & Kluge, R. eds. 2000. *Rehabilitation recommendations after alien plant control*. Reference handbook 11. Pretoria: Plant protection research institute of the ARC (Agricultural Research Council).
12. Scheepers, J.C. & **Kellner, K.** 1995. (*In* Arbuthnot, J.D. ed. *Report of the ESA working group on land degradation*. Pretoria: Department of Agriculture, Directorate of Resource Conservation).

9. PEER REVIEWED SCIENTIFIC PUBLICATIONS (Present-2004)

1. **Kellner, K.,** Kruger, A., Coetzee, H. & van den Berg, H. 2017. Linking land-user perceptions and range-management practices in the Mier region of the Kalahari duneveld savanna, South Africa. *Journal of arid environments*, (submitted for publication).
2. Dreber, N., Van Rooyen, S.E. & **Kellner, K.** 2017. Relationships of plant diversity and bush cover in rangelands of a semi-arid Kalahari savannah, South Africa. *African Journal of Ecology*, doi:10.1111/aje.12425.
3. Harmse, C.J., **Kellner, K.** & Dreber, N. 2016. Restoring productive rangelands: a comparative assessment of selective and non-selective chemical bush control in a semi-arid Kalahari savanna. *Journal of arid environments*, 135: 39-49.
4. Akhtar-Schuster, M., Amiraslani, F., Diaz Morejon, C.F., Escadafal, R., Fulajtar, E., Grainger, A., **Kellner, K.,** Khan, S.I., Perez Pardo, O., Sauchanka, U., Stringer, L.C., Reda, F. & Thomas, R.J. 2016. Designing a new science-policy communication mechanism for the UN Convention to Combat Desertification. *Environmental science & policy*, 63:122-131.
5. Van der Walt, L., Cilliers, S.S., Du Toit, M.J. & **Kellner, K.** 2015. Conservation of fragmented grasslands as part of the urban green infrastructure: how important are species diversity, functional diversity and landscape functionality. *Urban ecosystems*, 18(1): 87-113.

6. Van der Walt, L., Cilliers, S.S., **Kellner, K.**, Du Toit, M.J. & Tongway, D. 2015. To what extent does urbanisation affect fragmented grassland functioning? *Journal of environmental management*, 151: 517-530.
7. Kong, T.M., Marsh, S.E., Van Rooyen, A.F., **Kellner, K.** & Orr, B.J. 2015. Assessing rangeland condition in the Kalahari Duneveld through local ecological knowledge of livestock farmers and remotely sensed data. *Journal of arid environments*, 113:77-86.
8. Dreber, N., Kong, T.M., **Kellner, K.**, Harmse, C.J., Van Eeden, A. & Ocampo-Melgar, A. 2014. Towards improved decision-making in degraded dry lands of Southern Africa: an indicator based assessment for integrated evaluation of restoration and management actions in the Kalahari rangelands. *Planet@Risk*, 2(1): 21-28.
9. Dreber, N., Harmse, C.J., Götze, A., Trollope, W.S.W. & **Kellner, K.** 2014. Quantifying the woody component of savanna vegetation along a density gradient in the Kalahari bushveld: a comparison of two adapted point-centered quarter methods. *The rangeland journal*, 36: 91-103.
10. Kong, T.M., Austin, D.E., **Kellner, K.** & Orr, B.J. 2014. The interplay of knowledge, attitude and practice of livestock farmers' land management against desertification in the South African Kalahari. *Journal of arid environments*, 105:12-21.
11. Nel, L., Truter, W.F., Van Deventer, P. & **Kellner, K.** 2014. The emergence and survival of *Digitaria eriantha* and *Chloris gayana* seedlings on mine tailings planted with coated and non-coated seed. *Tropical grasslands - Forrajes tropicales*, 2(1):97-99.
12. Kong, T.M., **Kellner, K.** Austin, D.E., Els, Y. & Orr, B.J. 2014. Enhancing participatory evaluation of land management through photo elicitation and photo voice. *Society & natural resources*, 28(2):212-229.
13. Weber, K., Lange, C.A., **Kellner, K.**, Mishra, D. & Soni, V. 2013. Probing the process leading to desertification and its impact on plant biodiversity in the Thar Desert of Rajasthan, India. *Economology journal*, 5: 8-19. vglobale.it/public/files/EJ/EJ_Y2V4.pdf Date of access: 19 Sept. 2017.
14. Breedts, J.A.D., Dreber, N. & **Kellner, K.** 2013. Post-wildfire regeneration of rangeland productivity and functionality – observations across three semi-arid vegetation types in South Africa. *African journal of range and forage science*, 30(3):161-167.
15. Van der Walt, L., Cilliers, S.S., **Kellner, K.**, Tongway, D., & Van Rensburg, L. 2012. Landscape functionality of plant communities in the Impala Platinum mining area, Rustenburg. *Journal of environmental management*, 113:103-116.
16. Boneschans, R.B., Malo, D.S., Van Rooijen, F.S.J. & **Kellner, K.** 2012. Die evaluerende opvolging en plantdinamika op gerehabiliteerde goudslikmyndamme by Stilfontein, Noordwes Provinsie. *Suid-Afrikaanse Tydskrif vir Natuurwetenskap en Tegnologie*, 31(1):1.
17. Schwilch, G., Bestelmeyer, B., Bunning, S., Critchley, W., Herrick, J., **Kellner, K.**, Liniger, H.P., Nachtergaele, F., Ritsema, C.J., Schuster, B., Tabo, R., van Lynden, G. & Winslow, M. 2010. Experiences in monitoring and assessment of sustainable land management. *Land degradation & development*, 22(2):214-225.
18. **Kellner, K.** and Moussa, A.S. 2010. A conceptual tool for improving rangeland management decision-making at grassroots level: the local-level monitoring approach. *African journal of range & forage science*, 26 (3):139-147.

19. Moussa, A.S., van Rensburg, L. & **Kellner, K.** 2009. Soil properties changes after short-term livestock exclusion in “degraded” communally managed rangelands in the western Bophirima District, South Africa. *South African journal of plant and soil*, 26 (2):102-109.
20. Moussa, A.S., van Rensburg, L., **Kellner, K.** & Bationo, A. 2009. Exploring differences of soil quality as related to management in semiarid rangelands in the western Bophirima District, North West province, South Africa. *African journal of range & forage science*, 26(1):27-36.
21. Moussa, A.S., van Rensburg, L., **Kellner, K.** & Bationo, A. 2007. Soil microbial biomass in semi-arid-communal sandy rangelands in the Western Bophirima district, South Africa. *Applied ecology and environmental research*, 5(1):43-56.
22. Van den Berg, L. & **Kellner, K.** 2005. Restoring degraded patches in a semi-arid rangeland of South Africa. *Journal of arid environments*, 61: 497-511.
23. Baraqa, A.S., **Kellner, K.** & De Klerk, N. 2004. Land user participation in developing a computerised decision support system for combating desertification. *Environmental monitoring and assessment*, 99: 223-23.

10. CONFERENCE CONTRIBUTIONS (present-2008)

1. Meyer, H., Authmann, C., Dreber, N., Hess, B., **Kellner, K.**, Morgenthal, T., Nauss, T., Seeger, B. & Wiegand, K. 2017. IDESSA: an integrative decision support system for sustainable rangeland management in Southern African Savannas. Poster presented at the general assembly of the EGU, Vienna, Austria, 23–28 April.
2. Kruger, A., **Kellner, K.** & Van Deventer, P.W. 2016. The evaluation of four coated and non-coated grasses for the revegetation of gold and platinum tailings..Poster presented at the 4th annual congress of LaRSSA (Land Rehabilitation Society of SA) Kimberley, South Africa, 13–16 September.
3. Tautè, H., **Kellner, K.** & Van Deventer, P.W. 2016. The evaluation of five coated and non-coated grass species for the rehabilitation of Gold mine tailings in South Africa. Poster presented at the 4th annual congress of LaRSSA (Land Rehabilitation Society of SA) Kimberley, South Africa, 13–16 September.
4. **Kellner, K.** & Tautè, H. 2016. Control of bush encroachment in Limpopo and North West Province: a collaboration between the DEA and North-West University. Presentation delivered at Member of MAREP (Management, Research and Planning) meeting in Pretoria, South Africa, 13 October.
5. Kellner, K. 2016. Module 2.1: The context of land degradation and principles of restoration. Presentation delivered at the Centre of Environment Management (CEM), Potchefstroom, South Africa, 26–28 September 2016.
6. **Kellner, K.**, Harmse, C.J., Fouche, J.H. & Pelsner, J.J. 2015. Restoration of degraded arid- and semi-arid Savannas in South Africa. Presentation at SER Europe conference, Freising, Germany, 22–25 August.
7. **Kellner, K.**, Nel, L., Truter, W.F. & Van Deventer, P. 2015. The emergency and survival of *Digitaria Eriantha* and *Chloris gayana* seedlings on mine tailings planted with coated and non-coated seed. National LaRSSA conference, Krugersdorp, South Africa. (poster).

8. Harmse, C.J., Dreber, N. and **Kellner, K.** 2015. Calibrating a disc pasture meter to estimate grass dry matter production in arid dunefield vegetation of the southern Kalahari. Poster presented at the Arid Zone Ecology Forum (AZE), Springbok, South Africa, 5–8th October.
9. **Kellner, K.**, Harmse, C., Van Rooyen, S., Fouche, J.H. & Dreber, N. 2015. A comparative assessment and evaluation of chemical bush control actions in the Molopo savanna responses in vegetation and landscape functionality. Bush encroachment workshop presented for IDESSA, Potchefstroom, South Africa, 26 June.
10. **Kellner, K.** 2015. Restoration projects in the semi-arid savannas of South Africa. Group seminar at the Department of Ecosystem Modelling, Georg-August University, Goettingen, Germany, 12 May.
11. Taute, H., **Kellner K.** & Van Deventer, P. W. 2015. The evaluation of five coated and non-coated grass species for the rehabilitation of two gold and one platinum mine tailings in South Africa: Preliminary results. Presented at the 3rd annual LaRSSA conference, Muldersdrift, South Africa, 8–11 September.
12. Muller, I., Van Deventer, P.W. & **Kellner, K.** 2015. Viability of seed produced by five native grasses grown in mine waste: a pot trial. Presented at the 3rd annual LaRSSA conference, Muldersdrift, South Africa, 8–11 September.
13. Nel, L., Coetzee, D., Truter, W., Pretorius, J., **Kellner, K.**, Van Deventer, P.W., Muller, I. & Brits, Y. 2015. The value of coated *Eragrostis Curvula* (weeping love grass) seed used for rehabilitation Presented at the 3rd annual LaRSSA conference, Muldersdrift, South Africa, 8–11 September.
14. Van Rooyen, S., **Kellner, K.** and Dreber, N. 2015. Short-term structural responses of woody savanna vegetation to non-selective chemical bush control, South Africa. Paper presented at the 45th annual Gfö meeting, Göttingen, Germany, 31 August–4 September.
15. Bastian, H., Hanss, S., Wiegand, K., **Kellner, K.**, Morgenthal, T., Van Rooyen, A.F. & Jordaan, F. 2015. Predicting savanna dynamics in response to management and climate change: a modelling approach for decision support Paper presented at the 45th annual Gfö meeting, Göttingen, Germany, 31 August–4 September.
16. **Kellner, K.** & Dreber, N. 2015. IDESSA – sub project 2: management and restoration. Presented at SPACES workshop (Science Partnership for the assessment of Complex Earth System Processes), Cape Town, South Africa, 3–4 November.
17. Fouche, J.H., **Kellner, K.**, Dreber, N. & Tongway, D. 2015. A comparative assessment of landscape function in bush encroached and -controlled savanna rangelands. Presented at SPACES workshop (Science Partnership for the assessment of Complex Earth System Processes), Cape Town, South Africa, 3–4 November.
18. Attended the NRMP MAREP meeting, Cape Town, South Africa, 13–15 October 2015.
19. Attended the SADC United Nations Convention to Combat Desertification (UNCCD), Pretoria, South Africa, 28–30 August 2015.
20. Attended the national stakeholder consultation meeting for the UNCCD COP, Pretoria, South Africa, 12–19 June 2015.

21. Attended the 3rd UNCCD Conference of the Science-Policy Interface (SPI) and the 4th special session of the Committee on Science and Technology (CST S-4), Cancun, Mexico, 7–12 March 2015.
22. Attended the 12th session of the UNCCD COP meeting of the Committee on Science and Technology (CST12) and the meeting of the Science-Policy Interface (SPI), Ankara, Turkey, 12–17 October 2015.
23. Attended the IPBES Science-Policy and Nature second author meeting for Deliverable 3c: Methodological assessment of scenarios and modelling of biodiversity and ecosystem services, Ushuaia, Argentina, 9–13 March 2015.
24. **Kellner, K.** 2014. Rangeland ecology in South Africa: legislation, management and monitoring. Paper presented at Botswana national rangeland management conference: improving rangeland management in Kgalega district, Gaborone, Botswana, 27 May.
25. **Kellner, K.**, Kong, T.M., Harmse, C.J. & Dreber, N. 2014. Indicators to evaluate restoration and management practices in some farming communities in the semi-arid savanna of the Molopo and Mier Regions of South Africa: Land users' perceptions. Paper presented at the 49th annual congress of the Grassland Society of Southern Africa (GSSA), Bloemfontein, South Africa, 20–25 July.
26. Mokgosi, R.O., **Kellner, K.** & Malan, P.W. 2014. Impacts of land management and restoration practices on the ecosystem services after the control of woody plants in the Taung Area, North West Province. Paper presented at the 49th annual congress of the Grassland Society of Southern Africa (GSSA), Bloemfontein, South Africa, 20–25 July.
27. Fouché, J.H. & **Kellner, K.** 2014. The evaluation of three herbicides used to control *Serephium Plumosum* and their effect on the surrounding grass species. Paper delivered at Arid Zone Ecology Forum (AZEF): Thicket FusionForum, Rhodes University, Grahamstown, South Africa, 8–11 September.
28. Pelsers, J.J., **Kellner, K.** & Tongway, D. 2014. Comparison of the functional status of bush thickened and controlled rangelands in the Molopo savanna of South Africa using landscape functional analysis. Paper delivered at Arid Zone Ecology Forum (AZEF): Thicket FusionForum, Rhodes University, Grahamstown, South Africa, 8–11 September.
29. Van Rooyen, S.E. & **Kellner, K.** 2014. Comparison of bush thickened and chemically controlled savannas in the Molopo district, North-West Province, South Africa. Paper delivered at Arid Zone Ecology Forum (AZEF): Thicket FusionForum, Rhodes University, Grahamstown, South Africa, 8–11 September.
30. Mokgosi, R.O., **Kellner, K.** & Malan, P.W. 2014. The effects of restoration practices on ecosystem services after bush control in Magogong communal area, Taung, North West Province. Paper delivered at Arid Zone Ecology Forum (AZEF): Thicket FusionForum, Rhodes University, Grahamstown, South Africa, 8–11 September.
31. Dreber, N., Harmse, C.J. & **Kellner, K.** 2014. Effects of bush thickening and chemical control on grass assemblages in a South African savanna. Paper presented at the 44th annual meeting of

- the Ecological Society of Germany, Austria and Switzerland: Integrating ecological knowledge into nature conservation and ecosystem management, Hildesheim, Germany, 8–12 September.
32. Muller, I.; Van Deventer, P.W. & **Kellner, K.** 2014. Viability of seed produced by five native grasses grown in mine waste: a pot trial. Paper presented at the 2nd annual LaRSSA conference (Land Rehabilitation Society of Southern Africa), Muldersdrift, South Africa, 9–12 September.
 33. Muller, I, Van Deventer, P.W. & **Kellner, K.** 2014. Germination of coated seed from three grass species in different mine wastes for phytostabilisation. International Phytotechnology Conference, Heraklion, Crete, Greece , 30 September–3 October.
 34. Fouché, J.H., Jordaan, F. & **Kellner, K.** 2014. The invasive species of South Africa and problem plants of South Africa. Dow AgroSciences Conference, Parys, South Africa, 7 October.
 35. Pelser, J.J. & **Kellner, K.** 2014. Evaluation of the selected restoration technologies in semi-arid savannas, Mokala National Park, South Africa. Paper presented at the 11th Annual Kimberley Biodiversity Research Symposium (KBRS), Kimberley, South Africa, 22 October.
 36. **Kellner, K.** 2014. The challenges of bush encroachment in the northern provinces of the country. Paper presented at the DEA National Conference on sciences and natural resources. Waenhuiskrans, South Africa, 4–6 November.
 37. Attended the Climate change adaptation monitoring and evaluation indicators workshop, Johannesburg, South Africa, 13 February 2014.
 38. Attended the CSIR and WRC workshop on Charting the future of restoration science and practice in South Africa, Stellenbosch, South Africa, 26 February 2014.
 39. **Kellner, K.**, Kong, T, Harmse, C, & Dreber, N. 2013. Indicators to evaluate restoration and management practices in two farming communities in arid to semi-arid savannas of South Africa: Land users' perceptions. Paper presented at the 5th World Conference on Ecological Restoration, Madison, USA, 6–11 October.
 40. Nel, L., Truter, W.F., Van Deventer, P. & **Kellner, K.** 2013. The emergence and survival of *Digitaria eriantha* and *Chloris gayana* seedlings on mine tailings planted with coated and non-coated seed. Paper presented at the 22nd International Grassland Congress, Sydney, Australia. 15–19 September.
 41. Harmse, C.J., Dreber, N., **Kellner, K.** & Kong, T.M. 2013. Linking farmer knowledge and biophysical data to evaluate actions for land degradation mitigation in savanna rangelands of the Molopo, South Africa. Poster presented at the 22nd International Grasslands Congress, Sydney, Australia, 15–19 September.
 42. Dreber, N., Orr, B., **Kellner, K.** & Bautista, S. 2013. The PRACTICE approach: an integrated global perspective for combating land degradation in drylands. Paper presented at the 43rd Annual Meeting of the Ecological Society of Germany, Austria and Switzerland, Potsdam, Germany, 9–13 September.
 43. Dreber, N., Harmse, C., Goetze, A.R., Trollope, W.S.W. & **Kellner, K.** 2013. A comparison of two adapted point-centred quarter methods (APCQM) to estimate density and productivity of the

- woody layer in semi-arid savannas. Paper presented at the Arid Zone Ecology Forum, Kimberley, South Africa, 3–5 September.
44. Reynolds, D., Dreber, N., **Kellner, K.** & Harmse, C. 2013. The effect of bush encroachment and related mitigation actions on grass abundance and diversity patterns – preliminary results. Paper presented at the Arid Zone Ecology Forum, Kimberley, South Africa, 3–5 September.
 45. Harmse, C.J., Dreber, N., and **Kellner, K.** 2013. Bush encroachment and related mitigation actions in the Molopo savanna of South Africa: implications for grass composition, forage production and grazing capacity. Paper presented at the Arid Zone Ecology Forum, Kimberley, South Africa, 3–5 September. (Winner first price for best student presentation).
 46. Dreber, N., Kong, T.M., **Kellner, K.**, Van Eeden, A. & Ocampo-Melgar, A. 2013. Towards improved decision-making in degraded dry lands of southern Africa: an indicator based assessment for integrated evaluation of restoration and management actions in the Kalahari rangelands. Paper presented at the UNCCD 2nd Scientific Conference, Bonn, Germany, 9–12 April.
 47. **Kellner, K.** & Harmse, C.J. 2013. Role of WOCAT in UNCCD: potentials and constraints in South Africa. Paper presented at the 16th WOCAT international workshop and steering meeting, Pretoria, South Africa, 27 May–1 June.
 48. **Kellner, K.** 2013. Restoration of degraded arid- and semi-arid rangelands in Southern Africa. Paper presented at the 3rd MC/WG Meeting and Mini-Conference on 'Desert Restoration Bites'. London, United Kingdom, 8–9 January.
 49. **Kellner, K.** 2013. Indicators to evaluate restoration and management practices in two farming communities in arid to semi-arid savannas of South Africa: Land user's perceptions. Poster presented at the SER 5th World Conference on Ecological Restoration: reflections of the past, Directions for the future. Madison, Wisconsin, USA, 6–11 October.
 50. **Kellner, K.** & Dreber, N. 2013. Synergies between UNCCD, UNFCCC and CBD. (*In Low, P.S. ed., Economic and social impacts of desertification, land degradation and drought. White Paper I: UNCCD 2nd Scientific Conference, Bonn, Germany, 9–12 April*).
 51. Van Rooyen, L., Nortje, J.P., De Meyer, A., **Kellner, K.** & Jordaan, A. 2012. Evaluering van die kieming en vestiging van drie geselekteerde omhulde grasspesies in drie grondtipes vir rehabilitasie. Voordrag gelewer by die Akademie Kongres: Afdeling Biologie, Potchefstroom, Suid Afrika, 5 Oktober.
 52. Van Eeden, A.J. & **Kellner, K.** 2012. The impacts of land degradation and restoration actions on the vegetation dynamics in the Mier district of the Northern Cape, South Africa. Paper presented at the 47th Annual Congress of the Grassland Society of Southern Africa (GSSA), Langebaan, South Africa, 16–20 July.
 53. **Kellner, K.** & Jordaan, F.P. 2012. Monitoring and evaluation in land care projects. Paper presented at the 5th Biennial Landcare Conference, Mahikeng, South Africa, 1–4 October.
 54. Harmse, C.J., **Kellner, K.**, Van Eeden, A. & Dreber, N. 2012. Identifying the best restoration actions to combat land degradation in semi-arid savannas of Southern Africa: a participatory

- approach with local land users. Paper presented at the 5th Biennial Landcare Conference, Mahikeng, South Africa, 1–4 October.
55. Van der Walt L., Cilliers S.S., **Kellner K.** & Du Toit M.J. 2012. Landscape functionality and plant diversity in urban and rural grassland fragments in the Tlokwe municipality area. Paper presented at the 38th Annual Congress of the South African Association of Botanists (SAAB), University of Pretoria, Pretoria, South Africa, 15–18 January.
 56. Harmse, C.J. & **Kellner, K.** 2012. Vegetation dynamics to assess restoration actions to combat land degradation in the semi-arid rangeland savannas of the Molopo in the North West Province, South Africa. Paper presented at the 47th Annual Congress of the Grassland Society of Southern Africa (GSSA), Langebaan, South Africa, 16–20 July.
 57. **Kellner, K.**, van Eeden, A. & Harmse, C.J. 2012. The evaluation of restoration actions to combat land degradation and desertification in the Kalahari region, South Africa. Paper presented at the 4th International Conference on Drylands, Deserts and Desertification, Sede Boqer Campus of Ben-Gurion University, Israel, 12–15 November.
 58. **Kellner, K.** & Kong, T. 2012. IAPro test in South Africa - to develop and test an integrated and participatory environmental evaluation protocol. Paper presented at the 4th Plenary coordination meeting and 2nd Participatory assessment and knowledge transfer workshop, Mier, South Africa, 3–10 June.
 59. Van der Walt, L., Cilliers, S. S. & **Kellner, K.** 2011. Landscape functionality of plant communities in the Impala Platinum mining area, Rustenburg. Paper presented at the South African Association of Botanist (SAAB), Grahamstad, South Africa, 17 January.
 60. Lamprecht, A.J.H., Cilliers, S.S., **Kellner, K.** & Götze, A.R. 2011. Vegetation as the basis for establishment of a conservation plan for the Impala Platinum mining area, Rustenburg. Paper presented at the South African Association of Botanist (SAAB), Grahamstad, South Africa, 17 January.
 61. **Kellner, K.**, Van Den Berg, L., Van Rooyen, A. & Wepener, J.P. 2011. Rehabilitation technologies to combat land degradation and desertification in arid- and semi-arid rangelands of South Africa. Paper presented at the 9th International Rangeland Congress: diverse rangelands for a sustainable society (IRC2011), Rosario, Argentina, 2–8 April.
 62. **Kellner, K.**, Wiegand, K., Hanss, S. & Morgenthal, T. 2011. Semi-arid savanna rangeland degradation and management: a landscape scale model. Paper presented at the 9th International Rangeland Congress: diverse rangelands for a sustainable society (IRC2011), Rosario, Argentina, 2–8 April.
 63. **Kellner, K.**, Burgess, R., Bosoga, L. & Khwene, M. 2011. The Kalahari-Namib Project – enhancing decision making through interactive learning and action in the Molopo-Nossop river basin: a collaborative project between South Africa, Namibia and Botswana. Paper presented at the 40th Annual Congress of the Grassland Society of Southern Africa (GSSA), Grootfontein Agricultural Development Institute, Middelburg, Eastern Cape, South Africa, 11–15 July.
 64. **Kellner, K.**, Kong, T., Els, Y. & Coetzee, H. 2011. Local knowledge and perceptions of assessment indicators for a participatory evaluation of management and restoration practices to combat

- desertification in South Africa. Paper presented at the 40th Annual Congress of the Grassland Society of Southern Africa (GSSA), Grootfontein Agricultural Development Institute, Middelburg, Eastern Cape, South Africa, 11–15 July.
65. **Kellner, K.** & Wepener, J.P. 2011. The Dynamics and Rehabilitation of *Seriphium Plumosum* Encroachment in the Arid and Semi-arid Rangeland of the North-West Province, South Africa. Paper presented at the 40th Annual Congress of the Grassland Society of Southern Africa (GSSA), Grootfontein Agricultural Development Institute, Middelburg, Eastern Cape, South Africa, 11–15 July.
 66. Boneschans R.B., Malo D.S., Van Rooijen F.S.J. & **Kellner, K.** 2011. Die evaluering van die kronologiese opvolging en plantdinamika op gerehabiliteerde goudslikmyndamme by Stilfontein, Noordwes Provinsie. Voordrag gelewer by die Suid Afrikaanse Akademie vir Wetenskap en Kuns: Simposium van Biologiese Wetenskappe, Johannesburg, 5 September.
 67. Kong, T., **Kellner, K.**, Els and Y., Westcott, M. 2011. Photo voice for local ecological knowledge and perceptions on restoration and management practices and assessment indicators in the Kalahari. Paper presented at the SER 4th World Conference, Merida, Mexico, 24 August.
 68. Peel, M.J.S., Biggs, H.C., Kirkman, K.P., Jordaan, J.J., Scogings, P.F., Dzuba, L.E., Hardy, M.B., **Kellner, K.**, Hurt, C.R., Conradie, P.W., Mbatha, K.R., Short, A.D., Van den Berg, L., Du Toit, J.C.O., du Toit, F.J., Zacharias, P.J.K., Goodenough, D.C.W., Vetter, S., Botha, P.R. *et al.* 2010. Special address: The Grassland Society of Southern Africa - highlights of the strategic plan. Address presented as session chair at the 45th Annual Congress, Grassland Society of Southern Africa (GSSA): sustainable and adaptive practices in range and pastures systems, with an emphasis on arid regions, Kimberley, South Africa, 19–25 July.
 69. Coetzee, H., **Kellner, K.** & Van Rensburg, L. 2010. How to engage communities in semi-arid rangeland management projects. Poster presented at the 45th Annual Congress, Grassland Society of Southern Africa (GSSA): sustainable and adaptive practices in range and pastures systems, with an emphasis on arid regions, Kimberley, South Africa, 19–25 July.
 70. Els, Y., **Kellner, K.** & Lange, C. 2010. The implementation of selected technologies to enhance the restoration of indigenous tree species in the deforested riparian areas in the Mapungubwe National Park, South Africa. Paper presented at the 45th Annual Congress, Grassland Society of Southern Africa (GSSA): sustainable and adaptive practices in range and pastures systems, with an emphasis on arid regions, Kimberley, South Africa, 19–25 July.
 71. Lamprecht, A.J.H., Cilliers, S.S., **Kellner, K.** & Götze, A.R. 2010. A vegetation study of the area leased for mining purposes by Impala Platinum, Rustenburg. Poster presented at the 45th Annual Congress, Grassland Society of Southern Africa (GSSA): sustainable and adaptive practices in range and pastures systems, with an emphasis on arid regions, Kimberley, South Africa, 19–25 July.
 72. Westcott, M., **Kellner, K.** & Berner, J.M. 2010. The evaluation of germination and establishment of three selected grass species used for rehabilitation in four different soil mediums. Poster presented at the 45th Annual Congress, Grassland Society of Southern Africa (GSSA): sustainable and adaptive practices in range and pastures systems, with an emphasis on arid regions, Kimberley, South Africa, 19–25 July.

73. **Kellner, K.** 2010. Minimum set of impact indicators to assess desertification process on a global scale. Paper presented at the 45th Annual Congress, Grassland Society of Southern Africa (GSSA): sustainable and adaptive practices in range and pastures systems, with an emphasis on arid regions, Kimberley, South Africa, 19–25 July.
74. **Kellner, K.** 2010. Veld and pasture management in drought prone regions. Session chair, for the farmer outreach day during the 45th Annual Congress, Grassland Society of Southern Africa (GSSA): sustainable and adaptive practices in range and pastures systems, with an emphasis on arid regions, Kimberley, South Africa, 19–25 July.
75. **Kellner, K.** 2010. Landscape function analysis course discussion. Session chair, for workshop during the 45th Annual Congress, Grassland Society of Southern Africa (GSSA): sustainable and adaptive practices in range and pastures systems, with an emphasis on arid regions, Kimberley, South Africa, 19–25 July.
76. Weber, K., Lange, C.A. & **Kellner, K.** 2009. Desertification processes in Jodhpur district (North-West India). Presentation delivered at the Marburg International Dust and Sand Storm (DSS) Symposium: DSS and desertification, Marburg, Germany, 29–30 September.
77. Wepener, J.P. & **Kellner, K.** 2008. The control of *Seriphium Plumosum* encroachment in certain areas of the Grassland biome in the North-West Province. Paper presented at the 43rd Annual Congress of the Grassland Society of Southern Africa (GSSA), Badplaas, South Africa, 21–25 July.
78. Els, Y. & **Kellner, K.** 2008. The restoration of indigenous tree species. Paper presented at the 43rd Annual Congress of the Grassland Society of Southern Africa (GSSA), Badplaas, South Africa, 21–25 July.
79. Morgenthal, T.L. & **Kellner, K.** 2008. Proposed vegetation survey methodology for fixed site monitoring in South Africa: FIXMOVE. Paper presented at the 43rd Annual Congress of the Grassland Society of Southern Africa (GSSA), Badplaas, South Africa, 21–25 July.
80. **Kellner, K.** 2008. Restoration technologies to improve the grazing capacity of degraded arid- and semi- arid rangelands in South Africa. Paper presented at the XXI International Grassland Congress and VIII International Rangeland Congress, Hohhot, Inner Mongolia, China, 29 June–5 July.

11. MEMBER OF EDITORIAL STAFF AND REFEREE OF THE FOLLOWING JOURNALS

- Australasian Journal of Environmental Management (Editorial Advisory Board)
- African Journal of Range and Forage Science (Editorial Advisory Panel till 2010, currently only a referee)
- Journal of Arid Environments (Referee of scientific papers)
- South African Journal of Botany (Referee of scientific papers)
- Koedoe (Journal of the SANational Parks) (Referee of scientific papers)
- South African Journal of Wildlife Research (Referee of scientific papers)
- Journal of Vegetation Science/Applied Vegetation Science (Referee of scientific papers)

12. INVOLVEMENT IN PROFESSIONAL SOCIETIES

- Honorary Member of the Land Rehabilitation Society of Southern Africa (LaRSSA) (2014)

- Member of the Grassland Society of South Africa (GSSA) and past president (2011) and member of the GSSA Trust (till 2013)
- Arid Zone Ecology Forum in South Africa (AZEF). Past president and now only a member.
- Professional member of the Southern African Institute of Ecologists and Environmental Scientists (SAIE &ES).
- Member of the Society of Ecological Restoration International (SER)

13. OTHER CONTRIBUTIONS

I was the former leader of the sub-program (2009): Remediation and sustainable management of ecosystems in the Focus area for Environmental Science and Management in the School of Environmental Sciences and Development (North-West University - NWU), as well as the Head of the Botany Section (2007–2009) in the School of Environmental Sciences and Development, Faculty of Natural Sciences of the NWU.

I have been an external examiner for several MSc and PhD post-graduate thesis for the following Universities: Universities of Pretoria, Free State, Cape Town, Fort Hare, Nelson Mandela Metropolitan University, Stellenbosch University, Witwatersrand, Western Cape, University of Namibia, University of Western Australia, Namibian University of Science and Technology (previously the Polytechnic of Namibia), amongst others.

I have been the session chair of many national and international conferences, given talks on radio and written short communications for the popular media **mostly on invitation**. Some of the countries where presentations were given at conferences or workshops include: Ghana, Burkina Faso, Namibia, Niger, Senegal, China, Australia, Oman, Egypt, Germany, Kenya, Botswana, Zimbabwe, Spain, Israel, Italy, Spain, USA, South Korea, Argentina, Netherlands, Brazil, South Africa, France, Kuwait, United Arab Emirates and Cuba.

I served on the council of the Grassland Society of Southern Africa (GSSA) for 6 years after which I took up the role as president (2002–2003) and later the chairman of the board of trustees for the GSSA. I also served as the chairman of the Arid Zone Ecology Forum (AZEF) in South Africa (1997–2001)

I have done many consultancies over the last 8 years for various organizations with regard to land degradation, desertification, restoration ecology, the development of management and grazing plans, assessment of the rangeland condition and monitoring of vegetation dynamics. These include:

1. **South African National Parks (SANParks):** the rehabilitation of disturbed and degraded areas in Kgalagadi NP and Mapungubwe NP.
2. **AusAID (funded project through GRM International):** the development of a LandCare research strategy and outline a LandCare research action plan for the LandCare program in South Africa.
3. **International Consulting Services (ICS):** I joined a team regarding the development of a wildlife management plan for Sir Bani Yas Island in the United Arab Emirates (UAE), especially for the degraded grassland, savanna and woodland ecosystems.
4. **De Beers Consolidated Mines:** consultation regarding bush encroachment, restoration and rangeland condition at all mines around Kimberley and Cullinan, as well as Rooipoort Nature Reserve and adjacent farms of De Beers near Kimberley.
5. **Hotazel Manganese Mining Company:** rehabilitation of mining sites.
6. **Eskom:** impact study of Matla Power Station on the environment with special reference to soils and vegetation.

7. Universities, Technikons and other academic institutions in South Africa (ongoing) regarding land degradation, restoration, monitoring and rangeland condition assessment.
8. **South African Environmental Observation Network (SAEON):** Review of research projects in arid and semi-arid lands as baseline for the establishment of the Arid Node for SAEON in Kimberley.
9. Consultation work regarding the restoration of degraded arid- and semi-arid lands for many agencies, such as South African National Parks, UN Compensation Commission (UNCC) in Kuwait, United Arab Emirates, Bahrain, Mining Houses, South African Environmental Observation Network (SAEON).
10. **Western Cape Department of Agriculture:** in the programme: technology, research and development services Institute: plant production (Dr Nelmarie Saayman), *“Investigate methods to rehabilitate old cropping lands dominated by Galenia africana (Kraalbos) in the West Coast district and test possible indigenous species for use in rehabilitation in the Napky area, Overberg district (2012).*
11. **Lidwala Specialist Solutions:** consultation work done for the Pretoria based company regarding the Biodiversity Monitoring Protocol for Sishen Mine, Kathu, Northern Cape province, South Africa (2013).
12. **Integrated Sustainability Services (ISS) as contracted by IUCN:** consultation work was done to deliver a total economic valuation of village rangelands as well as the market and value chain analysis of livestock products and services for areas in Botswana (Bokspits of the Boravast Trust and the Khawa village of the Khawa Kopanelo Development Trust in south Kgalagadi district) and South Africa (Rietfontein in the Mier municipality, Siyanda district municipality, and the farms of Khuis and Surprise in the John Taolo district municipality).
13. **AU-SAFGRAD (African Union’s Semi-Arid Food Grain Research and Development):** I did a survey in Africa regarding: *Strengthening the role of science and technology in combating desertification in Africa*. AU-SAFGRAD in Burkina Faso launched an investigation to determine how future inputs of science and technology findings can support policy making in combating land degradation and desertification in Africa, especially to support the CST Bureau (Committee of Science and Technology), a subsidiary body of the UNCCD.

14. REFERENCES

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