

DEPT OF ENVIRONMENTAL SCIENCE

2017 PUBLICATIONS, REPORTS, CONFERENCES

JOURNAL PUBLICATIONS (40)

Aburto, J., Gaymer, C. and Cundill, G. 2017. Towards local governance of marine resources and ecosystems on Easter Island. *Aquatic Conservation: Marine and Freshwater Ecosystems* 27: 353-371.

Baum, J., Cumming, G.S. and De Vos, A., 2017. Understanding Spatial Variation in the Drivers of Nature-based Tourism and Their Influence on the Sustainability of Private Land Conservation. *Ecological Economics*, 140: 225-234.

Bowker, J.N., De Vos, A., Ament, J.M. & Cumming, G.S. 2017. Effectiveness of Africa's tropical protected areas for maintaining forest cover. *Conservation Biology*, 31(3): 559-569.

Chakona, G., Swartz, E.R. and Chakona, A. (2017). The status and distribution of a newly identified endemic galaxiid in the eastern Cape Fold Ecoregion, of South Africa. *Aquatic Conservation: Marine and Freshwater Ecosystems*, 2017:1-13. DOI: 10.1002/aqc.2850

Chakona, G. & Shackleton, C. 2017. Minimum dietary diversity scores for women indicate micronutrient adequacy and food insecurity status in South African town. *Nutrients*, 9, 812.

Chakona, G. & Shackleton, C.M. 2017. Voices of the hungry: a qualitative measure of household food access and food insecurity in South Africa. *Agriculture & Food Security*, 6(66) online. DOI: 10.1186/s40066-017-0149-x.

Cundill, G., Bezerra, J.C., De Vos, A. and Ntingana, N., 2017. Beyond benefit sharing: Place attachment and the importance of access to protected areas for surrounding communities. *Ecosystem Services*, 28: 140-148. <http://dx.doi.org/10.1016/j.ecoser.2017.03.011>

Dalu, T., Wasserman, R.J. & Dalu, M.T.B. 2017. Editorial commentary: Agricultural intensification and drought frequency increases may have landscape-level consequences for ephemeral ecosystems. *Global Change Biology*, 23: 983-985.

Dalu, M.T.B., Wasserman, R.J. & Dalu, T. 2017. A call to halt destructive, illegal mining in Zimbabwe. *South African Journal of Science*, 113(11/12).

Dalu, M.T.B., Wasserman, R.J., Maposa, V.G. & Dalu, T. 2017. Environmental traps in developing countries: A case of the Dema emergency diesel power plant (EPP), Zimbabwe. *Journal of Cleaner Production*, 150: 123–126. Available: <http://dx.doi.org/10.1016/j.jclepro.2017.02.168>

Dalu, T., Wasserman, R.J., Tonkin, J.D., Alexander, M.E., Dalu, M.T.B., Motitsoe, S.N., Manungo, K.I., Bepe, O. & Dube, T. 2017. Assessing drivers of benthic macroinvertebrate community structure in African highland streams: An exploration using multivariate analysis. *Science of the Total Environment*, 601-602, 1340-1348.

Dalu, M.T.B., Wasserman, R.J. & Dalu, T. 2017. Can Potamonautids be used as umbrella invertebrate species for conservation: Identifying opportunities and challenges related to community sustainable livelihoods. *Physics and chemistry of the Earth*, 1-7.

De Lacy, P. & Shackleton, C.M. 2017. Aesthetic and spiritual ecosystem services provided by urban sacred sites. *Sustainability*, 9, 1628, online, doi: 10.3390/su90911628.

- De Lacy, P. & Shackleton, C.M. 2017. Woody plant species richness, composition and structure in urban sacred sites, Grahamstown, South Africa. *Urban Ecosyst*, 20: 1169-1179.
- De Vos, A., Cumming, G.S. and Roux, D.J., 2017. The relevance of cross-scale connections and spatial interactions for ecosystem service delivery by protected areas: Insights from southern Africa. *Ecosystem Services*, 28: 133-139.
- Garekae, H., Thakadu, O.T. & Lepetu, J. 2017. Socio-economic factors influencing household forest dependency in Chobe enclave, Botswana. *Ecological Processes*, 6:40.
- Gosling, A., Shackleton, C.M. & Gambiza, J. 2017. Community-based natural resource use and management of Bigodi Wetland Sanctuary, Uganda, for livelihood benefits. *Wetlands Ecol. Manage.*, 25: 717-730.
- Gwedla, N. & Shackleton, C.M. 2017. Population size and development history determine street tree distribution and composition within and between Eastern Cape towns, South Africa. *Urban Forestry & Urban Greening*, 25: 11-18.
- Jarrett, M. & Shackleton, C.M. 2017. The potential contribution of urban golf courses to biodiversity: managers' perceptions and woody plant diversity in the Eastern Cape, South Africa. *Journal of Land Use Science*, 12: 292-311. DOI: 10.1080/1747423X.2017.1325525
- Mangwale, K., Shackleton, C.M. & Sigwela, A. 2017. Changes in forest cover and carbon stocks of coastal scarp forests on the Wild Coast, South Africa. *Southern Forests*, 79: 305-315. DOI: 10.2989/20702620.2016.1255480.
- Martins, A.R.O. & Shackleton, C.M. 2017. Abundance, population structure and harvesting selection of two palm species (*Hyphaene coriacea* and *Phoenix reclinata*) in Zitundo area, southern Mozambique. *Forest Ecology and Management*, 398: 64-74.
- Maseko, H., Shackleton, C.M., Nagoli, J. & Pullanikkatil, D. in press. Children and wild foods in the context of deforestation in rural Malawi. *Human Ecology*, 45: 795-807. DOI: 10.1007/s10745-017-9956-8
- Mugido, W. & Shackleton, C.M. 2017. The safety net function of NTFPs in different agro-ecological zones of South Africa. *Popul Environ*, 39:107-125.
- Mugido, W. & Shackleton, C.M. 2017. The contribution of NTFPs trade to rural livelihoods in different agro-ecological zones of South Africa. *International Forestry Review*, 19: 306-320. Doi:10.1505/146554817821865063.
- Mutekwa, V.T. & Gambiza, J. 2017. Forest protected areas governance in Zimbabwe: Shift needed away from a long history of local community exclusion. *Journal of Environmental Management*, 198: 330-339.
- Roux, D.J., Nel, J.L., Cundill, G. O'Farrell, P. & Fabricius, C. 2017. Transdisciplinary research for systemic change: who to learn with, what to learn about and how to learn. *Sustain. Sci*.
- Ruwanza, S. 2017. Invasion of abandoned agricultural fields by *Acacia mearnsii* affect soil properties in Eastern Cape, South Africa. *Applied Ecology and Environmental Research*, 15: 127–139. Available: http://dx.doi.org/10.15666/aeer/1501_127139
- Ruwanza, S. & Shackleton, C.M. 2017. Aspect and slope as determinants of vegetation composition and soil properties of coastal forest backdunes in the Eastern Cape, South Africa. *African Journal of Ecology*, 55:211-221.
- Ruwanza, S. & Shackleton, C.M. 2017. Ecosystem scale impacts of non-timber forest product harvesting: effects on soil nutrients. *Journal of Applied Ecology*, 54: 1515-1525. DOI: 10.1111/1365-2664.12891

Shackleton, C.M., Hurley, P.T., Dahlberg, A., Emery, M.R. & Nagendra, H. 2017. Urban foraging: a ubiquitous human practice but overlooked by urban planners, policy and research. *Sustainability*, 9:1884 online, DOI: 10.3390/su9101884

Shackleton, C.M., Guild, J., Bromham, B., Impey, S., Jarrett, M., Ngubane, M. & Steijl, K. 2017. How compatible are urban livestock and urban green spaces and trees? An assessment in a medium-sized South African town. *International Journal of Sustainable Urban Development*, 9: 243-252. DOI [10.1080/19463138.2017.1314968](https://doi.org/10.1080/19463138.2017.1314968)

Shackleton, S. & Shackleton, R. 2017. Local knowledge regarding ecosystem services and disservices from invasive alien plants in the arid Kalahari, South Africa. *Journal of Arid Environments*, <http://dx.doi.org/10.1016/j.jaridenv.2017.07.001>

Sigwela, A., Elbakidze, M., Powell, M. & Angelstam, P. 2017. Defining core areas of ecological infrastructure to secure rural livelihoods in South Africa. *Ecosystem Services*,

Sinasson, G.K.S., Shackleton, C.M., Glèlè Kakaï, R.L. & Sinsin, B. 2017. Forest degradation and invasive species synergistically impact *Mimusops andongensis* (Sapotaceae) in Lama Forest Reserve, Benin. *Biotropica*, 49: 160-169.

Sinasson, G.K.S., Shackleton, C.M., Assogbadjo, A.E. & Sinsin, B. 2017. Local knowledge on the uses, habitat and abundance of multipurpose *Mimusops* species in Benin. *Economic Botany*, 71: 105-122.

Sholto-Douglas, C., Shackleton, C.M., Ruwanza, S. & Dold, A.P. 2017. The effects of expansive shrubs on plant species richness and soils in semi-arid communal lands, South Africa. *Land Degradation & Development*, 28: 2191-2206. DOI: 10.1002/ldr.2745

Thondhlana, G. & Nott, M. 2017. Fuelwood preferences, use and availability in the Khomani San resettlement farms, southern Kalahari, South Africa. *Forests, Trees & Livelihoods*, 26(3): 156-169.

Thondhlana, G. & Cundill, G. 2017. Local people and conservation officials' perceptions on relationships and conflicts in South African protected areas. *International Journal of Biodiversity Science, Ecosystem Services & Management*, 13 (1): 204-215.

Tata Ngome, P.I., Shackleton, C.M., Degrande, A. & Teiguhong, J. 2017. Addressing constraints in promoting wild edible plants' utilization in household nutrition: a case of the Congo Basin forest area. *Agriculture & Food Security* 6:20 online 10.1186/s40066-017-0097-5

Wright, O., Cundill, G. & Biggs, D. 2016. Stakeholder perceptions of legal trade in rhinoceros horn and implications for private reserve management in the Eastern Cape, South Africa. *Oryx*. <https://doi.org/10.1017/S0030605316000764>

BOOK CONTRIBUTIONS (1)

Cockburn, J., Koopman, V., Pereira, L & Van Niekerk, J. 2017. Institutional bricolage to address sustainability challenges in the South African sugarcane industry: a case study of the SUSFARMS® initiative in the Midlands area of KwaZulu-Natal, South Africa. In: Pereira, L.M., McElroy, C., Girard, A., & Littaye, A. Food, Energy, and Water Sustainability: Governance Strategies for Public and Private Sectors, Earthscan: Routledge, London.

POLICY BRIEFS AND POPULAR ARTICLES (4)

Shackleton, C.M. 2017. Trees that belong and the birds they bring. *Grocott's Mail*, 5 May, 147 (018): 20.

Shackleton, C.M. & Gwedla, N. 2017. Street trees contribute to urban sustainability in South African towns. Policy Brief 15, Dept of Environmental Science, Rhodes University, Grahamstown. 6 pp.

Pereira, T., Shackleton, S. & Donkor, F.K. 2017. Integrating Climate Change Adaptation (CCA) and Disaster Risk Reduction (DRR) for greater local level resilience: Lessons from a multi-stakeholder think-tank. Policy Brief 16, Dept of Environmental Science, Rhodes University, Grahamstown, 9 pp.

Fox, H. & Shackleton, S. 2017. Learning from the decline of smallholder agricultural projects in the Kat River Valley, Eastern Cape, South Africa. Policy Brief 17, Dept of Environmental Science, Rhodes University, Grahamstown, 11 pp.

CONFERENCE PRESENTATIONS (14)

De Vos, A., Biggs, R., Preiser, R. Methods for understanding social-ecological systems: a systematic review. Resilience 2017, 20-23 August, Stockholm, Sweden. Contributed Oral Presentation.

De Vos, A., Cumming G.C., Roux, D. Ecosystem Services as a conceptual frame for unpacking the value of protected areas: emerging themes and policy opportunities. Resilience & Development Colloquium, 8-10 May 2017, Johannesburg, South Africa. Contributed Oral Presentation.

De Vos, A., Cumming G.C., Roux, D. Measuring ecosystem services for the management of social-ecological protected areas. Resilience 2017, 20-23 August, Stockholm, Sweden. Contributed Oral Presentation.

De Vos, A., Reid, J., Nelson, J., Cole, N. Out of sight, out of pocket: The value of water-related ecosystem services provided by an undervalued protected area section to diverse downstream stakeholders PECSii Conference, 7-10 November, Oaxaca, Mexico. Contributed Speed Talk.

Gambiza, J. 2017. Achieving land degradation neutrality: The role of restoration. Plenary paper. The 5th Annual Land Restoration Society of Southern Africa (LaRSSA) Conference on Resilient Landscapes in a Changing Climate, 1-4th August, Olifants River Lodge, Mpumalanga.

Hardisty, S., De Vos, A., Daw, T. 2017. How gear use affects the income and subjective wellbeing of four Kenyan fishing communities. Resilience for Development Colloquium, 8-10 May, Johannesburg, South Africa. Poster.

Hardisty, S., De Vos, A., Daw, T. 2017. How gear use affects the income and subjective wellbeing of four Kenyan fishing communities. 10th WIOMSA Scientific Symposium, 30 Oct – 2 Nov, Dar Es Salaam, Tanzania. Oral Presentation.

Pullanikkatil, D., Phalira, W., Kaneka, B., Mkanthama, C. and Chiotha, S. PHE approach for climate change adaptation; the case of Lake Chilwa Basin, southern Malawi. African Great Lakes Conference 2017: Conservation and Development in a Changing Climate. May 2-5, 2017. Entebbe (Uganda).

Pullanikkatil, D. Role of Universities in International Development. Panel discussion at launch of Glasgow Center for International Development, University of Glasgow, Nov 15, 2017. Glasgow (Scotland).

Reid, J., De Vos, A. 2017. Benefit flows from an out-of-sight mountain stream to users in downstream Plettenberg Bay. Garden Route Interface Meeting. 19-20 September, Sedgfield, South Africa. Contributed Oral Presentation.

Senkoro, A., Shackleton, C.M., Voeks, R. & Riberio. 2017. Usos e manejo de *Walburgia salutaris* (Bertol.f.) Chiov. (Canellaceae) espécie ameaçada de extinção a sul de Moçambique. (Poster). Science and Technology in Portugal Congress, 3-5 July, Lisbon (Portugal).

Soumya KV, Setty, S. & Shackleton C.M. 2017. Ecology and human use of dhoop from *Boswellia serrata* Roxb. in the Western Ghats, Karnataka. (Poster). Conference on Conservation Science and Sustainable Development, 24-25 January, Bangalore (India).

Thondhlana, G. & Bulunga, A.A.L. 2017. Interventions yield energy-saving behaviour in residences at Rhodes University, South Africa. International Symposium on Society and Resource Management: 18-22 June, Umea (Sweden).

Xoxo, S., De Vos, A., Biggs, R. 2017. Influence of systems studied on methods that are used to understand social-ecological systems. Resilience for Development Colloquium, 8-10 May, Johannesburg, South Africa. Contributed Speed Talk.

CONFERENCE PAPERS (7)

Garekae H., Thakadu OT. & Lepetu J. 2017. Household and stakeholder perspective on forest management regimes in Botswana: Implications for sustainable forest management (Paper). 7th Forest Science Symposium, 18th – 20th July, Pietermaritzburg, South Africa.

Manyani, A., Shackleton, C.M. & Cocks, M.L. 2017. How do urban dwellers identify with natural elements within urban green spaces in the Eastern Cape? (Paper). IERM convention "People & Green Space", 11-13 Sep, Johannesburg.

Martins, A. & Shackleton, C.M. 2017. The production and commercialisation of palm wine *Hyphaene coriacea* and *Phoenix reclinata* in Zitundo area, Southern Mozambique. (Paper). 57th annual conference of the Society for Economic Botany, 4–9 June, Bragança (Portugal).

Njaxwu, A. & Shackleton, C.M. 2017. Assessing the abundance of non-timber forest products in relation to forest succession on the Wild Coast, South Africa. (Paper). 57th annual conference of the Society for Economic Botany, 4–9 June, Bragança (Portugal).

Senkoro, A., Shackleton, C.M., Voeks, R. & Riberio, A. 2017. Uses, knowledge and management of the Pepper-bark tree (*Warburgia salutaris*), a threatened medicinal plant species in southern Mozambique. (Paper). 57th annual conference of the Society for Economic Botany, 4–9 June, Bragança (Portugal).

Shackleton, C.M., Kull, C.A. & Shackleton, R.T. 2017. The role of invasive alien species in shaping local livelihoods and human wellbeing. (Paper). 14th Intn conference on the Ecology & Management of Alien Plant Invasions: synthesis, challenges & new opportunities, 4-8 September, Lisbon (Portugal).

Shackleton, C.M., Tickin, T. & Cunningham, T. 2017. Non-timber forest products as biocultural keystone species. (Paper). 57th annual conference of the Society for Economic Botany, 4–9 June, Bragança (Portugal).

PUBLISHED CONFERENCE PROCEEDINGS

RESEARCH REPORTS (2)

Sisitka L, Ntshudu M. 2017. *Macubeni Stakeholder Analysis (MSA): Final Report*. GEF5 Sustainable Land Management Project. Rhodes University, Grahamstown.

Powell, M., Biggs, H., & Braack, M. 2017. Ntabelanga and Lalini ecological infrastructure project.

DVDs