



Perspective



Drowning in data, thirsty for information and starved for understanding: A biodiversity information hub for cooperative environmental monitoring in South Africa

Sandra MacFadyen^{a,ah,*}, Nicky Allsopp^b, Res Altwegg^c, Sally Archibald^d, Judith Botha^e, Karen Bradshaw^f, Jane Carruthers^g, Helen De Klerk^h, Alta de Vosⁱ, Greg Distiller^c, Stefan Foord^j, Stefanie Freitag-Ronaldson^k, Richard Gibbs^a, Michelle Hamer^l, Pietro Landi^a, Duncan MacFadyen^m, Jeffrey Manuelⁿ, Guy Midgley^o, Glenn Moncrieff^{b,c}, Zahn Munch^h, Onesimo Mutanga^p, Sershen^{q,r}, Rendani Nenguda^m, Mzabalazo Ngwenya^c, Daniel Parker^{s,t}, Mike Peel^{u,v,w}, John Power^x, Joachim Pretorius^y, Syd Ramdhani^z, Mark Robertson^{aa}, Ian Rushworth^{ab}, Andrew Skowno^{n,ac}, Jasper Slingsby^{ac,b}, Andrew Turner^{ad,ae}, Vernon Visser^{c,ah,ai}, Gerhard Van Wageningen^{af}, Cang Hui^{a,ag,ah}

^a Mathematical Biosciences Hub, Department of Mathematical Sciences, Stellenbosch University, Matieland 7602, South Africa

^b South African Environmental Observation Network, Fynbos Node, South Africa

^c Centre for Statistics in Ecology, the Environment and Conservation, Department of Statistical Sciences, University of Cape Town, South Africa

^d Centre for African Ecology, School of Animal, Plant and Environmental Sciences, University of the Witwatersrand, Johannesburg 2050, South Africa

^e Scientific Services, South African National Parks, South Africa

^f Computer Science, Rhodes University, South Africa

^g Department of History, University of South Africa, South Africa

^h Geography and Environmental Studies, Stellenbosch University, South Africa

ⁱ Department of Environmental Science, Rhodes University, South Africa

^j Department of Zoology, University of Venda, South Africa

^k Garden Route and Frontier Research Unit, SANParks, South Africa

^l South African Research Infrastructure Roadmap, SANBI, South Africa

^m Research and Conservation, Oppenheimer Generations, South Africa

ⁿ South African National Biodiversity Institute, South Africa

^o Global Change Biology Group, Stellenbosch University, South Africa

^p Department of Environmental Sciences, University of KwaZulu-Natal, South Africa

^q Institute of Natural Resources, South Africa

^r University of the Western Cape, South Africa

^s School of Biology and Environmental Sciences, University of Mpumalanga, South Africa

^t Wildlife and Research Management Research Group, Department of Zoology and Entomology, Rhodes University, Makhanda, South Africa

^u ARC-Animal Production Institute, Rangeland Ecology Group, Nelspruit, South Africa

^v School for Animal, Plant and Environmental Sciences, University of the Witwatersrand, Johannesburg, South Africa

^w Applied Behavioural Ecology and Ecosystem Research Unit, University of South Africa, South Africa

^x North West Provincial Government, Department of Economic Development, Environment, Conservation & Tourism, Directorate of Biodiversity Management, South Africa

^y Data Analysis, ABSA, South Africa

^z School of Life Sciences, University of KwaZulu-Natal, South Africa

^{aa} Department of Zoology and Entomology, University of Pretoria, South Africa

^{ab} Scientific Services, Ezemvelo KZN Wildlife, South Africa

^{ac} Department of Biological Sciences and Centre for Statistics in Ecology, Environment and Conservation, University of Cape Town, Rondebosch, South Africa

^{ad} Cape Nature, South Africa

^{ae} Department of Biodiversity and Conservation Biology, University of the Western Cape, Cape Town, South Africa

^{af} High Performance Computing, Stellenbosch University, South Africa

^{ag} Biodiversity Informatics Group, African Institute for Mathematical Sciences, Cape Town 7945, South Africa

^{ah} National Institute for Theoretical and Computational Sciences (NITheCS), Stellenbosch University, Matieland 7602, South Africa

^{ai} African Climate and Development Initiative, University of Cape Town, Rondebosch 7701, Cape Town, South Africa

* Corresponding author at: Biodiversity Informatics Hub, Department of Mathematical Science, Stellenbosch University, Matieland 7602, South Africa.
E-mail address: macfadyen@sun.ac.za (S. MacFadyen).