

# Dr Antje Ahrends

## Institute

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Royal Botanic Garden Edinburgh (RBGE)

## Qualifications

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Diplom (German MSc equivalent); PhD

## Employment history

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2012-present Head of Genetics and Conservation, Royal Botanic Garden Edinburgh.  
2009-2012 Plant Biodiversity Scientist, Royal Botanic Garden Edinburgh.  
2006-2009 Marie-Curie Early Stage Researcher, University of York.  
2005-2006 Carlo-Schmid Scholar, UNEP World Conservation Monitoring Centre.

## Role and responsibilities

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- To run a research programme at RBGE integrating the use of large scale biodiversity datasets, GIS and modelling to underpin the conservation of biodiversity.
- To provide leadership across RBGE's science programme in enhancing quantitative skills.
- To run the Genetics and Conservation section at RBGE (7 permanent members of staff).

## Synopsis of current and future research interests

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Dr Antje Ahrends' research focuses on the use of biodiversity data, GIS and modelling approaches to study the distribution of, and the impact of human activities on, biodiversity and ecosystem services in focal systems (e.g. forests). She studies the impact of threats such as land use change, habitat fragmentation, degradation, and climate change. The work aims to (a) enhance the understanding of the drivers of biodiversity patterns, (b) make predictions on the impacts of future global change, and (c) evaluate conservation options for mitigating these impacts. The current geographic foci of her work include South East Asia, China, sub-Saharan Africa and the United Kingdom. Dr Antje Ahrends links her research with tangible outcomes for policy and biodiversity conservation.

## Committee representation / honorary positions

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2018-present Editor *Plants, People, Planet*  
2013-present Research Associate, Kunming Institute of Botany, CAS China.  
2011-2015 Member of the Scottish Government Centre of Expertise on Climate Change.  
2007 - 2012 Associate Editor of *Frontiers of Biogeography*.  
2002 – 2005 NABU/Kindernothilfe steering committee: conservation/development projects, Kenya  
2001 – 2005 African Programmes Officer, NABU (German Birdlife Partner)

## Grants held

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Jan 2016 – Jan 2017 Saving forests, changing lives. People's Postcode Lottery (£200k; PI)  
Jan 2011 – Jan 2015 Niche Evolution of South American Trees and its Consequences. Natural Environment Research Council (£350k; Co-I)  
Grants ≤ GBP 20k Critical Ecosystem Partnership Fund small grant (US\$ 20k; Co-I) (2004-2005)  
Deutscher Akademischer Austauschdienst DAAD (EUR 2k; PI) (2004)  
WWF UK (£5k; Co-I) (2005); Institut für Berufliche Qualifizierung NRW (EUR 20k; Co-I) (2003); Gesellschaft für tropische Ornithologie (DEM 1k; PI) (2001); Prince Bernhard Foundation (DEM 1k; Co-I) (2001); TUI (DEM 1k; Co-I) (2001); Deutscher Akademischer Austauschdienst (DEM 1k; PI) (2000)

## Skills

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**Languages:** English, French and Spanish fluent; Kiswahili near fluent; Chinese intermediate.  
**Statistics:** Linear and non-linear (mixed effects) models, multivariate analysis, wide range of species distribution modelling techniques, basic Bayesian statistics.  
**Programming:** advanced R; basics in C and Bash (Unix shell for automating routines in GRASS GIS).  
**Other:** Tropical plant identification (11 months fieldwork in East Africa; Kew course in Tropical Plant Identification).

## Selected refereed publications ([\\*Hyperlink to Google scholar profile\\*](#))

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- Ahrends, A**, Hollingsworth, PM, Beckschäfer, P, Chen, H, Zomer, RJ, Zhang, L, Wang, M & Xu, J. 2017a. China's fight to halt tree cover loss. *Proceedings of the Royal Society B: Biological Sciences* 284.
- Willcock, S, Phillips, OL, Platts, PJ, Swetnam, RD, Balmford, A, Burgess, ND, **Ahrends, A**, Bayliss, J, Doggart, N, Doody, K, Fanning, E, Green, JMH, Hall, J, Howell, KL, Lovett, JC, Marchant, R, Marshall, AR, Mbilinyi, B, Munishi, PKT, Owen, N, Topp-Jorgensen, EJ & Lewis, SL. 2016. Land cover change and carbon emissions over 100 years in an African biodiversity hotspot. *Global Change Biol* 22: 2787-2800.
- Zomer, RJ, Neufeldt, H, Xu, J, **Ahrends, A**, Bossio, D, Trabucco, A, Van Noordwijk, M & Wang, M. 2016. Global Tree Cover and Biomass Carbon on Agricultural Land: The contribution of agroforestry to global and national carbon budgets. *Scientific reports* 6.
- Ahrends, A**, Hollingsworth, PM, Ziegler, AD, Fox, JM, Chen, H, Su, Y & Xu, J. 2015. Current trends of rubber plantation expansion may threaten biodiversity and livelihoods. *Global Environ Change* 34: 48-58.
- Rovero, F, Menegon, M, Fjeldså, J, Collett, L, Doggart, N, Leonard, C, Norton, G, Owen, N, Perkin, A, Spitale, D, **Ahrends, A** & Burgess, ND. 2014. Targeted vertebrate surveys enhance the faunal importance and improve explanatory models within the Eastern Arc Mountains of Kenya and Tanzania. *Divers Distrib*.
- Ahrends, A**, Burgess, ND, Gereau, RE, Marchant, R, Bulling, MT, Lovett, JC, Platts, PJ, Wilkins Kindemba, V, Owen, N, Fanning, E & Rahbek, C. 2011a. Funding begets biodiversity. *Divers Distrib* 17: 191-200.
- Ahrends, A**, Rahbek, C, Bulling, MT, Burgess, ND, Platts, PJ, Lovett, JC, Kindemba, VW, Owen, N, Sallu, AN, Marshall, AR, Mhoro, BE, Fanning, E & Marchant, R. 2011b. Conservation and the botanist effect. *Biol Conserv* 144: 131-140.
- Ahrends, A**, Burgess, ND, Milledge, SAH, Bulling, MT, Fisher, B, Smart, JCR, Clarke, GP, Mhoro, BE & Lewis, SL. 2010. Predictable waves of sequential forest degradation and biodiversity loss spreading from an African city. *Proc Natl Acad Sci USA* 107: 14556-14561.
- Platts, PJ, **Ahrends, A**, Gereau, RE, McClean, CJ, Lovett, JC, Marshall, AR, Pellikka, PKE, Mulligan, M, Fanning, E & Marchant, R. 2010. Can distribution models help refine inventory-based estimates of conservation priority? A case study in the Eastern Arc forests of Tanzania and Kenya. *Divers Distrib* 16: 628-642.

## Selected book chapters, reports and policy briefs

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- Ahrends, A**, Malugu, I, Kindeketa, W, Gross-Camp, N, Burgess, ND, Freeman, S, Thomson, J, Nzao, L, Kayombo, C, Soah, S, Bwoma, M, Paul, P, Harris, D & Hollingsworth, PM. 2017b. Saving forests, Changing Lives. Current status and trends in the Tanzanian coastal forests and their woody resources. RBGE, WWF TCO, COSTECH, University of East Anglia, TRAFFIC East Africa, UNEP World Conservation Monitoring Centre, Dar es Salaam.
- Brooker, R, **Ahrends, A**, Bailey, D, Brewer, M, Brown, I, Castellazzi, M, Gimona, A, Ellis, C, Harding, A, Harrison, P, Hopkins, C, Moss, A & Muir, M. 2013. Final Report: Climate Change Risk-Based Assessment For Notifiable Features in Scotland. Report to Scotland Natural Heritage. UK.
- Milledge SAH, Gelvas IK, **Ahrends A**. 2007. Forestry, Governance and National Development: Lessons Learned from a Logging Boom in Southern Tanzania. Dar es Salaam, TRAFFIC East/Southern Africa, Tanzania Development Partners Group, Tanzania Ministry of Natural Resources and Tourism.