

Sarobidy Rakotonarivo, PhD

E-mail: sarobidy.rakotonarivo@gmail.com

[Google scholar page](#), Twitter: [@sarobidyrakoto](#), Skype: **sarobidyrakoto**

Interdisciplinary social scientist using surveys, choice experiments, behavioural games, qualitative interviews, deliberative approaches and mixed methods to understand decision-making in the areas of natural resource management, environmental justice, environmental economics, climate change mitigation, conservation and rural livelihoods.

PROFESSIONAL PROFILE

Organisation, project management and leadership

In my previous role (as a postdoctoral research at the university of Stirling), I successfully organised and led 145 behavioural game workshops with 580 local farmers across three countries (Scotland, Gabon and Madagascar). I carried them out under budget, over a short time scale while fulfilling other responsibilities. I also organised workshops and academic conferences, taking responsibility for planning, defining topics and chairing discussions.

Analytical, synthetical and research skills

My PhD and postdoctoral training have equipped me with a range of research skills enabling me to select appropriate research methods and analyse a range of quantitative and qualitative data.

Innovation and problem solving

I am continually seeking new ways to approach and solve problems working with colleagues of different disciplines, nationalities and levels of experience. In my current post, I was set the task of developing an innovative game-based approach using tablet computers, accessible to illiterate and innumerate participants (through the use of visually appealing graphics and careful facilitation) to help local farmers voice their needs and stimulate discussion on their motives and decision processes. These games were key to understanding and mitigating conflicts related to conservation and food security.

Oral and written communication skills

My post naturally requires me to be able to communicate effectively, both for the academic environment but also to various audiences. I have given talks to numerous academic conferences in Africa and Europe. I have also presented my research findings to policy makers and organisations such as the World Bank in Madagascar and the National Park Agency in Gabon. Similarly, I have written a dozen of academic articles as well as policy briefs and newspaper articles. I have also demonstrated ability to explain difficult concepts to a wide range of audience including illiterate local communities.

Teamworking skills and networking

I have quickly adapted to work in multicultural and international environments (UK, Denmark, Germany, Costa Rica, Tanzania, Gabon). I have considerable experiences of working in multi-disciplinary research teams. While organising the workshops in three different countries, I had to fit very quickly in with very diverse partners, with very different approaches to work.

Mentorship and teaching skills

I have gained considerable experience in training and coaching my research and field assistants. I also have teaching experience on sustainable development, social research methods, decision making in natural resource management and environmental economics.

EDUCATION

2016 Double PhD degree in Environmental and Development Economics, Bangor University, UK and University of Copenhagen, Denmark

2012 Double MSc in Sustainable Tropical Forestry, Bangor University, UK and Technische Universität Dresden, Germany (Erasmus Mundus Programme)

2010: Diploma of Advanced Studies in Forestry, Development, and Environment, Ecole Supérieure des Sciences Agronomiques, Université d'Antananarivo, Madagascar

2008: BSc degree in Agricultural sciences with a specialisation in Water and Forestry, Ecole Supérieure des Sciences Agronomiques, Université d'Antananarivo, Madagascar

RELEVANT RESEARCH AND WORK EXPERIENCE

January 2020 – Present: Postdoctoral Researcher, Ecole Supérieure des Sciences Agronomiques, Université d'Antananarivo, Madagascar for Forests4Climate4People: “Forests for climate mitigation for both people and planet”

- Run field-training courses for key regional and national stakeholders on the social issues of forest conservation and restoration programmes and provide follow up mentoring as they apply the lessons in their work.
- Produce and disseminate videos to communicate the social issues associated with forest conservation and restoration to civil societies and a greater number of key stakeholders.
- Use the films and policy briefs in trainings and policy engagement
- Produce a review paper of how current tenure rules influence the capacity of projects to effectively reduce emissions from deforestation/degradation and restore forest without harming forest-edge communities.

Oct 2016 – October 2019: Postdoctoral Researcher, University of Stirling, UK for ConFooBio: “Resolving conflicts between biodiversity conservation and food security under uncertainty.” (1.5 million Euros, 2016 – 2021 - Funded by European Research Council)

- Developed and implemented game workshops with local communities in three countries: Madagascar, Gabon and Scotland.
- Evaluated the impacts of different conflict interventions on local people behaviour.
- Identified key determinants of individual and social behaviour (values, attitudes, local perceptions of equity and trust, socio-demographics, etc.).
- Engaged with local partners (National Park Agency in Gabon, Association Madagasikara Voakajy and Scottish National Heritage),
- Trained and mentored research and field assistants across three countries.

Feb 2013 – June 2016: Postgraduate researcher, Bangor University, UK

- Evaluated the local welfare impacts of forest conservation in Madagascar using non-market valuation methods (choice experiments) and qualitative debriefing approaches.
- Contributed to the socio-economic work package of a research programme, p4ges ('Can Paying for Global Ecosystem Services values reduce poverty?'), funded by UK Research Councils and the Department for International Development (DFID).
- Assessed the suitability and outcomes of various compensatory interventions (cash transfer or support for improved farming).
- Collaborated with Conservation International and provided specific recommendations on how global policy can be devised to deliver fair and equitable benefits to local people

Jan 2012 – October 2012: Research assistant: Technische Universität Dresden, Germany

- Assessed the benefit sharing outcomes of a [community carbon enterprise model](#), a pro-poor market-based approach aiming to channel carbon revenues from avoided deforestation (REDD+), to local communities in Lindi district, Tanzania.
- Evaluated the social impacts of the model and the causes and effects of land use conflicts inherent in the model.

- Advanced specific recommendations to project proponents ([TFCG](#) and [MJUMITA](#)) on the need to explicitly assess social and environmental justice in the project and more context-specific efforts to prevent social harm from conservation.

July-August 2011: Summer Course Academy, Centro Agronómico Tropical de Investigación y Enseñanza (CATIE) in Costa Rica

- Examined challenges and opportunities of forest certification and Payments for Ecosystem Services in Costa Rica.

Jan 2009 – Sept 2010: Research assistant, World Wide Fund for Nature - WWF Madagascar

- Measured and modelled above ground biomass and soil organic carbon for the Holistic Conservation Program and Good Planet Foundation in Antananarivo, Madagascar

Sept 2009: Junior consultant for WWF, World Wide Fund for Nature Madagascar

- Co-organized the Malagasy national REDD+ workshop on Monitoring, Reporting and Verification and co-edited the draft report.

GRANTS & AWARDS

2018: PI “Unlocking conflicts between food security and biodiversity conservation: Novel insights from behavioural games.” SPARK grant (supports the pump priming of research projects that provide the spark for a larger application) University of Stirling - £10K

2013-2016: Full PhD fellowship - European Commission through the “Forest for Nature and Society” Erasmus Mundus Doctorate programme - €129K

2015: Vice Chancellor’s Impact Award intended to celebrate doctoral candidates at Bangor University whose research has the potential to directly contribute to the educational, economic, physical or social well-being of the community.

2012: Erasmus Mundus Student Award (<https://sutrofor.eu/>), SUTROFOR program edition V 2010-2012, awarded to the best graduating student with outstanding achievement - €500

2010-2012: Erasmus Mundus MSc scholarships sutrofor.eu, World-class programme with the objective of preparing qualified graduates to deal with the complex aspects of contemporary tropical forestry - €60K

2012: Research studentship from the Academy of Finland and the Responsive Forest Governance Initiative in Africa to carry out a MSc project on in Tanzania on REDD+ benefit sharing mechanism and local forest governance.

2010: Best MSc graduate (“Major de promotion”) of the 2009-2010 Forestry, Development, and Environment DEA cohort at the Ecole Supérieure des Sciences Agronomiques, Université d’Antananarivo, Madagascar

2008: Best student (“Major des Majors”) in Agricultural Sciences (2004-2008 cohort) at the Ecole Supérieure des Sciences Agronomiques, Université d’Antananarivo, Madagascar

PUBLICATIONS

- Brittain, S. ..., **Rakotonarivo, O.S.** et al. (2020). Ethical considerations when conservation research involves people. *Conservation Biology*. <https://doi.org/10.1111/cobi.13464>
- Jones, J. P. G., ..., **Rakotonarivo, O.S.** et al. (2019a). "Last chance for Madagascar's biodiversity." *Nature Sustainability* 2(5): 350-352. DOI: 10.1038/s41893-019-0288-0.
- Jones, J. P. G., ..., **Rakotonarivo, O.S.** et al. (2019b). "Madagascar: Crime threatens biodiversity." *Science* 363(6429): 825-825. DOI: 10.1126/science.aaw6402 %J.
- Hockley, N., Mandimbiniaina, R., **Rakotonarivo O.S.** (2018). “Fair and equitable conservation: do we really want it, and if so, do we know how to achieve it?” *Madagascar Conservation and Development* 13(1):3-4
- Duthie, A. B., J. J. Cusack, I. L. Jones, J. Minderman, E. B. Nilsen, R. A. Pozo, **Rakotonarivo, O. S.** et al. (2018). "GMSE: An r package for generalised management strategy evaluation." *Methods in Ecology and Evolution*.

- Poudyal, M., **Rakotonarivo, O. S.**, J. H. Razafimanahaka, N. Hockley and J. P. G. Jones (2018). "Household economy, forest dependency & opportunity costs of conservation in eastern rainforests of Madagascar." *Scientific data* 5: 180225-180225.
- Poudyal M, Jones JPG, **Rakotonarivo, O.S.** et al. (2018) "Who bears the cost of forest conservation?" *PeerJ* 6:e5106 <https://doi.org/10.7717/peerj.5106>
- Redpath, S. M.,..., **Rakotonarivo, O.S.** et al. (2018). "Games as Tools to Address Conservation Conflicts." *Trends in Ecology & Evolution*, 33(6):415-426
- Cusack, J. Duthie, A.D., **Rakotonarivo, O.S.** et al. (2018). "Time series analysis reveals synchrony and asynchrony between conflict management effort and increasing large grazing bird populations in northern Europe." *Conservation Letters* 0(0): e12450.
- **Rakotonarivo, O. S.**, J. Bredahl Jacobsen, et al. (2018). "Estimating welfare impacts where property rights are contested: methodological and policy implications." *Land Use Policy* 70:71-83
- **Rakotonarivo, O. S.**, J. B. Jacobsen, et al. (2017). "Qualitative and Quantitative Evidence on the True Local Welfare Costs of Forest Conservation in Madagascar: Are Discrete Choice Experiments a Valid ex ante Tool?" *World Development* 94:478-491
- **Rakotonarivo, O.S.**, Schaafsma, M. Hockley, N.J. (2016). A systematic review of the reliability and validity of discrete choice experiments in valuing non-market environmental goods. *Journal of Environmental Management* 183(1):98-109
- **Rakotonarivo O.S.** (2016) "Improving the estimation of local welfare costs of conservation in low-income countries using choice experiments: Empirical evidence from Madagascar" PhD [Thesis](#) Prifysgol Bangor University
- Scheba, A. and **Rakotonarivo, O.S.** (2016). Territorialising REDD+: Conflicts over forest conservation in Lindi, Tanzania. *Land Use Policy* 57:625-637
- Poudyal, M., ..., **Rakotonarivo, O.S.**, et al. (2016) Can REDD+ social safeguards reach the 'right' people? Lessons from Madagascar. *Global Environmental Change* 37: 31-42
- Mustalahti, I. **Rakotonarivo, O.S.** (2014) REDD+ and empowered deliberative democracy: Learning from Tanzania. *World Development* 59: 199-211
- Vieilledent, G., ..., **Rakotonarivo, O.S.** et al. (2012). A universal approach to estimate biomass and carbon stock in tropical forests using generic allometric models. *Ecological Applications* 22(2): 572-583

Manuscript in press:

- Cusack, J. ..., **Rakotonarivo, O.S.**, et al. (in press) Balancing decision-making bias and harvesting compliance for sustainable wildlife management. *Ecology and Society*

Submitted manuscripts:

- **Rakotonarivo, O.S.** et al. (under review) A novel experimental game reveals the importance of performance-based payments and social equity in conservation conflict interventions.
- **Rakotonarivo O.S.** et al. (under review) "The role of trust and fairness index in mitigating conservation conflicts: A case study of goose-agriculture conflict in Orkney."
- Duthie, A.B., ... **Rakotonarivo, O.S.**, et al. (under review) Online multiplayer games as virtual laboratories for collecting data on socio-ecological decision-making.

Manuscript in preparation

- **Rakotonarivo O.S.** et al. "When payments interact with property rights: unlocking conflicts between forest conservation and forest clearing for swidden agriculture in Africa.

Datasets, Newspaper articles and Policy Brief

- **Rakotonarivo, O.S.** et al. (2020). Experimental games and questionnaire survey for understanding conflicts in Gabon, Scotland, Madagascar and Kenya. [Data Collection]. Colchester, Essex: UK Data Archive. [10.5255/UKDA-SN-854068](https://beta.ukdataservice.ac.uk/datacatalog/studies/study?id=10.5255/UKDA-SN-854068)
- **Rakotonarivo, O. S.** (2019). Five actions Madagascar's president must take to save country's biodiversity, *Theconversation*. 12 May 2019

- Poudyal, M., **Rakotonarivo, O.S.** et al. (2016). Household survey and discrete choice experiment for investigating the opportunity cost of conservation restrictions in eastern Madagascar. [Data Collection]. Colchester, Essex: UK Data Archive. 10.5255/UKDA-SN-852435.
- **Rakotonarivo, O.S.** Hockley, N. (2017). “Forest conservation approaches must recognise the rights of local people”. [TheConversation](#). 08. August 2017.
- Cannon, J. “Forest communities pay the price for conservation in Madagascar”. 25 July 2018. <https://news.mongabay.com/2018/07>
- Who bears the costs of forest conservation? Policy brief (2018). Socio-economic Work Package P4ges. Retrieved from p4ges project [website](#)
- Do REDD+ social safeguards reach the ‘right’ people? Policy brief (2018). Socio-economic Work Package P4ges. Retrieved from p4ges project [website](#)

SELECTED TALKS

- Rakotonarivo O.S. **Using in-depth interviews and focus groups to supplement quantitative surveys.** Talk given at the ESPA (Ecosystem Services for Poverty Alleviation) Social Science event, London, UK. October 2014
- Rakotonarivo, O.S. **Restriction du teviata: Quels en sont les coûts pour les populations locales?** Talk given at the World Bank group, Antananarivo, Madagascar, December 2015
- Rakotonarivo, OS. **Willingness-to-pay versus Willingness-to-accept: Contested property rights in forest conservation in Madagascar:** Talk given at the 18th BIOECON (Biodiversity and Economics for Conservation) Annual Conference, Cambridge, United Kingdom, September 2016
- Rakotonarivo, OS. **Win-win illusions: the need to rethink coercive models of forest conservation in the tropics.** Talk given at the ESPA (Ecosystem Services for Poverty Alleviation) 2016 Annual Science Conference in Nairobi, Kenya, November 2016
- Rakotonarivo, OS. **Does more time to deliberate affect respondents’ behaviour in a discrete choice experiment?** Talk given at the 22nd Annual Conference of the European Association of Environmental and Resource Economics in Zurich, Switzerland, June 2016
- Rakotonarivo, OS. **Using choice experiments to estimate the net welfare costs of forest conservation ex-ante: How does experience affect survey responses?** Talk given at Forests and Livelihoods: Assessment, Research, and Engagement (FLARE) Annual Meeting, Edinburgh, United Kingdom, December 2016
- Rakotonarivo, OS. **Jeux comportementaux: Un outil innovant pour l’atténuation des conflits homme-éléphants** Talk given at Agence Nationale des Parcs Nationaux (ANPN), Libreville, Gabon, March 2017

RELEVANT TRAINING

- **Theory of Change one-day workshop** - facilitated by Dr Isabel Vogel, on applying Theory of Change to addressing global challenges. University of Stirling, November 2018
- **Grant-writing one-day training workshop** – Traps, tricks and techniques: grantcrafting a competitive application – facilitated by Grantcraft. University of Stirling, May 2018
- **Preparing Successful Fellowship Applications** – facilitated by Dr Liz Elvidge from Imperial College, University of Stirling, June 2017
- **Facilitation skills workshop** – a highly participative and intensive 2-day training workshop designed to provide participants with tools and techniques to facilitate with greater confidence and competence - by Amanda Stott from Facilitate This, September 2017

TEACHING, MENTORING AND LEADERSHIP

- Technical advisor: **“Elaboration of a national protocol to monitor elephant-conflict intensity across Gabon”** Cellule conflit homme-faune - Agence Nationale des Parcs Nationaux (ANPN), Libreville, Gabon, December 2018

- Course contributor: “**Environmental services and conservation decision making**”. ENMPG21- Biodiversity and Ecosystem Services (2017/8), 10 ECTS. MSc in Environmental Management. University of Stirling. Fall 2018
- Course contributor: “**Sustainable Development**” and the “**Economics of Designing Payments for Ecosystem Services (PES) schemes**”. ENMPG05 - Environmental Economics (2017/8), 15 ECTS. MSc in Environmental Management. University of Stirling. Fall 2017
- Course contributor: “**Valuation of Ecosystem Services**” –. DXX-3016 - Ecosystem services and functioning. 15 ECTS. BSc Conservation with Forestry. Bangor University, Spring 2016
- Thesis supervision: “**Understanding conservationists’ perceptions of conservation conflicts using Q-Methodology**” BSc student Sheena Davis (University of Stirling), “**Lion games with pastoralists in Tanzania**” PhD student Becca Sargent (University of Newcastle), “**Harnessing the potential of monetary incentives to conserve forests and improve livelihoods in Kenya**”, MSc student Adams Kipchumba (University of Stirling)
- Mentoring and training: Seven research assistants in Madagascar, Scotland and Gabon.
- Handling editor for Conservation biology, Reviewer for World Development, Current Opinion in Environmental Sustainability, Land Use Policy, Animal Conservation, Forests, and Madagascar Conservation and Development

SOFTWARE SKILLS

Statistics:

- Proficient user of **Nlogit**, **R software**, **SPSS**. I have used these software (R in particular) to conduct basic descriptive and inferential statistics as well as more advanced analyses such as generalized multivariate regression models.
- Proficient user of **NVivo** and **RQDA** software that support qualitative and mixed methods research

Visual design:

- Basic graphics and maps using **R software** and **QGIS**,
- Good command of **Netlogo**, a multi-agent programmable modelling environment for communicating and simulating natural and social phenomena and for studying individual and social behaviour.

Form building:

- Used **Google Forms** to build online questionnaires,
- Used **KoboToolbox** (a free open-source tool for mobile data collection in challenging environments)

LANGUAGE SKILLS

My native language is **Malagasy**. I am highly proficient in both spoken and written **English** and **French**.

REFEREES

- ⇒ **Dr Neal Hockley**
 Senior Lecturer in Economics & Policy - School of Environment, Natural Resources and Geography, Bangor University, Thoday Building, LL57 2UW, Gwynedd, Wales
 Email: n.hockley@bangor.ac.uk
 Tel: +44(0)1248 382769

- ⇒ **Prof Julia P. G. Jones**
Professor in Conservation Science, School of Environment,
Natural Resources and Geography- Bangor University,
Thoday Building, LL57 2UW, Gwynedd, Wales
Email: julia.jones@bangor.ac.uk
Tel: +44 (0) 1248 382650
- ⇒ **Prof Nils Bunnefeld**
Professor in Conservation science with a focus on social-
ecological systems. Biological and Environmental Sciences
University of Stirling, Stirling, FK9 4LA
Email: nils.bunnefeld@stir.ac.uk
Tel: +44 (0)1786 467804
- ⇒ **Prof Jette Bredahl Jacobsen**
Professor in Environmental and Resource Economics
Rolighedsvej 23, 1958 Frb. C, Gammel Bygning stuen,
Building: A107
Email: jbj@ifro.ku.dk
Phone: +45 35 33 17 46