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PUBLICATIONS AND RESEARCH

Journal articles

Maney, C., Hill, S.L.L., Giller, K.E., Sassen, M. (*in review*) Mature, diverse shade tree communities are needed to reap broad biodiversity benefits in cocoa agroforestry systems.

Burns, J. *et al.* (*in review*). Land system response to values-based scenarios of global biodiversity policy implementation.

Maney, C., Sassen, M., Giller, K.E. (2024). Are agricultural commodity production systems at risk from local biodiversity loss? *Biol. Lett.* 20: 20240283 <https://doi.org/10.1098/rsbl.2024.0283>

Maney, C., Guaras, D., Harrison, J. *et al.* National commitments to Aichi Targets and their implications for monitoring the Kunming-Montreal Global Biodiversity Framework. *npj biodiversity* 3, 6 (2024). <https://doi.org/10.1038/s44185-024-00039-5>

Maney, C., Sassen, M. & Hill, S. L. L. (2022). Modelling biodiversity responses to land use in areas of cocoa cultivation. *Agriculture, Ecosystems & Environment*. <http://dx.doi.org/10.1016/j.agee.2021.107712>

Vynne, C. *et al.* (2022). An Ecoregion-Based Approach to Restoring the World's Intact Large Mammal Assemblages. *Ecography*. <http://dx.doi.org/10.1111/ecog.06098>

Woodley, S., Bhola, N., Maney, C. & Locke, H. (2019) Area-based conservation beyond 2020: A global survey of conservation scientists. *Parks* 25. <https://doi.org/10.2305/IUCN.CH.2019.PARKS-25-2SW1.en>

Hill, S. L. L., Arnell, A., Maney, C. *et al.* (2019) Measuring Forest Biodiversity Status and Changes Globally. *Front. For. Glob. Chang.* <https://doi.org/10.3389/ffgc.2019.00070>

Reports and chapters

EU Directorate-General for Environment. BIOCLIMA: Assessing Land use, Climate and Biodiversity impacts of land-based climate mitigation and biodiversity policies in the EU (2024). https://environment.ec.europa.eu/publications/bioclimate-assessing-land-use-climate-and-biodiversity-impacts-land-based-climate-mitigation-and_en

Cambridge Econometrics, UNEP-WCMC. Modelling an Inclusive Green Economy COVID-19 Recovery Programme for South Africa (2021). <https://www.camecon.com/what/our-work/modelling-a-global-inclusive-green-economy-covid-19-recovery-programme/>

EDUCATION AND TRAINING

Plant Production Systems, Wageningen University and Research

PhD, Production Ecology and Resource Conservation

- Thesis title: "Cocoa, conservation, and capturing causality. Interdependencies between biodiversity and cocoa farming in West and Central Africa".
- Large-scale synthesis models of cocoa production system biodiversity intactness, a review of agricultural commodity impacts and dependencies on biodiversity, structural modelling of biodiversity in West and Central African cocoa, modelling biodiversity relationships with cocoa yield and ecosystem service delivery.
- Supervised by Prof. Ken E. Giller and Dr Marieke Sassen of Plant Production Systems, Wageningen University, co-supervised by Dr Samantha L.L. Hill (UNEP-WCMC).

Department of Zoology, University of Cambridge

MPhil by Research, Zoology

- Thesis title: "Using national biodiversity planning and reporting data to investigate gaps in biodiversity conservation progress".
- Studentship-funded research. Joint supervisors: Prof. William Sutherland CBE, Conservation Science Group, University of Cambridge and Prof. Neil Burgess, Chief Scientist, UNEP-WCMC.

Queens' College, University of Cambridge

MA, Biological Natural Sciences (First class)

- Research project title: "Habitat change in tropical forest alters the distribution of morphologies in odonate communities".
- Joint supervisors: Dr Edgar Turner, Insect Ecology group, Zoology Department, Dr Sarah Luke, Zoology Department.

WORK EXPERIENCE

August 2024 - present

**Senior Modelling Scientist and Nature Futures lead
UNEP-WCMC**

- Lead the “Nature Futures” focal initiative, supporting organisational strategy and providing expert input to projects on nature scenarios across the Centre.
- Lead research on the integration of new technology including geospatial foundational models and large language models into biodiversity modelling and decision-making.

January 2024 - July 2024

**Modelling Scientist
UNEP-WCMC**

- Led technical components of biodiversity modelling projects at the global scale.
- Carried out R&D for indicator development and implementation by public and private sectors.
- Provided guidance for finance sector implementation of biodiversity indicators.

January 2022 - December 2023

**TRADE Hub Project Researcher
UNEP-WCMC**

- Two-year research position on the impacts and dependencies of tropical commodity crops on biodiversity, with a case study on cocoa.
- Developed institutional relationships with stakeholders including the CocoaSoils public-private partnership.

January 2021 - December 2021

**Programme Officer
UNEP-WCMC**

- Supported the development and review of global indicators of ecosystem condition.
- Technical lead on a project estimating futures of natural capital assets and ecosystem services under COVID-19 economic recovery scenarios.

**November 2018 - July 2019
and**

**Associate Programme Officer
UNEP-WCMC**

October 2020 - December 2020

- Carried out spatial analyses of biodiversity data for public policy and research, including mangrove mapping and priority areas for human-wildlife conflict.
- Supported scoping analyses into new national-scale biodiversity indicators.
- Supported global-scale modelling and mapping of forest biodiversity using R and Google Earth Engine.

August 2018 - October 2018

Global Biodiversity Modelling Internship
UNEP-WCMC

- Collated and standardised data on biodiversity responses to land-use change.
- Developed mixed-effects models to estimate generalised impacts of cocoa farming on local biodiversity.