

# **BLOOM - Biodiversity and Land-use Objectives for Optimal Management (2025-2027)**



<https://iiasa.ac.at/projects/bloom>

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The **BLOOM project** is a **One Health, interdisciplinary initiative** that brings together ecological, epidemiological, and economic modeling to understand and mitigate the risk of zoonotic disease spillover. Our goal is to develop an **integrated modeling framework** that explores how ecosystem conservation can influence disease dynamics—particularly by affecting biodiversity and the presence of reservoir species.

We also incorporate the **socio-economic behaviors and decisions of local stakeholders**, such as farmers and households, to better reflect real-world trade-offs. This ensures that our framework can inform equitable, context-sensitive policies that balance **public health, biodiversity, and local livelihoods**.

## **Project Outputs**

We aim to deliver:

- A **modeling framework** to support analysis of conservation–health trade-offs;
- A **policy brief** translating key findings for decision-makers;
- **Peer-reviewed research outputs** that highlight the value of ecological insights in public health planning.

## **Case Study and Long-Term Vision**

In the short term, BLOOM is focused on **Ebola Virus Disease (EVD)** risk at a regional scale in **Sierra Leone** and potentially **Côte d’Ivoire**, using available ecological and socio-economic data. In the long term, we hope to scale this work through collaborative grant applications, enabling broader implementation of One Health strategies. We envision partnerships with local institutions, researchers, and governments to co-develop solutions that are both effective and locally grounded.

## We're Looking for Collaborators

To strengthen our project and ensure relevance on the ground, we're seeking partners who can:

- **Provide insights into conservation policy:**
  - Key policy challenges in the region
  - Stakeholder mapping (e.g., conservation actors and their networks)
  - Opportunities for science-policy engagement (events, platforms, networks)
  - Feedback and validation of findings (fully acknowledged in outputs)
- **Share ecological data or expertise:**
  - Biodiversity and wildlife surveys
  - Forest and land-use inventories
  - Agroforestry practices and their interactions with local communities
  - Insights into human-wildlife interactions and Ebola spillover dynamics
- **Contribute economic and land-use information:**
  - Industry distribution and land-use patterns
  - Agricultural production types (subsistence, regional markets, export)
  - Wages by sector and migration patterns
  - Structural drivers of land-use change

## What We Can Offer

As a team of early-career researchers, we're building our network with the support of **IIASA** and are committed to **reciprocal, impactful collaborations**. In return for your engagement, we offer:

- **Co-authorship** in scientific and policy publications
- **Visibility** via the IIASA website and project outreach materials (with full attribution of logos and affiliations)
- Support for involvement in programs such as:
  - [IIASA's Young Scientists Summer Program \(YSSP\)](#) – for PhD student research stays
  - [Africa-UniNet mobility grants](#) – for research exchanges with IIASA

We warmly welcome expressions of interest from researchers, practitioners, and institutions who would like to collaborate. We are happy to provide more materials and information upon request.