



THE ROLE OF BIODIVERSITY IN CLIMATE CHANGE MITIGATION (ROBIN): A WHOLE SYSTEM APPROACH

ROBIN aims to understand, measure and quantify biodiversity's role in mitigating climate change and in providing other benefits to people.

The issue

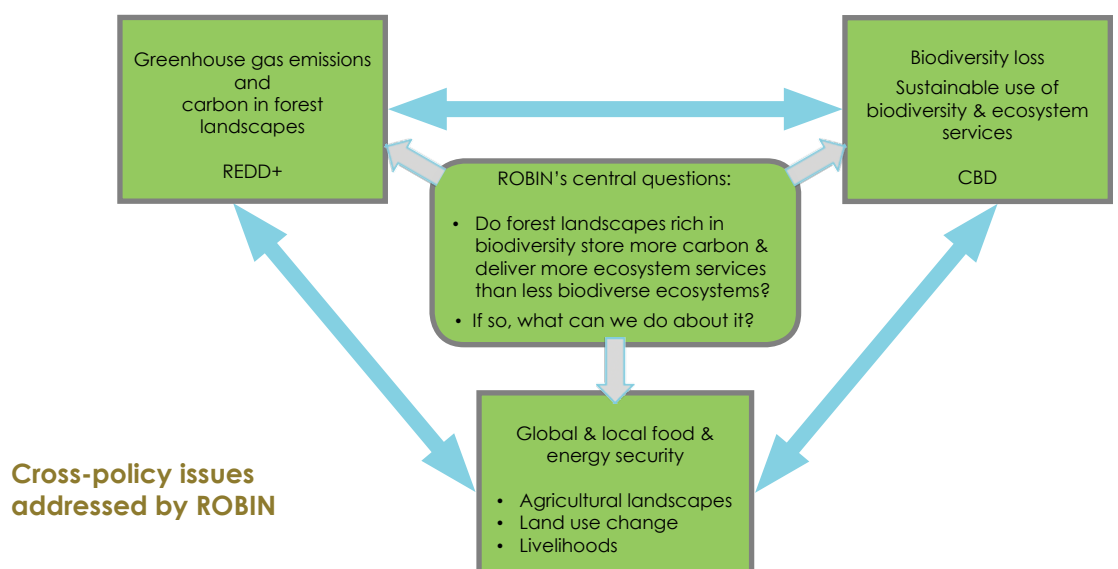
Tropical forest landscapes are hot spots for biodiversity and hold substantial stores of carbon. They are used by forestry, agriculture, nature conservation and other sectors, and they must provide for peoples' health, well-being and economic security. ROBIN tries to reconcile these many and potentially conflicting demands.

The context

This issue is relevant to the Convention on Biological Diversity (CBD) and actions to protect biodiversity and enhance its benefits to people. It informs the UN programme on Reducing Emissions from Deforestation & Forest Degradation (REDD+) which aims to enhance forest carbon pools by supporting the conservation, sustainable management and restoration of forests. REDD+ includes social and environmental safeguards. ROBIN also considers land-use change in multi-functional landscapes and is relevant to food and energy security.

ABOUT ROBIN

ROBIN has assessed the role of biodiversity in terrestrial ecosystems in South and Mesoamerica in mitigating climate change. It has evaluated socio-ecological consequences of changes in biodiversity and ecosystem services under climate change.





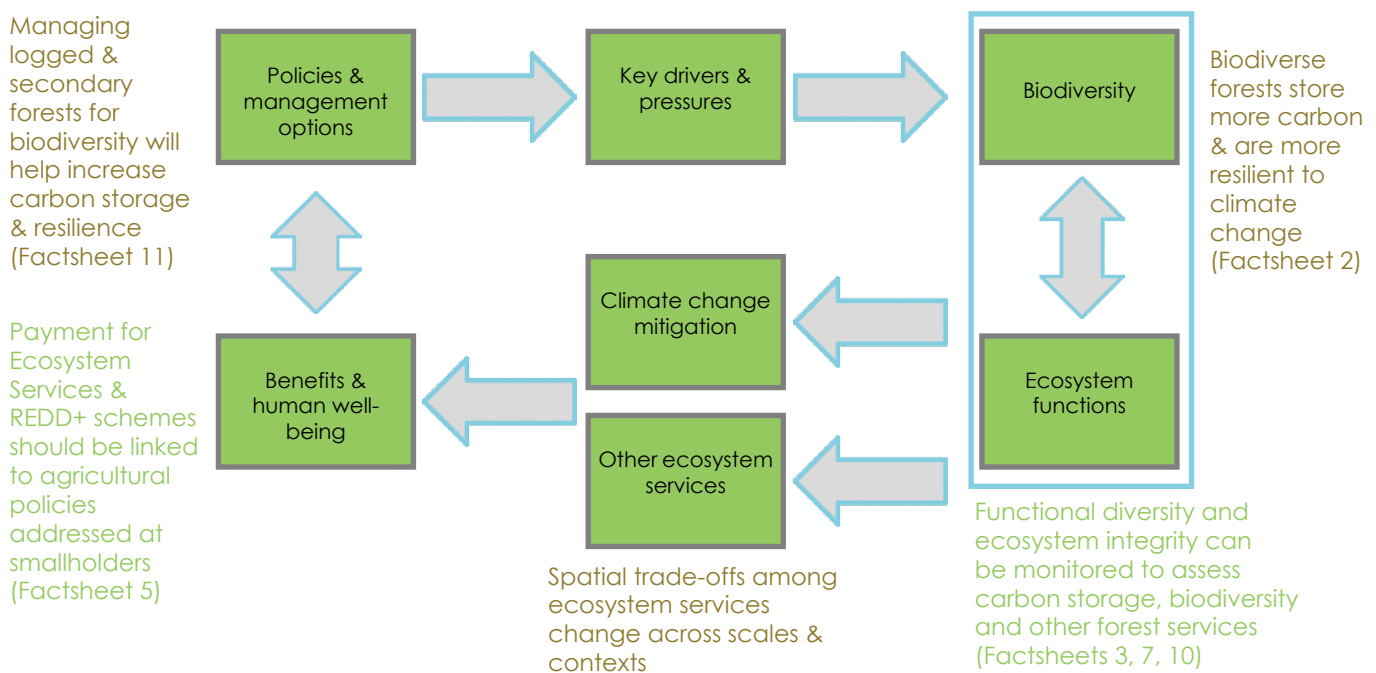
Methods

ROBIN used data from **field studies** (Factsheet 2), **remote sensing**, land use and ecosystem **modelling** (Factsheets 4, 6) and **participatory** approaches. We worked at multiple scales (local, national - Mexico, Brazil, Bolivia and Guyana - and regional) using a common indicator framework. The ROBIN spatial data portal (<http://robinproject.info/home/products/geoportal/>) will provide access to many datasets.

We used **scenarios** combining possible climate and land use futures with options representing how people and governments may affect climate change. We improved two ecosystem models (LPJmL-FIT and JULES) by including biodiversity more realistically. We tested the scenarios in the models to see how forest growth, crop yield, carbon storage and other ecosystem services may be affected by future climate and land use change.

We worked with a broad range of **local people** (farmers, foresters, government authorities, etc.) in three case study areas. We used Fuzzy Cognitive Mapping to explore issues relating to forest biodiversity, climate change and local needs. ROBIN developed two **decision-support tools** to help develop options that are relevant to their local or national situations, OPTamos (Factsheet 8) and QUICKScan (Factsheet 9).

Some key messages from ROBIN's whole system approach



More information
www.robinproject.info

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