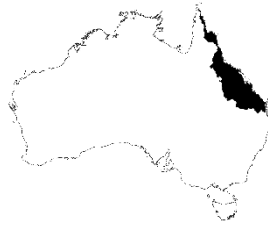


Assessing the Impacts of Land Change on Carbon Emissions and Biodiversity

A Pilot Study Focusing on the



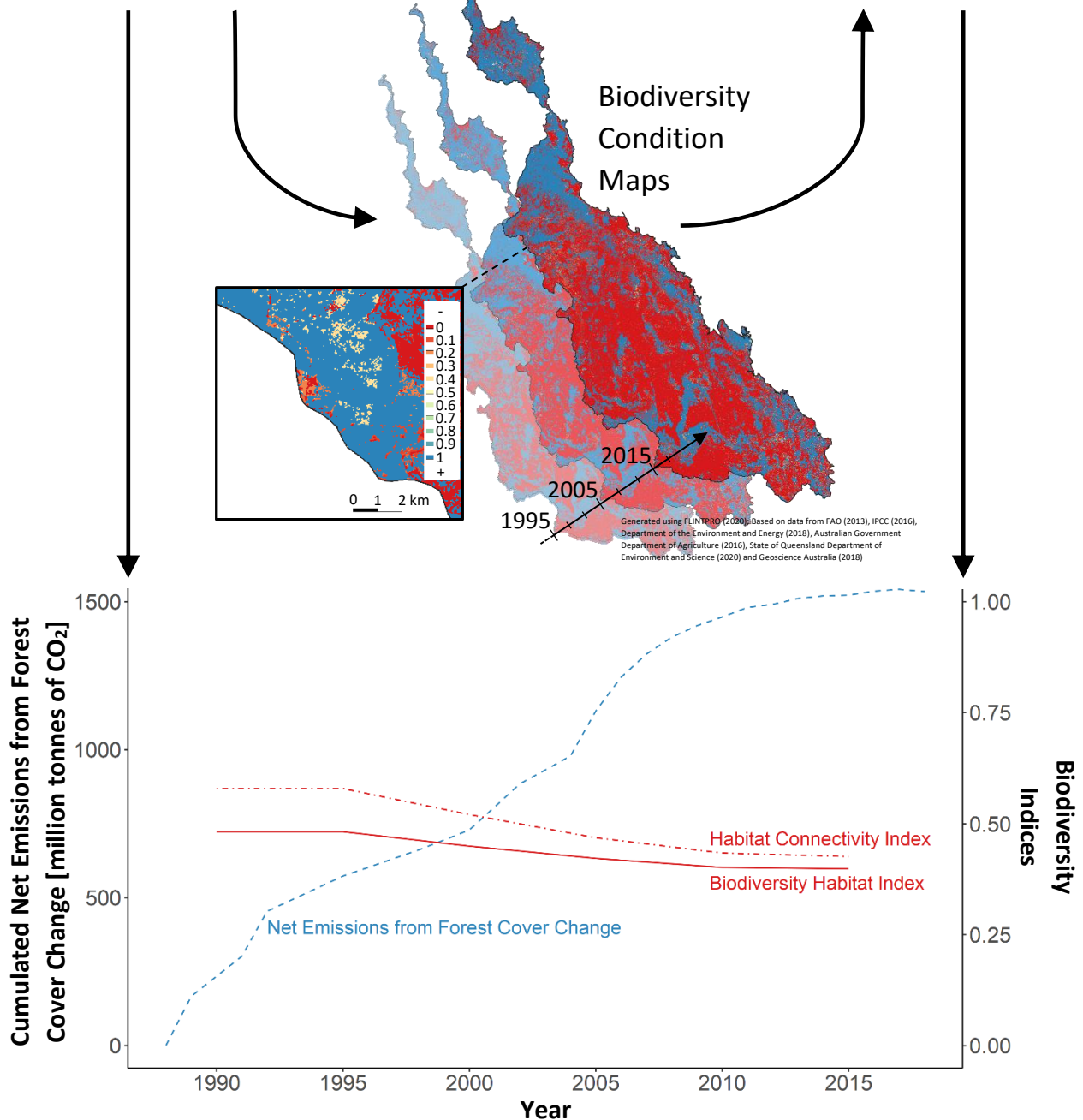
Great Barrier Reef Catchment Area



Calculating Carbon Stock and Stock Change

CSIRO
BILBI

Assessing the Consequences of Change for Biodiversity



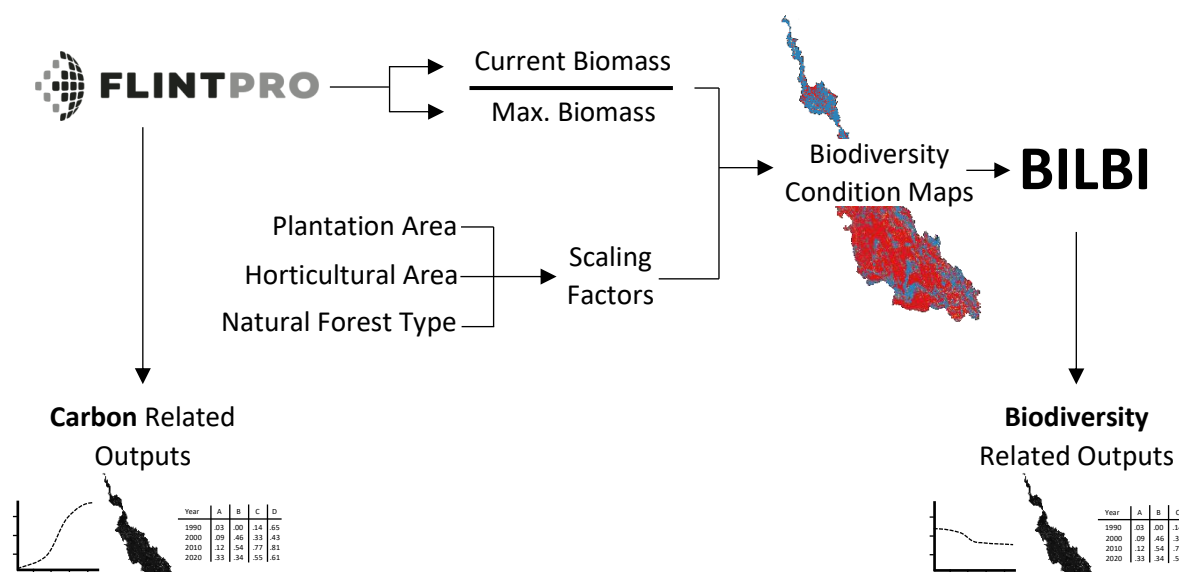
Our Goal

We aim to provide a transparent, accurate and consistent system to monitor the impacts of land management on climate and biodiversity through time and space.

The Principle

We connect the Carbon Emission Model (FLINTPRO) and the Biodiversity Model (BILBI) with a time-series of Biodiversity Condition Maps. These maps provide information about changes in vegetation and the quality of habitat to support biodiversity. They reflect:

the current Above-Ground Biomass of the specific year in relation to the potential maximum Above-Ground Biomass and the quality of the vegetation in form of Scaling Factors



The Outcome

We provide a consistent system for tracking and simulating changes in vegetation coverage, related carbon fluxes and impacts on biodiversity. This allows for monitoring the trade-offs and co-benefits of land management on climate and biodiversity.

Next Steps

With this pilot study focusing on the Great Barrier Reef Catchment Area, we have successfully demonstrated the functionality of the system. A next step involves the development of a fully operational Biodiversity Condition Map Module. The module will enable users to generate the condition maps directly from the FLINTPRO environment. As an additional development, a specified FLINTPRO Forest Growth Module will be adjusted to the requirements of biodiversity monitoring.

Contact

Dr Philipp Kilham
philipp.kilham@mulliongroup.com

Dr Tom Harwood
Tom.Harwood@csiro.au