Objectives:

* Create a gridded product based on a earth system model to simulate regeneration processes.
* Develop a large-scale monitoring tool for restoration sites derived from publicly available data.
* Develop algorithms to simulate secondary forest regrowth.
* Predict suitability of land for specific restoration strategies across the landscape.

General questions:

Specific questions:

Text:

Roughly 70% of forested areas has been affected by forest management, clearing and abandonment (FAO,2010). Natural regeneration processes have an important role in the resilience of forest during mortality events. Regeneration processes such as reproductive allocation, seed dispersal, germination and seedling survival are influenced by environmental variables such as light availability, water, temperature and soil composition. This variables can have a deterministic effect in where do trees regrow and at what rate.

Non-governmental organizations dedicated to tropical forest restoration often struggle to meet the goals set by the funds that finance their operations. It is even more difficult to set out a monitoring strategy that allows them to report the total restored land. Large scale monitoring of forest regrowth can be possible with

Reproductive allocation can be monitored through remote sensing of flowering (crown delineation and detection of flowering individuals with RGB )

There are vegetation demographic models to represent vegetation dynamics.

Processes such as reproductive allocation, dispersal, seed survival, germination, seedling survival and growth to adult size classes are sensitive to light, water, temperature and soil nutrients, thus it can determine where trees regenerate or not.