

Challenge of disturbances and solution for sustainable management in the dry forest ecosystem, Madagascar

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Ecosystem services

Provisioning services : foods, water, materials

Regulating services: filtering water, pollination, etc.

Cultural services

Supporting services

Problem: The cover of Malagasy dry forest has decreased for century



Natural disturbances:
Wildfire, cyclone, etc.



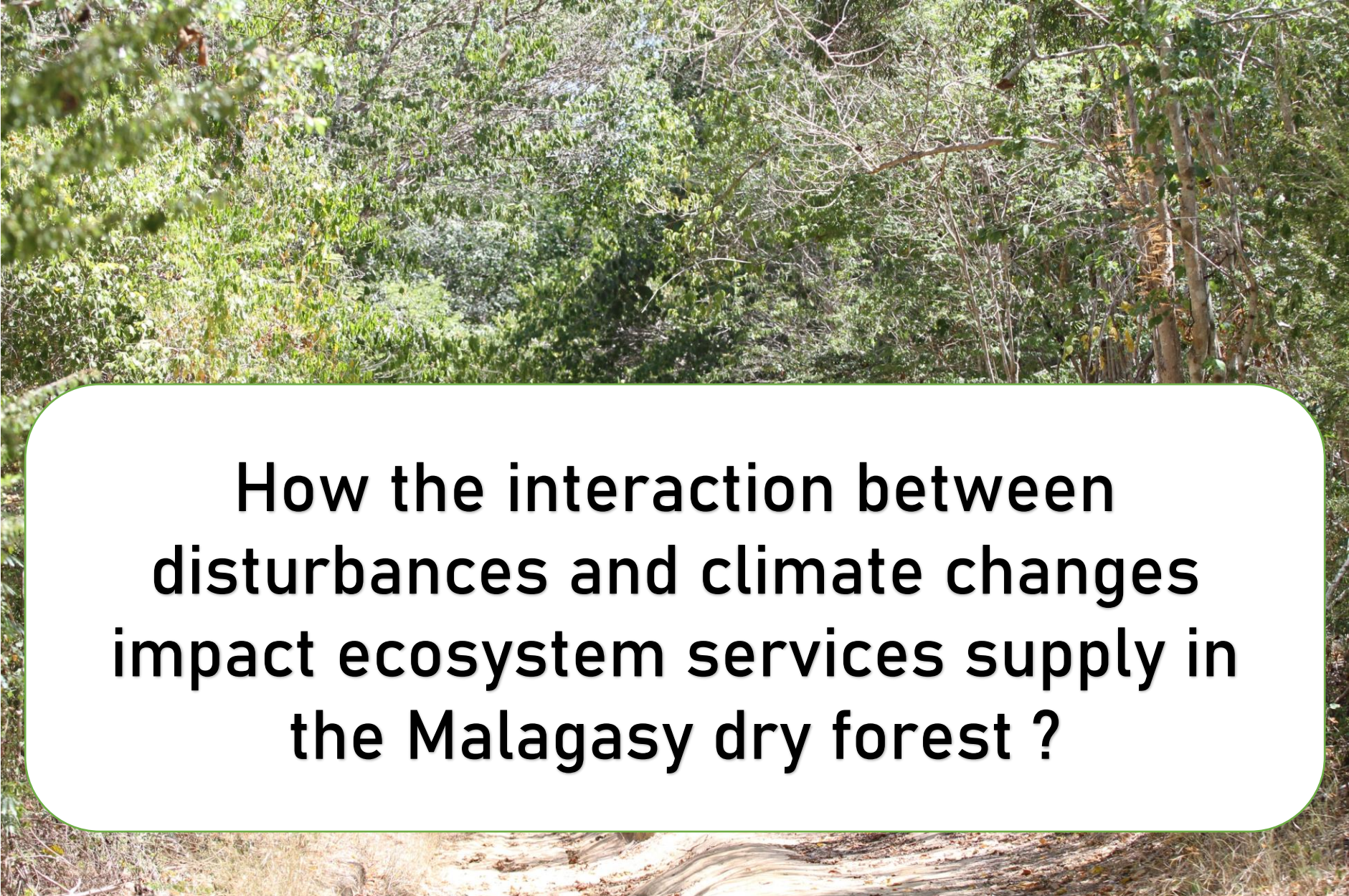
Human disturbances:
Agricultural expansion



Climate change conditions



**Forest
dynamic's and
ecosystem
service supply
were affected**



**How the interaction between
disturbances and climate changes
impact ecosystem services supply in
the Malagasy dry forest ?**

Modeling methods correlations:

1

Forest disturbances and climate change



2

Malagasy dry forest dynamic's and ecosystem services supply

- ◆ Forest fire
- ◆ Agricultural land uses
- ◆ Carbon sequestration
- ◆ Water yield
- ◆ Habitat quality

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Output of the study

	Future scenario of Malagasy dry forest cover Its capacity to provide ecosystem services
	Identification of important areas for conservation / restoration, based on an area's high level of ecosystem service provision.