







# TREES Research: Influence of land use governance on natural resources in Irodo Whatershed, DIANA Region

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#### Introduction

- Irodo whatershed research site is located near 3 protected areas (Montagne d'Ambre National Park, Ankarana Special Reserve, Analamerana Special Reserve)
- Land use follows a dynamic that depends on several factors: socioeconomic, political and environmental (physical)
- The patterns of degradation perceived at the watershed level are different for the upstream and downstream population
- Does the application of land use policies effective at the scale of the local population in the Irodo watershed?
- The research is part of Tropical Restoration Expansion for Ecosystem Services (TREES) project of Forest for Future (F4F) implemented by GIZ in Madagascar, Ethiopia and Togo

#### Results

#### Land use and land degradation

#### Land use forms by population

- Rice cultivation
   on the plains
   Subsistance crops
- on the upper slopes of plains • Forest plantations on the slopes for energy

and construction

# Degradation of ecosystem services motors

slope erosion
 Drying up of

Forms of

교의 (5)[쓰기스레이 (5)[18]

- water points
   Invasive plants
- Reduction of soil fertility

Land use planning and impact

Figure: Irodo Whatershed (© GIZ)

Fires of

multiple origin

Slash and burn

agriculture

illegal wood cut

#### Aims

- To establish the link between the spatio-temporal dynamics of forests and the different forms of land use in the Irodo Whatershed
- To show the importance of land use policies in forest governance

## Land use policies by institutions

- Territorial planning tools by decentralised territorial authorities (SRAT, SAC)
- IGAs or value chains initiated by organisations

# Couvert arboré Gain de couvert arboré Perte de couvert arboré

Watershed (2001-2021)

600ha
450
300
150
101 102 103 104 105 106 107 108 109 10 11 102 103 104 105 106 107 118 119 12

Perte de couvert arboré

Perte de couverture végétale due aux incendies

Forestry dynamics in the Irodo

#### Forestry dynamics:

Between 2001-2021:

3680 ha of forest cover loss, i.e. 0.53% of the total loss in the DIANA Region 178 ha of fire losses

Between 2001 and 2012:

534 ha of forest gain representing 0.62% of regional forest gain

### Methodology



• Literature review: link between land use and forest management, agriculture means, land use policy



- Semi structured interviews
- Focus group discussions
- Data treatment and analysis:
- Qualitative content analysis
- Spatio-temporal dynamics of forest cover loss (with Forest Global Watch)

#### Discussions

- Primary cause of deforestation and land degradation in Irodo whatershed is agriculture and its methods linked to livelihoods
- Planning instruments influence the restoration or conservation of ecosystems but also maintain livelihoods in degraded landscapes by improving and re-establishing the flow of services

#### Bibliography

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