Forecasting tropical moist forest cover change in the 21ˢᵗ century under a "business-as-usual" scenario

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Abstract

Tropical forests are disappearing at an alarming rate because of human activities. Here we modelled spatially the anthropogenic deforestation process in 119 tropical territories (X countries) including all the humid tropical forests in the world. We demonstrated the effectiveness of protectead areas at deplacing deforestation and the negative impact of road infrastructures on forest conservation globally. We derived high resolution global maps of the deforestation risk and likely future forest cover for the 21st century under a "business-as-usual" scenario. If large areas of tropical forest will still remain in 2100 at the heart of Amazon, in the Congo Basin and in New-Guinea, many countries will entirely loose their tropical forest before the end of the 21st century. The remaining forest will be strongly fragmented and located in remote places.

Keywords: deforestation, forecasts, forest cover change, forest refuge areas, moist tropical forests, spatial modelling, scenarios.

Short title: Forecasting tropical moist forest cover change.

1   Introduction

(brief introduction describing the paper's significance)

In general, this should include a brief (1-2 paragraph) introduction, followed by a statement of the specific scope of the study, followed by results and then interpretations.

2   Results and discussion
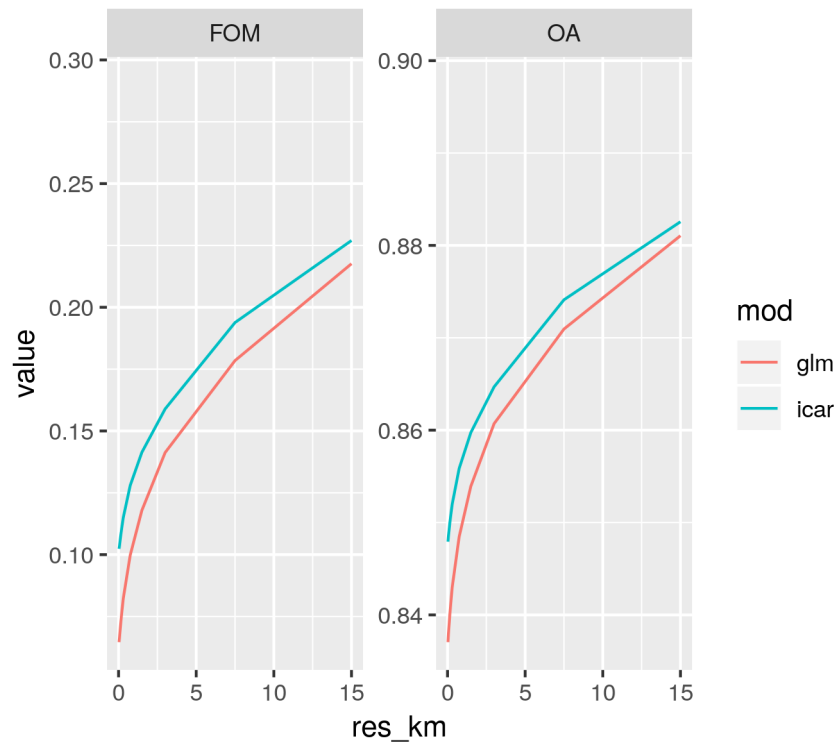
3   Ackowledgements

4 Tables

5   Figures

Figure 1: **Models' accuracy at multiple resolutions**. We compared the projected deforestation maps of the two models (glm and icar) to the observed deforestation map on the period 2010-2017 (Vieilledent *et al.*, 2018a,b). We computed the Figure Of Merit (FOM) and the Overall Accuracy (OA) of the projections at multiple resolutions (from 30 m to 15 km).

References

Vieilledent, G., Grinand, C., Rakotomalala, F.A., Ranaivosoa, R., Rakotoarijaona, J.R., Allnutt, T.F. & Achard, F. (2018a) Output data from: Combining global tree cover loss data with historical national forest-cover maps to look at six decades of deforestation and forest fragmentation in Madagascar.
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