



Agricultural commodities face substantial risk from climate change because of their sensitivity to and dependence on weather variables. One such commodity is macadamia (*Macadamia integrifolia*) an important lucrative commodity in Malawi. This study presents evidence on the impact of climate change on the agro-ecological suitability of macadamia in Malawi

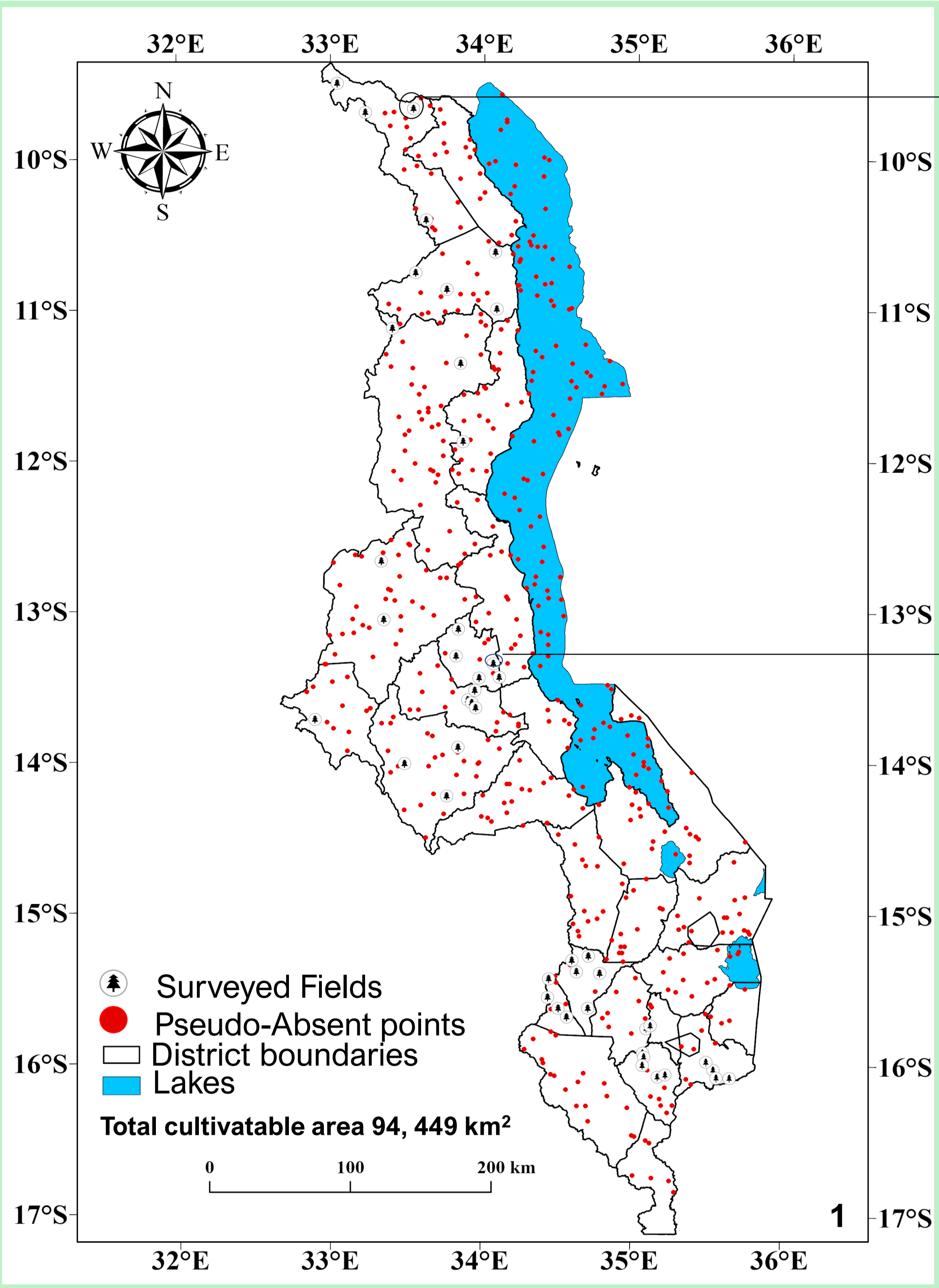
RCP 4.5 Projections

- Temperatures expected to increase by ≥ 1.4 °C.
- Increase in number of hot (≥ 30 °C) days (15 days a year).
- Increase in number of hot (≥ 14 °C) nights (20 days a year).
- Variability in precipitation (droughts & flooding).

RCP 8.5 Projections

- Temperatures expected to increase by ≥ 2.5 °C.
- Increase in number of hot (≥ 30.5 °C) days (30 days a year).
- Increase in number of hot (≥ 14 °C) nights (40 days a year).
- Variability in precipitation (droughts & flooding).

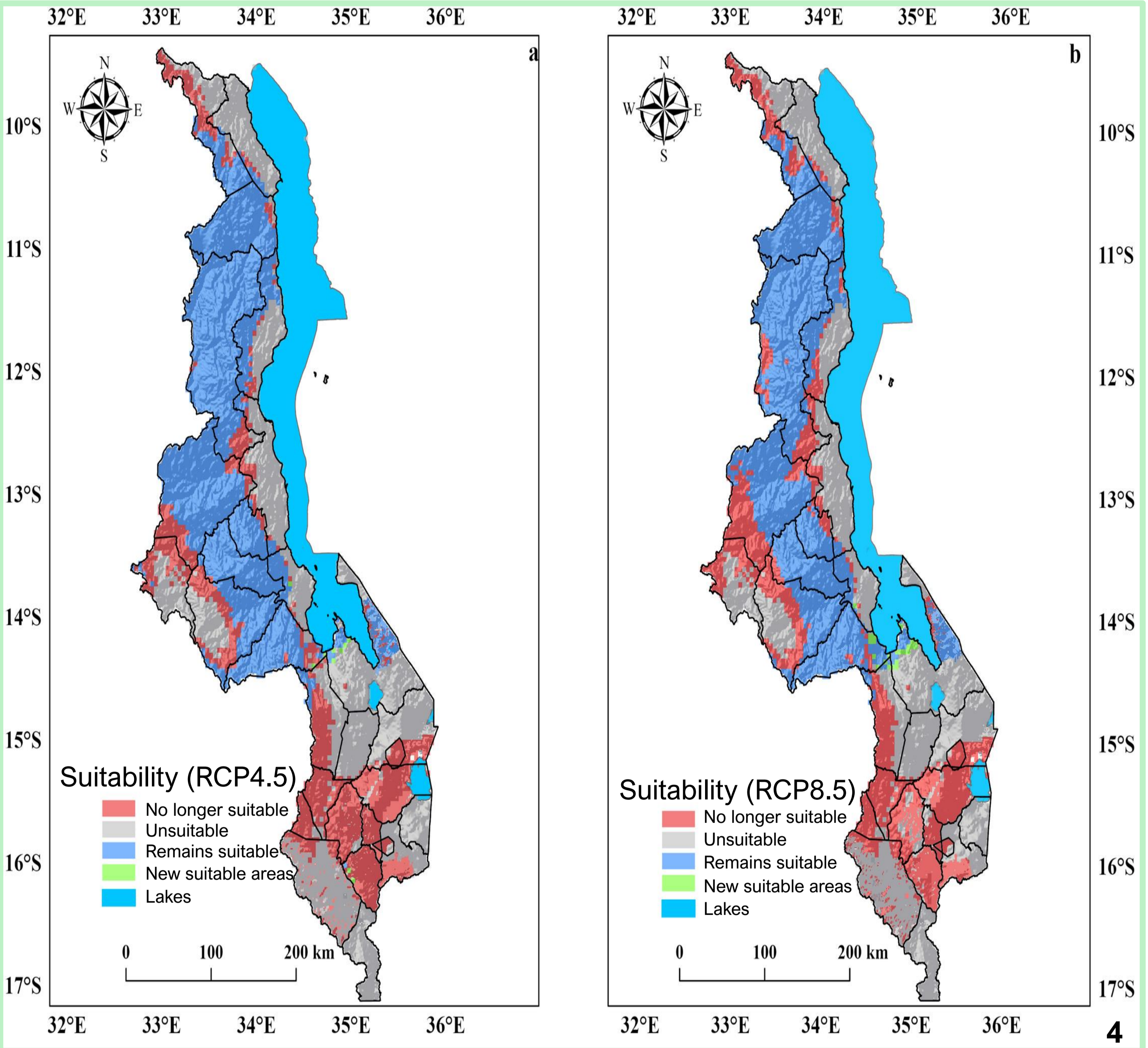
Tree Sampling



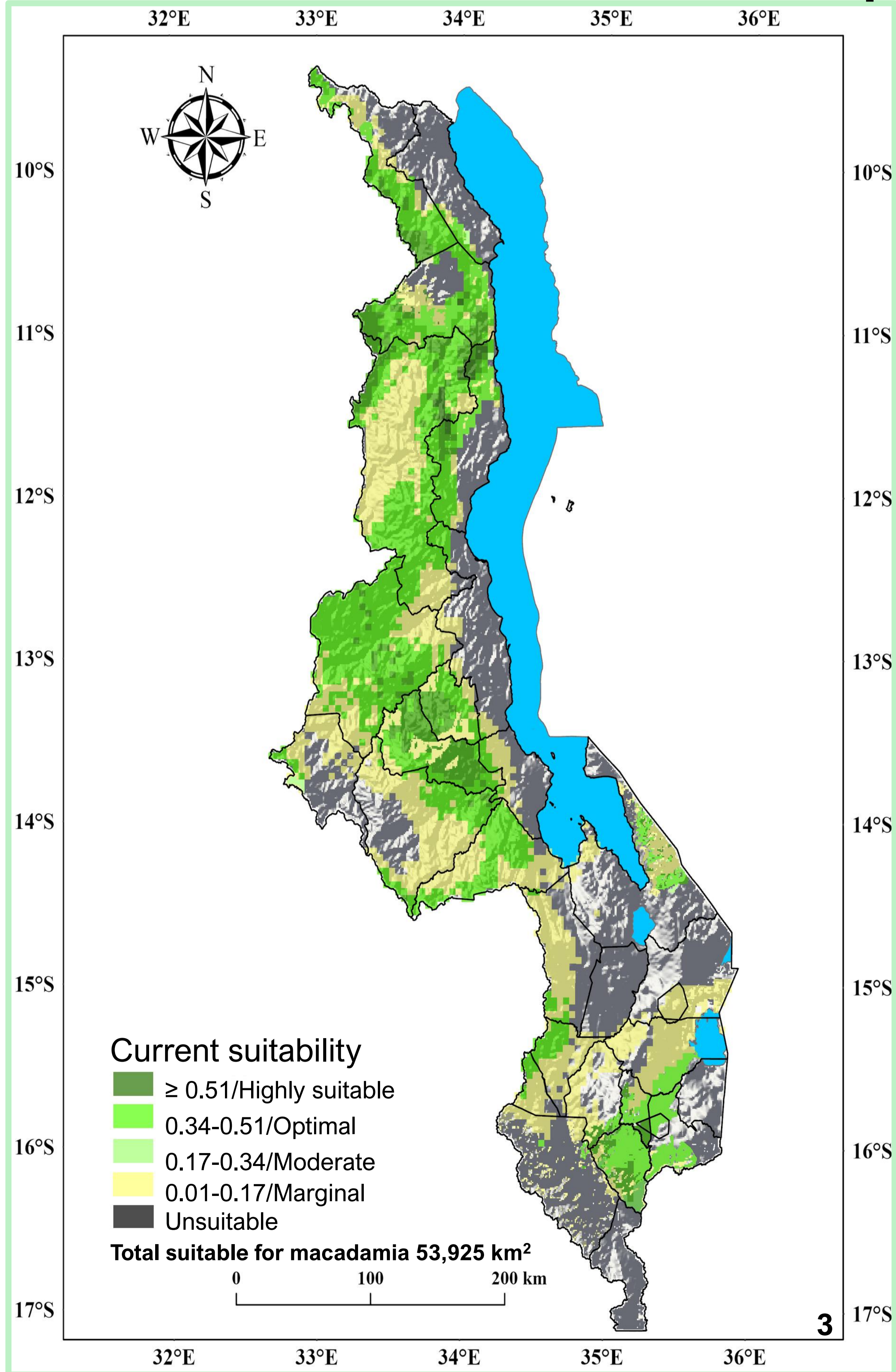
GPS data (rainfed macadamia fields). Ten-year-old orchards only. Data on elevation was also collected.



Future suitability (2050s)



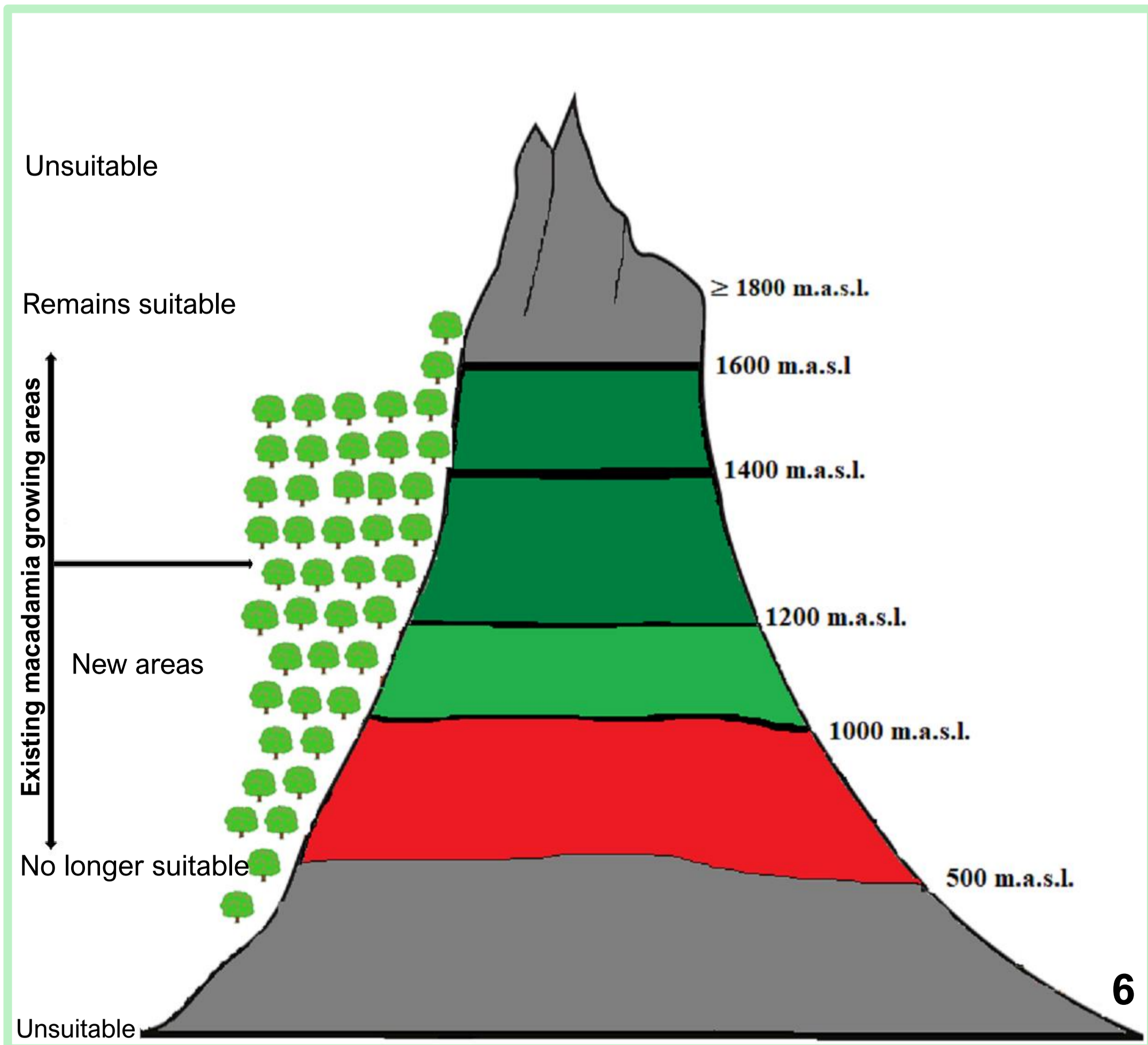
Current suitability (~1970–2000)



Losses in suitability

Region	RCP 4.5		RCP 8.5	
	Area (km²)	Percentage (%)	Area (km²)	Percentage (%)
Central	6,784.1	7.2	7,950.1	8.4
Northern	1,850	2.0	3,730	3.9
Southern	8,380.9	8.9	8,733.9	9.2
Total	17,015	18.1	20,414	21.6

Shifts in suitability



Acknowledgements and References

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