New listings, persistent demands: quantifying illegality risks for CITES Appendix II tree species in Brazil

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Background

The Convention on International Trade in Endangered Species (CITES) is the earliest international agreement recognising that global collaboration is needed to address the environmental consequences of trade. Yet its potential to curb illegal logging pressure on key timber species has remained underutilized. A new wave of Appendix II listings raises the question of the instrument's renewed potential to support long-standing legality, sustainability and traceability demands across timber production systems.

This study presents a spatially explicit illegality risk assessment for three listed tree species groups relevant to Brazil: *Handroanthus* spp. and *Tabebuia* spp. (ipê), *Dipteryx* spp. (cumaru) and *Cedrela* spp. (cedar), in the two largest producing states, Pará and Mato Grosso.

Methods

Based on data from Brazilian public licensing and timber control systems, we estimate the extent to which reported volumes are associated with (i) invalid or illegal logging permits (ii) overestimated authorized yields and (iii) discrepancies between in- and outflows reported by supply chain actors.

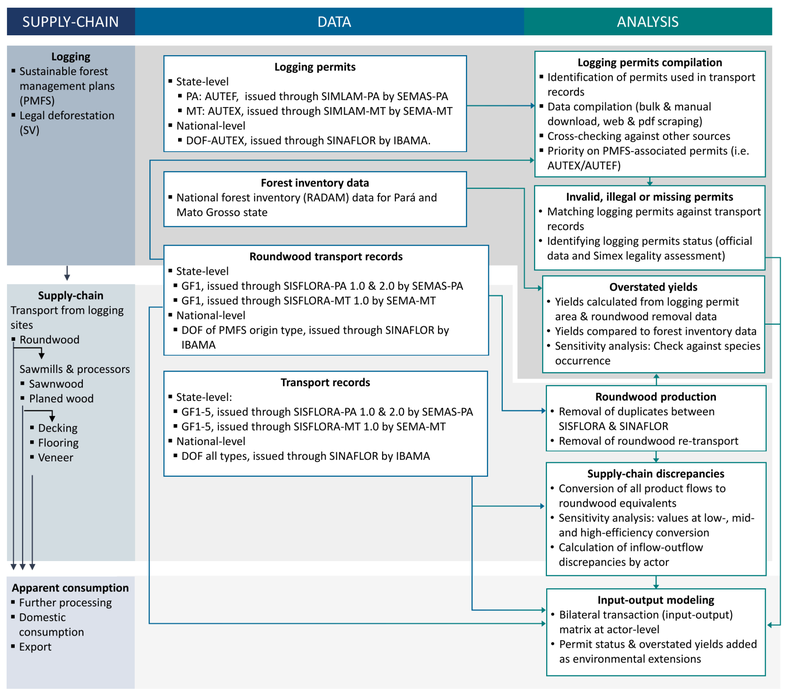

Fig.1 Overview of methods: main data sources and analysis steps at different stages of the supply chain. Adapted from Franca et al. (2023).

Results

Overview of illegality risks across species

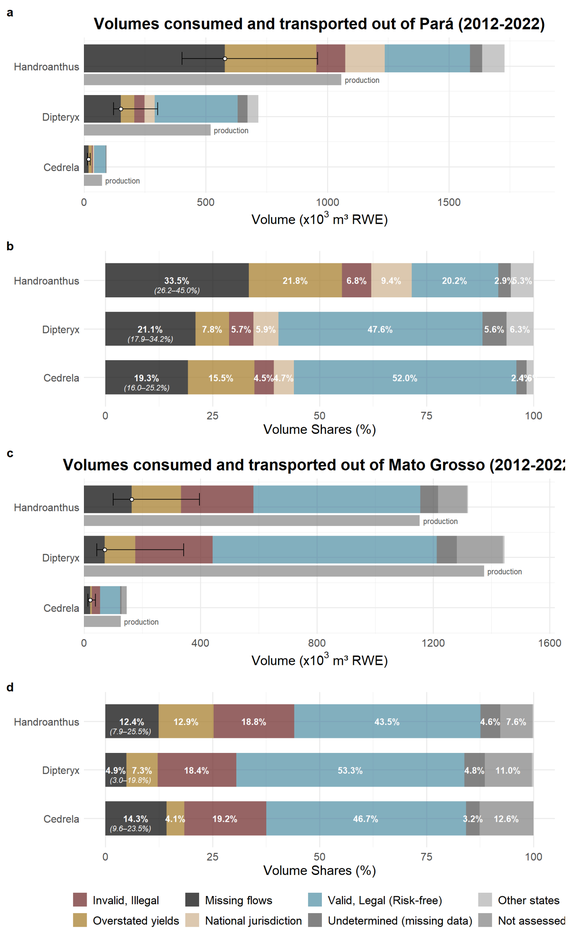

Fig.2 Overview of illegality risks associated with volumes of ipê, cumaru and cedar consumed and commercialized in Pará and Mato Grosso. Sensitivity analysis (low-, mid-, high- efficiency in roundwood conversion) for missing flows are displayed through error bars and annotated "(high-low%)" intervals.

Mapping forests of origin and risks associated to logging permits

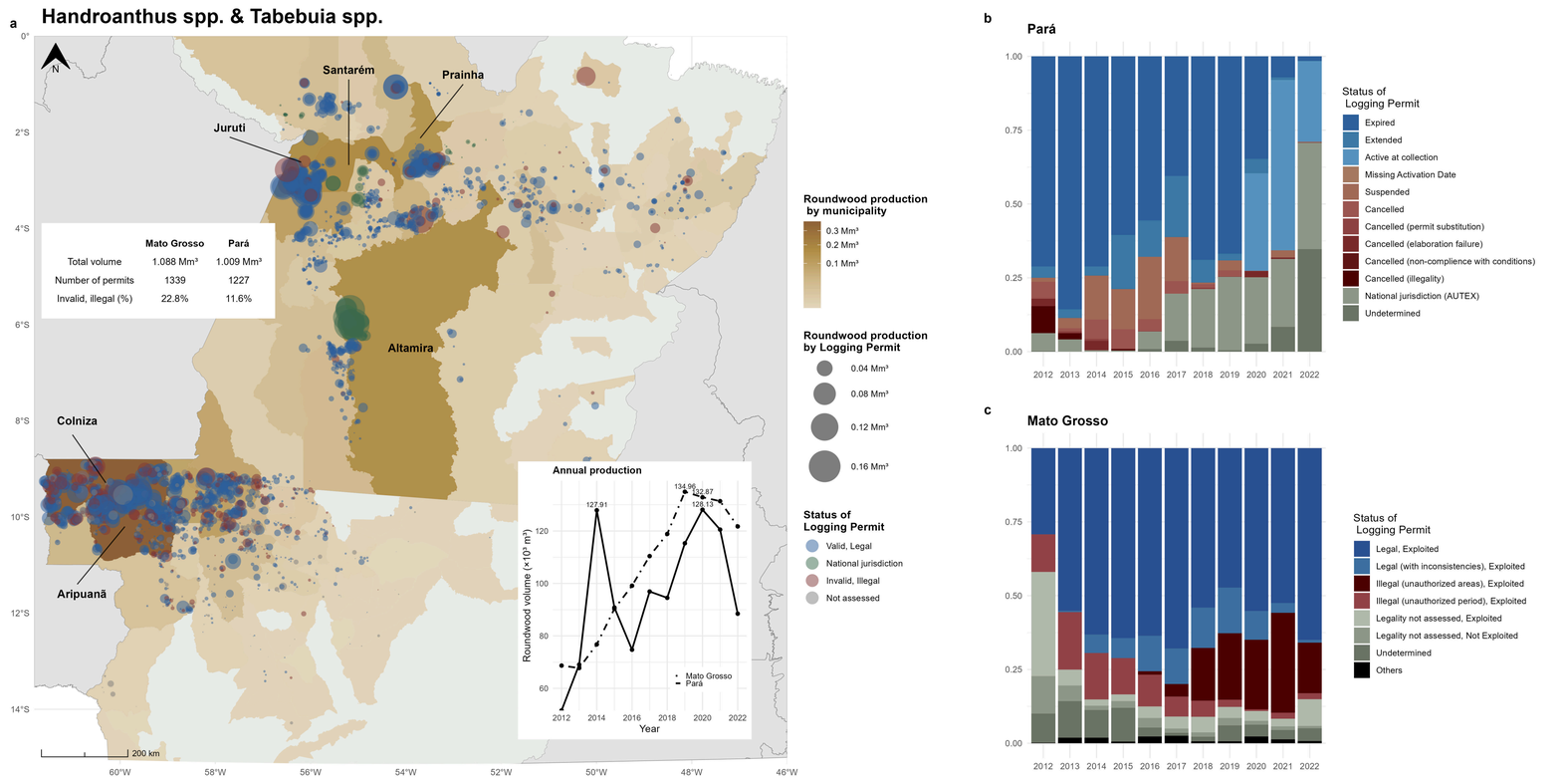

Fig.3 Ipê roundwood production, origins and the illegality risk associated with areas authorized for harvest.

Spatial distribution of illegality risks according to location of origin

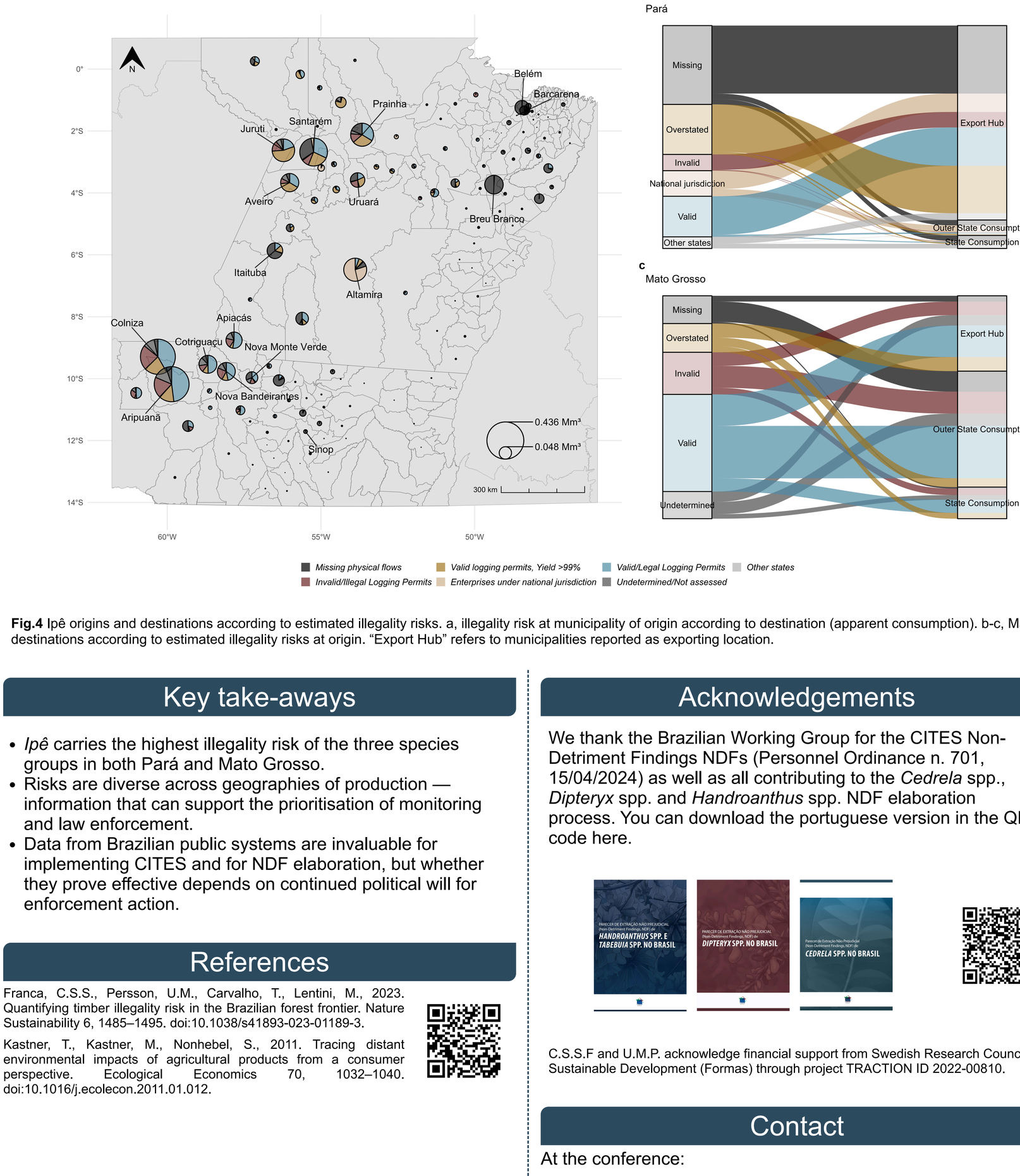

Fig.4 Ipê origins and destinations according to estimated illegality risks. a, illegality risk at municipality of origin according to destination (apparent consumption). b-c, Major destinations according to estimated illegality risks at origin. "Export Hub" refers to municipalities reported as exporting location.

Key take-aways

- *Ipê* carries the highest illegality risk of the three species groups in both Pará and Mato Grosso.
- Risks are diverse across geographies of production — information that can support the prioritisation of monitoring and law enforcement.
- Data from Brazilian public systems are invaluable for implementing CITES and for NDF elaboration, but whether they prove effective depends on continued political will for enforcement action.

References

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