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DATA PAPER

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MADERA: A standardized Pan-Amazonian dataset for tropical timber species

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Abstract

We compiled and presented a dataset for all timber species reported in the Amazon region from all nine South American Amazonian countries. This was based on official information from every country, as well as from two substantial scientific references. We verified the standard taxonomic names from each individual source, using the Taxonomic Name Resolution Service (TNRS) and considered all Amazonian tree species with diameter at breast height (DBH) ≥10 cm. We also obtained estimates of the current population size for most species from a published approach based on data from 1900 tree inventory plots (1-ha each) distributed across the Amazon region and part from the Amazon Tree Diversity Network (ATDN). We then identified the hyperdominant timber species. In addition, we overlapped our timber species list with data for species that are used for commercial purposes, according to the International Tropical Timber Organization (ITTO), the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) and the International Union for Conservation of Nature (IUCN) taxa assessment and Red List categories. Finally, we also included IUCN Red List categories based on combined deforestation, and climate change scenarios for these species. Our final Amazonian timber species dataset contains 1112 unique species records, which belong to 337 genera and 72 families from the lowland Amazonian rainforest, with associated information related to population, conservation, and trade status of each species. The authors of this research expect that the information provided will be useful to strengthen the public forestry policies of the Amazon countries, inform ecological studies, as well for forest management purposes. The data are released under the Creative Commons Attribution 4.0 International license.

KEYWORDS
Amazon region, timber species, tree species, tropical taxonomy, tropical timber, woody species

CONFLICT OF INTEREST STATEMENT

The authors declare no conflicts of interest.

DATA AVAILABILITY STATEMENT

The dataset is available as Supporting Information. Associated data are archived on Zenodo at https://doi.org/10.5281/zenodo.7063870. All R scripts used in this research are available on Zenodo at https://doi.org/10.5281/zenodo.8045101.

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SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

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