

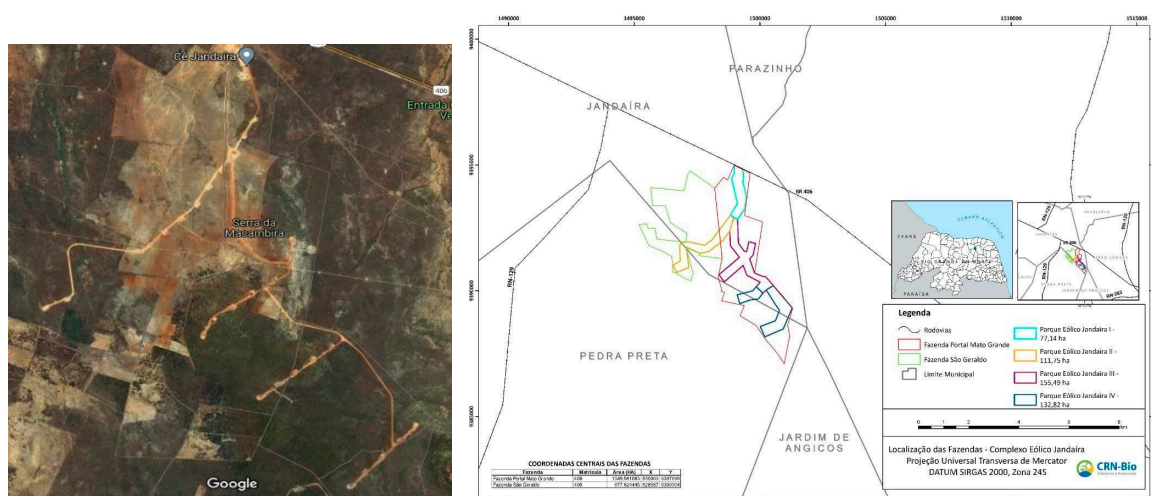
SUPPLEMENTARY MATERIAL

Valorization of Wood Residues from Vegetation Suppression during Wind Energy Plant Implementation and Its Potential for Renewable Phenolic Compounds through Flash Pyrolysis: A Case Study in Northeast Brazil's Semi-Arid Region

Data collection during the implementation of a wind energy project

Nine native species were identified as subject to deforestation during the installation phase of the Jandaíra Wind Farm Project in the Mato Grande region (**Figure S1**): *Myracrodruon urundeuva* (commonly known as “Aroeira”), *Mimosa tenuiflora* (commonly known as “Jurema preta”), *Aspidosperma pyriforme* (commonly known as “Pereiro”), *Ceiba glaziovii* (commonly known as “Barriguda”), *Caesalpinia ferrea* (commonly known as “Pau ferro”), *Caesalpinia pyramidalis* (commonly known as “Catingueira”), *Ziziphus joazeiro* (commonly known as “Juazeiro”), *Mimosa verrucosa* (commonly known as “Jurema branca”), *Commiphora leptophloeos* (commonly known as “Imburana”), and *Griffinia gardneriana* (commonly known as “Grifínea”), with the latter being threatened with extinction.

Figure S1. Location of the Jandaíra Wind Farm Project in the Mato Grande region.



Caesalpinia ferrea exhibited the lowest occurrence in the vegetal suppression area, not exceeding two individuals. Similarly, to the *Ziziphus joazeiro*, highlighting their potential in this study proved insignificant, given that these species experienced no significant deforestation. Conversely, the *Caesalpinia pyramidalis* stood out as the most abundant and adversely affected species by the suppression. A considerable quantity of *Myracrodruon urundeuva* demanded special attention, as it was listed as threatened during the elaboration of the Simplified Environmental Report (RAS). However, this species was no longer listed by implementing the wind complex. Both the *Mimosa verrucosa* and *Mimosa verrucosa* species are abundant in the caatinga area, and in the selected region for vegetal suppression, their abundance persisted. Nevertheless, numerous studies indicate the potential of these species.

In Project Jandaíra, IDEMA-issued vegetation suppression authorizations (ASV) aimed to preserve *Myracrodruon urundeuva*, complying with the Program for the Recovery of Degraded Areas (PRAD) and forest replacement requirements. However, individuals of the threatened species *Griffinia gardneriana* were identified and rescued in the wind complex area, as per MMA Ordinance No. 443/2014. The Amaryllidaceae family includes *Griffinia gardneriana* (Herb.) Ravenna, commonly referred to as lily. It is endemic to Brazil and distributed in the Caatinga and coastal sandy areas. Notably, this species provides food and water to the local fauna and is morphologically characterized by onion-like underground bulbous structures (**Figure S2**) and long, wide, dark green leaves with grayish spots. Scape-type inflorescences exhibit bilateral symmetry and a color range from lilac to white in *Griffinia gardneriana*. The sepals fuse to create an elongated tube, providing significant ornamental value. Anthesis, the floral opening, takes place in the early evening, emitting a sweet fragrance. Natural populations of *Griffinia gardneriana* face a severe risk of extinction, as the Brazilian Center for Conservation of Flora reported.

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Figure S2. *Griffinia gardneriana* rescued from an area designated for vegetal suppression.

