Challenges for the conservation of the useful neotropical palm pindobaçu (*Attalea pindobassu* Bondar) in the face of climate change

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**Introduction**

Pindobaçu (*Attalea pindobassu* Bondar) is a native palm of Brazil’s Caatinga biome. The species has significant socioeconomic relevance for traditional communities in the Chapada Diamantina, Northeast Brazil, who employ it for cosmetic, food, and handicraft purposes.

We investigated the suitability of habitats of pindobaçu using Ecological Niche Modelling under current and future climate scenarios, SSP2-4.5 (optimistic) and SSP5-8.5 (pessimistic), to evaluate the effectiveness of the current network of protected areas (PAs) in long-term conservation of the species.

**Figure 1:** Distribution and habitat, as well as products made from the fruits of the Pindobaçu palm (*Attalea pindobassu*) by the community of Coxo de Dentro in the Chapada Diamantina mountains, Brazil. A. Occurrence record used in the study; B. Habitat; C. Fruits; D. Handicraft production; E. Cosmetic; F. Edible oil; G. Handicraft.

**Methods**

- **Occurrence records**
  - GBIF Global Biodiversity Information Facility
  - Species Link

- **Environmental variables**
  - Bioclim
  - Maxent
  - GLM
  - Random Forest
  - Current
  - Future
  - SSP2-4.5
  - SSP5-8.5

**Results**

Current climate suitability: 68,754 km² (8.04% of the Caatinga biome)

A low percentage of climate suitability areas were observed within the PAs, in the current scenario and in the future scenarios

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<thead>
<tr>
<th>SSP2-4.5</th>
<th>SSP5-8.5</th>
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<tbody>
<tr>
<td>i) 2040 reduction of 23.94%;</td>
<td>i) 2040 reduction of 37.27%;</td>
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<tr>
<td>ii) 2060 reduction of 50.7%;</td>
<td>ii) 2060 reduction of 60.46%;</td>
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<tr>
<td>iii) 2080 reduction of 64.73%;</td>
<td>iii) 2080 reduction 100%;</td>
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<tr>
<td>iv) 2100 reduction of 75.21%</td>
<td>iv) 2100 reduction 100%</td>
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**Conclusions**

The creation of germplasm banks for *ex situ* conservation, creation and expansion of PAs, and monitoring of natural populations is crucial to ensure the sustainability of this palm’s resources for traditional communities into the future.

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