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Energy justice analysis of palm oil production policies in Brazil: assessing disparities and opportunities

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#### EUBCE ENERGY JUSTICE ANALYSIS OF PALM OIL PRODUCTION POLICIES IN BRAZIL: ASSESSING DISPARITIES AND OPPORTUNITIES

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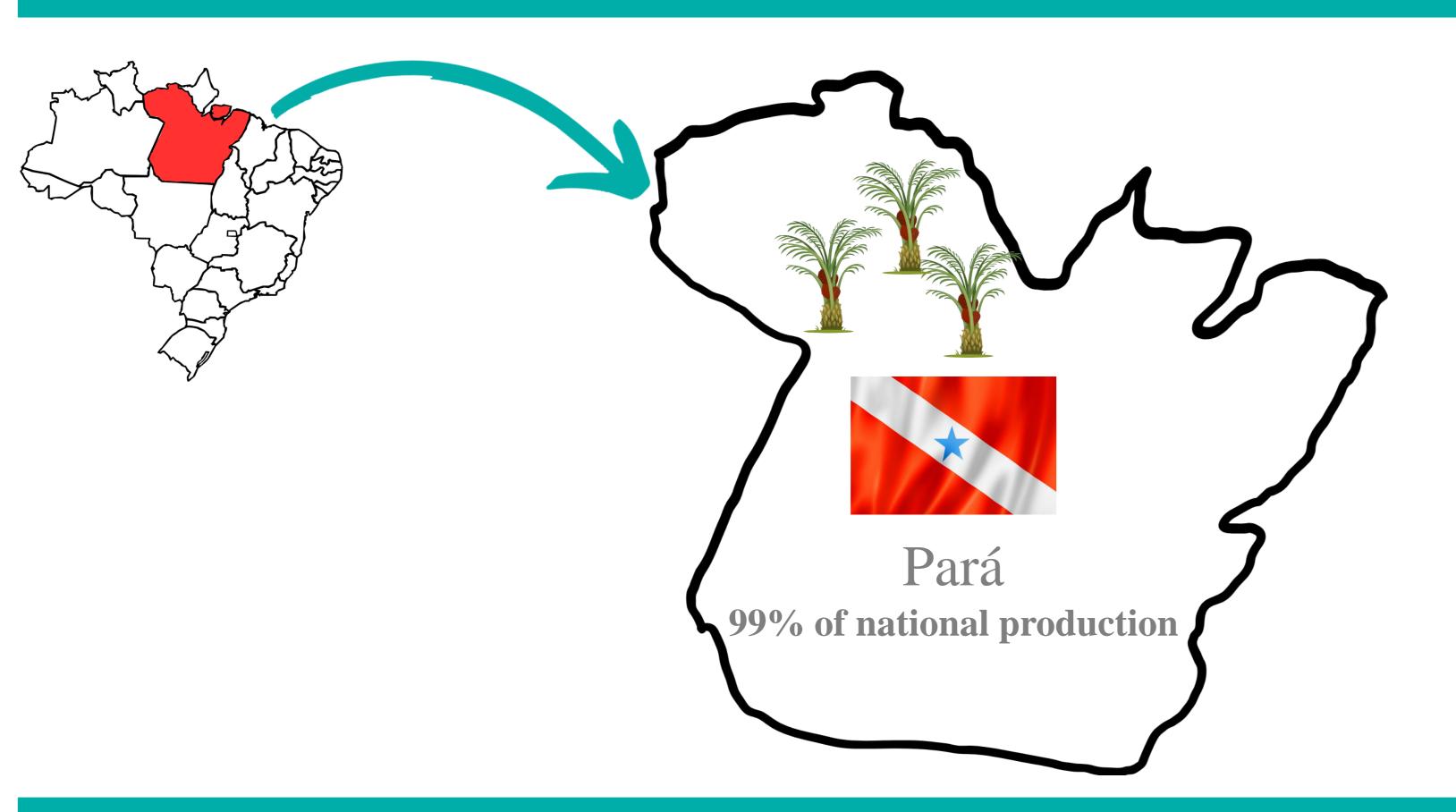
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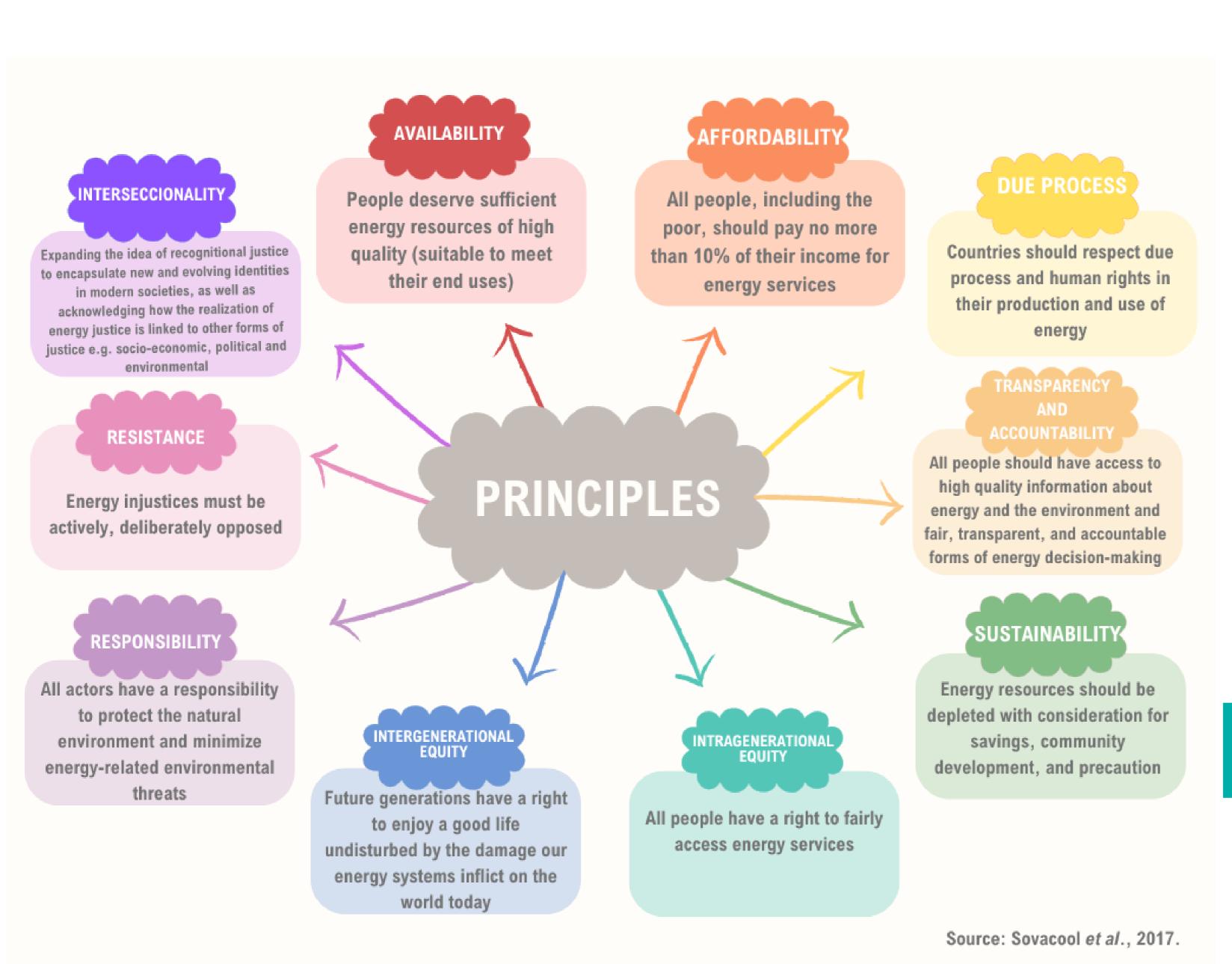
## PALM OIL PRODUCTION IN BRAZIL





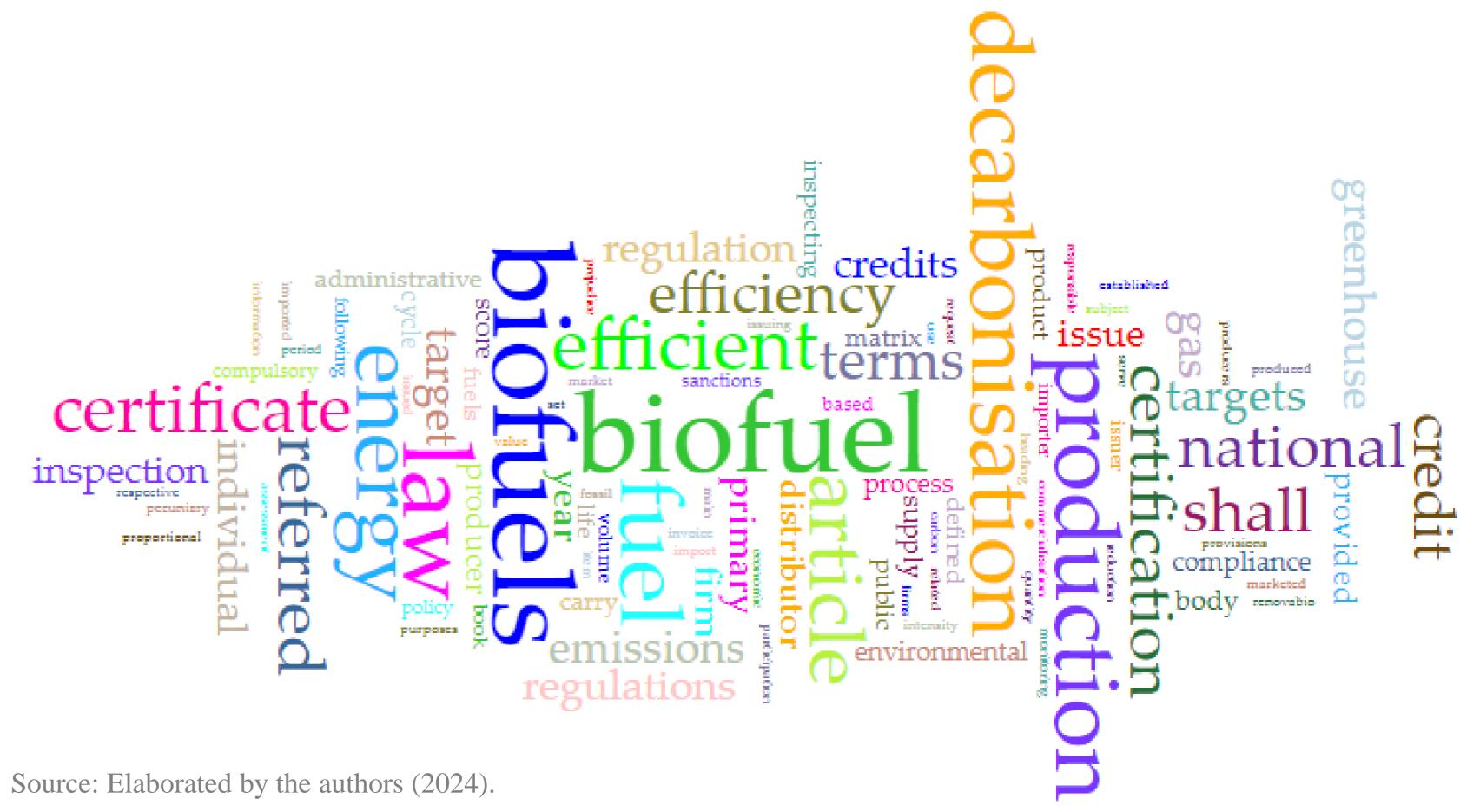
Biodiesel production is vital for meeting the growing demand for renewable energy. Palm oil, a significant energy source, plays a pivotal role. Despite Brazil's vast potential, it contributes less than 1% to the global palm oil supply. The majority of Brazil's palm oil production takes place in the Amazon region, particularly in the state of Pará.

### MATERIALS AND METHOD



- Empirical research: Utilised artificial intelligence Language Processing (NLP).
- Analysis: Policy compliance with energy justice principles was evaluated.

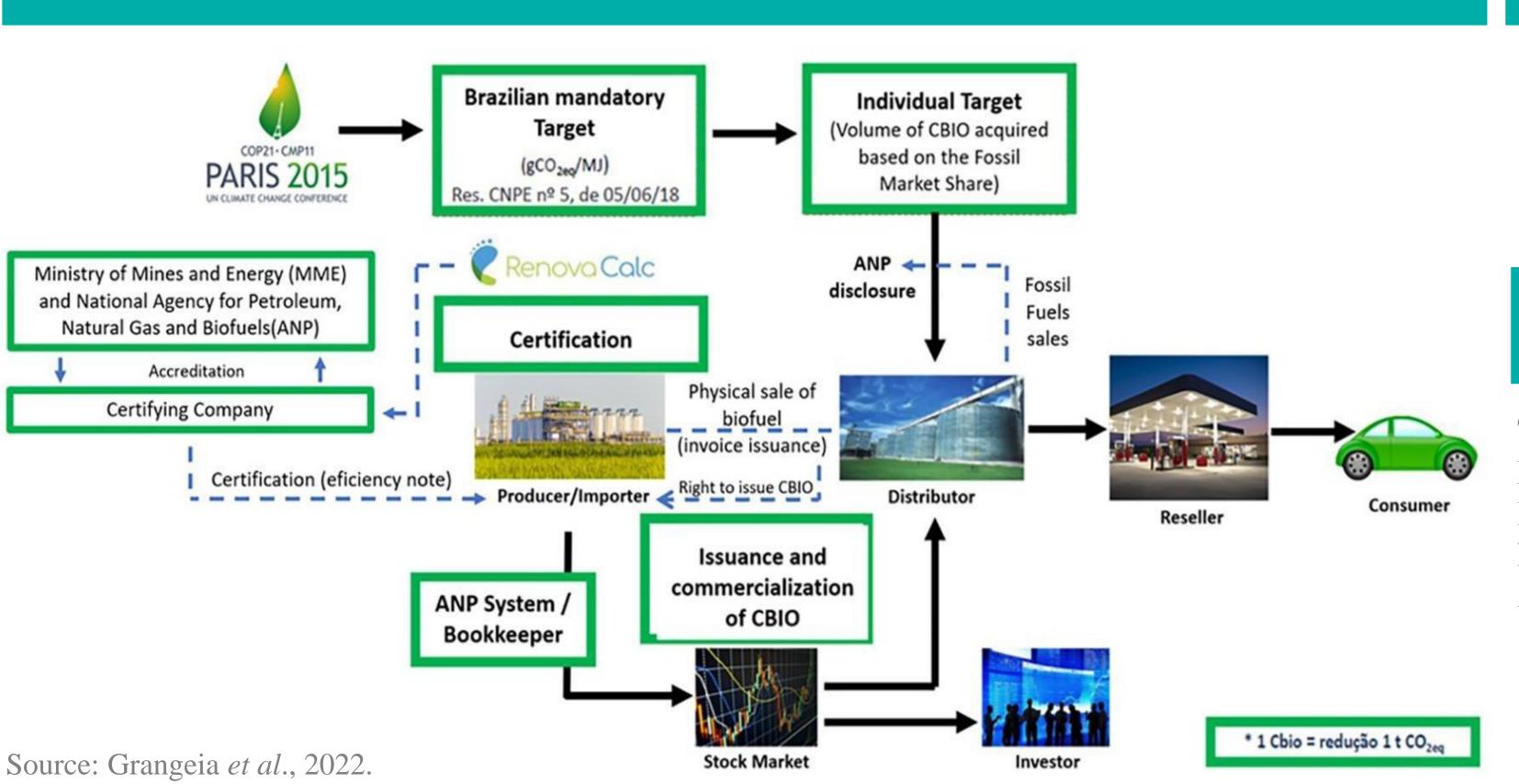
### RESULTS



#### CONCLUSIONS

Biodiesel production is crucial to meet the demand for renewable energy sources. Palm oil plays a pivotal role in this regard. This study used artificial intelligence and natural language processing to evaluate policy compliance with energy justice principles. The study found notable progress but also identified areas requiring immediate attention. Initiatives, such as RenovaBio, offer promising opportunities for substantial improvements in sustainability and energy equity. However, stringent monitoring and policy adjustments are necessary to ensure equitable distribution of benefits.

# RENOVABIO'S OPERATING MODEL



# REFERENCES

Brasil. Lei n°13576, de 26 de dezembro de 2017. Dispõe sobre a Política Nacional de Biocombustíveis (RenovaBio) e dá outras providências.

https://www.planalto.gov.br/ccivil\_03/\_ato2015-2018/2017/lei/l13576.htm Sovacool BK, Burke M, Baker L, Kotikalapudi CK, Wlokas H. New frontiers and conceptual frameworks for energy justice. Energy Policy 2017;105:677–91. https://doi.org/10.1016/j.enpol.2017.03.005.

Grangeia C, Santos L, Lazaro LLB. The Brazilian biofuel policy (RenovaBio) and its uncertainties: An assessment of technical, socioeconomic and institutional aspects. Energy Convers Manag X 2022;13:100156. https://doi.org/10.1016/j.ecmx.2021.100156.

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