Sustainability Evaluation of Biorefineries in tropical countries. Macro and micro-scale possibilities

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Tropical countries have a wide biodiversity where agriculture practices represent an important role in their economies and environmental sustainability. Many research are focused on tropical agro-industrial crops and waste valorization oriented on the potential use of these by-products through integrative biorefineries. However, large-scale biorefineries from one-crop feedstock could promote unsustainable farming practices leading to deforestation, and monocropping, and could not be the sustainable alternative for minor farmers located in areas of difficult access where there are high costs of biomass or waste collection limiting their participation in the strengthening of regional bioeconomies. Therefore, decentralized small-scale biorefining represents a suitable alternative due to the economic, ecological, and social benefits. In this talk, biorefineries and micro-biorefineries in tropical countries are discussed through case study analysis. Perspectives in the area are presented and existing challenges are identified, which may focus research into sustainable agricultural chains to empower local communities by promoting self-reliance.

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**SHORT CV**

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