

Plan Overview

A Data Management Plan created using DMPTool-Stage

Title: Emerging markets for biofuels

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Project abstract:

The main objective of this project is to develop and implement a methodology to evaluate biofuels production in developing countries taking into account concepts of sustainability coupling TEA, LCA and EXA. We will start by selecting countries that are considered emerging economies with a large population and on average lower energy consumption compared to developed countries and identify official data sources for each country in terms of energy production, energy demand as well as the production of biofuels. A database will be constructed of relevant data (energy matrix, feedstock availability, the energy expenditure of production, net energy content, energy conversion efficiency, among others). We will then identify the possible raw materials and conversion technologies, evolve the analysis including sustainability (Energy and Exergy-based performance indicators) and evaluate how incentives can alter sustainability and process (using Renovabio as a case study).

Start date: 11-30-2020

End date: 05-30-2022

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Emerging markets for biofuels

A database of relevant data related to the transportation sector was constructed (energy matrix, feedstock availability, the energy expenditure of production, net energy content, and energy conversion efficiency, among others). A sustainability assessment involving Life cycle assessment, techno-economic evaluation and exergy analysis was performed and the data obtained were disclosed through scientific papers.

The data were collected from specialized literature and the results obtained in the project were based on well-known methodologies used for sustainability assessment. A detailed description of each methodology used was provided in the manuscripts generated as a result of this project.

No document and metadata.

All the data were collected from literature which was properly cited.

The data were collected from already published papers and also from official governmental sources. In all cases, the respective reference was cited.

The data was stored on a private server.

Only the collaborators of this project have full access to the database.

All the data gathered in this project will be kept stored.

The data will be stored at the USP repository as well as in the GitHub repository. The data will also be stored in a private repository (External HD).

The data were shared through the submission of two papers to international journals and by the writing of a policy brief to the International Energy Agency. The papers were published in Open Access format and the policy brief will be widely publicized by the International Energy Agency.

No.

Nicholas Canabarro

We need only a data repository (github and google drive).

Planned Research Outputs

Data paper - "Sustainability Assessment of Ethanol and Biodiesel Production in Argentina, Brazil, Colombia, and Guatemala"

Data paper - "Techno-economic analysis of biofuels production in Argentina, Brazil, Colombia and Guatemala"

Policy brief - "Emerging markets for biofuels - A policy brief"

Planned research output details

Title	Type	Anticipated release date	Initial access level	Intended repository(ies)	Anticipated file size	License	Metadata standard(s)	May contain sensitive data?	May contain PII?
Sustainability Assessment of Ethanol and Biodiesel ...	Data paper	Unspecified	Open	None specified		None specified	None specified	No	No
Techno-economic analysis of biofuels production in ...	Data paper	Unspecified	Open	None specified		None specified	None specified	No	No
Emerging markets for biofuels - A policy brief	Policy brief	Unspecified	Open	None specified		None specified	None specified	No	No