



# 7<sup>th</sup> INTERNATIONAL WORKSHOP ADVANCES IN CLEANER PRODUCTION

“CLEANER PRODUCTION FOR ACHIEVING SUSTAINABLE DEVELOPMENT GOALS”

## Emergy Synthesis and Sustainability: Analysis of Emergy Flows in the Territorial Dynamics in the Municipality of Pitalito - Huila

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### Abstract

This work shows the application of emergy synthesis in the municipality of Pitalito a small territory located in the Department of Huila in southwestern Colombia, the purpose of this application is to establish a basis of analysis for the identification of environmental, social and productive relationships in the systems under study, as well as the dynamics of generation, use and exploitation of energy in their processes, analyzing the energy intensity, environmental pressure, the structure of existing resources and the efficiency of their use. The analysis allowed to quantify the primary renewable flows and reserves, the dynamics and effects of productive and extractive activities in the territory, as well as the different interrelationships between flows, energy efficiency and sustainability in the framework of the integration of energy, territory and development -ETD- with a systemic vision, allowing the identification of critical points for the formulation of measures, decision making and policy approaches for territorial sustainable development.

*Keywords: emergy synthesis, sustainability, territory*