

Presentations

Presentation No: 13

Presentation title: Sustainability impact analysis of sugarcane and forestry expansions in Mercosur: Developing a SIAT prototype

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Abstract: The SENSOR TTC team of the Mercosur countries Argentina, Brazil, and Uruguay elected two policy cases to build a SIAT prototype on: sugarcane expansion, focusing on Central Brazil; and forestry expansion, involving Southern Brazil, Uruguay, and Northern Argentina. Climate change has induced most countries to aim their policies to substitute fossil fuels by biofuels, which relies on carbon that is naturally fixed by the photosynthetic process carried out by plants. Due to its vast areas with plain topography and high temperatures, associated with adequate yearly rainfall, sugarcane, considered to be the most efficient biofuel crop, can be grown in almost the whole country. Development of locally adapted *Eucalyptus* cultivars, and increasing demand for cellulose by the global market, and for non-native timber by the local markets, afforestation has increased dramatically in the La Plata River basin during the last 20 years. Both processes are happening under a policy framework based mainly on economic incentives for the implementation of the respective industrial processing plants: sugar and ethanol production, as well as paper and cellulose plants. Sustainability impact indicators will be constructed from data available in Latin American or country-based Institutions. A survey has been done, and three indicators (one for each sustainability dimension) will be selected for implementation in the Mercosur SIAT prototype. The chosen indicators will be used in both policy cases. A survey of policies related to sugarcane and forestry expansion was done and one will be selected for SIAT modelling for each case. The sugarcane expansion policy selected is Land Zoning, and impacts will be analyzed according to scenarios of land use change: conversion of grain crops or conversion of planted pastures to sugarcane crops. The SIAT Mercosur prototype is under development, and follows a conceptual framework that includes different modelling efforts, such as: land use dynamics; land cover change based on Markov chain and cellular automata.



Confirmation

I confirm that

Coutinho Heitor

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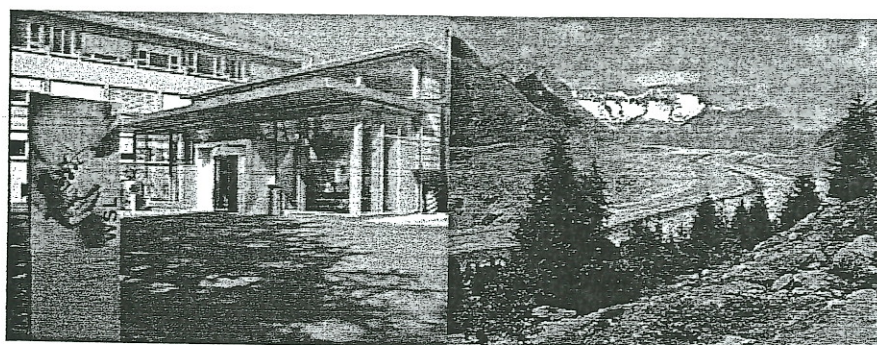
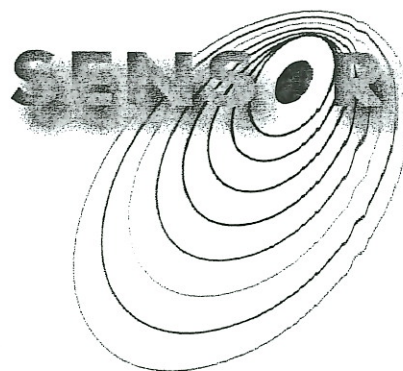
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