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GLP 2010

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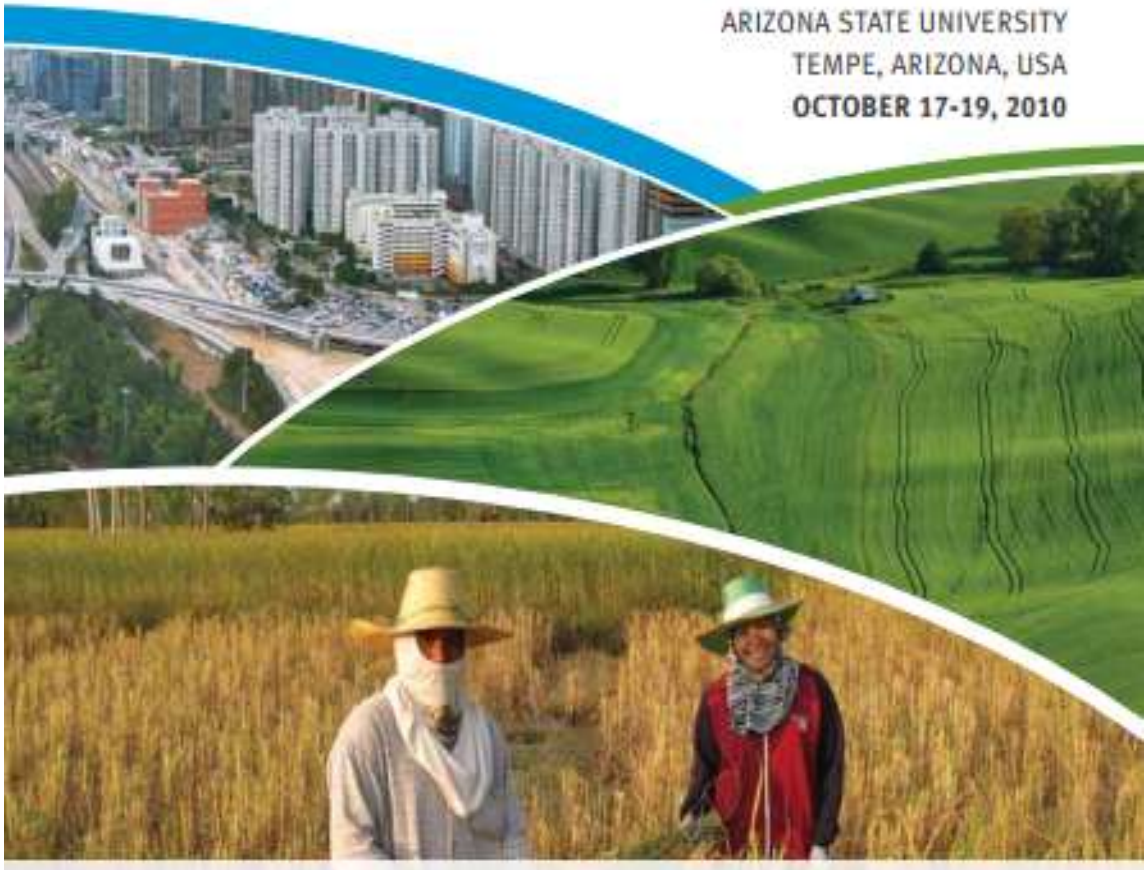
Land Systems, Global Change and Sustainability



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Sustainability Impact Assessment Tools to support the development of policies leading to land use change processes: the Sensor Project approach applied to sugarcane expansion in Brazil

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The 'SENSOR' project (EC FP6), aimed at developing tools for ex-ante impact assessment of policies related to land use change (LUC). SIAT (Sustainability Impact Assessment Tool) is a meta-modelling system for integrated assessment of sustainability impacts of LUC. The impact indicators are integrated using the Land Use Function approach (LUF), based on linear additive models to weight and aggregate them into a set of functions identified as descriptors of goods and services supplied by different LUs. Considering, in most of the world, the limitation of data, and quantitative models to represent adequately the complexity of LU processes, FoPIA (Framework of Participatory Impact Assessment) was developed. A project extension to Mercosur and China aimed at testing the transferability of the Sensor approach to differing realities. In Brazil, the sugarcane crop expansion in the State of Mato Grosso do Sul was analyzed. Policies related to sugarcane expansion were screened, and the Agroecologic Zoning selected as the policy instrument in the first Brazilian SIAT prototype, that required development of policy response and indicator functions. The main limitation was the lack of reliable data time-series to identify indicator responses to LUC. This issue hampered effective application of the LUF method. Stakeholder consultations, and participatory integrated assessments, are necessary to plug some of the gaps caused by limited data availability. Further work includes testing the FoPIA approach to assess the sugarcane expansion policy case in Brazil, and feed the SIAT prototype with its outputs, including qualitative LUF analyzes, impact assessments and indicator thresholds.

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