

[SDI for the Amazon](#)

Call for papers for the Special Issue on

Spatial Data Infrastructures for the Sustainability of the Brazilian Amazon: Integrating People, Information, and Models

to appear in the [Earth Science Informatics](#) journal (ESIN)

Guest Editors: [Fred Fonseca](#) – Penn State University, U.S.A.
[Clodoveu Davis](#) – Federal University of Minas Gerais (UFMG), Brazil
[Gilberto Câmara](#) – National Institute for Space Research (INPE), Brazil

Potential contributors are strongly encouraged to read the [report](#) of the workshop:
[Spatial Data Infrastructures for the Sustainability of the Brazilian Amazon:
Integrating People, Information, and Models](#)

Important Dates: - Manuscript submission period begins March 15th and ends June 1st 2009

Please [first register yourself](#) and [then submit your manuscript](#) at: <https://www.editorialmanager.com/esin/>

After submission of your manuscript, email fredfonseca@ist.psu.edu

Background

When approaching the idea of a SDI for integrated scientific understanding of the Brazilian Amazon, there are two competing perspectives. One approach is to view SDI as an automated map data distribution system. In this case, SDI implementation focuses on distribution of data from existing sources on an “as-is” basis. The alternative is to view SDI as an enabler for understanding space. In this case, a SDI does not only deliver maps, but acts as an architecture for disseminating spatial information globally, with associated metadata on quality, uncertainty, lineage, and semantic descriptions, providing means for an effective understanding of the complex interactions between people and nature. So, in order to be able to integrate knowledge on the Brazilian Amazon sustainability-related processes, do we need more information or more people? Or is it necessary to have better models and more computing power? We are interested in contributions that integrate both people and the technology aspects of information and models. Below are some potential, though not exclusive, topics for the special issue

Topics

- Can the monitoring of the Amazon be “wikified”, i.e., can volunteers closely monitor environmental issues by working in their free time over freely-available geographic data? What kind of tools would they need? Can volunteers be able to obtain, analyze, and identify change vectors from online data sources? Can the quality of this volunteer work be assessed? How can people be motivated to contribute? Is it possible to approach real-time monitoring if there are enough volunteers?
- How can we obtain a better understanding of the environment and model the interactions between man and nature in a meaningful and useful way?
- What are the options for modeling human activity that affect the environment? Some of the theoretical options are agent-based models, game theory, understanding human choices, complexity theory, spaces of variable geometry, scale, networks, and interactions at a distance.
- How to represent human free will in the computer, so that we are able to model the interactions between nature and society, and to measure the impact of governmental policies?
- What is the impact of human actions in different geographical scales?
- How can we build geographical visualization systems that help public policy makers and societal stakeholders? How do good GIS user interfaces help planners and decision makers?
- How can a planner build scenarios for the Amazon using spatial decision support systems, considering factors such as demand for agricultural commodities and for energy?
- How can economic factors be expressed spatially?
- How does the spatial expression of markets contribute to public policies that promote sustainability?
- What are the relations between markets and sustainability at various spatial scales?