

The Brazil Low Carbon Country Case Study

Land Use, Land Use Change and Forestry in Brazil

Presented by Christophe de Gouvello
Senior Energy Specialist, LCSEG

Summary of the Presentation

- I. Introduction:
Brazil GHG emissions profile
- II. Methodology: focus on LULUCF modeling
(Q&A and Debate)
- III. Low Carbon Scenario for LULUCF
(Q&A and Debate)
- IV. Economic Analysis to inform the Decision Process
(Q&A and Debate)

I - Brazil GHG Emissions Profile

Reference Scenario 2008

1. Considerable volumes of land

Agriculture and livestock have become key sectors for growth

Leading to steady expansion over the territory

Marginal expansion induces conversion of native vegetation

Deforestation has become the main GHG emissions source

2. Considerable efforts to explore large renewable energy sources

Hydropower, Bio-ethanol from sugar cane

Low Carbon intensity of the Energy Matrix : only 1.77 tCO₂ vs 11.02 tCO₂/cap in OECD

II – Methodology -

Focus on Land Use,
Land Use Change and Forest
(LULUCF)

Main General Steps

1. Build a Reference Scenario

- Work with **Public Agencies** when possible
- Adhere to **official projections** when available
- If not, build **new models** and projections
- Use of unique set of premisses

2. Identify Mitigation & Sequestration Options

- National and International (ethanol, sequestration, interconnection)
- Quantifications
- Co-benefits
- Barriers
- Proposals to overcome barriers
- Economic Analysis
- Financial Support required

3. Build a Low Carbon Scenario

- Derived from Reference Scenario and Options
- Internal consistency (national)
- Marginal Abatement Cost Curves (MACs)
- Macro Economic Virtues

Intensive Consultative Process with Government and Centers of Excellence to build ownership

Integrated Multi-Setorial Approach

Main Themes

- A. LULUCF** : Emissions from Land Use, Land Use Change and Forestry – Mitigation and Sequestration (CO₂, CH₄, NO₂)
- B. ENERGY SECTOR** : Production and Use of Energy – Including Ethanol Exports to substitute Gasoline (CO₂, CH₄)
- C. TRANSPORT SECTOR** : Options to minimize emissions from Municipal and Regional transport
- D. WASTE MANAGEMENT** : Avoid or Capture & Destroy Emissions from Solid and Liquid Waste (CO₂, CH₄)

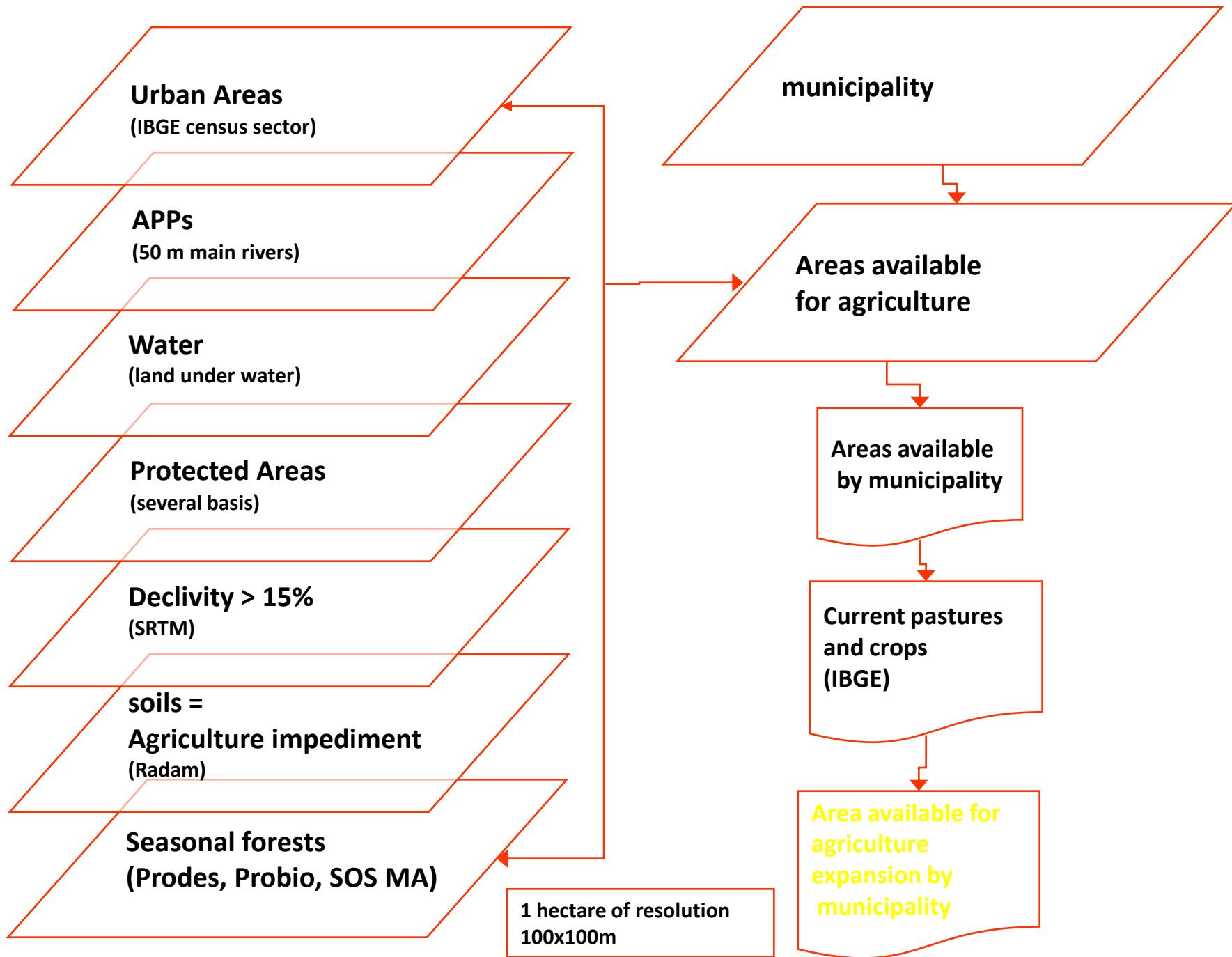
METHODOLOGY FOCUS: LULUCF

1)

2)

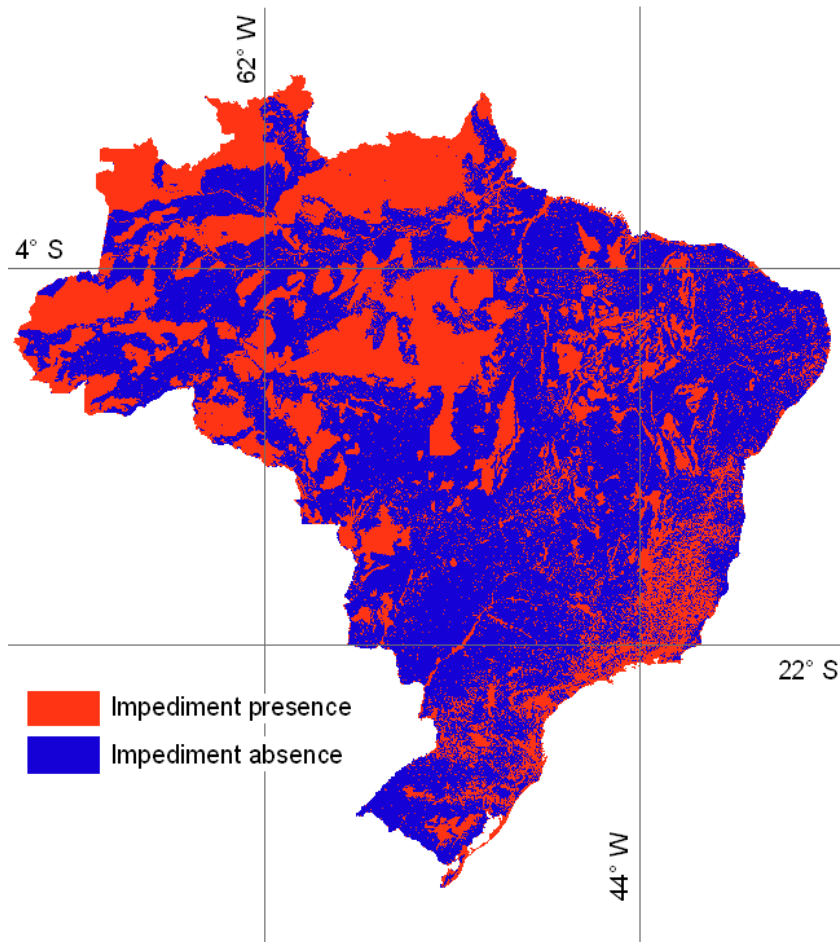
3)

1. Calculation of available land for agriculture expansion

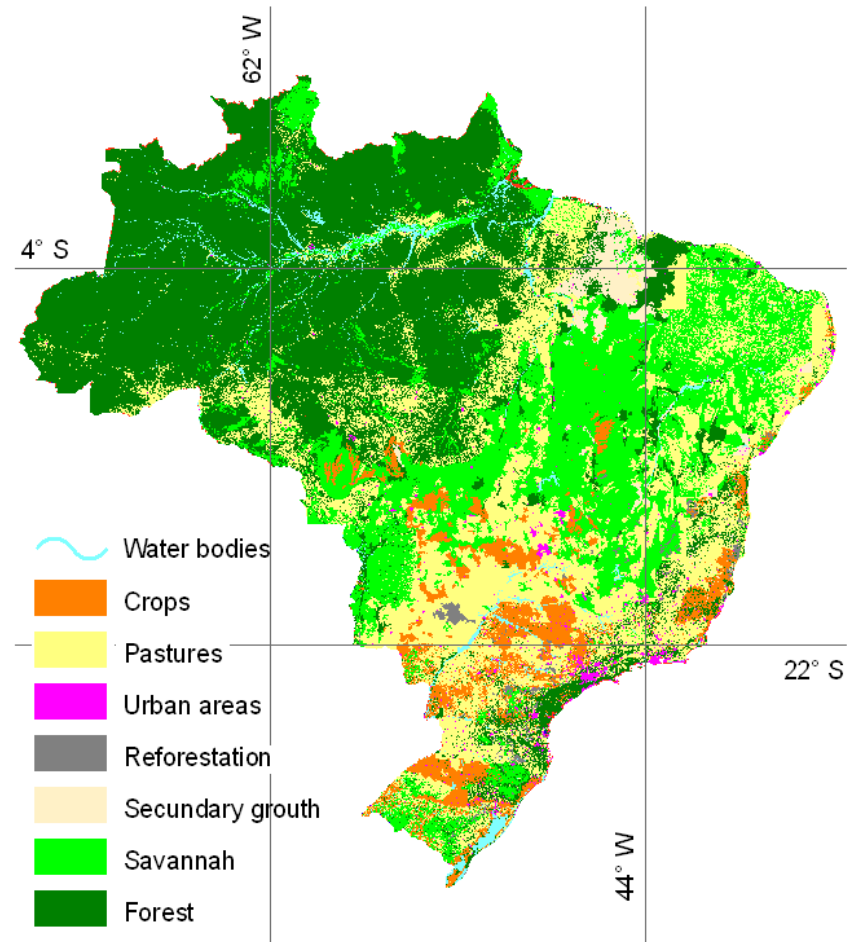


Impediment and current land use

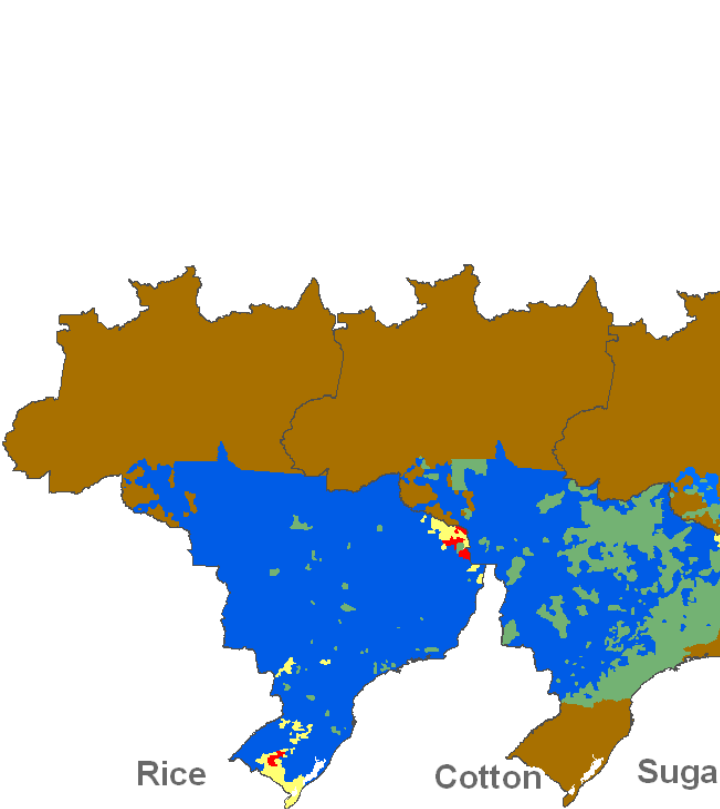
Impediment



Land Use



Crop suitability



Source: Assad e Pinto (2008)

