A Cheaper, Simpler Pathway to Large-Scale Agricultural Sustainability?

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Food Price Increases: Here to Stay?  \(\uparrow\) Demand > \(\uparrow\) Supply
Most of the increase in food production in the next 20 years will take place in the tropics and subtropics, led by Latin America
Connections between Climate Change, Deforestation, and Food Production

Nepstad et al. 2013a Phil Trans Roy Society; 2013b Carbon Mgt
Deforestation in the Brazilian Amazon: A 70% Decline

10-year Average Deforestation (96-2005)

Cattle Herd

Soy

Amazon Production: Cattle Herd Size (millions heads) and soy production (millions of tons)
CO2 Emissions Reductions 2008-2010 and Associated Financial Transactions: Deforestation in the Brazilian Amazon and European Union ETS

Brazil’s national transition to low-deforestation rural development is within reach

Intensification of beef production is opening up land for crop expansion

Forthcoming: Earth Innovation and Agrolcone report on Brazil’s transition to Zero deforestation, high production
Sustainable Agriculture=

• Food Security
• Environmental Conservation
• Climate Change Mitigation
• Poverty Alleviation
How are we doing?

*Sustainable supply chain initiatives are having a hard time achieving market transformation*

- High cost of farm-by-farm, mill-by-mill certification
- Low demand for certified production
- Ambitious company commitments to sustainable sourcing are difficult to meet
How are we doing?

- Likelihood of a near-term global climate treaty with “teeth” and finance at scale is low

- Binding commitments within UNFCCC postponed to 2020

- REDD+ has advanced far, but lacking financial mechanism
How are we doing?

• *Domestic policy* support for transition to *sustainable agriculture* limited

• Low political will

• Low institutional capacity
Fragmentation: a profusion of initiatives, each with its own vocabulary, processes and metrics

Reserva Legal

Moratoria
Lista Negra
Desmatamento Zero
Líquido
CRA
Modulos Fiscais
CAR
EMBARGO
HCVA
REDD
APP
LINHA DE REFERENCIA
## Strengths and Weaknesses

<table>
<thead>
<tr>
<th></th>
<th>Sustainable Supply Chains</th>
<th>International Finance (REDD+)</th>
<th>Domestic Policy/Finance</th>
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<tbody>
<tr>
<td>Private Sector Engagement</td>
<td>High</td>
<td>Low</td>
<td>High</td>
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<tr>
<td>Achieving large-scale impacts?</td>
<td>?</td>
<td>?</td>
<td>Varied</td>
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<tr>
<td>Benefits to sustainable farmers</td>
<td>Low</td>
<td>Low</td>
<td>Low</td>
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Nepstad et al. 2013 Carbon Management
Can we link the three approaches?

A “jurisdictional” or “territorial” performance approach

Nepstad et al. 2013 Carbon Management
Today: Isolated Farmers, Few Positive Incentives

- **License to Operate**: Regulatory Agencies
- **Large-scale non-compliance**: Farmer
- **Public interests in land defended**: Farmer
- **Reputational damage**: Commodity Buyers
- **Legality, zero deforestation**: Commodity Buyers
- **$, Inputs, Calves**: Commodity Buyers
- **Default, reputational damage**: Repayment
- **Risks**
- **Demands**
- **Benefits**

Loans

Finance Institutions
Farmers in "Green" Counties

- Easier license to operate
- Easier rules
- Non-compliance
- Public interests defended more effectively
- "Clean" soy, beef
- Better terms
- Lower inputs with better terms
- Less risk

Regulatory Agencies
Commodity Buyers
Finance Institutions

Risks
Demands
Benefits
Key Elements of a “Territorial Performance System”

• Consensus on step-wise pathway to large-scale sustainability
• Incentives to support this transition at farm level
• Monitoring platform for measuring and reporting progress
• Pilots for testing and refining
Potential Advantages

• Simpler
• Cheaper
• Embeds sustainability in public policy
• Less dependent on reputational risk
• Potential for large-scale impact
Possible Consensus on Incremental Pathway to Zero Net Deforestation in Brazilian Amazon

Data source: PRODES (deforestation) and IBGE (soybean and cattle production)
Deforestation (2013)

**Frontier:** reduction > 80% below 1996-2005 average

**Consolidated / Remote:** ≤ 20 km²/year
Forced Labor Incidences (2010 - 2013)
Integrating Processes: Compliance with Forest Code & Deforestation

Fonte: R. Nussbaum, ProForest
The Brazilian Territorial Performance Process

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The diagram outlines various organizations involved in the Brazilian Territorial Performance Process.
Conclusions:

• Latin America critical to food security, climate change mitigation, conservation
• Potential to align incentives and regulations in support of transition to large-scale sustainability developed through “bottom-up” consensus
• Could strengthen existing initiatives