The role of certification in value chain development

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• Background to value chains
  • Corporate Social Responsibility
  • Value Chains/ Global Production Networks
  • Isomorphism of certification

• The controversy of bamboo certification
  • The case for FSC
  • The case against FSC

• Creating new schemes
  • New schemes
  • The blueprint of success
  • Discussion
Many building and construction standards now require FSC certified materials leading to pressure from the construction (Mosobo 2010) and pulp and paper industries.

The first bamboo (*Guadua angustifolia*) certification scheme was established in Colombia funded by GTZ. The scheme was not sustainable for a number of reasons, primarily due to a lack of capacity building.

Development of certification for *Bambusa affinis* began in the late 1990s in India.

China has been the first country to successfully create large FSC management units (FMU) and Chain of Custody (COC), value chain certificates.
Corporate Social Responsibility
Value Chains
The Global Economy: Global Production Networks
• Accountability
• Transparency
• Legitimacy (procedural/input)
• Supported by a strong network of actors
Legitimacy is the perception of others that the existence and actions of an organisation are desirable, right and proper within some *socially constructed systems of values, norms and beliefs* (paraphrased from Suchman 1995)

**Western Forest Certification legitimacy is based upon:**

1) Non-state market driven mechanism (Cashore 2003) ('supragovernmental' Meidinger 2010)
2) Third Parties (implies independence)
3) NGO support (Implies environmental and social expertise)
4) Democratic principles (implies participation and contestation)
The case for Forest Stewardship Council (FSC) bamboo certification

Forest Stewardship Council (FSC) Principles and Criteria

1. Compliance with laws and FSC Principles
2. Tenure and use rights and responsibilities
3. Indigenous peoples' rights
4. Community relations and worker's rights
5. Benefits from the forest
6. Environmental impact
7. Management plan
8. Monitoring and assessment
9. Maintenance of high conservation value forests
10. Plantations
“As far as I’m concerned, in China bamboo is a type of tree. It is part of the forest. Bamboo has its particular characteristics as tree species do. It is a challenge of fine tuning; the whole system doesn’t need to be overturned.”

对我来说在中国竹子在中国是树种。是森林的一部分。他的特性，其他的树种这是一个挑战是微调，不是说把所有的东西推翻。

“Bamboo certification adheres to principles and criteria; the scope of sustainable management is much broader. Bamboo certification is a mode of national development. It is a good thing: it can improve the level of bamboo forestry within China, increase the farmers’ income and international exchange, which will enable China to develop production and other positive elements. The change has been quite significant.”

不是一模一样的，竹林认证按照原则的标准，人们的经营行为的话可持续经营是范围比较一点的话竹林认证是数量可持续经营是国家展方线，是很好的话可以提高中国竹林的水增加老百姓的收入，是很大的国际的交流，为我们家产品的发展其他比较好的事情，变化一概是比较大的。
Bamboo certification in India

• On the surface bamboo management is simple and sustainable, yet further investigation identifies:
  – Issues regarding land tenure
  – Indigenous people’s rights
  – Environmental law violations
  – Women are receiving less than the minimum wage
The case against Forest Stewardship Council (FSC) bamboo certification
## Bamboos uniqueness

### Some key differences between bamboos and trees (Based on WBO 2011)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Bamboo</th>
<th>Trees</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Growth</strong></td>
<td>Bamboo reaches its final height in 2-4 months</td>
<td>Trees keep growing throughout their whole lifetime</td>
</tr>
<tr>
<td></td>
<td>Growth occurs in one year with a single cylinder</td>
<td>Trees grow wood rings</td>
</tr>
<tr>
<td><strong>Rooting structure</strong></td>
<td>Rhizomes serve as the trunk, the culms are the branches off the trunk.</td>
<td>Trees have roots, trunks and branches</td>
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<tr>
<td></td>
<td>Bamboos have three distinct rooting structures: monopodial (diffuse),</td>
<td></td>
</tr>
<tr>
<td></td>
<td>sympodial (clumping) and amphodial (mixed)</td>
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<tr>
<td><strong>Flowering patterns</strong></td>
<td>Bamboos are monocarpic flowering once in cycles. Depending on the</td>
<td>Trees that are mature flower and set seed on an annual cycle</td>
</tr>
<tr>
<td></td>
<td>species bamboos flower once in 20 or 100 years</td>
<td></td>
</tr>
<tr>
<td><strong>Competitiveness</strong></td>
<td>Can outcompete trees or other plants for access to sunlight, nutrients</td>
<td>Competes through height in the canopy</td>
</tr>
<tr>
<td>characteristics</td>
<td>and water through rhizomes and ‘invasive’ characteristics</td>
<td></td>
</tr>
<tr>
<td><strong>Fertility</strong></td>
<td>Many bamboo species are infertile and require vegetative propagation</td>
<td>Trees are fertile</td>
</tr>
<tr>
<td></td>
<td>techniques</td>
<td></td>
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<tr>
<td><strong>Longevity</strong></td>
<td>Culms can decay after 3-8 years without harvesting. The mother plant</td>
<td>Trees can last centuries</td>
</tr>
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<td></td>
<td>tends to die after flowering</td>
<td></td>
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</tbody>
</table>
Bamboos utilisation
The quote provided by the auditing company in India for bamboo certification

<table>
<thead>
<tr>
<th>Surveillance</th>
<th>Service</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-assessment</td>
<td>Pre-assessment for bamboo certification and orientation on various certification schemes</td>
<td>EU 1,136.40 (Indian Rs 77,210)</td>
</tr>
<tr>
<td>Main audit year 1</td>
<td>Audit according to FSC principles and criteria forest area: 15 hectares, 20 farmers</td>
<td>EU 8,045.00</td>
</tr>
<tr>
<td>2-5 years</td>
<td>Audit according to FSC principles and criteria, forest area 15 hectares, 20 farmers</td>
<td>EU 2,477.50</td>
</tr>
<tr>
<td>Chain of Custody</td>
<td>COC for bamboo processing (including two production sites)</td>
<td>EU 1,152.80</td>
</tr>
<tr>
<td>Total</td>
<td>Bamboo FSC pre-assessment and certification and COC for 5 years</td>
<td>EUROs 12,811.70</td>
</tr>
<tr>
<td></td>
<td></td>
<td>US$ 17,348.27 Per hectare: US$ 1,156.55</td>
</tr>
</tbody>
</table>
Bamboo Geographies

Map of potential bamboo species richness, derived by integrating all 998 species (UNEP-WCMC/INBAR 2003)

Global Bamboo Distribution
http://igendesign.wordpress.com

Distribution of potential species richness of woody bamboos derived by combining the distributions of 379 species (UNEP-WCMC/INBAR 2004)
The creation of other schemes

- The World Bamboo Organisation
- The International Network for Bamboo and Rattan (INBAR)
- Private sector scheme
- PEFC (Programme for Endorsement of Forest Certification Schemes)
  China

Photos by Kathleen Buckingham
Challenges in Yunnan, South-western China
Creating new schemes
Creating new schemes
Creating new schemes

- Aim: to provide a socially, environmentally and economically sustainable value chain
- Allow bamboo to be able to compete in high end markets
- Balancing Input legitimacy (procedural: transparency, inclusion, accountability) and Output legitimacy (effectiveness; efficacy)
- Avoiding proliferation of schemes: harmonisation
- If moving away from the isomorphic (blueprint) model providing an accountable alternative
- Enlisting powerful actors to support the scheme
The design of the certification scheme for bamboo is a contested one.

The fundamental question remains: what is sustainable bamboo management and what mechanisms can be used to ensure the resource is developed adequately to maximise its potential as a relatively new globally commercial natural resource?

Many countries feel that China cannot act as a model due to having one predominant monopodial species, Moso, which currently dominates the market.

In emerging tropical and sub-tropical bamboo nations solutions towards finding sympodial bamboo management techniques are needed; however within this market China can still potentially play a key role.

Research and development needs to allow for the notion of forestry to evolve and for mechanisms to be in place to create a equitable market for bamboo development.
Thank you