Research webinars on standards’ impacts
No.32: The Impact of International Cooperative Initiatives on Biodiversity
22 November 2018, 2pm
The Impact of International Cooperative Initiatives on Biodiversity

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Independent policy evaluation
Bridge science-to-policy

Mark van Oorschot
The influence of International Cooperative Initiatives on Biodiversity
Impacts of Sustainable Forest Management

Mark van Oorschot, Marcel Kok & Bas Arts
Content

› Agenda
  - Convention Biological Diversity
  - Role of non-state actors & VSS

› Biodiversity impacts
  - Approach explorative analysis
  - Sustainable Forest Management
  - Knowledge gaps for M&E

› Relevance
  - Dutch trade policies and VSS
  - Credibility and additionality
CBD - Convention on Biological diversity

› Targets:
  - Reduce rate of global biodiversity and habitat loss
  - Increase sustainable use of ecosystems by all actors.....
  - ...... , ensuring conservation of biodiversity & functions
  - Mainstreaming biodiversity considerations in sectoral policies

› Actors:
  - Traditionally large role for states in conservation & protection
  - But many useful contributions come from:
    ▪ Non-state actors (civilians, business, finance), that work together in..
    ▪ International Cooperative Initiatives for Biodiversity (ICIs)
Scenarios for the 4th Global Biodiversity Outlook
Resource production and biodiversity loss

Source: PBL

Kok et al 2014
Business is part of the problem......
...... but also part of the solution

Entry-points

- Sustainable consumption
- Supply-chain responsibility
- Sustainable production landscapes
Relevance of ICIs for Biodiversity

› CBD Post-2020 agenda
  - Contribution of non-state actors
  - Credibility on additional role
  - Potential and effectiveness?

› Examples of ICI cases:
  - Community Forest Management
  - Zero-deforestation commitments
  - Voluntary Sustainability Standards
    - Sustainable forest management (WUR - PBL)
    - Agro-commodities (IISD project)

Arts et al 2017
VSS Impact assessment approach

Starting point
Impact analysis framework from Milder et al 2014
Combining general & detailed information
Top-down and bottom-up
Impact assessment in the ICI study

Level 1:
- Hectares certified worldwide (high data certainty)

Level 2:
- Induced change by certification (assumptions)

Level 3:
- Solid experimental proof (uncertainty on generalisation)
MSA Biodiversity indicator

› Mean Species Abundance
  – Index of naturalness/intactness (0 to 1)
  – Coupled to human pressures
  – Undisturbed situation as reference
  – Alkemade & Schippers et al
    ▪ Impacts forest-use, climate, infra

› Applied in scenario studies
  – Comparing alternative futures and options
  – Applied in land-use modelling
    ▪ IMAGE and GLOBIO models
    ▪ UN, FAO, OECD outlook study

Photographic impression of mean species abundance indicator at landscape level

Ten Brink et al 2010
SFM - Mechanisms of change

› On site effects
  - Improvements from silvi-cultural practices
    ▪ Reduced impact logging
    ▪ Rotation forestry practices: seed-tree retention, HCVA identification, ..... 
    ▪ Reforestation by plantation establishment (FSC principle 10)

› Off-site effects
  - Sharing (mixed systems) or sparing (efficient mono-cultures)
    ▪ Efficiency: high-productive plantations
    ▪ Avoided deforestation
    ▪ Wider landscape effects
Level 1: Growth in global certified SFM area

Global certified forests

Source: FSC; PEFC

Global certified tropical forests

Source: FSC; PEFC

van Oorschot et al 2014
Level 3: Evidence from the knowledge base

Some proof-of-concept

› van Kuijk et al. 2009
  - Improved silvicultural treatments
› Gibson et al. 2011
  - Conservation value of secondary forests
› Putz & Zuidema et al. 2012
  - RIL effects on biodiversity, carbon and regrowth
› Albakidze et al 2011
  - HCVA identification and protection
› And many more ..... 
› Ongoing certification impact reviews
  - Komives et al. 2018
Level 2/3 : Combined calculations on additionality
Biodiveristy in SFM-areas = sums of managed area, weighted for biodiversity-quality

<table>
<thead>
<tr>
<th>IMPACTS OF CONVENTIONAL MANAGEMENT</th>
<th>RESIDUAL LOSS in MSA</th>
<th>AREA (10e6 ha)</th>
<th>LOSS x AREA (10e6 ha*MSA)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>tropics</td>
<td>temperate</td>
<td>boreal</td>
</tr>
<tr>
<td>Selective logging</td>
<td>70%</td>
<td>-30%</td>
<td>18</td>
</tr>
<tr>
<td>Rotation forestry</td>
<td>50%</td>
<td>-50%</td>
<td>-</td>
</tr>
<tr>
<td>Plantations</td>
<td>30%</td>
<td>-70%</td>
<td>5</td>
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</tbody>
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<table>
<thead>
<tr>
<th>POTENTIAL CERTIFICATION IMPACTS</th>
<th>POSITIVE IMPACTS</th>
<th>AREA (10e6 ha)</th>
<th>IMPACT x AREA (10e6 ha*MSA)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>min</td>
<td>max</td>
<td>tropics</td>
</tr>
<tr>
<td>1. RIL application</td>
<td>10%</td>
<td>20%</td>
<td>18</td>
</tr>
<tr>
<td>2. Better rotation forestry</td>
<td>10%</td>
<td>20%</td>
<td>-</td>
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<tr>
<td>3. Plantation (reforestation effect)</td>
<td>20%</td>
<td>20%</td>
<td>2</td>
</tr>
<tr>
<td>4. HCVA set-aside in plantations</td>
<td>5%</td>
<td>40%</td>
<td>1</td>
</tr>
<tr>
<td>5. Avoided deforestation - sparing</td>
<td>39%</td>
<td>27%</td>
<td>39%</td>
</tr>
</tbody>
</table>

Assumption: certification impacts have general applicability

-138 -36% final situation - with SFM

Arets et al. 2010; Potts et al 2014

Distribution over forest management types
First rough estimate of SFM impacts

Uncertainty & knowledge gaps

- Low-hanging fruit
  - Additionality?
  - Historical forest governance
  - Performance based certification

- Avoided deforestation
  - Hard to quantify
  - Land-use changes data
  - Evaluate landscape approaches

- Geographical variation
  - Impact studies for different forest and management types
Relevance of VSS impacts to policy

Dutch policies for sustainable trade build on ICI-performance

› Aide and Trade agenda
  – Amsterdam declaration on deforestation-free supply-chains
  – Many ICIs included: IDH, CDP, TFA, EUSTTC, ISLA
› Accountability and reliability
  – EU Directive on reporting & transparency for large enterprises
  – GRI Reporting standard & VSS-use
› Promotion of international CSR
  – International-CSR convenants (8 sectors) include VSS commitments
› Proxy indicator for monitoring policy effects
  – Market uptake of standards => Quantified impact
Market uptake of certified natural resources

Market shares of certified, sustainably produced natural resources

The utilisation and implementation of sustainable production standards is considerable in the Netherlands, but much lower on a global level.

- Coffee
- Timber
- Cacao
- Palm oil
- Fish
- Soya

Global production
Dutch consumption

PBL – People and Earth, 2017
How to tackle the credibility crisis?

› Conditions for legitimacy and policy support (C Termeer)
  - Broad societal support (MSI)
  - Traceability of supply-chains
  - Independent control
  - Be transparent on success AND failure
  - Show additionality and impacts

› “Two-way” traffic
  - VSS building trust and
  - Governments endorsing and giving support
  - ISEAL as platform for meta-governance
Bas Arts et al. 2017
The Impact of International Cooperative Initiatives on Biodiversity (ICIBs)
WUR – Wageningen University Research
PBL – Planbureau voor de Leefomgeving

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www.pbl.nl or #PBLNL
Homogenisation process and MSA indicator

Homogenisation

Original species of ecosystem

- Natural range of species abundance in intact ecosystem
- Abundance of individual species, relative to natural range
- Mean Species Abundance, relative to natural range
Figure 2. Box and whisker plot of MSA values for each land-use category.

Figure 6. Box and whisker plot of MSA values for different patch size categories.
Emerging governance landscape for biodiversity

Trend - from public to private and multi-stakeholder initiatives

Potential and effectiveness?
Discussion with David d’Hollander
Thoughts? Questions? Comments?
ISEAL Research Webinars

Join us for Autumn research webinar series from October to November 2018.

**19th October 2018:** The Systemic Impacts of Voluntary Sustainability Standards

**25th October 2018:** Do private coffee standards ‘walk the talk’ in improving socio-economic and environmental sustainability?

**15th November 2018:** Understanding of the Conservation Impacts of Voluntary Sustainability Standards.

**22nd November 2018:** The Impact of International Cooperative Initiatives on Biodiversity.

**29th November 2018:** Social and environmental monitoring of the ASC® certification in the south of Chile.

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