

**Four Policy Briefs prepared by Topic and Theme Groups of ISDRS for the**

**SIDE EVENT: Biodiversity Science Policy Challenges:  
Multifaceted Stakeholders Approaches**

**Tuesday 2018.11.20 at 18:15, Building 1, Luxor - Asia and the Pacific Room**

**at the**



## Content

1. ISDRS – IUNCBD Policy Brief on Ecosystem Restoration to reverse loss of biodiversity  
2
2. ISDRS – IUNCBD Policy Brief on ‘Sustainability Standards & Supply Chain Initiatives:  
How Governments can increase their impact’ ..... 4
3. ISDRS – IUNCBD Policy Brief on Smarter Use of Certification ..... 7
4. ISDRS – IUNCBD Policy Brief on applying the “Convention Check” ..... 9

## 1. ISDRS – IUNCBD Policy Brief on Ecosystem Restoration to reverse loss of biodiversity

### Addressing the UN Biodiversity Conference 2018

14th meeting of the Conference of the Parties to the Convention on Biological Diversity - COP 14, Sharm El-Sheikh, Egypt, 17-29 November 2018



### Input from ISDRS Theme group 3: Biodiversity and Ecosystem Services

#### 1. Issue to be addressed

Restoration of ecosystems is taking place all around the world after more or less organized action plans to reverse loss of biodiversity. It is a desirable activity as it contributes to improve the biodiversity of ecosystems and their ecological functioning. In fact, it is implicitly or explicitly included in UN Sustainable Development Goals 14 and 15.

However, the Aichi Biodiversity targets related to ecosystem restoration are far from being achieved (Secretariat of the Convention on Biological Diversity 2014). Particularly, those targets establishing objectives of restoration for 2020 will not be accomplished because of the restoration of degraded ecosystems takes periods of time longer than those quoted in the targets. Consequently, new paradigms based on sound experiences must be adopted to activate practical and sustainable restoration action plans at all spatial scales (Spangenberg 2011).

#### 2. Key findings in recent scientific research

Research has shown that:

- The restoration of degraded ecosystems takes long time. E.g.: wetlands may take between 5 and 100 years to be restored (Moreno-Mateos et al. 2012); forest recovery may take a few decades depending on the metric type measured, past land use, and region (Meli et al. 2017).
- Passive restoration (e.g., facilitating water flows, recovering topography or soil texture) may often more efficiently recover biodiversity than active restoration (e.g., planting trees, detailed geomorphological work) (Zaldivar et al. 2010).
- Restoration actions focused on enhancing biodiversity and provision of ecosystem services could improve the success of restoration actions focussed exclusively on biodiversity (Rey-Benayas et al. 2009).
- Planning and implementing restoration requires the integration of scientific-technical, economic and social aspects (Comín et al. 2005).

#### 3. Implications for policy makers

- Targets for biodiversity recovery should be linked to the timing of ecosystem restoration as both biological and abiotic components of ecosystems jointly evolve as dynamic systems (Hutchinson 1965), with intermediate targets achievable in the short and medium term.
- Managers and decision makers should prioritize reducing direct and indirect drivers of biodiversity loss and then wait a few years to observe the rate and direction of natural recovery, before investing in active restoration efforts (Brancalion et al. 2016).

- More efficient biodiversity recovery is that planned at watershed or landscape scale, considering the biogeochemical interactions sustaining biodiversity dynamics (Bullock et al. 2011).
- In order to integrate the complex set of socio-economic, institutional, and legal/policy drivers required to implement ecosystem restoration the integration of the evaluation of ecosystem services (including regulating and cultural services) in restoration planning is strongly recommended (Comín et al. 2018).

#### 4. Lead author(s) and related research institutes

Prof. Dr. Francisco A. Comín. Instituto Pirenaico de Ecología-CSIC, Zaragoza, Spain. International Sustainable Development Research Society (ISDRS).

Prof. Dr. Joachim H. Spangenberg. Sustainable Europe Research Institute SERI Germany, Cologne, FR Germany.

#### 5. Relevant references

- Brancalion P.H.S. et al., 2016. Balancing economic costs and ecological outcomes of passive and active restoration in agricultural landscapes: the case of Brazil. *Biotropica* 48(6):856–867.
- Bullock JM, Aronson J, Newton AC, Pywell RF, Rey-Benayas JM., 2011 Restoration of ecosystem services and biodiversity: conflicts and opportunities. *Trends Ecol Evol.* 2011; 26(10):541–549
- Comín F.A. et al. 2005. Wetland restoration: integrating scientific-technical, economic and social perspectives. *Ecological Restoration* 23(3):181-186.
- Comín F.A., Miranda B., Sorando R., Felipe-Lucia M.R., Jiménez J.J., Navarro E., 2018. Prioritizing sites for ecological restoration based on ecosystem services. *Journal of Applied Ecology* 55 (3):1155-1163.
- Hutchinson G.E., 1965. *The Ecological Theater and the Evolutionary Play*. Yale Univ. Press, 164 páginas.
- Meli P. et al., 2017. A global review of past land use, climate, and active vs. passive restoration effects on forest recovery. *PLoS ONE* 12(2): e0171368. doi:10.1371/journal.pone.0171368.
- Moreno-Mateos D., Power M.E., Comín F.A., Yockteng R., 2012. Structural and Functional Loss in Restored Wetland Ecosystems. *PLoS Biology* January 2012 | Vol.10 | Issue 1 | e1001247
- Rey Benayas J.M., Newton A.C., Diaz A., Bullock J.M., 2009. Enhancement of Biodiversity and Ecosystem Services by Ecological Restoration: A Meta-Analysis. *Science* 325: 1121-1124.
- Secretariat of the Convention on Biological Diversity (2014) *Global Biodiversity Outlook 4*. Montréal, 155 pages.
- Spangenberg, J.H. 2011. Sustainability science: a review, an analysis and some empirical lessons. *Environmental Conservation* 38 (3): 275–287
- Zaldívar, A., Herrera J.A., Teutli C., Comín F.A., Andrade J.L., Coronado C., Pérez R. 2010. Conceptual framework for mangrove restoration in the Yucatan Peninsula. *Ecological Restoration* 28 (3):333-342.

## 2. ISDRS – IUNCBD Policy Brief on ‘Sustainability Standards & Supply Chain Initiatives: How Governments can increase their impact’.

### Addressing the UN Biodiversity Conference 2018

14th meeting of the Conference of the Parties to the Convention on Biological Diversity - COP 14, Sharm El-Sheikh, Egypt, 17-29 November 2018



### Input from ISDRS Topic group 5d

#### 1. Issue to be addressed

Biodiversity is often under threat as result of the production of agricultural commodities, which are traded globally. Increasingly, transnational, multi-stakeholder initiatives have been established to improve the farming practices associated with these internationally traded products like, coffee, tea, cocoa, palm oil, cotton, fresh fruits and more. These initiatives stimulate suppliers to improve their production practices and they provide a system of self-control or third-party control of the farmers and first processors. Evidence shows that a strong growth in the uptake of these initiatives has been achieved in the last decade (Potts et al. 2014). The driving mechanisms behind this are the market demand which comes mostly from buyers in high-income and emerging countries and the differentiation strategies of corporate brands

In recent years, many global companies are starting to tackle a growing range of environmental sustainability issues, most notably the Zero Deforestation Commitments which have been pledged. Diverse in-house programmes have also been established to deliver on these sustainability commitments. Because many of these programmes emphasize forest conservation, these instruments provide promising opportunities to tackle biodiversity loss and to support restoration. However, many of these initiatives are relatively new and the evidence regarding their actual impact is mixed (Nelson et al, 2017). A closer examination of the motivations, intents and assessment of these programmes and their underlying mechanisms is needed to identify how their impact can be increased and to identify the additional measures needed to achieve the ultimate desired environmental goals. Below we summarize the main findings of current research on voluntary sustainability standards (VSS) and set out the implications for policy-makers.

#### 2. Key findings in recent scientific research

- Sustainability standards and certification uptake by growers has grown dramatically in the last 20 years, covering almost 50% of coffee and a smaller proportion of other commodities (ITC, 2015). However, trajectories vary by sector (Lernoud et al, 2017) and uptake in demand currently lags behind growth in supply, leading to shrinking premiums.
- The body of work on the impacts of standards indicate that the impacts are context-specific, and that while sustainability standards can produce islands of success, there are limits to their effectiveness as sole *drivers* of change, in engaging the mainstream body of companies in an industry, and in achieving ever more pressing sustainable development objectives.
- Mainstreaming has been a challenge: because of the voluntary character of sustainability standards, the challenge remains reaching many disorganized smallholders due to the costs involved, and persuading suppliers selling to markets where demand for sustainability standards and certification is weak or non-existent to participate. Further, while standards can be effective in creating ‘islands of success’ they have limited traction in tackling pressures on natural resources and competition over land use in the wider landscape. Achieving public goods (e.g. ecosystem services conservation and

enhancement, health, education and food security) cannot be achieved through certification on its own (Nelson, Rueda and Vermeulen, 2017). To drive rapid and effective change on issues such as forest and biodiversity conservation and on social issues, including indigenous peoples' and community land rights and rural development prerogatives requires additional measures (Nelson and Phillips, 2017).

- Supply chain initiatives have multiplied to provide these additional measures, beyond and in combination with sustainability standards and certification. Most are led by mainstream global companies, but there are also important examples involving alternative traders, such as direct trade initiatives in coffee and non-timber forest products (Nelson, Rueda and Vermeulen, 2017).
- The proliferation of initiatives, led by private sector actors, reflects the different conditions at origin (i.e., dispersed vs. concentrated providers; strong vs. weak enforcement of regulations), different supply chain structures (vertically integrated vs. long and complex chains), and different conditions in the market place (branded vs. non-branded companies, niche vs. mainstream goods, etc.) and corporate needs (product differentiation, risk avoidance, efficiency gains) (Rueda et al. 2017).
- In agriculture and forestry, many of the larger, corporate programmes are focused upon intensifying productivity, tackling environmental sustainability issues and tackling social and human rights risks. Third party certification or at least verification by a second party continues to play a role in many of these newer supply chain initiatives – setting standards of good agricultural practices for example. Sustainability standards are also evolving: Some are expanding on their roles in supporting dialogue and platforms for collaboration, facilitating producer engagement on the ground, as well as supporting innovations (e.g. on living wage methodologies, living income agenda setting and the use of technology for traceability etc).
- Yet, more reforms are needed within standards themselves and in the enabling environment. More regulations are needed to protect the environment at different scales. Improvements to sustainability standards are needed (e.g. increasing their transparency, independence, holistic approach and high traceability, and continuous improvement requirements (Changing Markets Foundation, 2018). The mechanisms employed to *drive* change need to advance. They are already diversifying, as more attention is paid to the incentives and disincentives needed to change the behaviour of diverse actors over a wider geography in sustainable landscape initiatives There is also growing recognition that governments need to play a much greater role in mainstreaming and enforcing sustainability in production.
- The global thirst for tropical commodities, for biofuels and meat especially, must be tackled head on. Questions also must be asked of the global companies in terms of the share of value in supply chains and the internalization of social and environmental costs into products, given the continuing low returns for smallholder producers compared with the profits of companies.

### 3. Implications for policy makers

One of the current CBD programmes addresses 'Economics, Trade and Incentive Measures' and these include activities on incentives for trade of products promoting biodiversity conservation. However, a clear policy on how to support and strengthen the impacts and mainstreaming of voluntary sustainability initiatives in the market is still lacking. This calls for 'smart governance' of biodiversity related private certification. This will include:

- Promoting intensive collaboration between national governmental agencies and voluntary sustainability initiatives, both in producing and buyer countries to enhance the adoption of sustainability standards and to reduce costs. Monitoring and enforcement of conservation policies are investments governments can make to support a shift towards sustainable production and trade.
- Given the small willingness to pay for sustainable products, other mechanisms to enhance farmers incomes should be designed such as stable contracts and quality upgrading.
- Governments in consuming and producer countries can promote the uptake of sustainability standards via education,

- Supplier governments should set government standards of adequate stringency to shift whole industries and enable mainstreaming to occur. They also should engage in regional initiatives, with neighbouring governments, to develop joint roadmaps, tackling issues of leakage.
- Public procurement in producer and buyer countries should respond to sustainability criteria of adequate stringency and effectiveness.
- Governments have a fundamental role to play enacting and enforcing legislation that supports corporate efforts and providing public goods such as technical assistance and infrastructure development that enhance the scaling up of programmes. Governments should ensure that land use planning effectively identifies the most priority, critical areas, such as biodiversity hotspots and ensures that private sector led programmes protect these hotspots and protected areas and contribute to restoration in mosaic landscapes.

These proposals should be added to the discussions on [Item 22. Mainstreaming of biodiversity within and across sectors](#) and [Recommendation SBI-2/3](#) and [Recommendation SBI-2/4](#)

#### 4. Lead author(s) and related research institutes

- Prof. Ximena Rueda, School of Management, Sustainability Head, Universidad de los Andes, Bogotá, Colombia.
- Prof. V. Nelson, Natural Resources Institute, University of Greenwich, UK.
- Prof. dr. W.J.V. Vermeulen, Copernicus Institute of Sustainable Development, Utrecht University, Netherlands Stellenbosch University, South Africa / International Sustainable Development Research Society.

#### 5. Relevant references

- ITC, 2015. *The State of Sustainable Markets: Statistics and Emerging Trends 2015*, Geneva.
- Lernoud, J. et al., 2017. *The State of Sustainable Markets*, Geneva, Switzerland: International Trade Centre (ITC), International Institute for Sustainable Development (IISD), Research Institute of Organic Agriculture (FiBL).
- Meulensteen, T.M., Vermeulen, W.J. V & Meerman, S., 2016. Creating shared value in the buyer-supplier relationship through the implementation of sustainability requirements. *Global Business and Economics Review*, 18(6), pp.656–678.
- Nelson, V. & Phillips, D., 2018. Sector, Landscape or Rural Transformations? Exploring the Limits and Potential of Agricultural Sustainability Initiatives through a Cocoa Case Study. *Business Strategy and the Environment*, 27(2), pp.252–262. Available at: <http://doi.wiley.com/10.1002/bse.2014>.
- Nelson, V., Rueda, X. & Vermeulen, W.J. V, 2017. Challenges and Opportunities for the Sustainability Transition in Global Trade (Introduction). *Business Strategy and the Environment*, 26
- Oorschot, M. van et al., 2014. *Sustainability of international Dutch supply chains. Progress, effects and perspectives*, The Hague. Available at: [www.pbl.nl/en](http://www.pbl.nl/en)
- Potts, Jason, et al. *The state of sustainability initiatives review 2014: Standards and the green economy*. Winnipeg, MB: International Institute for Sustainable Development, 2014
- Rueda, Ximena, Rachael D. Garrett, and Eric F. Lambin. "Corporate investments in supply chain sustainability: Selecting instruments in the agri-food industry." *Journal of cleaner production* 142 (2017): 2480-2492
- Vermeulen, W.J.V., 2015. Self-Governance for Sustainable Global Supply Chains: Can it Deliver the Impacts Needed? *Business Strategy and the Environment*, 24(2), pp.73–85. Available at: <http://doi.wiley.com/10.1002/bse.1804>.
- Vermeulen, W.J.V. & Metselaar, J.A., 2015. Improving sustainability in global supply chains with private certification standards: testing an approach for assessing their performance and impact potential. *International Journal of Business and Globalisation*, 14(2), p.226.

### 3. ISDRS – IUNCBD Policy Brief on Smarter Use of Certification

#### Addressing the UN Biodiversity Conference 2018

14th meeting of the Conference of the Parties to the Convention on Biological Diversity - COP 14, Sharm El-Sheikh, Egypt, 17-29 November 2018



#### Input from ISDRS Topic group 5d: Value Chains and Trade

##### 1. Issue to be addressed

Biodiversity is often under threat as result of the production of agricultural commodities, which are traded globally. Increasingly multi-stakeholder initiatives have been established to improve the agricultural practices of these internationally traded products like, coffee, tea, cocoa, palm oil, cotton, fresh fruits and more. These initiatives stimulate suppliers to improve their production practices and they provide a system of self-control or third-party control of the farmers and first processors of these commodities. Evidence shows that a strong growth in uptake of these initiatives have been achieved in the last decade (Oorschot *et al.*, 2014; Potts *et al.*, 2014, 2016; Vermeulen, 2015). The driving mechanism behind this is the market demand from mostly buyers in high income countries.

As such this form of self-governance provides promising opportunities to improve biodiversity world-wide. However, the current experiences show both positive results and adverse effects, which relate to the fast-growing number of very diverse approaches in these voluntary sustainability initiatives.

##### 2. Key findings in recent scientific research

Research has shown that:

- worldwide we see a growing number of competing sustainability standards and certification schemes in many different product / commodity groups;
- the uptake by buyers and by suppliers is growing, whereas the supply of sustainability approved products/commodities is ahead of the growth in demand;
- these standards represent the related stakeholder group in various ways;
- sustainability standards and certification schemes address sustainability aspects in very diverse ways (both in terms of the completeness of aspects addressed and in the value chain actors addressed);
- sustainability standards and certification schemes differ largely in applying good governance practices themselves, including issues of access of stakeholders, transparency and accountability;
- proposals for assessment methods for sustainability standards and certification schemes address are available both for content (aspects coverage and scope) and for governance practices (good governance) have been developed.

##### 3. Implications for policy makers

One of the current CBD programmes addresses 'Economics, Trade and Incentive Measures' and these include activities on incentives for trade of products promoting biodiversity conservation. However, a clear policy on how to public only for accredited in the market is still lacking. This call for 'smart governance' of biodiversity related private certification (Oorschot *et al.*, 2014; Vermeulen, 2015; Nelson, Rueda and Vermeulen, 2018). This will include:

- promoting intensive collaboration of national governmental policies and voluntary sustainability initiatives, both in supplier countries and in buyer countries;
- these governments should be selective in giving policy support to voluntary sustainability initiatives and limit this to those initiatives that apply practices of good governance;
- governments should develop mechanisms to accredit only voluntary sustainability initiatives that apply good governance practices (Metselaar, 2010; Vermeulen *et al.*, 2010; Klinge, 2018);
- with these accredited initiatives national governments at the supplier side can establish collaborative public-private initiatives for market support to sustainable farming and agro-commodity production

These proposals should be added to the discussions on [Item 22. Mainstreaming of biodiversity within and across sectors](#) and [Recommendation SBI-2/3](#) and [Recommendation SBI-2/4](#)

#### 4. Lead author(s) and related research institutes

- Prof. dr. W.J.V. Vermeulen, Copernicus Institute of Sustainable Development, Utrecht University, Netherlands Stellenbosch University, South Africa / International Sustainable Development Research Society.
- Prof. Ximena Rueda, School of Management, Sustainability Head, Universidad de los Andes, Bogotá, Colombia.
- Prof. V. Nelson, Natural Resources Institute, University of Greenwich, UK.

#### 5. Relevant references

- Klinge, J. (2018) *The Quality of Standards - An Assessment Framework to Measure the Quality of Organisations Producing and Maintaining Voluntary Sustainability Standard Systems*. Utrecht.
- Metselaar (2010) *The sustainable supply chain governance (SSCG) system performance*. Available at:  
<http://scholar.google.com/scholar?hl=en&btnG=Search&q=intitle:The+Sustainable+Supply+Chain.#0%5Cnhttp://scholar.google.com/scholar?hl=en&btnG=Search&q=intitle:The+sustainable+supply+chain%230%5Cnhttps://www.atkearneyprocurementsolutions.com/knowledge/articles/2>.
- Nelson, V., Rueda, X. and Vermeulen, W. J. V. (2018) 'Challenges and Opportunities for the Sustainability Transition in Global Trade (Introduction)', *Business Strategy and the Environment*, 27(2), pp. 173–178. doi: 10.1002/bse.2008.
- Oorschot, M. van *et al.* (2014) *Sustainability of international Dutch supply chains. Progress, effects and perspectives*. The Hague. Available at: [www.pbl.nl/en](http://www.pbl.nl/en).
- Potts, J. *et al.* (2014) *State of Sustainability Initiatives Review 2014 Standards and the Green Economy*. Winnipeg: International Institute for Sustainable Development (IISD) and International Institute for Environment and Development (IIED).
- Potts, J. *et al.* (2016) *State of Sustainability Initiatives Review: Standards and the blue economy*. Winnipeg.
- Vermeulen, W. J. V. *et al.* (2010) *Roles of Governments in Multi-actor Sustainable Supply Chain Governance Systems and Effectiveness of their Interventions—An Exploratory Study*, PBL Netherlands Environmental Assessment Agency. Bilthoven. Available at:  
<http://www.pbl.nl/sites/default/files/cms/publicaties/500411001.pdf>.
- Vermeulen, W. J. V. (2015) 'Self-Governance for Sustainable Global Supply Chains: Can it Deliver the Impacts Needed?', *Business Strategy and the Environment*, 24(2), pp. 73–85. doi: 10.1002/bse.1804.

## 4. ISDRS – IUNCBD Policy Brief on applying the “Convention Check”

### Addressing the UN Biodiversity Conference 2018

14th meeting of the Conference of the Parties to the Convention on Biological Diversity - COP 14, Sharm El-Sheikh, Egypt, 17-29 November 2018



### Input from ISDRS Topic group 9d: Law and Sustainability

#### 1. Issue to be addressed

Multilateral Environmental Agreements (MEA's) are nationally often hardly or not implemented although signed and/or ratified (Young 2011). National legislative bodies often do not much more than copy and paste MEA into legislation, if at all (Koester 2004, Mauerhofer et al. 2015). This leads to a top-down-deadlock in the implementations of these agreements leaving them behind in the implementation queue in comparison for example to regional agreements of regional integration organizations such as the EU with a much stronger implementation mechanism.

Managers of Protected Areas (PA's) are often confronted with this kind of top-down-deadlock leaving them with a lack of implementation rules out in the field and unable to create these implementation rules themselves.

#### 2. Key findings in recent scientific research

Research has shown (Mauerhofer 2011, Dudley et al. 2016):

- an approach to improve implementation of MEAs (CBD, CMS, AWEA, EUROBATS, Bern Convention) protecting Biodiversity without need to change the law.
- how PA-managers can contribute through an “Convention Check” to improved implementation of these MEA's.
- how the Convention-Check method applies through a 10-step system a bottom-up approach to assess the contribution of large-scale PAs to the implementation of these MEA's.
- that this approach allows to overcome deadlocks in MEA implementation, contributing to improved global PA governance.
- a Convention Check as a case study carried out in the Thaya Valley National Park, Austria, demonstrating that the park contributes significantly to implementation of these 5 MEA's.

#### 3. Implications for policy makers

Protected area managers are provided with a tool which they can apply within their managerial and budgetary responsibilities (Mauerhofer 2011).

In this way, “their” protected area can contribute to improve implementation of MEA's. One of these impacts shown is that more than 25 % of the recommendations developed for improved implementation were executed within two years (Mauerhofer 2011).

This Convention Check approach proves to be rather flexible and applicable not only to the five MEAs of the case study but to a wide range of MEAs (Dudley 2016). Similar is valid for the type of Protected area as well as for the geographic range.

These proposals should be added to the discussions on [Item 24. Mainstreaming of biodiversity within and across sectors](#) and [Recommendation SBSTTA-22/5](#)

#### **4. Lead author(s) and related research institutes**

Dr. Volker Mauerhofer, Meiji University, Tokyo/Japan, International Sustainable Development Research Society <http://isdrrs.org/about-isdrs/board-biographies/>, International Society for Ecological Economics

#### **5. Relevant references**

- Dudley N., Harrison I.J., Kettunen M., Madgwick J., Mauerhofer V., 2016. Natural solutions for water management of the future: Freshwater protected areas at the 6th World Parks Congress, Aquatic Conservation: Marine and Freshwater Ecosystems (Wiley) 26 (Suppl. 1): 121–132
- Koester, V., 2002. The five global biodiversity-related conventions: A stocktaking. Review of European Community and International Environmental Law 11, 96-103.
- Mauerhofer V., 2011. A bottom-up 'Convention-Check' to improve top-down global protected area governance, Land Use Policy (Elsevier), 28, 877–886
- Mauerhofer V., Kim R.E., Stevens C., 2015. When implementation works: a comparison of Ramsar Convention implementation in different continents, Environmental Science & Policy (Elsevier) 51, 95-105.
- Young, O.R., 2011. Effectiveness of international environmental regimes: Existing knowledge, cutting-edge themes, and research strategies. Proceedings of the National Academy of Sciences of the United States of America 108, 19853-19860.

See also: <https://panorama.solutions/en/solution/assessment-individual-pas-contribution-environmental-conventions>