Conservation and use of biodiversity in tropical forests. Are we on the right track?

Seminar report

16 June 2010, Ede, the Netherlands

Ministerie van Landbouw, Natuur en Voedselkwaliteit

WAGENINGEN UR
For quality of life

Universiteit Utrecht

TROPENBOS INTERNATIONAL

Vereniging Tropische Bossen

Conservation and use of biodiversity in tropical forests. Are we on the right track?

16 June 2010, Ede, the Netherlands

Seminar report

→ Applying smarter policies helps to conserve tropical forest biodiversity ←

Reporters:

Cathrien de Pater, Ministry of Agriculture, Nature and Food Quality, Inter-ministerial Programme on Biodiversity
Roderick Zagt, Tropenbos International
Danielle van Oijen, Wageningen University, Forest and Nature Conservation Policy Group
Freerk Wiersum, Wageningen University, Forest and Nature Conservation Policy Group
Herman Savenije, Ministry of Agriculture, Nature and Food Quality, Department of Knowledge and Innovation
Bernd Slesazeck

Ministerie van Landbouw, Natuur en Voedselkwaliteit

WAGENINGEN UR
For quality of life

Universiteit Utrecht

TROPENBOS INTERNATIONAL

Vereniging Tropische Bossen

Contents





1. Background, objectives and programme

The United Nations declared 2010 to be the International Year of Biodiversity. This was a good reason to dedicate the 2010 “Right Track” seminar to biodiversity and tropical forests. This seminar is the fourth in a series of annual conferences titled *Sustainable forest management in the tropics. Are we on the right track?* in which the latest scientific insights on tropical forests are presented and discussed with forestry and conservation professionals and key policy representatives in the Netherlands.

Tropical forests are among the richest but also the worst affected ecosystems of the world. Whereas in some forest areas biodiversity is on its way to recovery, deforestation and forest degradation are still widespread. Consequently, not only massive biodiversity losses occur (habitats as well as species and gene sources), but also essential forest ecosystem functions and services are at stake. This threatens the sustainability of local livelihoods, economic value chains and global environmental goods. Recent studies have clearly demonstrated the socio-economic justification for investing in forest biodiversity, not only for future generations, but also for the people living today. Restoring, maintaining and sustainably using both biodiversity and related ecosystem functions and services in human-influenced forest landscapes has been recognized as a key conservation and development issue. Several national and international initiatives have been taken to reverse the downward trend in deforestation and loss of biodiversity. The design and implementation of certification schemes is one of them.

However, do we have all necessary (inter)national policies in place? Are certification and other current measures appropriate and effective? How do we deal with specificity of situations? Has certification of products and uses of tropical forest fulfilled their promises, and especially, what should be done where and when this is not the case? Who should take what role?

These questions were at the core of the presentations and discussions at the seminar. The purpose of the seminar was:

1. to share current scientific insights in the status of forest biodiversity, integrated forms of sustainable biodiversity use and management, certification systems, and biodiversity policies; and
2. to discuss policy and management implications emerging from these insights, including priorities for further work.

The seminar was attended by 106 participants representing a broad audience of professionals working in tropical forest management, policy, conservation, industry and trade, science and advisory services.

In this report we summarize the highlights of the presentations and discussions. We end with conclusions and recommendations for further action. The programme is presented in Box 1 below.

Box 1: Seminar programme

12.00	Registration and coffee
13.15	Welcome & Introduction by Chair, Prof. Dr. René Boot (Tropenbos International & Utrecht University)
13.30	Debating the Tropical Extinction Crisis – Prof. William Laurance (Smithsonian Institution, Brazil & Panama, James Cook University, Australia, Utrecht University)
13.50	Functions of biodiversity for ecosystems and people – Dr. Lourens Poorter (Wageningen University)
14.10	Are forest-related standards and certification schemes future proof for biodiversity? – Ir. Erik Lammerts van Bueren (ISAFOR Institution Support & Analysis, Forest and Land Use)
14.30	Coffee / tea break

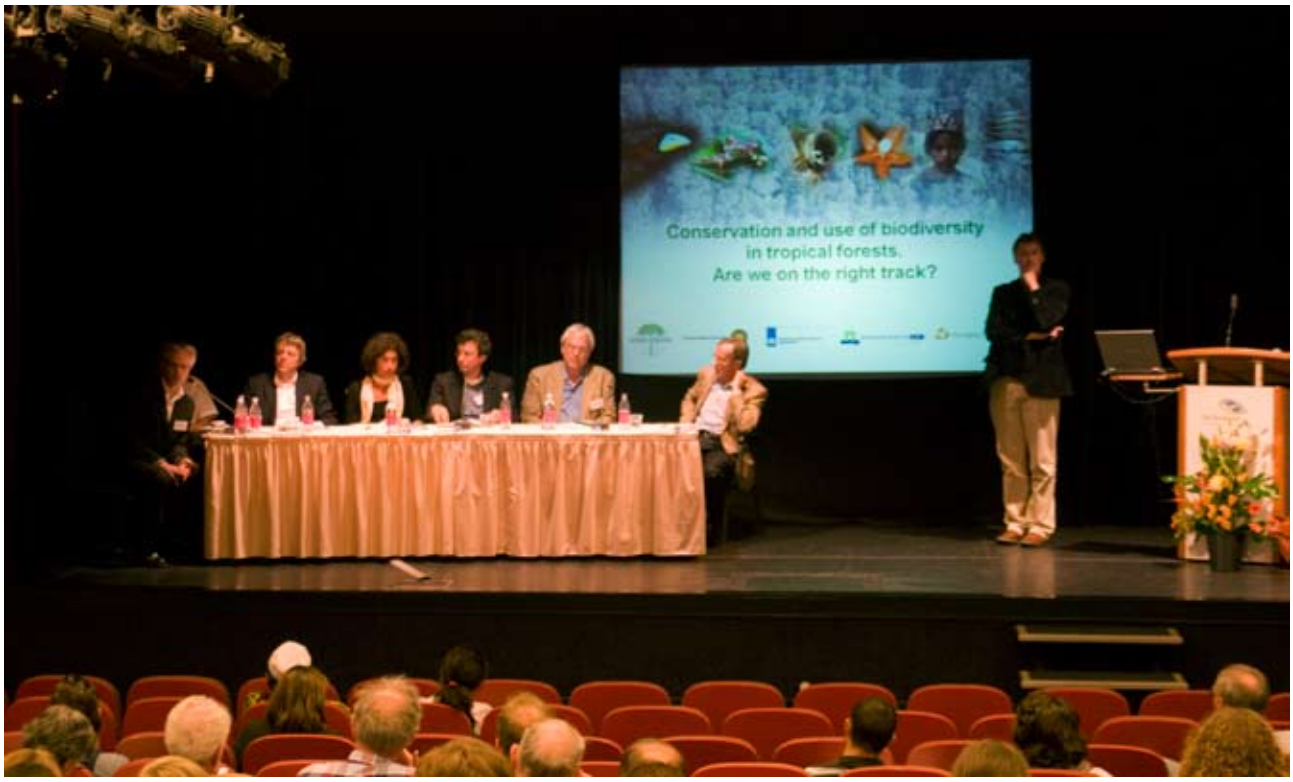
This seminar was the fourth in a series of annual events on *Sustainable forest management in the tropics. Are we on the right track?* It is jointly organized by Utrecht University (Prince Bernhard Chair), Wageningen University (Forest Ecology and Forest Management), Tropenbos International, Dutch Association of Tropical Forests (VTB) and the Ministry of Agriculture, Nature and Food Quality.

15.00 International biodiversity policy: what mix of governance tools? - Prof. Bas Arts/Dr. Ingrid Visseren (Forest and Nature Conservation Policy Group, Wageningen University)

15.20 Interactive panel discussion with speakers and:
Drs. Daniëlle Hirsch, Both Ends & Task Force Biodiversity and Natural Resources;
Ir. Rob Busink, Ministry of Agriculture, Nature and Food Quality, Department of Nature, Landscape and Rural Areas;
Drs. Marnix Becking, Ministry of Foreign Affairs, Department of Environment & Water.

16:45 Conclusion

17:00 Drinks



2. Highlights of the presentations

2.1. Debating the Tropical Extinction Crisis

Prof. William F. Laurance
Smithsonian Institution, Brazil & Panama; James Cook University, Cairns, Australia; Utrecht University, Prins Bernhard Chair of International Nature Conservation

Prof. Laurance's presentation centered around the magnitude of the biodiversity extinction crisis in tropical forests. Tropical forests are the most biologically diverse and ecologically complex of terrestrial ecosystems, and are disappearing at alarming rates due to a variety of threats. Since the 1970s scientists have alerted the world about the 'Tropical Extinction Crisis' (TEC). Dirzo & Raven (2003) predict an extinction rate as high as 50-75%.

This scenario of mass extinction was seriously challenged by Wright & Muller-Landau (WML) (2006a, 2006b). They argued that of all species, just 21-24% (Asia), 16-35% (Africa), and even less in the Neotropics would be *threatened* with extinction only. Their argument was based on 3 sets of data:

1. Empirical data from 45 tropical nations which showed a strong relation between net forest cover and (rural) population density.
2. UN projections on population growth which showed a tendency to level off for the rural population due to increasing urban migration, especially in Latin America and Asia.
3. species-area relationship curves predicting species losses for Asian, African, and American tropics.

In short, they concluded that TEC was an overstatement.

Laurence reviews these arguments and estimates that deforestation would lead to the extinction of around 10-40% of all tropical species by 2050. Overall, he considers the estimates of Wright & Muller-Landau too optimistic:

- In WML's models, all forest types count equally and a key assumption is that 100% of old-growth species persist just as well in altered forests as in old-growth. The truth is that logged, fragmented, regrowing forests and plantations are increasing massively at the expense of old-growth forest, and that for extinction-prone species the distinction between old-growth and regenerating or fragmented habitats can be profound. Moreover, we still lack data to make robust predictions about the conservation value of altered forests (Gardner *et al*. 2007).
- The UN projections on population growth are debated among demographers. In reality, for many developing nations, population growth is slowing only relative to the breakneck pace in recent decades, and in some cases - and in some biodiversity hot spots – it is still rising dramatically.
- The dramatically growing urban population creates increasing demands and markets for forest resources. These growing urban demands may counteract on the impact of increasing rates of rural migration to urban centers resulting in forest regeneration on abandoned fields. For instance, continuing industrialization (3-5 fold expansion by 2050), biofuel expansion (till over 300 million hectares), globalization and macroeconomic forces will have drive accelerated deforestation and conversion as can be witnessed in e.g., the Brazilian Amazon.
- WML do not include many anthropogenic impacts such as climate change, forest degradation, emerging diseases, and environmental synergisms in their calculations.

Laurance concluded that in any tropical conservation strategy it is unwise to discount the importance of forest degradation. He argued for conservation of big reserves that span large gradients of environmental variation as an achievable goal and the best strategy for mitigating climate change.

2.2. Functions of biodiversity for ecosystems and people

Dr. Lourens Poorter
Forest Ecology and Forest management Group,
Wageningen University

Tropical forests store a significant proportion of the world's biodiversity in a relatively small part of the globe. Although this diversity of life has an intrinsic value, there is growing awareness that this biodiversity is very important for the functioning of ecosystems, and for human well-being, by means of the services these ecosystems provide. The importance of biodiversity for human well-being is underlined by the Millennium Ecosystem Assessment (MEA, 2005), a United Nations initiative that assessed the consequences of ecosystem change for people.

The MEA distinguishes four types of ecosystem services: 1) provisioning services such as timber, food, fibers and fuel; 2) supporting services such as nutrient and water cycling; 3) regulating services such as climate regulation and erosion control, and 4) cultural services, such as spiritual, recreational and aesthetic values.

The speaker explored the question whether there is a relation between biodiversity and ecosystem functions. How important is species richness for providing these services? Only recently, evidence about the importance of biodiversity for supporting and regulating services has become available. It has been shown that a higher diversity leads to a higher productivity and carbon storage potential. However, the number of species ("species diversity") appears to be less important than their functional characteristics ("functional diversity") in contributing to this higher productivity. Functional diversity is defined as the value, range, and relative abundance of plant or animal characteristics in a community. Which characteristics are important depends on the ecosystem service considered. For carbon storage, wood density and tree size are relevant functional characteristics, while for photosynthesis this can be phosphorous content of leaves. The role of functional diversity in providing ecosystem services remains poorly known, but initial results suggests that 1) functional diversity is not always related in a simple way with species diversity; 2) the number of species needed to provide a specific ecosystem service varies, and for some ecosystem services only a relatively low number of species is needed, 3) many ecosystem services, especially regulating and provisioning services, are determined by the characteristics of the dominant species in the system rather than by its diversity, and 4) many species are needed, though, to ensure that there is a buffer against local species losses through environmental change.

2.3. Are forest-related standards and certification schemes future proof for biodiversity?

Ir. Erik Lammerts van Bueren
ISAFOR Institution Support & Analysis, Forest and Land Use

The central question of the presentation was: 'Is Forest Biodiversity better off with certification?' In summary the answer would be best captured by: Yes, but… standards and the auditing show ambiguity and certification is no means to stop conversion of natural forests.

The contributions of forest certification to biodiversity protection results from supporting the enforcement of legislation, the incorporation of monitoring and feedback mechanisms in management planning, identifying and protecting the most valuable areas within the Forest Management Unit (FMU) and preventing undue damage to the ecosystem.

Besides these positive aspects, forest certification has its limitations. Erik Lammerts van Bueren formulated the following three main issues:

- One limitation of certification is the large difference between certificates notably those from certification systems which are directed and one single product or service. Different standards focus on different products or functions and they have different goals and different structures. This diversity causes a variety of sustainability requirements imposed on different products and similar products from different sources. A negative consequence of this situation is that it creates an incentive to choose products which have less strict sustainability requirements over products with more rigorous sustainability requirements , e.g. bio-mass over timber or plantations over natural forests.
  Only those standards which include spatial and quality requirements can effectively protect biodiversity. Both requirements are needed to protect biodiversity in standards which allow the harvest of timber and NTFP's. Spatial requirements ensure the protection of the most valuable areas. Components of the standard which require quality of the intervention, such as reduced impact logging, prevent undue damage to the ecosystem. Only Source Oriented Standards (such as FSC and PEFC) aim at ecosystem integrity and have included both kinds of requirements. On the other hand, Use Oriented Standards, which aim at one specific function such as CO2 storage of biomass, lack quality requirements in most cases and consequently requirements for conservation of biodiversity within the production unit are not or only vaguely formulated. Especially the unbridled proliferation of these Use Oriented Standards has a unintended and undesirable impact on forest management and conservation of biodiversity.
- Another issue is the limitations of registering biodiversity and assessing change. There is a need for specific knowledge - which is often not available - and various checks over time. The general formulation of goals, criteria and indicators adds to the ambiguousness of certification standards. In the end, auditors have a wide range of interpretation of the standards. A clear translation of goals into actions and measures is therefore required. To enable the formulation of clear actions and measures, effective interventions are needed. In order to gain this insight, cooperation between forest researchers/scientists and management is needed.
- A third limitation is caused by the fact that forest certification is not a tool for land-use planning and can therefore not protect forests from conversion in the future. Presently limited parts of certified FMUs can be converted under specific conditions. Exceeding a justified allowable conversion area will lead to withdrawal of the certificate.

To sum up, forest certification is a useful track towards more sustainable use of forests, including the conservation of biodiversity. Current developments have proven to have some effect but improvements are needed. Erik Lammers van Bueren formulated the following recommendations:

- Standards should be more explicit in what they mean by “conserve biological diversity” and for what purpose. Standards should also require clear articulation of biodiversity objectives and translation of these objectives into management activities. Both are needed for any system to deliver a service or product sustainably as an absolute minimum requirement for sustainable production is the maintenance of the ecological production basis.
- Policy makers should create level playing fields by setting fair and equal sustainability requirements for different products and products from different sources, in order to counteract the otherwise unfair competition of products for which less strict sustainability requirements.
- Forest conversion could be limited more when certification schemes consider requirements which discourage major conversion in Forest Management Units. To start the discussion on which criteria could be formulated, Erik Lammerts van Bueren suggests the following criteria:
  - » Requiring assurance that no major conversion in coming 10 years after certification will occur.
  - » Withdraw certificate from entire FMU when a more than justified allowable part has been converted into plantations or agriculture use.
  - » Refrain from issuing a new certificate to the remainder of the natural forests in the FMU during 10 years after the conversion.

2.4. International biodiversity policy: Are we on the right track?

Prof. Dr. Bas Arts / Dr. Ingrid Visseren
Forest and Nature Conservation Policy Group,
Wageningen University

When considering the information of the earlier presentations against the question of whether we are have the necessary international policies in place, it is tempting to answer NO. This answer can be based on the observation that the rate of biodiversity loss is not slowing down regardless of, e.g., the target in the Convention on Biodiversity Conservation that the decline should have been … in 2010. Moreover, worldwide deforestation still measures 13 million ha/yr in the 2000s, unbridled consumption of meat, soy, palm oil and timber are driving deforestation, and the number of poor people is not decreasing.

Nonetheless, the picture regarding conservation trends is not only bleak, and the answer to whether we are on the right track might better be: “NO, *but*”. There are success stories such as a 100% increase in protected areas in 25 years, a decreasing net change in deforestation compared to the nineties, and a relative improvement for poor people living on less than a dollar a day and fully depending on forests.
The current international forest regime, which comprises all rules and policy initiatives related to forests, including public and private initiatives, binding regulation and voluntary schemes, contributes to those relative improvements.

Well-known initiatives such as certification schemes appear to generate socio-economic and environmental benefits, even though there are only few credible case studies showing significant net benefits. Furthermore, certification is now widely applied, even though it was accepted more quickly in the already well-managed forests in the North than in tropical forests. Numerous other policy initiatives exist to stimulate and develop standards for conservation and sustainable use of tropical forests, to name a few: stimulation and certification of various types of novel ways for using nature, e.g. through ecotourism, sustainable aquaculture or agroforestry; investments in conservation reserves by ‘greenionaires’; boycotts of wrong nature products; and stimulation of

new forms of payments of environmental services. In several of such schemes, e.g. REDD+, co-benefits in respect to biodiversity conservation are explicitly included.

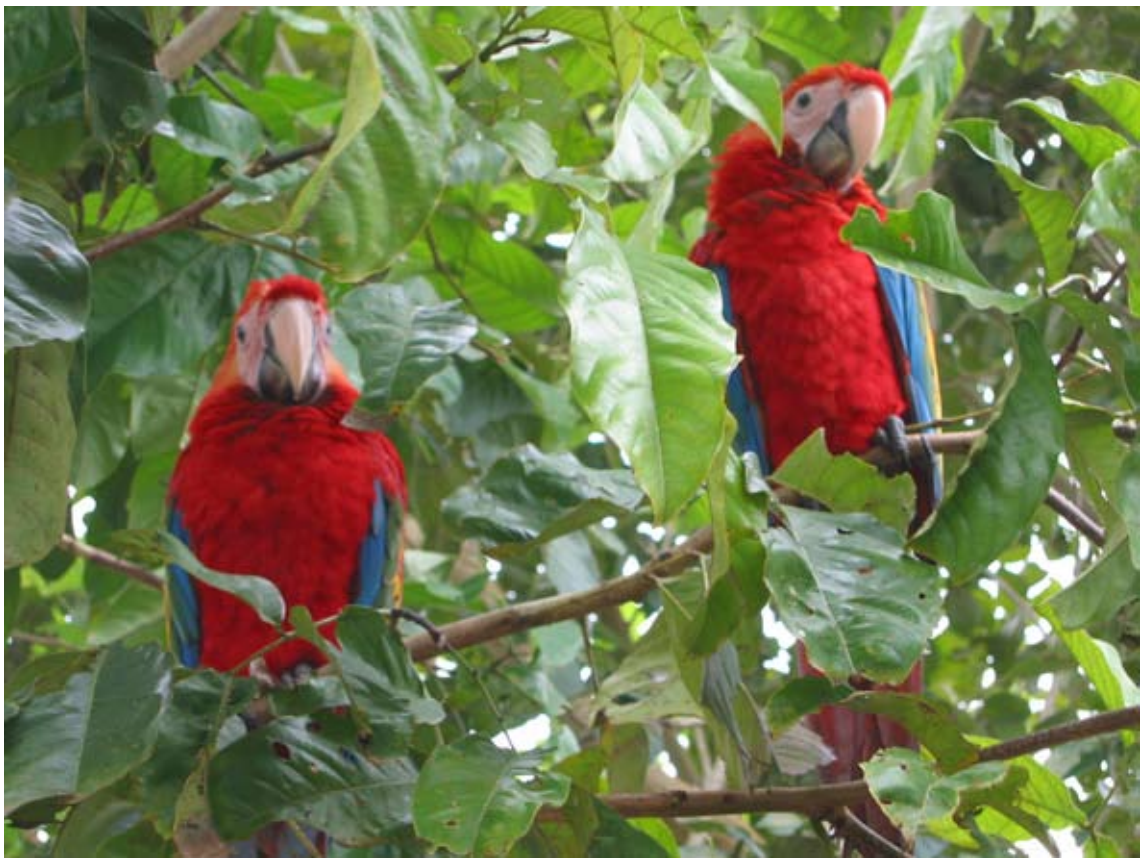
Regarding national policies, 156 countries have a forest law and 143 countries have forest policies in place. So YES, international and national policies are definitely in place, and some are even effective and smart. However, many policies exist only on paper and consistent implementation is lacking. On top of that, measures are not always appropriate and clever, because underlying causes such as poverty are not fully addressed and institutional fragmentation and overlap is not reflected upon.

The question is therefore: who should take what role to solve the policy failures with respect to implementation? Within the present governance approach solving these problems is not just a government task. Rather a multi-actor collaboration should be realized in which markets should

initiate, states should facilitate and civil society should participate. The interactive governance process should focus on:

1. better implementation processes;
2. policies addressing underlying causes;
3. adaptive standardization: e.g. certification schemes should become more adaptive and flexible to meet the needs of the poor ;
4. ‘soft law’, i.e. rules from civil society should become ‘hardened’ by supporting state policies
5. interaction management: no META governance institutions but interaction from below.

In the discussion after the presentation it became clear that for the proliferation of certification schemes should not just be considered as a problem. They could also be considered as enabling a growing support through a process of ‘let so many flowers blossom as possible’. Proliferation is not necessarily bad, as it can lead to innovation and new ideas. It was also stressed that the government has an important role in creating a level playing field and promoting governance schemes as essential ingredient of government policies.



Box 2: Statements

1. Biodiversity is an integrated part of the functions provided by the tropical forest ecosystems, and an essential basis for many local livelihoods.
2. The importance of biodiversity goes beyond its conservation in undisturbed natural forests, it is also found in forest mosaic landscapes of natural, semi-natural and domesticated landscape elements with a diversity in nature-human interactions, e.g. different forms of use of biodiversity.
3. The appreciation and valuation of forest biodiversity (also vis-á-vis other forest functions) is different for different stakeholders and therefore normative; valuation must be the result of broad-based political/ multistakeholder processes.
4. From policy and management perspective there are three main categories of biodiversity:
    - functional related to ecosystem functioning,
    - functional related to ecosystem services for mankind, and,
    - emotionally/ethically valued biodiversity (e.g. threatened species).

    Each category requires its own specific management and conservation measures.
5. Maintaining and restoring biodiversity in forests enhances their resilience to human-induced pressures which is an essential "insurance policy" to safeguard against climate-change impacts and assuring ecosystem goods and services.
6. Biodiversity conservation can be both an objective in itself and/or a condition for sustainable multiple-use forest management. Managing forests sustainably for multiple uses requires definition of the compatibility of different uses/objectives.
7. Policy instruments for biodiversity must be evaluated against their effectiveness to put real values on biodiversity and its functions, to be reflected in revenues streams and prices sustainably covering the costs of management and conservation.
8. Certification of biodiversity will not go beyond "niche" gains if not embedded in a mix of policy instruments that are conductive for its application and effectiveness, including an international and national policy and legal framework and their enforcement, awareness raising and incentive instruments, tenure security and clarity.
9. Certification schemes have three approaches towards biodiversity conservation, with focus on:
    - biodiversity per se,
    - biodiversity as co-benefit from sustainable natural resource management, and
    - sustainable management of functional biodiversity for mankind.

    Effective biodiversity conservation requires the proper combination of these different approaches.
10. Standards for forest certification will have to be explicit in the definition of "biological diversity conservation" and the purpose of its conservation. Certification standards will have to specify biodiversity objectives at the level of units for forest management to be translated into management activities. The absolute minimum requirement is maintaining the ecological production basis.
11. The impact of a specific certification scheme on biodiversity conservation depends on the social trust towards the brand provided which depends primarily on the right mix of policy and governance arrangements, including credible multi-stakeholder partnerships.

3. Implications for policy. Forum and plenary discussion

In the forum and plenary discussion, the issues raised by speakers and participants were further explored. The propositions made by the speakers and forum members (Box 2) served as a guidance. The chairman, René Boot, first invited the forum members to reflect on the presentations. The ensuing discussion evolved around a number of themes which are reported accordingly.

3.1. Initial reflections by the panel

Danielle Hirsch (Both Ends; Task force on Biodiversity and Natural Resources)
Danielle Hirsch commented that although we may be pessimistic about the success of policies designed to conserve biodiversity, there is also reason for hope. There are examples of initiatives that work, and these must be scaled up and translated into policies.

Rob Busink, Ministry of Agriculture, Nature and Food Quality of the Netherlands, department of Nature, Landscape and Rural Areas (LNV/NLP)
Rob Busink commented that the first two presentations put the urgency of the biodiversity crisis in perspective, but that nevertheless the urgency of the biodiversity agenda is undisputed. He highlighted that it is important to look at the functions of biodiversity rather than just the species richness. From the last two presentations it is clear that there are many tracks leading to biodiversity conservation and responsible management. His ambition is to find the highway for high speed progress towards achieving the agreed goals. He was encouraged by the observation that the general policy framework seems to be in order, but agreed that it continues to be a challenge to implement these policies. A level playing field is needed to make sure that well designed policies and other initiatives can realize their potential.

Marnix Beckers, Ministry of Foreign Affairs, Department of Environment and Water (BuZa/ DMW)
Marnix Beckers took note of the need for large protected areas that harbour the space across environmental gradients to cushion the effects of climate change, but warned for social resistance against protected areas, and the need to reserve areas for other purposes including, e.g., biofuel plantations. The role of the Netherlands is limited, and should focus on reducing our footprint and addressing the demand side. He warned against imposing our standards and policies on partners in the South – there should be a dialogue. This dialogue will also help in harnessing the potential of local solutions for addressing some of the constraints facing the use and conservation of biodiversity. A key key question remains who should pay the bill of conserving biodiversity, climate policies and the like. The design and scale of financing mechanisms may also constitute a risk for local communities

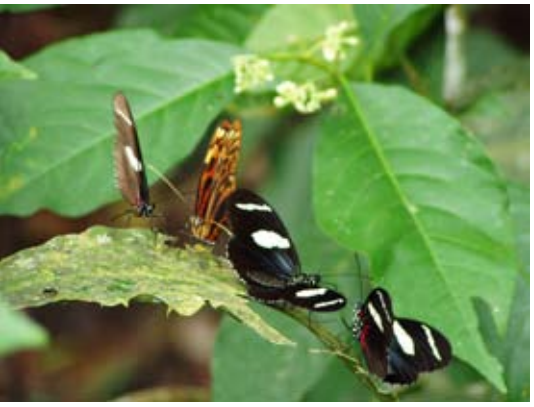
3.2. General Discussion

Policy frameworks

Bas Arts' conclusion that the general policy framework for biodiversity is there, but the implementation is lacking was generally supported, although some commented on the issue of intrinsic animals rights.

Many initiatives, including certification, emphasize incentives ('carrots') as a tool to entice corporate stakeholders into mitigating their impacts on biodiversity. This has worked well in some areas, such as timber, but not at all in others, such as palm oil. A balanced approach of incentives, punishments ('sticks') and communication approaches works best to achieve progress in positive directions in areas where this is difficult.

Both certification and international policies such as the CBD were portrayed as soft instruments that lacked sanctions and thus lacked the potential to convince others than the willing and to reap more than the low-hanging fruit. It was indicated that when there is urgency and soft instruments have been demonstrated not to work, countries may resort to hard trade measures, which are sanctionable. This is happening with regard to legal timber. Others disputed the softness of instruments such as certification: in specific trade chains it can be very disadvantageous for non-compliant companies to be the odd one who is not certified. This may act as a strong incentive to become certified.



The issue of penalties ('sticks') received some attention, too. In some conditions where the 'bad guys' are big and few, naming and shaming (a strategy employed by NGOs) can work effectively to change behaviours, in particular when corporate image and shareholder value are at stake. However, it was pointed out that such strategies only work once, and that government regulation and action must ensure that other companies follow suit. It was observed that there is no fundamental difference between policies and market-based instruments. Governments (have to) create the framework for markets to operate well.

Certification

With regard to certification it was observed that standards proliferate, both for products (such as FSC and PEFC) and for uses (such as carbon standards). It is a worry that the criteria and standards for biodiversity are not equal in these standards: forest oriented standards explicitly consider biodiversity objectives, while use-oriented standards have them as ancillary objectives at most. As various standards may apply to the same forest (standards for timber, standards for NTFP, standards for carbon), confusion is the result. The producer/forest owner has to comply with different standards; it leads to competition between certification schemes for the lowest acceptable standard; it is expensive to comply with different standards and it distorts the market. On the other hand, while subscribing to the view that collaboration between different standards is necessary, some participants noted that competition between standards can drive innovation.

Certification *vis-à-vis* other instruments

Erik Lammerts van Bueren concluded that certification works for conserving biodiversity, but also highlighted its disability to reduce forest conversion. The discussion proceeded to explore improvements to the certification instrument. When questioned about the scope for appropriately addressing functional diversity in certification standards, Lourens Poorter acknowledged that this was still a challenge, in part because the knowledge about functional biodiversity is still limited, and in part because each environmental service requires its own specific approach to functional diversity. A point was made that criteria must be made auditable and monitorable, and that monitoring results should be fed back into management, but increased effectiveness of standards also depends on a better understanding of biodiversity, which is usually lacking on tropical forests. Some people complained that certification schemes had become institutions of their own, serving their own interest, and that consultants appear to have been the main beneficiaries of certification. The discussion went on to assess other mechanisms than biodiversity policies and certification that

could promote biodiversity goals, in particular financial mechanisms. Rob Busink said that financial mechanisms, e.g. payments for environmental services and trade-related policies were already at the core of the Netherlands' biodiversity policies. In the end, we need higher prices to reflect the true cost of products; taxing does not work in that respect, but internalisation of costs does.
Land use policies remain very hard to influence as they remain in the domain of sovereign governments. This is a severe limitation to any instrument addressing biodiversity conservation. It was observed, though, that some international agreements, such as that on Indigenous Peoples' Rights, strengthened the role of certain stakeholders with an interest in biodiversity use and conservation in land use decisions. This affects land use policies in a positive way.

The role of the state
The role of the state in general and that of the Netherlands in particular received quite some attention during the discussion. Many participants agreed that the state has an important role to play in creating a level playing field by promoting coherence and consistency between policies and determining minimum standards that must be achieved with regard to biodiversity. Examples of inconsistent policies were cited where the Netherlands government supports FLEGT and promotes the concept of payment for environmental services, while it funds export credit facilities that apply no environmental or social criteria, and stimulates the import of cheap meat from converted forests in Brazil by means of low VAT tariffs. Several panelists urged for "greening" our (Dutch) state financial instruments as an effective measure.
It was also commented that biodiversity policies often exist in isolation, while all sectoral policies have impacts on biodiversity. Biodiversity standards and policies should become pro-poor and adaptive instruments that are deeply integrated in other policies. The Netherlands needs a sustainable development policy rather than a biodiversity policy.
Minimum standards and a predictable regulatory framework help companies to develop strategies that are beneficial for biodiversity conservation. Although the impression exists that the private sector does not like regulation, in the end it, too, wants rules that provide long term clarity and equal market opportunities. As Daniëlle Hirsch put it: "Free markets beg for firm rules at the long term". The state should help by setting fair and equal sustainability requirements for different products and products from different sources.

China and India
It was commented that all these instruments may be attractive and effective, but that this would not mean much if we do not consider the changing geopolitics, for example the growing role of China and other emerging economies in the global trade of timber and many other commodities. This prompted a discussion on how 'green' China was and how sensitive it is to the demands of the consumers for which they are producing. It was stated that in the end only one instrument would be effective to change China's behaviour, namely to pay for improved practices. This would come at a considerable economic cost to western nations. China and the EU have engaged in a dialogue on illegal logging, and also Viet Nam is interested in that discussion, so there are signs that consumer demands have the potential to influence behaviours in those countries.

4. Summary of conclusions and recommendations

The policy framework for the use and conservation of biodiversity seems to be largely in place, but implementation is staying behind; nevertheless many things are happening in the field, even if not all goals are met these could serve as stepping stones to build on.

- Certification of forest management seems to have an impact on sustainbly managing biodiversity in tropical forests, but it is not an effective instrument for reducing deforestation rates and conversion;
- A proliferation (or growing diversity) of certification standards may help to select for the best approach, but also creates confusion, increases costs, and may undermine high biodiversity standards;
- Responsible financing: incorporating ecological and social sustainability criteria in investment and export credit mechanisms and other financing instruments would make a positive impact on biodiversity conservation and ecological and social footprints.
- Governments – including the Netherlands - are important in creating equal opportunities for all players in the market and setting clear minimum standards to be satisfied with regard to biodiversity and in providing a consistent and coherent regulatory and enabling framework.
- Regarding countries such as China and India who move forward without all those sustainability policies and regulations, we should engage with these markets and countries and see where we can make use of opportunities. FLEGT is an example of this.
- Smart regulation, matching ‘carrots’ with ‘sticks’ and ‘sermons’ work best to achieve progress towards biodiversity goals.

The summaries and PowerPoints of the presentations and other information on the seminar are available on the seminar website: **www.tropischebossen.nl**.

Background Literature

Blackman, A. and Rivera, J. (2010). The evidence base for environmental and socioeconomic impacts of 'sustainable' certification. Washington, resources for the Future, Environment for Development Discussion Paper Series EfD DP 10-10 (mentioned in Arts' presentation).

Brook, B.W., Bradshaw, C.J.A., Koh, L.P. and Sodhi, N.S. (2006). Momentum drives the crash: mass extinction in the tropics. Biotropica 38:4, 302-305 (mentioned in Laurance's presentation).

Diaz, S., Fargione, J., Stuart Chapin, F. and Tilman, D. (2006). Biodiversity loss threatens human well-being. PLOS Biology 4(8): 1300-1305 (mentioned in Poorter's presentation)

Dirzo, R. and Raven, P.H. (2003). Global state of biodiversity and loss. Annual Review of Environmental Resources 28:137–67. Retrieved from http://people.ucsc.edu/~cwilmers/ENVS120/dirzo2003.pdf (19 June 2010) (mentioned in Laurance's presentation).

Gardner, T.A., Barlow, J., Parry, L.W. and Peres, C.A. (2007). Prediction the uncertain future of tropical forest species in a data vacuum. Biotropica 39:1, 25-30. Retrieved from http://afec-x.ecologicalevolution.org/files/readings/predicting_future_of_tropical_species_in_a_data_vacuum.pdf (19 June 2010) (mentioned in Laurance's presentation).

Laurance, W. (2007). Have we overstated the tropical biodiversity crisis? Trends in Ecology & Evolution 22:2, 65-70 (mentioned in Laurance's presentation).

Peña-Claros, M., Blommerde, S. and Bongers, F. 2009. Assessing the progress made: an evaluation of forest management certification in the tropics. Wageningen, the Netrherlands, Tropical Resource Management Papers No. 95.

Sloan, S. (2007). Fewer people may not mean more forest for Latin American forest frontiers. Biotropica 39:4, 443-446 (mentioned in Laurance's presentation).

Thompson, I., Mackey, B., McNulty, S., Mosseler, A. (2009). Forest Resilience, Biodiversity, and Climate Change. A synthesis of the biodiversity/resilience/stability relationship in forest ecosystems. Secretariat of the Convention on Biological Diversity, Montreal. Technical Series no. 43, 67 pages.

Van Kuijk, M., Putz, J. and Zagt, R. 2009. Effects of forest certification on biodiversity. Wageningen, the Netherlands, Tropenbos International.

Wright, S.J. and Muller-Landau, H.C. (2006a). The Future of Tropical Forest Species. Biotropica 38:3, 287–301. Retrieved from http://bio.fsu.edu/miller/pdfs/Wright_Muller06.pdf. (19 June 2010) (mentioned in Laurance's presentation).

Wright, S.J. and Muller-Landau, H.C. (2006b). The Uncertain Future of Tropical Forest Species. Biotropica 38:4, 443-445. Retrieved from http://striweb.si.edu/tropical_extinction/wrightmulleruncertainfuture.pdf. (19 June 2010) (mentioned in Laurance's presentation).