



Resource-Efficient Land Use – Towards A
Global Sustainable Land Use Standard
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Exploring options for strengthening sustainable land use within the UN Convention on Biological Diversity

GLOBALANDS Discussion Paper

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1 Introduction¹

Sustainable land use is an important backbone for a future sustainable development worldwide. The sustainable use and management of land are widely seen as pre-conditions for many environmental goals such as the protection of water, soil, biodiversity and ecosystem services but also for social objectives like food production, securing livelihoods and access to natural resources.

However, land is under pressure: worldwide, crop- and grazing land expand at the cost of forests and natural areas; urbanization and built-up areas encroach on fertile land; land degradation, the loss of fertile soil and terrestrial biodiversity continue unabated (FAO 2010; ISRIC 2008; SCBD 2014; UNEP 2014).² Against this backdrop, political action is urgently needed to promote the sustainable governance of land use, both domestically and at international level. Our focus will be on the latter.

“Land use” merits being addressed by international policies since – despite being occasionally classified as a “local” (i.e., non-transboundary) issue – it *does* have international implications (Ginzky 2015). For instance, agriculture, forestry and other land uses roughly cause a quarter of all anthropogenic GHG emissions.³ Land use is thus linked to destabilizing the climate, a global common good – with land use-related emissions even on the increase⁴ (IPCC 2014). Second, biodiversity hotspots with endemic (globally unique) species as well as wildlife species that are migrating across countries (e.g., birds and mammals) are threatened by human impacts and land degradation (Maier 2012; Myers et al. 2000). To prevent their demise, joint – that is, international – efforts are required. Moreover, unsustainable land use in one country can cause water shortages or water pollution in neighbouring countries. Another international task of paramount importance is the promotion of food security, which is tightly interlinked with the management of land. Finally, international rule making can strengthen domestic land use regimes and foster learning processes with positive effects on sustainable development both nationally and internationally. The GLOBALANDS project (in the context of which this paper was produced) was therefore dedicated to exploring international pathways for strengthening sustainable land use.

Though there is no overarching sustainable “land (use) policy” at the global level, a number of international policies already exist that promote different aspects of sustainable land use. However, these policies tend to be weak, fragmented, countervailed by other (e.g., trade) policies apt to undermine sustainable land use, and are altogether in need of being strengthened and complemented (Wunder et al. 2013). Against this backdrop, we take the Convention on Biological Diversity (CBD) as a starting point in this paper to discuss further

¹ We would like to thank Ulrike Doyle, Harald Ginsky, Horst Korn, Almut Jering, Axel Paulsch, Jan Seven, Friedrich Wulff and our colleagues from the GLOBALANDS Project for critical comments on the paper in its various stages. The views expressed and all remaining errors remain of course our sole responsibility.

² The “Status of World Soil Resources Report” by the Global Soil Partnership’s still exists only as draft

³ These emissions result mainly from deforestation and livestock husbandry as well as soil and nutrient management, both in OECD- and non-OECD-1990 regions (IPCC 2014).

⁴ The increase amounted to 12 % between 1970 and 2010 (ibid).

international options for fostering sustainable land use.⁵ We start out by defining what we mean by “sustainable land use” and by briefly reviewing the present state of the international governance of the issue. Subsequently, we identify the most important conceptual elements of the CBD with relevance for sustainable land use, zooming in on the issue of ‘sustainable use of biodiversity’. We then develop different options of how sustainable land use can be strengthened within the Convention, ranging from low-threshold to more demanding options. Among others, we discuss the merits of working, in the medium to long run, towards a CBD ‘land protocol’.

2 Sustainable land use: definition and international governance to date

We are far from a common understanding of what sustainable land use exactly is and how it can be defined. While academic debates on “sustainable agriculture” (e.g., Harwood 1990; Horrigan et al. 2002; Pannell & Schilizzi 1999; Roling & Wagemakers, Maria Annemarie Elisabeth 2000) or “sustainable forestry” (e.g., Aplet 1993; Oliver 2003; Pearce et al. 2003; Winkel 2006) have been exhaustive, there are hardly any integrated definitions⁶ that take the numerous demands from and practices applied in different sectors into account — or that acknowledge and address the various side- and leakage effects (e.g. ILUC) of specific land uses. As a result, sustainable land use or management is often interpreted and promoted in relation to individual (economic and/or political) interests. An internationally agreed approach towards sustainable land use could overcome this problem and make a clear reference (or benchmark), national governments or private actors have to comply with.

A broad and integrative definition of sustainable land use at global level could thereby serve as a starting point: *Globally sustainable land uses serve the needs (for food, energy, housing, recreation etc.) of all human beings living on earth today and in the future, respecting the boundaries and the resilience of ecological systems* (cf. Kaphengst 2014).

The further specification of dimensions and thematic aspects of sustainable land use can be drawn from a number of frameworks and initiatives. One of these is presented in Table 1.

⁵ Note that within the GLOBALANDS Project, various papers were produced that discuss *other* international policies and their potential to promote sustainable land use, cf. www.globalands.eu

⁶ UNEP (2014) outlines concrete actions to balance the consumption of land with sustainable supply. This, however, does not specify how the land itself can be used sustainably and thus does not include a clear definition of sustainable land use.

Table 1: Themes relevant for land use identified by the Global Bioenergy Partnership

Environmental	Social	Economic
Greenhouse gas emissions	Price and supply of a national food basket	Resource availability and use efficiencies, conversion, distribution and end use
Productive capacity of the land and ecosystems	Access to land, water and other natural resources	Economic development
Air quality	Labour conditions	Economic viability & competitiveness
Water availability, use efficiency and quality	Rural and social development	Access to technology and technological capabilities
Biological diversity	Access to energy	Energy security/ Diversification of sources and supply
Land use change, including indirect effects	Human health and safety	Energy security/ Infrastructure and logistics for distribution and use.

Source: GBEP (2011)

Land use practices which adhere to this definition by combining resource protection with social inclusion are employed every day across the globe. However, the question remains how such practices can be promoted and strengthened by international policies.

In the GLOBALANDS project, a ‘governance screening’ on international policies affecting land use was conducted in 2011 (Wunder et al. 2013). It concluded that the landscape is highly fragmented and sector-specific policies still predominate. A number of international policies that do not explicitly consider land use (such as trade and investment policies) have substantial (often negative) side-effects on the sustainability of land use. However, the screening also identified a range of international policies and processes which either already address individual aspects of sustainable land use or which can be potentially utilized to further strengthen sustainable land use in international policies. Examples include the UN Convention on Biological Diversity (CBD), the UN Convention to Combat Desertification (UNCCD), the UN Framework Convention to Combat Climate Change (UNFCCC), the Non-Legally Binding Instrument on All Types of Forests (NLBI) but also the Voluntary Guidelines on Land Tenure (VGGT). Another important case in point is the concept of a “land degradation neutral world” originally tabled by the UNCCD which was included in the current proposal of the (legally non-binding) UN Sustainable Development Goals (SDGs). Also, private standards address aspects of sustainable land use (cf. Table 2).⁷

⁷ Target 15.3 of the proposed set of goals and targets demands to “by 2020, combat desertification, and restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land-degradation neutral world”.

Table 2: Some relevant international goals, policies and institutions addressing (aspects of) sustainable land use

International policy/ organisation/ initiative	Nature & focus with regard to sustainable land use
SDGs	(Draft) set of UN policy goals various of which are related to land: ownership and control over land (to achieve SDG-1 & 5); secure and equal access to land (SDG-2); land and soil quality (SDG-2), soil pollution (SDG-3 & 12); sustainable cities (SDG-11); the sustainable use of terrestrial ecosystems, sustainable management of forests, combating desertification, halting and reversing land degradation and halting biodiversity loss (SDG-15), including by striving for “a land-degradation-neutral world” (15.3).
CBD	UN treaty promoting, among others, the conservation and sustainable use of biodiversity (here: terrestrial biodiversity)
UNCCD	UN treaty combating desertification and mitigating the effects of drought in countries experiencing serious drought and/or desertification (i.e., land degradation in arid, semi-arid and dry sub-humid areas)
UNFCCC	UN treaty aiming to stabilize greenhouse gas concentrations. It ex- or implicitly addresses soil carbon; land use change and forestry (LULUCF), biomass production and deforestation (REDD+).
NLBI	Non-binding international policy to promote sustainable forest management. Specific of its goals include reversing the loss of forest cover, increasing the area of protected forests and the share of products from sustainably managed forests.
VGGT	Non-binding international guidelines promoting secure tenure rights and equitable access to land, fisheries and forests.
RAI Principles	Voluntary principles aiming to increase the responsibility of (private, public) investments in agriculture and food systems.
FAO Global Soil Partnership	Public private network with the mandate to improve the governance of soil resources. The GSP's scientific advice body is the Intergovernmental Technical Panel on Soils (ITPS).
World Bank “Environmental and Social Framework”	World Bank safeguard policies requiring borrowing governments to address specific environmental and social risks in order to receive Bank financing for development projects. These address, among others, land acquisition, restrictions on land use and involuntary resettlement; biodiversity conservation and sustainable management of living natural resources; and indigenous peoples.
Private standards	Broad set of voluntary instruments for the private sector, including certification schemes that label products whose production complies with a set of (land-use relevant) sustainability principles and criteria. ⁸

Source: own.

Addressing desertification and degradation of ecosystems, the UNCCD has the strongest thematic overlap to sustainable land use, but the analysis in the GLOBALANDS screening also showed that due to its geographical focus on dry and sub-humid countries (with emphasis on Africa) and its legal limitations, the UNCCD could not serve as a global “vehicle” for promoting sustainable land use (see also Ginzky 2015).

⁸ Examples include, among others, e.g., the Forest Stewardship Council, fairtrade labels, organic farming labels, Rainforest Alliance certification, UTZ Certified, Better Cotton Initiative, Common Code for the Coffee Community (4C), Ethical Tea Partnership Standard, Bonsucro, Roundtable on Responsible Soy, Roundtable on Sustainable Palm Oil, Roundtable for Sustainable Biomaterials, or the International Sustainability Carbon Certification (cf. Klink & Wolff 2015).

In contrast, the VGGT discussed and adopted in 2012 under the auspices of FAO's Committee for World Food Security (CFS) can be seen as a promising attempt to land governance in general, which has per se a strong potential to shape land use at various levels. While the VGGT give room for the integration of both social and environmental concerns, the extent as to which these issues are considered will crucially depend on the national and regional implementation of the Guidelines. Clear indications what "sustainable land use" is, especially from the environmental perspective, cannot be found in the Guidelines, and many facets of sustainable land use as summarized in Table 1 are not covered.

Against this backdrop, this paper further explores the possibilities to strengthen global sustainable land use under the CBD. While the CBD is perceived by some to focus on the conservation of ecosystems, species and genes and is thus not automatically associated with sustainable land use, one of the three objectives of the Convention is the sustainable *use* of biodiversity. This is often not sufficiently recognized.

In our governance screening in 2011, we had concluded that the CBD remains weak in achieving its goals. We attributed this to lacking financial resources and also to shortcomings in the implementation of national programmes and initiatives: implementation is often too restricted in scope and does not involve critical policy and economic sectors. At the same time, starting in 2010 with the tenth Conference of the Parties (COP 10) in Nagoya, the CBD underwent a promising development in identifying new sources for funding and new alliances for the protection of biodiversity. Moreover, IPBES, the international scientific panel on biodiversity and ecosystem services started its work in 2012. One of the thematic assessments to be conducted by IPBES in the upcoming years will be on land degradation and restoration (in close cooperation with the UNCCD).

These recent developments encouraged us to revisit the CBD as a potential lever in international politics to strengthen in particular the environmental dimension of sustainable land use at the global level.

3 Thematic cornerstones of sustainable land use in the CBD

At first sight, it does not seem very obvious that the CBD could function as a new trigger of sustainable land use in international policies. The term "sustainable land use" does not appear very prominently in CBD documents, "land use" is even missing in the articles of the Convention. This might be rather for political than for content reasons. Agriculture and forestry are highly contested issues at the global agenda and most countries see their national sovereignty at risk should these issues be regulated by means of international agreements. Unlike global commons such as climate change, "land" has a long tradition of being governed at domestic level, frequently through private ownership. As a consequence, vested interests exist and policy-makers are usually reluctant to deal with land issues in international negotiations. Furthermore, biodiversity seems to be only a sub-aspect of (sustainable) land use, which also encompasses water availability and quality, soil erosion and degradation, nutrients balances etc.

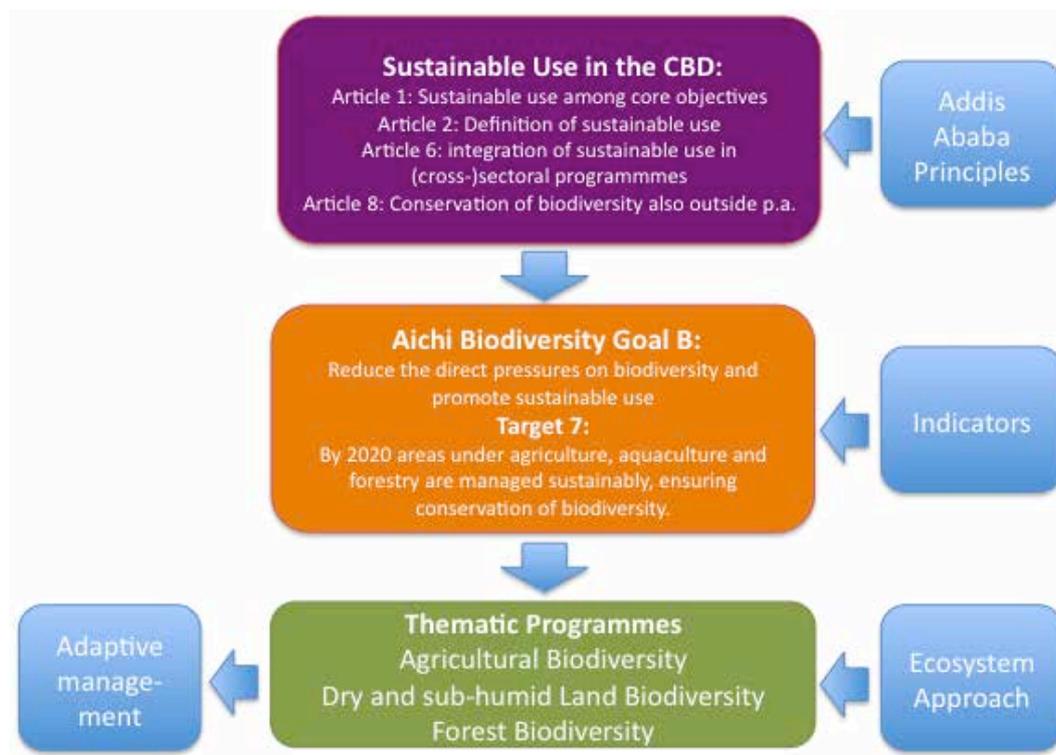
However, the thematic link between the protection of biodiversity and land use is more than obvious. Intensive agriculture and deforestation leading to destruction and contamination of habitats and ecosystems are *the* main drivers of biodiversity loss. In other words, halting the loss of biodiversity – the key goal of the CBD – would inevitably mean changing land use around the world towards more sustainable practices.

Consequently, in the history of the CBD, the issue of land use was not ignored but tackled indirectly through a number of components, which play a crucial role in the implementation of the CBD targets. Given the rising awareness in the recent years on “peak soil”, international investments and land tenure as well as food security (to name only a few), the issue of land use has become a “nexus” issue which could no longer be ignored by relevant international policies such as the CBD.⁹ This section will show that almost every aspect of sustainable land use is directly and indirectly addressed by the CBD. It rather seems a question of (re-)bundling the different cornerstones under the thematic roof of sustainable land use within the CBD than introducing it as a new topic (Wunder et al. 2013).

In the following, we will explore the most relevant elements of the CBD that could potentially serve as a basis for strengthening global sustainable land use. The selected elements are identified from different conceptual levels of the CBD. A key element is what the CBD understands under “sustainable use of biodiversity and its components”, which seems conceptually close to elements of a sustainable land use. We start with the general articles of the Convention, followed by the more recently specified goals and targets of the Convention and indicators used. Then, we discuss two principles and cross-cutting issues, which further specify the understanding of “sustainable use of biodiversity”, most importantly the “Ecosystem Approach” and the “Addis Ababa Principles”. Finally, we explore three thematic work programmes of the CBD, which can be directly linked to land use (for an overview see Figure 1).

⁹ This is by no means restricted to the CBD but also applies to many other international policies such as the UNFCCC. To which extent this has been tackled in the respective policy fields, see the GLOBALANDS governance screening (Wunder et al. 2013).

Figure 1: Conceptual elements of the CBD with particular relevance for sustainable land use



Source: own.

3.1 Goals, targets and indicators

While Article 1 of the Convention highlights the sustainable use of all components of biodiversity as one of the core objectives Article 2 defines **sustainable use of biodiversity** as “the use of components of biological diversity in a way and at a rate that does not lead to the long-term decline of biological diversity, thereby maintaining its potential to meet the needs and aspirations of present and future generations.”¹⁰

Article 6 of the Convention urges Parties not only to develop strategies and programmes for the conservation and sustainable use of biodiversity but also to integrate (as far as possible) sustainable use of biodiversity in sectoral and cross-sectoral programmes and policies.¹¹

Also article 8 of the Convention makes clear that measures for the conservation of biodiversity are not limited to protected areas and their management but do equally consider sustainable use of biodiversity in all aspects. It is explicitly highlighted that biodiversity and its components need to be conserved and used sustainably within, adjacent to and outside of protected areas.¹² With regard to the definition of biological diversity in Article 2 of the Convention, components of biodiversity encompass genes, species and

¹⁰ <https://www.cbd.int/convention/articles/default.shtml?a=cbd-02>

¹¹ <https://www.cbd.int/convention/articles/default.shtml?a=cbd-06>

¹² <https://www.cbd.int/convention/articles/default.shtml?a=cbd-08>

ecosystems. Especially the term “ecosystems” widens the scope of biodiversity to a dynamic system and a functional unit, of which human beings and their activities constitute an integral part. Land use is generally taking place in ecosystems be it agro-ecosystems, forests, coasts, savannahs or others.

COP Decision V/25 established sustainable use of biodiversity as a cross-cutting issue of the Convention and, among other things, encouraged Parties to compile and share knowledge about sustainable use initiatives and projects and thereby increase cooperation.¹³

In 2002, the Parties to the CBD committed themselves to significantly reducing the rate of biodiversity loss by 2010. Faced with failure in reaching this target, the recently agreed **Strategic Plan for Biodiversity 2011-2020**¹⁴ takes a broader perspective on what is needed to preserve biodiversity and to use ecosystems more sustainably by focussing on food security, human health, local livelihoods, clean air water and so on. The resulting “**Aichi Biodiversity Targets**”¹⁵ are mostly set for 2020 (partly for 2015), and they are accompanied by a vision for 2050. All strategic goals guiding the Aichi Targets can be linked to land use more or less directly. However, Target 7 under “Strategic Goal B: Reduce the direct pressures on biodiversity and promote sustainable use” directly relates to areas currently used for agriculture, aquaculture and forestry and their management. The target is to ensure that “[b]y 2020 [these areas]¹⁶ are managed sustainably, ensuring conservation of biodiversity”¹⁷. At COP-11 in Hyderabad in 2012, a representative from the CBD secretariat argued at the “Land Day” that sustainable land management could contribute 50% or more to the achievement of the Aichi Targets¹⁸.

Last but not least, the CBD is equipped with an elaborated **set of indicators** for measuring progress in achieving the CBD’s Aichi targets. The various national systems of biodiversity indicators have resulted in the Biodiversity Indicator Partnership (bip)¹⁹, which seeks to achieve agreement on a common approach among member states and to provide up-to-date indicators and data for monitoring of the Aichi Targets.

Biodiversity data and reporting from the states are combined in the “Global Biodiversity Outlook” (GBO) report, which the CBD Secretariat publishes on a regular basis. The most recent report was published in 2014 and shows trends and developments concerning the strategic goals under the CBD (SCBD 2014). The report results build on 55 biodiversity-related indicators and their statistical extrapolation to 2020. The indicators were selected from a pool of over 170 indicators, which were identified by the Convention. While limits in interpreting indicators and extrapolating their values for the purpose of reporting on the

¹³ <https://www.cbd.int/decision/cop/default.shtml?id=7166>

¹⁴ further information can be found at <https://www.cbd.int/sp/>

¹⁵ <https://www.cbd.int/sp/targets/>

¹⁶ A figure specifying the area for which this target is set can be found in the CBD Global Strategy on Plant Conservation (GSPC) under GSPC Target 6: “[...] at least 75% of production lands in each sector managed sustainably consistent with the conservation of plant diversity.” The term “sector” applies to agriculture and forestry.

¹⁷ <http://www.cbd.int/sp/targets>

¹⁸ <http://www.unccd.int/en/programmes/Event-and-campaigns/Land-Day/Land%20day%206/Pages/Land-Day-6-report.aspx>

¹⁹ www.bipindicators.net

progress of achieving the Aichi targets are also explained and recognized (Tittensor et al. 2014), it has to be noted that substantial experiences with the definition, selection and interpretation of indicators have been made under the CBD. Indicators used under Goal B (especially targets 5, 7 and 8) and others are also of direct use for monitoring of sustainable land use (see Table 2).

Table 3: Selection of indicators for monitoring of the Aichi Targets (with relevance for sustainable land use)

Goal B: Reduce the direct pressures on biodiversity and promote sustainable use		
Target 5: Loss of habitats	Target 7: Areas under sustainable management	Target 8: Pollution
<ul style="list-style-type: none"> • Red List Index • Extent of forests & forest types • Extent of marine habitats • Living Planet Index • Wild Bird Index for habitat specialists • Area of forest under sustainable management: degradation & deforestation • Forest fragmentation • River fragmentation & flow regulation • Wildlife Picture Index 	<ul style="list-style-type: none"> • Area of forest under sustainable management: certification • Area of agricultural ecosystems under sustainable management 	<ul style="list-style-type: none"> • Water Quality Index for Biodiversity • Nitrogen deposition • Loss of reactive nitrogen to the environment

Source: Biodiversity Indicator Partnership (bip 2015).

3.2 Fundamental principles

3.2.1 The Ecosystem Approach

As the CBD’s primary framework for action (Decision V/6, VII/11), the Parties to the Convention have adopted the “Ecosystem Approach”. The ecosystem approach is a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way.²⁰ The approach requires adaptive management to deal with the complex and dynamic nature of ecosystems, as well as precautionary action in the absence of complete knowledge or understanding of ecosystem functioning. It plays a particular conceptual role in the design and implementation of all three thematic programmes outlined above and recognizes that humans and their activities are an elementary part of an ecosystem.

Based on this integrative perspective, the principles of the ecosystem approach could actually provide an adequate basis for a potential framework on sustainable land use. Most of the principles, especially 2, 3, 4, 6 and 11 could directly apply to a general understanding how sustainable land use and land management at global level could be achieved (cf. Box 1).

²⁰ <http://www.cbd.int/ecosystem/description.shtml>

For terrestrial ecosystems, “ecosystem management” could well be replaced by “land management”.

The ecosystem approach is widely established and applied in numerous projects, which often integrate different sectors in the management of ecosystems and natural resources. It also allows for aligning biodiversity protection with goals of climate policy. At EU level, for example, intensive research was conducted in recent years on ecosystem based adaptation and mitigation (for example, Naumann et al. 2011). More recent initiatives, strategies and initiatives are framed under terms like “Green Infrastructure” and “Nature-based solutions”.²¹ Finally, the ecosystem approach is aligned with the framework of ‘ecosystem services’ (see Principle 5 in Box 1) which has gained prominence in international biodiversity policy and science in recent years. Ecosystems services are defined as “the benefits people obtain from ecosystems” (MA 2005, p. v) and changes in land use and cover are regarded as one main factor directly affecting the provisioning of ecosystem services.

Box 1. Principles of the Ecosystem Approach

1. The objectives of management of land, water and living resources are a matter of societal choices.
2. Management should be decentralized to the lowest appropriate level.
3. Ecosystem managers should consider the effects (actual or potential) of their activities on adjacent and other ecosystems.
4. Recognizing potential gains from management, there is usually a need to understand and manage the ecosystem in an economic context.
5. Conservation of ecosystem structure and functioning, in order to maintain ecosystem services, should be a priority target of the ecosystem approach.
6. Ecosystem must be managed within the limits of their functioning.
7. The ecosystem approach should be undertaken at the appropriate spatial and temporal scales.
8. Recognizing the varying temporal scales and lag-effects that characterize ecosystem processes, objectives for ecosystem management should be set for the long term.
9. Management must recognize the change is inevitable.
10. The ecosystem approach should seek the appropriate balance between, and integration of, conservation and use of biological diversity.
11. The ecosystem approach should consider all forms of relevant information, including scientific and indigenous and local knowledge, innovations and practices.
12. The ecosystem approach should involve all relevant sectors of society and scientific disciplines.

3.2.2 The Addis Ababa Principles on Sustainable Use of Biodiversity

In its Decision VII/12 the COP adopted the Addis Ababa Principles on Sustainable Use of Biodiversity as “an important tool to achieve the 2010 target endorsed by the World Summit on Sustainable Development, the Millennium Development Goals and the three objectives of the Convention”²². The Addis Ababa Principles are not prescriptive but they provide a

²¹ http://ec.europa.eu/research/environment/index_en.cfm?pg=nature-based-solutions

²² <https://www.cbd.int/decision/cop/default.shtml?id=7749>

governance framework for the sustainable use of components of biodiversity. As a framework, which also includes guidelines and a few instruments, it can be used by Governments, resource managers, indigenous and local communities, the private sector and other stakeholders,²³ who are not only dealing with the protection of biodiversity alone but are also confronted with the question how land use can be managed in a sustainable way.

Although “land use” is not mentioned a single time in the Principles, many components could equally serve as a fundament for a governance framework of sustainable land use, for example:²⁴

- Multi-level governance and consideration of scales (Principle 1 and 7)
- Adaptive management (Principle 4)
- International cooperation (Principle 8)
- Consideration of multiple values (of biodiversity) (Principle 10, 12)
- Rights based and participatory approach (Principle 2, 9 and 12)
- Education, awareness raising and communication (Principle 14)

Both the ecosystem approach and the Addis Ababa Principles promote a holistic approach towards the conservation and sustainable use of biodiversity, interfacing nature and ecosystems with the human sphere. The Satoyama Initiative, which was launched at COP 10 in Nagoya in 2010²⁵ even expands this understanding towards “conservation and advancement of socio-ecological production landscapes and seascapes (SEPLS) that secure ecosystem services and conserve biodiversity to support and enhance human well-being”.²⁶ It aims for a broadening global recognition of the value and importance of biodiversity to mainstream biodiversity in production activities. On a conceptual level, there is a significant overlap to frameworks serving for a sustainable land use.

3.3 Thematic programmes of work

Over the years, the COP has endorsed seven thematic programmes of work that reflect the major biomes of the world and provide concrete guidance by describing principles, key issues, outputs and timetables. The most relevant programmes in terms of global land use pertain to agricultural biodiversity, the biodiversity of forests as well as the biodiversity of dry and sub-humid lands.

The **programme of work on agricultural biodiversity** mainly deals with two aspects: firstly, the impacts of agricultural systems and practices on biodiversity in different ecosystems and secondly, the sustainable use of genetic resources and a fair and equitable sharing of the benefits of their usage. Especially the first aspect has a clear link to land use (practices). Impacts of agricultural practices are not only considered for agro-ecosystems but also at the interface with adjacent and other ecosystems. The programme has also adopted the

²³ <https://www.cbd.int/sustainable/addis.shtml>

²⁴ also compare Kaphengst (2014)

²⁵ through a joint collaboration between the Ministry of the Environment of Japan (MOEJ) and the United Nations University Institute for the Advanced Study of Sustainability (UNU-IAS)

²⁶ <http://satoyama-initiative.org/en/about/#2>

“International Initiative for the Conservation and Sustainable Use of Soil Biodiversity”. Among the three objectives of this framework one refers to “cooperation actions towards mainstreaming soil health and biological management into agricultural land management and rehabilitation programmes” (Mulongoy 2008). In broader terms, the idea of “mainstreaming” biodiversity into management practices could also be a key aspect of an integrated approach towards sustainable land use. Not only with regard to this initiative but also with other activities the programme is administered in close cooperation with the FAO.

The **programme of work on forest biodiversity** consists of three elements: (i) conservation, sustainable use, and benefit-sharing, (ii) an institutional and socio-economic enabling environment, (iii) knowledge, assessment, and monitoring. With the agreement on “Non-legally Binding Authoritative Statement of Principles for a Global Consensus on the Management, Conservation and Sustainable Development of all Types of Forests”, also known as the “Forest Principles”, produced at the 1992 Rio Summit, governments built the basis for numerous forest-related processes at the international level. Increasingly, much of the programme focuses on the creation and refinement of forest indicators that allow for the assessment of the status and trends of forest resources globally. Indicators help to specify the concept of “sustainable forest management” (SFM), which is widely used in international forest policy but poorly defined and therefore inconsistently applied.

Dry and sub-humid lands, including arid and semi-arid regions, grasslands, savannahs, and Mediterranean landscapes, encompass approximately 47% of the Earth's terrestrial area. The **programme of work on dry and sub-humid lands** is divided into two parts that need to be implemented in parallel (decision V/23, annex I, paragraph 4): “assessments” and “targeted actions in response to identified needs”. While the assessments mainly consist of knowledge-building and support activities, the targeted actions include the management of protected areas, responsible resource management and support for sustainable livelihoods. The programme of work is closely coordinated with the UNCCD and builds on capacity building, networks and case studies of successful management to achieve its targets.

3.4 Conclusions

The broad approach of the CBD, which includes conservation *and* sustainable use of biodiversity (also reflected in the strategic plan and the Aichi targets), shows a strong overlap to conceptual approaches towards sustainable land use. While not explicitly addressed as the term “sustainable land use”, components of it could be found at every conceptual level of the CBD. The ecosystem approach (including its adaptive management) as well as the Addis Ababa principles could serve also as conceptual basis of how land could be sustainably used at various levels. Furthermore, the CBD's experiences with indicators and their application for measuring progress towards targets could be a good basis for monitoring of land related aspects of biodiversity protection.

4 Options for strengthening the global governance of sustainable land use through the CBD

A range of pathways can be pursued to render the international governance of land use more sustainable in the future (Fritsche et al. 2015). These include:

- Agenda-setting
- Promoting institutional co-ordination and actor co-operation
- Integrating sustainable land use concerns into existing policies and institutions
- Creating new policies and institutions

Some of these pathways can be followed from within the arena of the CBD. In the following, we will introduce options along these pathways.

4.1 Agenda-setting: Starting to create a common understanding of what sustainable land use is

Agenda-setting is the feeding-in of an issue (here: sustainable land use) into (here: international) policy processes. The aim is to prepare policy formulation with regard to the issue. Agenda-setting has a strong discursive component: typically, it involves the (at least initial) definition of “the problem” (what is sustainable land use?) among a broad range of actors/ actor coalitions; the demarcation of who is legitimized to address the problem (the UN, national governments, the private sector, farmers’ coalitions etc.); and the framing of potential solutions to the problem (regulation, planning, markets, participation...). These definitions create the basis for the subsequent political debate, the selection of actors to be involved in the process, the range and even content of policy alternatives (Fritsche et al. 2015).

With regard to land use, it is still necessary to even define “sustainable land use”. Against the backdrop of the above mentioned conceptual building blocks within the CBD, a debate among the CBD parties could be stimulated through, for instance,

- a guidance document produced or commissioned by the CBD Secretariat within the CBD’s Technical Series, addressing the topic of “sustainable land use” under the CBD. As a minimum, this document would collate (handbook-style) all CBD objectives, principles, rules, decisions etc. with relevance for sustainable land use, and it would describe their respective land use implications. The preparation of such a non-binding document could be funded by the German government or by the European Commission, for instance in the context of the “EU Biodiversity for Life” (B4LIFE) flagship initiative;
- a workshop with interested CBD parties addressing the questions of „What means sustainable land use under the CBD?” and “What is missing in the CBD with regard to sustainable land use? A gap analysis”. The workshop could be hosted, for instance, by the German government as an informal workshop or as a Technical Expert Group.

The main challenge in this discursive process will be to widen the CBD parties’ perspective from a narrow focus on ‘nature conservation’ towards an integration of land use in sectors

like agriculture, forestry, mining etc. – a politically rather contentious step.²⁷ Furthermore, it will be a challenge to maintain, on the one hand, the thematic focus on biodiversity (so as to remain within the remit of the CBD) and to broaden, on the other hand, the view towards other, land use related sustainability issues (so as to create a value added).

4.2 Promoting institutional coordination

A second pathway to improve international governance with regard to sustainable land use is to promote governance and actor linkages – that is, to improve the coordination of policies and institutions with relevance for sustainable land use as well as the cooperation between the relevant actors. The aim is to create awareness of potential synergies and conflicts, to promote learning, reduce duplication of work and ultimately increase the coherence between rules and activities (Fritsche et al. 2015). Our focus will be on the first of the two approaches (governance linkages).

At present, channels of institutional co-ordination exist between the CBD and other multilateral environmental agreements (MEA), such as biodiversity-related conventions,²⁸ forest-related processes²⁹ and the other Rio Conventions (Böhringer 2014; Morgera 2011). In 2014, the CBD's Conference of Parties decided to strengthen the cooperation with other conventions, international organizations and initiatives (CBD Decision XII/6). However, existing forms of co-ordination do not materially address the issue of sustainable land-use.³⁰ Integrating sustainable land use issues into the joint work plans of the existing co-operation channels could not only strengthen policy coordination but would also feed back into the process of creating a joint understanding on sustainable land use within the CBD.

4.3 Integrating sustainable land use concerns into existing policies and institutions

Better integrating ('mainstreaming') sustainable land use concerns into other policies and institutions that have the potential to either hamper or to drive sustainable land use is a further pathway for improving the governance of sustainable land use. The aim is to reduce incoherence and foster synergies among land use relevant policies, similar to the previous pathway. In addition, the integration approach builds 'bridgeheads' for sustainable land use by including the issue in more and more pre-existing policies and institutions (Fritsche et al. 2015).

²⁷ This is due, among others, to the fact that CBD negotiators typically do not have their governments' permission to agree on anything influencing agricultural practices at home.

²⁸ e.g., the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), the Convention on Wetlands (Ramsar), the Convention on the Conservation of Migratory Species of Wild Animals (CMS) and the International Plant Protection Convention.

²⁹ E.g., the International Tropical Timber Organisation (ITTO) and the Collaborative Partnership on Forests.

³⁰ An exception were the two sessions at the Global Soil Week 2015 that brought together the CBD's IPBES, the UNCCD's SPI and the Global Soil Partnership's ITPS, which all work on land indicators.

The CBD's mandate to address the conservation and sustainable use of (among others, terrestrial) biodiversity indirectly covers aspects of sustainable land use such as land degradation, soil erosion, soil quality (with regard to toxics or nutrient loads) as well as water quality since these influence the state of biodiversity.

Integrating sustainable land use into the CBD can include, among others,

- introducing the topic as a “new and emerging issue” within the CBD's Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA). After each COP, parties and relevant organizations can submit proposals on such new and emerging issues as they relate to the conservation and sustainable use of biodiversity (for instance, under the title of “Unsustainable land use as driver of biodiversity loss – exploring the need for action”). While in recent years this possibility has been made rarely use of in order to cope with the implementation of existing programmes, the possibility principally exists and the openness towards using it can of course change with increased attention to an issue;
- institutionalizing the topic as a “cross-cutting issue” through a COP decision. Cross-cutting issues need to correspond to the issues addressed in Articles 6-20 CBD and provide links between the thematic programmes;
- integrating the topic into the review, revision and update of national biodiversity strategies and action plans (NBSAPs);
- ultimately integrating sustainable land use in the revision and update of the Strategic Plan for Biodiversity for the 2021-2030 period.

4.4 Creating new policies and institutions: a ‘Land Protocol’ under the CBD?

A fourth pathway for strengthening global sustainable land use is the creation of new policies and institutions, be they public or private, self-standing or derived from existing conventions, binding or non-binding. New policies and institutions may be of different geographic, sector and issue scope as well as levels of specificity. Their aim is to produce a central authority either for policy development or, alternatively, for policy preparation (at the science-policy interface), with sufficient political clout to assert itself.

Under the CBD, new policies and institutions might emerge from, for instance,

- the development of **principles or guidelines** on sustainable land use. These may be a new set of (voluntary) principles/ guidelines, or consist in the amendment of the Addis Ababa Principles with sustainable land use aspects not yet covered in these;
- the development of a (binding) protocol on sustainable land use. Such a **‘land protocol’** could either, as a minimum, collate all existing definitions, fundamental principles, and obligations with respect to sustainable land use; or it could include new substance and obligations.

In the following, we present the formal conditions for adopting a protocol under the CBD and explore the political conditions under which it has been possible to adopt CBD protocols in the past. While at present the political feasibility to introduce such a protocol is obviously

very low, this might change in the future. In the long run, a binding policy may be the more effective and even necessary form for promoting sustainable land use at international level.

4.4.1 Under what formal conditions is it possible to adopt a CBD protocol?

Since the 1980s, states have increasingly used a 'framework convention and protocol approach' in international environmental treaty-making (Beyerlin & Marauhn 2011, p. 270; Riedel 1998). Protocols enable a specification of individual aspects of the framework convention at a later point in time and thus a smoother agreement on the convention in the first place. Such later-to-be-specified aspects may be particularly controversial and/or complicated issues (e.g. biosafety, access and benefit-sharing with regard to genetic resources); or they may be issues that have further evolved over time and became regarded as increasingly important for regulation only after the convention's adoption (e.g., sustainable land use could become such an issue). Legally, a protocol represents the 'strictest form of implementing [a] Convention' (Korn 2004, p. 45). Once ratified, it has the status of a self-standing international treaty. A protocol therefore needs to be separately ratified by each party to its framework convention. While a party to the framework convention does not need to become a party to any of the convention's protocols, a country that is not a party to the convention (e.g., the USA in the case of the CBD) cannot become a party to one of its protocols.

In line with the 'framework convention and protocol approach', the CBD foresees the possibility to develop protocols, thus specifying issues within its purview: Art. 23.4 (c) and (e) as well as Art. 28 and 29 stipulate that the CBD's Conference of Parties (COP) may, in keeping under review the implementation of the CBD, consider, adopt and amend protocols to the convention.³¹ A protocol to the CBD enters into force once it has been ratified by as many CBD parties as are specified in the respective protocol (Art. 36.2). Subsequently, the protocol's decision-making body will be the "Meeting of the Parties to the Protocol" (COP/MOP) and the CBD Secretariat can perform secretariat functions for the protocol (Art. 24.2). The CBD's dispute settlement procedures as specified in Art. 27 can be taken over for the CBD's protocols.

So far, the CBD parties have adopted two protocols (see below) while suggestions for further protocols (e.g., on the transboundary traffic with invasive alien species) have been rejected by the COP. We give a brief overview of the political conditions under which the Cartagena and Nagoya Protocols have been established.

³¹ Note that Art. 19.3 defines the specific option for developing a biosafety protocol, an option that resulted in the development of the Cartagena Protocol (see below).

4.4.2 Under what political conditions has it been possible to adopt the CBD protocols?

4.4.2.1 Cartagena Protocol on Biosafety

The Cartagena Protocol (CP) aims “to contribute to ensuring an adequate level of protection in the field of the safe transfer, handling and use of living modified organisms resulting from modern biotechnology that may have adverse effects on the conservation and sustainable use of biological diversity, taking also into account risks to human health, and specifically focusing on transboundary movements” (Art. 1 CP). For this purpose, the Protocol – among other things – sets up an advanced informed agreement (AIA) procedure prior to the first intentional transboundary movement of living modified organisms (LMOs) for intentional introduction into the environment of the Party of import.³² The Protocol was adopted in January 2000 (CBD Dec. EM-I/3) and entered into force in September 2003. To date, the protocol has 168 parties.

As regards its negotiation history, the issues of biotechnology and biosafety had already decisively shaped the original CBD negotiations prior to its adoption in 1992 (Bail et al. 2002; Cantley 1995; Falkner 2000; Mayr & Soto 2013; McConnell 1996). This was tightly related to the advancement of modern biotechnologies, in particular to the development of transgenic crop in the 1970s and 80s. This development was fraught with debates on ethical implications, ecological and health risks, intellectual property rights, technology transfer, socio-economic repercussions in the Global South etc. (Crucible Group 1994). Against this backdrop, developing countries called for the development of international biosafety rules. Despite the interest of many developing countries in biotechnologies and their potential benefits (Juma & Konde 2013), there was a fear that biotechnology companies and research institutes might use their territories as testing grounds for the new technology with its potential risks (Falkner 2000, 2002). Inspired by the instrument of “prior written consent” created under the recently adopted Basel Convention for the trade in hazardous wastes, developing countries called for a similar procedure prior to GMO transfers. With OECD countries – the main producers of GMOs – regarding international biosafety rules as unnecessary, this demand was not successful during the CBD negotiations. It resulted, however, in the agreement to “consider” a respective international protocol (Article 19.3). In mid-1995, the CBD parties indeed agreed to start protocol negotiations.

During the negotiations, the North-South opposition gradually combined with an intra-OECD conflict (Gupta 2000). This was the consequence of a public discourse, above all in Europe, that addressed ecological and health/food safety concerns over GMOs and GMO trading. The discourse accompanied the negotiations and intensified when, in 1996, the commercial planting of transgenic crops started in the US (James 2000). The intra-OECD conflict saw the biosafety-sceptic “Miami Group” of major agricultural and GMO exporters (led by the US)³³

³² The Cartagena Protocol also calls on parties to develop international rules on liability and redress. This resulted in the “Nagoya-Kuala Lumpur Supplementary Protocol on Liability and Redress to the Cartagena Protocol on Biosafety” (adopted in 2010).

³³ Beyond the US, the Miami Group comprised Argentina, Australia, Canada, Chile and Uruguay.

along with Japan and the biotechnology industry on the one side, and on the other side the Nordic countries (supported by green NGOs); the (rest of the) EU – initially only “only lukewarm” towards biosafety measures under the CBD (cf. Gupta 2000) – started to align with this position during the 1990s and to fight, along with the “Like-Minded Group” of many developing countries for strong biosafety provisions.

When the Protocol was finally adopted, all sides had made concessions. On the one side, the Like-Minded Group and the EU prevailed, for instance, with regard to subjecting GM trade to the Protocol rather than the World Trade Organization; the possibility to restrict GMO imports in line with a precautionary approach; inclusion of socio-economic considerations in the decision on GMO imports; and the agreement to establish rules and procedures regarding liability and redress for damage resulting from transboundary GMO movements. On the other side, under the Miami Group’s pressure, the Protocol’s scope had been significantly reduced vis-à-vis earlier ambitions (Hagen & Weiner 2000; Kleinman & Kinchy 2007; Mackenzie et al. 2003; Oberthür & Gehring 2006).

4.4.2.2 *Nagoya Protocol on access to genetic resources and the fair and equitable sharing of benefits arising from their utilization*

The Nagoya Protocol (NP) aims at promoting “the fair and equitable sharing of the benefits arising from the utilization of genetic resources, including by appropriate access to genetic resources and by appropriate transfer of relevant technologies” (Art. 1 NP). Genetic resources are the genetic material of plant, animal, microbial or other origin which has actual or potential value. The NP puts into more concrete terms and expands the CBD’s framework for “access and benefit-sharing” (ABS) with regard to such resources. The CBD stipulates that, in order to acquire genetic resources, users of genetic resources³⁴ need to ensure that the provider country gives its prior informed consent (PIC) and that a bilateral contract is negotiated which regulates the fair sharing of (monetary and non-monetary) benefits resulting from the utilization of the genetic resources in question. Beyond reaffirming and partly specifying these cornerstones, the Nagoya Protocol provides a new set of international access standards, commits user countries to enact measures to foster the compliance of users and creates an internationally recognised ‘certificate of compliance’ to support user country measures. The Nagoya Protocol was adopted in 2010 (CBD-Dec. X/1) and entered into force in October 2014. Presently, it has 57 parties.

Like biosafety, the issue of “ABS” had a substantial history before the Nagoya Protocol started to being negotiated (cf. Wallbott, Wolff & Pożarowska, 2014). During the 1980s the perception emerged that genetic resources were the “green gold” of biodiverse (mostly Southern, developing) countries. This perception resulted not only from concerns about biodiversity loss but from the rise of biotechnology and the increasing application of Intellectual Property Rights (e.g., patents) to “living matter” as a way to hedge the costs of biotechnological R&D. In the CBD negotiations, a sharp controversy reigned between

³⁴ e.g., bioprospecting, pharmaceutical, cosmetics etc. companies.

developed and developing countries (Rosendal 2000): the former (in line with their pharmaceutical, biotechnology and breeding industries) fought for an access to genetic resources as unrestricted as possible. The latter, however, felt it to be unjust that industrialised countries used genetic material which in many cases was originally collected in developing countries without sharing the benefits resulting from its utilisation, and by applying IPRs on the material even restricted access to the related knowledge. As a consequence, the international community committed to the framework on ABS outlined above. It gave up the earlier notion that genetic resources were a 'heritage of mankind' and replaced it by the principle that natural resources in general were subject to sovereign rights of states.

The CBD's ABS framework of 1992 became specified through subsequent national ABS laws (mostly in so called 'provider countries') and a set of voluntary international standards under the CBD – the 'Bonn Guidelines' of 2002. However, the former did not result in significant sums of benefit-sharing revenues and the latter focused on access rather than user country measures to support benefit sharing. Meanwhile, the discursive battle over 'biopiracy' – i.e., the (mis-)use of IPR on genetic resources – intensified during the 1990s (Svarstad 2004). Against this background, a coalition of biodiversity-rich developing countries formed. At the World Summit on Sustainable Development in 2002, these "Like Minded Megadiverse Countries" (LMMC) successfully launched an initiative to negotiate within the CBD an "international regime" to promote benefit-sharing, which was to become the Nagoya Protocol.

In 2004, negotiations were formally mandated within the CBD. They were sluggish and fraught with conflict along the former North-South divide: "On the one hand, countries rich in GR and poor in relevant technological and industrial capacities (mostly developing countries) were interested in a regime that stringently supports benefit-sharing. Countries poor in biodiversity but well-equipped with technologies (developed countries), on the other hand, advocated simple access to GR abroad. However, some of the newly industrializing countries such as Brazil, India and China have built up (bio-)technological capacities and have gradually developed user-country interests and identities next to their provider-country perspective" (Wallbott et al. 2014, p. 53).

However, the negotiating parties finally managed to compromise on many contentious issues and the resulting Protocol bridges the interests of industrialized and developing countries. For instance, against the initial position of the EU and the JUSCANZ coalition (a coalition of non-EU developed countries), the protocol was made legally binding; in return, its geographic, temporal and economic scope remained rather narrow. Against the LMMC's preferences it contained detailed access standards but in line with them it also provided for binding user measures and an internationally recognised certificate of compliance to support user measures (TWN 2011).³⁵ The ultimate agreement was driven forward by developing countries' strategic move to make the adoption of the protocol contingent on the adoption

³⁵ However, it remains in the discretion of (user country) governments whether or not to they require genetic resource users to disclose the resource's source and legal status in patent applications as user country measures.

of the CBD's 'Strategic Plan for Biodiversity 2011-2020' (which contains the Aichi targets) and its 'Strategy for Resource Mobilization', both of which industrialised countries wanted to see in place. Moreover, Japan assisted the agreement by announcing significant funds in support of the Convention's implementation.

5 Conclusions

In this paper, we argued that land use practices crucially affect sustainable development worldwide and that the political promotion of sustainable land use is urgently needed. The CBD already deals with aspects of sustainable land use (under the term "sustainable use of biodiversity"). With its existing institutional architecture and binding framework, it would provide a good starting point to strengthen the international governance of sustainable land use. We have outlined various options how this could be done.

The certainly most demanding option would be to introduce a 'land protocol'. Formally, this requires a COP decision. Politically, at the moment it seems unlikely that the parties will engage in developing a new protocol. The process of negotiating protocols has proven to be time- and resource-intensive, and the tough negotiations of the Nagoya Protocol – adopted only in 2010 – still looms large in the memory of delegates. The negotiation histories of the Cartagena and Nagoya Protocols also show that significant political momentum (including public pressure) around the issues and a critical mass of promoters are necessary to trigger protocol negotiations. In each case, a substantial number of developing countries had called for a protocol, fearing economic injustice and/ or ecological risk from the lack of international regulation. In other words, a perception had emerged among a sufficient number of countries that they would gain from introducing international regulation. Also, both biosafety and access and benefit-sharing had been "new" issues for which no national regulations or property rights had pre-existed; this could have kept opposition against an international regulation of the issues comparatively low. Finally, the ultimate adoption of both protocols was linked to issue linkages and/or compensatory arrangements.

Most of these conditions are not (likely to be) prevalent when it comes to addressing 'sustainable land use'. Apart from individual aspects (such as 'land grabbing'), the issue is not (yet) sufficiently politicized at the international level. There is not even a common understanding of what 'sustainable land use' comprehends. Among the CBD parties, only some have yet shown an interest in addressing the issue at international level. They include, for instance, a number of EU Member States³⁶ as well as countries committed to the concept of a 'land degradation neutral world' in the context of the UNCCD.³⁷ However, a range of both developing and developed country parties to the CBD have rejected international 'interventions' with regard to their domestic land use regimes (most notably, forestry and agriculture). They argue that the governance of land use should be subject to national

³⁶ Namely, those 23 member states willing to commit themselves to an EU Soil Framework Directive (which had ultimately been blocked by a minority of five EU countries, leading to the withdrawal of the draft directive in 2014).

³⁷ The so called „Group of Friends (GoF) of Desertification, Land Degradation and Drought“ which includes Australia, Burkina Faso, Iceland, Lesotho, Namibia, Qatar, the Republic of Korea and Turkey.

sovereignty, and/ or claim that they are already managing their land and soil sustainably.³⁸ Unlike in the case of biosafety and ABS, “land” is a subject that has been regulated at national and even local levels extensively. Any additional international regulation of land threatens to interfere with existing property rights and related streams of income, so that national interest groups can be expected to work against it. Moreover, to date no group of states regards themselves as potential ‘winners’ from an international regulation of land use sustainability, so that there is little incentive for governments to become leaders and push the process forward. It would either need a political ‘entrepreneur’ to push the agenda for other benefits than direct pay-offs. Or the issue of “sustainable land use” would need to be reframed in a way that creates winners.³⁹

Still, a *binding* international and integrative policy on sustainable land use should constitute a medium-term goal. In our view, a CBD protocol, despite its described drawbacks at present, could constitute a promising anchoring point for such a binding policy. For a protocol to become politically feasible in the medium to long term, all other of the above policy pathways – agenda setting, promoting institutional co-ordination and mainstreaming – should be pursued, so that a common understanding of sustainable land use is forged in the first place and national interests can emerge in relation to such an understanding. Embracing the outlined options as steps towards strengthening sustainable land use within the CBD might eventually lead to a critical examination of a land protocol under the CBD. If neither of these steps will be taken, chances for improving the international governance of sustainable land use will be lost.

Finally, we would like to conclude by pointing out that apart from the CBD, other important international processes are currently ongoing that address sustainable land use. We briefly mentioned the process of integrating land use in the SDGs, the implementation of the VGGT and the potential upcoming opportunity to address land use issues in the climate negotiations (UNFCCC) end of 2015. These processes have their own dynamics, constraints and opportunities and could not be discussed here in any detail (see at some greater length, Fritsche et al. 2015). Finally, it should be noted that the focus on the CBD as taken in this paper complements rather than conflicts with the currently ongoing processes.

³⁸ With regard to forestry these were, among others, Brazil, Indonesia, Malaysia, but also Russia, Finland and Sweden. With regard to agriculture, they included the “Miami Group” of agricultural exporters (US, Canada, Argentina etc.). Independent of the CBD negotiations, an EU directive on soil protection failed to be adopted since some member states were averse to subjecting soil to EU law.

³⁹ A success example is the reframing of international forest protection through “REDD+” (“Reducing Emissions from Deforestation and forest Degradation in developing countries” under the UN climate convention). The perspective of tying forest protection to international payments created winners and a boost to the respective negotiations.

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