forum
biodiversity

Guidelines for Assessing Biodiversity-Related Risks and Opportunities in the Financial Sector

An Aid for Implementing the VfU Biodiversity Principles

Preface

Starting in 1994, the Verein für Umweltmanagement und Nachhaltigkeit in Finanzinstituten e. V. [VfU; Association for Environmental Management and Sustainability in Financial Institutions] has encouraged German-speaking financial institutions to exchange their thoughts and expertise on topics of sustainability. Its aim is to develop strategies and tools that promote sustainable development within the financial sector.

Since 2008, the VfU has been particularly concerned with the issue of biodiversity and its relevance within the financial sector. In cooperation with the Centre for Sustainability Management (CSM) at the Leuphana Universität Lüneburg (Germany) and other contributors, the "VfU Forum Biodiversität" task force compiled these recommendations for the financial sector. The project was facilitated by the German Federal Agency for Nature Conservation (BfN, Bundesamt für Naturschutz).

The present guidelines for assessing biodiversity-related risks and opportunities may serve as an aid for implementing the VfU biodiversity principles. Representatives from the financial sector can refer to the following questions when discussing biodiversity issues with clients. In this way, they can assess main impacts on biodiversity and the potential dependency of the client's business activities on biodiversity. When applicable, the results of the analysis should be considered when making decisions regarding financing, the issuing of loans, investments and equity investments as well as insurance services.

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1
Introduction

The guidelines for assessing of biodiversity risks and opportunities supplement the VfU's "Biodiversity Principles" (www.vfu.de). They provide precise questions that may be useful when discussing biodiversity issues with clients. Representatives from the financial sector may refer to these guidelines when evaluating client business activities, their impacts and dependencies on biodiversity. This allows them and their clients to consider important aspects of biodiversity when making business-related decisions, particularly when it comes to financing.

The loss of biodiversity is caused by many different factors. The most important factors include the increasing loss of habitats, climate change, overexploitation of natural resources, emissions, and neobiota, i. e. non-indigenous animal and plant species distribution. Any step towards the preservation of biodiversity begins with these factors, and they are, that, are affected by businesses, institutions, and projects in various ways.

The impact of the financial sector is mainly indirect and often linked to financing and the issuing of loans, as well as to investments, equity investments, or insurance services (see Vfu (2011): Biodiversity Principles. Recommendations for the Financial Sector). Although the present guidelines primarily focus on enhancing the dialog between clients and representatives within the financial sector, it is worth mentioning that the issue of biodiversity should be integrated into the internal environmental management systems of banking institutions.

Just as clients within the financial sector broadly vary (companies, project corporations, the public sector, etc.), so do the effects that funded projects have on biodiversity. From the perspective of the company, there are different spheres of activity that correspond with how a business strategy, property design scheme, or supply chain used by clients of the financial sector, affect biodiversity. Table 1 depicts the main correlations between these spheres of activity and factors that impact biodiversity.

The present guidelines are based on these correlations. They include a range of questions that are related to the different spheres of activity. These questions provide representatives from the financial sector with suggested criteria and indicators to draw upon when evaluating clients and client measures. Consequently, the guidelines can help integrate the issue of biodiversity into existing questionnaires and evaluation tools.

Existing client environmental and sustainability management systems may already acknowledge some of these factors. In order to simplify the process, it is possible to draw upon existing policies, reports, and instruments that relate to the case in question. In addition, the Global Reporting Initiative (GRI) developed several indicators for biodiversity-related environmental schemes. These can serve as groundwork for financial institutions wishing to assess the impacts that projects and companies have on biodiversity.

[1]New species inhabiting areas by means of human intervention.

Corporate Division	Habitat Loss / Impact on Natural Habits	Climate Change	Overexploitation	Emissions	Introduction of Neobiota or Use of Genetically Modified Organisms, Equitable Benefit Sharing
Management Control, Governance and Corporate Strategy	Incorporation of the target, “preservation of natural habitats”, into the corporate strategy	Development of a climate strategy including goals and measures (carbon footprint)	Alignment of the corporate strategy with a powerful commitment to sustainability (consumption must not exceed regrowth rate)	Compilation of binding target agreements for reduction of relevant emissions	Evaluating the corporate strategy with regards to the introduction of neobiota and the use of genetically modified organisms
Organizational Schemes in Compliance With Relevant Laws and Recommendations	Convention on Biological Diversity (CBD,Fauna-Flora - Habitat); Guideline Ramsar Convention (Convention on Wetlands, especially as waterfowl habitat, international relevance); Bonn Convention on the Conservation of Migratory Species (CMS); World Heritage Convention (WHC); Enviromental Liability Directive	UNFCCC (United Nations Framework Convention on Climate Change); Montreal Protocol for the protection of the ozone layer; EU Emissions Trading Directive; Copenhagen Accord (UN climate conference 2009)	Convention on Biodiversity (CBD) Convention on International Trade in Endagered Species of Wild Fauna and Flora (CITES) IUCN Red List of Endangered Species	Montreal Protocol; POP Convention; LRTAP (Convention on Long-range Transboundary Air Pollution); PIC – Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade, 2004; Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal	Cartagena Protocol on Biosafety; access and benefit sharing according to the Nagoya Protocol; International Treaty on Plant Genetic Resources for Food and Agriculture
Location & Properties	Prevention and reduction of land sealing	Energy consumption in facilities; protection and preservation of carbon sinks (swamps & forests)	Use of building materials from sustainable cultivation	Damage to local biodiversity through light, dust, sound	Preventing the occurrence of non-domestic plants on corporate properties
Supply Chain & Raw Materials	Reduction of land consumption in raw material extraction (aiming towards sustainable land use)	Energy consumption reduction during raw materials extraction; protection of carbon sinks (swamps & forests)	Sustainable cultivation methods (such as prevention of monocultural farming, prevention of overfishing); protection of endangered species	Prevention of overfertilization; wastewater reduction	Preventing the cultivation of non-domestic species; preventing the use of genetically modified organisms

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Products	Reduction of land consumption through products (for example, buildings); prevention of habitat fragmentation	Reduction of greenhouse gas use as product component; reduction of product energy consumption	Reduction/substitution of components (for example, rare plants) as elements of the production (for example, in the pharmaceutical industry) if they belong to rare or protected species, or if they come from sensitive ecosystems (inclusion of impacts on biodiversity into the life cycle analysis)	Reduction of product waste; prevention of hazardous emissions during product use	Preventing the import of non-domestic species
Production and Processing	Preventing and reducing land sealing	Reduction of energy consumption, prevention of greenhouse gas use during production process	To be negotiated	Reduction of sewage water discharge and warm service water	Preventing the use of non-domestic species during production
Transport & Logistics	No fragmentation of habitats due to infrastructure (such as pipelines, traffic routes)	Reduction of energy consumption and greenhouse gas emissions during transportation	When using fuels from renewable sources, the company should verify that they come from certified sustainable sources	Prevention or reduction of emissions during transportation (for example, through the use of low-emission fuels or transportation ways and low-energy logistics)	Measures for the prevention of neobiota distribution (such as fungal infestation of transport boxes, seashells on hulk)
Human Resources	Information and training for staff members and suppliers with regard to company impact on habitat loss; adjustment of company incentive systems	Information and training of staff members with regard to the company impact on climate change	Information and training of staff members with regard to the company's impact through overexploitation of natural resources	Information and training of staff members with regard to the prevention of harmful emissions	Information and training of staff members with regard to the introduction of neobiota, the use of genetically modified organisms and on the issue of equitable benefit sharing of genetic resources
Corporate Reporting	Continuous investigations and reports with regard to land and water biodiversity figures and to the impact of corporate activities on the affected habitats	Reports on carbon footprint	Reports on use, consumption and regeneration of natural resources	Reports on - SO_2 emissions, - NO_x emissions, - persistent organic pollutants (POP), - volatile organic compounds (VOC) etc.	Reports on - use of GMOs - cultivation of species outside their original (previous) range - measures to prevent the unintentional distribution of neobiota - equitable benefit sharing in the use of genetic resources

Table 1: Important corporate spheres of activity and their impact on biodiversity

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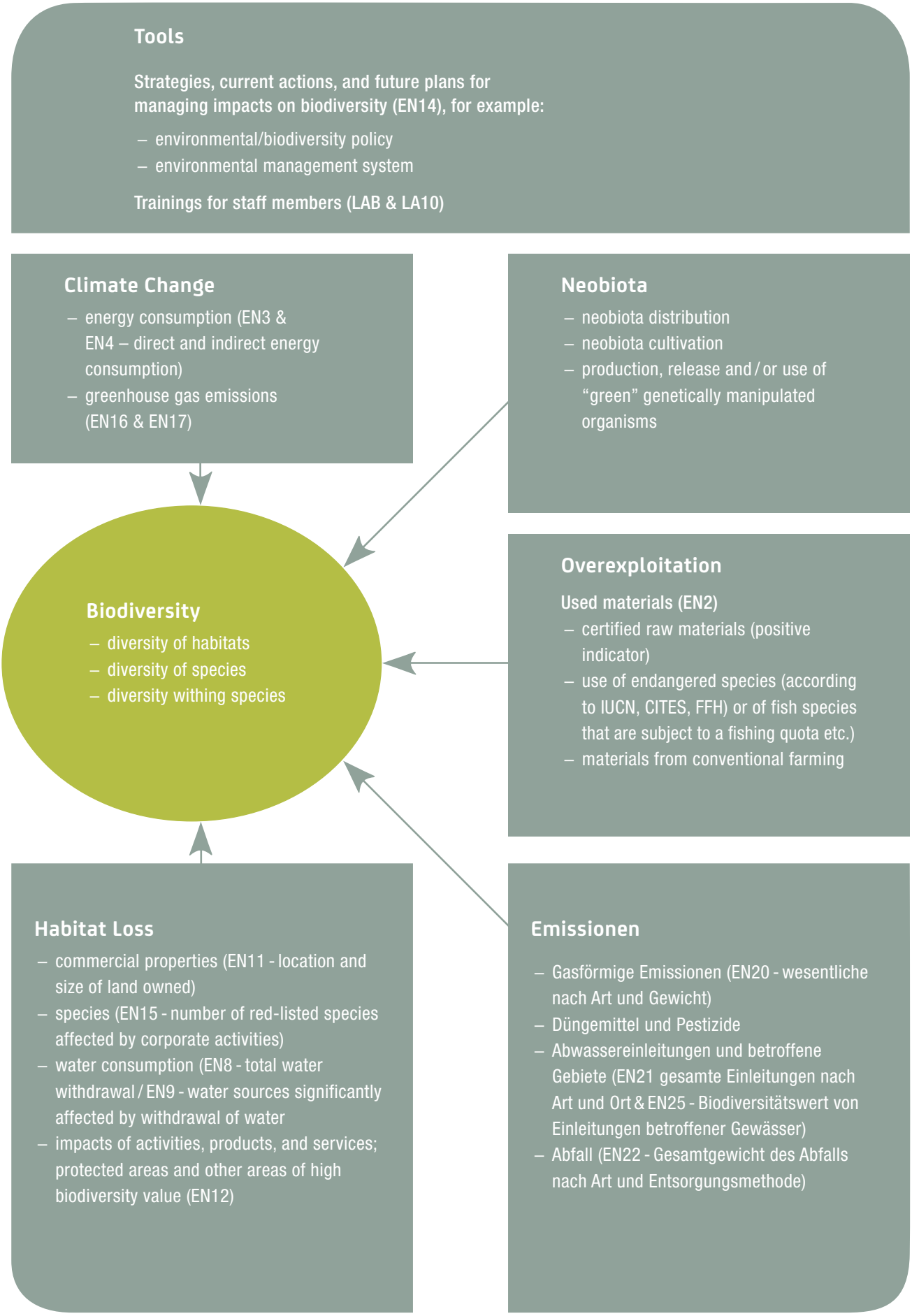

Based on: GRI (2007): Biodiversity Resource Document, p. 28.

Figure 1: Interconnections between the Global Reporting Initiative indicators and the causes of the global loss of biodiversity

[1]Arten, die mit menschlicher Hilfe Gebiete besiedeln, in denen sie bisher nicht vorkommen.

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High Risk Industries with Regard to Biodiversity

Key Question

Does the company belong to, or collaborate with one of the following industries?

- Agriculture
- Biofuels
- Food and beverages (incl. supply chain)
- Building and Construction
- Waste management
- Forestry and paper production
- Recreation and tourism
- Oil and gas
- Mining
- Energy supply

Comment

The following table depicts the primary impacts these industries have on biodiversity. Financial services institutions should be aware of these interconnections and offer responsible products and options to companies.

	Habitat Loss	Emmisions	Climate Change	Invase species (neobiota)	Overexploitation
Agriculture					
Biofuels					
Food industry (incl. supply chain)					
Building and construction industry, materials					
Waste management					
Forestry and paper production					
Recreation and tourist industry					
Oil and gas					
Mining					
Energy generation and supply					

Table 2: Impacts of different industries on biodiversity

Primary biodiversity risks

Biodiversity risks

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3

Business Governance and Strategy

3.1 Habitat Loss/Impact on Natural Habitats

Key question

Is the company equipped with a biodiversity or environmental policy that aims to conserve biodiversity, and more specifically, to protect habitats?

Additional question

Does the company pass policy standards or requirements along to suppliers and partners from the supply chain, and are they required to comply?

Additional question

Is the company equipped with an environmental management system that addresses the impact corporate activities, products, and services have on biodiversity in areas (and protected neighboring areas) of high biodiversity value?

Comment

The preservation of biodiversity should be an integral element of an environmental management system. Companies should extensively investigate critical aspects with regard to habitat loss, climate change, overexploitation, emissions, and neobiota or genetically modified organisms.

Further Information

- Millennium Ecosystem Assessment (MEA) (2005): Ecosystems and human wellbeing. Biodiversity Synthesis www.maweb.org/documents/document.354.aspx.pdf [07.11.2011].
- Schaltegger, S. & Beständig, U. (2010): Handbuch Biodiversitätsmanagement. Ein Leitfaden für die betriebliche Praxis. Bundesministerium für Umwelt, Naturschutz und Reaktorsicherheit, Deutsche Gesellschaft für Technische Zusammenarbeit & CSM-Leuphana University (Hrsg.), www.bmu.de/naturschutz_biologische_vielfalt/downloads/doc/46143.php [08.10.2010].
- World Business Council for Sustainable Development (WBCSD) (2011): Guide to Corporate Ecosystem Valuation. A framework for improving corporate decision-making, www.wbcsd.org/DocRoot/MFjSs2eRbr7dm6qV6efx/WBCSD_Guide_CEVApril_2011.pdf [04.05.2011].
- World Business Council for Sustainable Development (WBCSD); Meridian Institute & World Resources Institute (WRI) (2008): Corporate Ecosystem Services Review. Guidelines for Identifying Business Risks and Opportunities Arising from Ecosystem Change, http://pdf.wri.org/corporate_ecosystem_services_review.pdf [07.11.2011]

3.2 Climate Change

Key Question

Is the company equipped with a climate strategy that aims to optimize products, services, and corporate activities in order to alleviate the negative impacts of climate change on biodiversity?

Additional Question

Does the company measure its corporate carbon footprint?

Additional Question

Does the company define precise goals and introduce strategic schemes that seek to reduce its carbon footprint?

Comment

It is a proven fact that ongoing climate change transforms ecosystems, and thus has a considerable impact on biodiversity.

Further Information

- Secretariat of the Convention on Biological Diversity : Climate Change and Biodiversity, **www.cbd.int/climate**
- Intergovernmental Panel on Climate Change (IPCC) (2008): Climate Change 2007. Synthesis Report, **www.ipcc.ch/pdf/assessment-report/ar4/syr/ar4_syr.pdf** [28.05.2009]

3.3 Overexploitation

Key Question

Does the company introduce any strategic schemes (such as a biodiversity policy or standards) that aim to prevent overexploitation (for example, caused by large-scale monocultural farming or overfishing)?

Comment

Overfishing poses one of the biggest threats to marine habitats. In the agricultural and forestry industries, biodiversity is diminished by intensification, specialization, and rationalization. Overexploitation also affects diversity in animal breeding and cultivated plants, the so-called agrobiodiversity.

Further Information

Fishing:

- International Council for the Exploration of the Sea (ICES): **www.ices.dk**
- European Environment Agency (2010): The European environment – State and Outlook 2010: Synthesis **www.eea.europa.eu/soer/synthesis/synthesis** [29.11.2010]

3.4 Emissions

Key Question

Does the company define goals for optimizing products, services, and corporate activities that continuously decrease harmful emissions (beyond greenhouse gas emissions)?

Comment

All companies contribute to the release of emissions into the environment. For example, overfertilization in the agricultural sector leads to a loss of low-nutrient ecosystems. Likewise, the accumulation of persistent pollutants, such as dioxins in organisms, and toxic pollution are a threat to biodiversity.

3.5 Introduction of Neobiota or Use of Genetically Modified Organisms

Key Questions

1. **Is the company making an effort on the corporate strategy level to avoid the intentional or unintentional distribution of species?**
2. **Does the company speak out against the use of genetically modified organisms?**
3. **Are there any schemes aimed at reducing risks related to the use of genetically modified organisms?**

Comment

Through human influence and intervention, new species may spread in non-native areas. Such species distribution may occur intentionally, for example, through the cultivation of new crops. It may also occur unintentionally, for instance through organisms traveling in ship ballast water. In non-native habitats, new species can suppress indigenous species, transmit diseases, or change the genetic pool through hybridization.

There is no conclusive assessment of the risks that genetic engineering poses on biodiversity. In compliance with the principles of precaution, the use of genetically modified organisms should be avoided.

Further Information

Neobiota:

- Delivering Alien Invasive Species In Europe (DAISIE): www.europe-aliens.org

Genetically modified organisms:

- Sachverständigenrat für Umweltfragen (SRU) (2008): Umweltgutachten – Kapitel 12: Gentechnik, www.umweltrat.de/SharedDocs/Downloads/DE/01_Umweltgutachten/2008_Umweltgutachten_HD_Kap12.pdf [07.11.2011]

4

Organizational Measures for Complying with Legal Regulations

4.1 Habitat Loss / Impact on Natural Habitats

Key Question

Does the company introduce any organizational measures in order to continuously secure compliance with all legal regulations concerning the protection of natural habitats?

Additional Question

Does the company introduce any organizational measures in order to continuously secure compliance with all legal regulations and recommendations deriving from, for example:

- the respective national legal regulations
- the EU Council Directive 92/43/EEC
- the UN Convention on Biological Diversity (CBD)
- the RAMSAR Convention on Wetlands
- the World Heritage Convention (WHC)
- the Bonn Convention on the Protection of Migratory Species (CMS), and
- the EU Environmental Liability Directive (Directive 04/35/CE)?

Comment

National legal regulations facilitate the implementation of international conventions. However, corporate activities should also be guided by international agreements when involved with regions that have not ratified or implemented these conventions.

Further Information

- EU FFH-Richtlinie: Richtlinie 92/43 (EWG) zur Erhaltung der natürlichen Lebensräume sowie der wildlebenden Tiere und Pflanzen:
  www.bfn.de/0316_dokumente.html
- Überblick zum europäischen Umweltrecht mit Bezug zur biologischen Vielfalt:
  http://europa.eu/legislation_summaries/environment/nature_and_biodiversity_index_en.htm
- UN Konvention über die biologische Vielfalt:
  www.cbd.int
- Convention on Wetlands of International Importance especially as Waterfowl Habitat (RAMSAR):
  www.ramsar.org
- World Heritage Convention(WHC):
  whc.unesco.org
- Bonner Konvention zum Schutz wandernder Tierarten (CMS):
  www.cms.int

4.2 Climate Change

Key Question

Does the company introduce any measures in order to secure compliance with all national and international legal regulations with regard to climate protection?

Additional Question

Does the company introduce any measures in order to continuously secure compliance with all legal regulations and recommendations deriving from, for example:

- the Framework Convention on Climate Change (UNFCCC)
- the Montreal Protocol on Substances that Deplete the Ozone Layer
- the EU Emissions Trading Directive (Directive 2003/87/CE), and
- the Copenhagen Accord?

Further Information

- United Nations Framework Convention on Climate Change (UNFCCC): **http://unfccc.int**
- Montreal Protocol on Substances that Deplete the Ozone Layer: **www.unep.org/ozonaction**
- EU Emissions Trading Directive: Directive 2003/87 (CE) establishing a scheme for greenhouse gas emission allowance trading within the Community and amending Council Directive 96/61/EC

4.3 Übernutzung

Key Question

Does the company take any organizational measures in order to continuously secure compliance with all national and international legal regulations with regard to the sustainable use of natural resources and the protection of endangered animal species?

Additional Question

Are there any existing measures that support continuous compliance with all legal regulations and recommendations deriving from, for example:

- the relevant national legal regulations,
- the EU Directive 92/43 (EEC),
- the UN Convention on Biological Diversity (CBD),
- the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), and
- fishing quotas for certain fish species?

Additional Question

Did the company introduce any organizational measures in order to continuously secure compliance with regulations deriving from internationally recognized sustainability labels such as FSC and PEFC in the forestry sector, and MSC in the fishing sector?

Further Information

- Forest Stewardship Council (FSC):
  www.fsc.org
- Programme for the Endorsement of Forest Certification Schemes (PEFC):
  www.pefc.org
- Marine Stewardship Council (MSC):
  www.msc.org
- Convention on International Trade in Endangered Species of Wild Flora and Fauna (CITES):
  www.cites.org

4.4 Emissions

Key Question

Did the company introduce any measures that support continuous compliance with all national and international legal regulations concerned with waste and gasiform or liquid emissions?

Additional Question

Did the company introduce any organizational measures that support continuous compliance with all regulations and recommendations deriving from, for example:

- the Montreal Protocol on Substances that Deplete the Ozone Layer
- the Stockholm POP Convention
- the Convention on Long-Range Transboundary Air Pollution, and
- the International Convention for the Prevention of Marine Pollution from Ships (MARPOL)?

Further Information

- Geneva Protocol to the 1979 Convention on Long-Range Transboundary Air Pollution
- Helsinki Protocol on the Reduction of Sulphur Emissions (1985)
- Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade (1998)
- Stockholm Convention on Persistent Organic Pollutants (POP Convention, 2001, Annexes A, B and C)
- Sofia Protocol concerning the Control of Emissions of Nitrogen Oxides or their Transboundary Fluxes (1988)
- Gothenburg Protocol to the 1979 Convention on Long-Range Transboundary Air Pollution concerning the Abatement of Acidification, Eutrophication and Ground-level Ozone

- International Convention for the Prevention of Marine Pollution from Ships
- (MARPOL 73/78):
  www.bsh.de/de/Meeresdaten/Umweltschutz/MARPOL_Umweltuebereinkommen/index.jsp
- Overview of EU environmental law on the protection of water and soil and the prevention of harmful emissions:
  http://europa.eu/legislation_summaries/environment/index_en.htm

4.5 Introduction of Neobiota, Benefit Sharing and Use of Genetically Modified Organisms

Key Questions

1. **Did the company introduce any organizational measures that support continuous compliance with all regulations concerning the introduction of neobiota?**
2. **Does the company secure continuous compliance with legal regulations regarding equitable benefit sharing deriving from the use of genetically modified organisms?**
3. **Does the company secure continuous compliance with legal regulations concerned with the risks related to the use of genetically modified organisms?**

Additional Question

Did the company introduce any measures that support continuous compliance with all national and international regulations and recommendations deriving from, for example:

- the UN Convention on Biological Diversity (CBD)
- the Nagoya Protocol
- the Cartagena Protocol, and
- the International Treaty on Plant Genetic Resources for Food and Agriculture?

Comment

In the context of preserving biodiversity, one of the major aims is to ensure fair and equitable sharing of benefits deriving from the use of genetic resources.

This concern is regulated by the 2010 Nagoya Protocol (Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization).

Further Information

Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from Their Utilization:

- www.cbd.int/abs/
- www.abs.bfn.de

2.link entfernen?

5

Locations and Properties

5.1 Loss of Habitats through Corporate Properties that do not Pertain to the Production of Raw Materials

Key Questions

1. **Is the number of corporate properties that are of key importance to biodiversity kept to a minimum (indication of percentage in relation to total managed area)?**
2. **Do new cultivation and management activities promote ecological upgrading or downgrading of the areas under cultivation?**
3. **Are the managed premises situated within or close to protected areas, and do they negatively affect the protected areas?**

Additional Question

Does the company routinely check corporate and neighboring properties for the presence of endangered species?

Additional Question

Does the company introduce any structural or maintenance measures that are beneficial to biodiversity?

Comment

Structures and property design might harm important habitats populated by endangered species. On the same note, certain construction and maintenance schemes (such as near-natural areas with domestic hedges, trees etc.) can also have beneficial effects on biodiversity.

Further Information

Kumpfmüller, M. & Hauser, E. (2006): Wege zur Natur im Betrieb. Informationsmappe. Amt der Oberösterreichischen Landesregierung (Hrsg.).
www.land-oberoesterreich.gv.at/cps/rde/xbcr/SID-462A68CB-509E7FF2/ooe/N_natur_infomappe.pdf [14.4.2011]

5.2 Impacts of Location and Properties on Climate Change

Key Question

Does the company seek to optimize the energy efficiency of properties (for example, insulation, building services, use of renewable energies), and does it investigate the impacts these properties have on climate change?

Additional Question

To what extent is energy consumption covered by renewable energies?

Additional Question

Does the development of new locations lead to a loss of carbon sinks?

Comment

Swamps and forests store large amounts of CO_2. Stored greenhouse gases are released due to the loss of these habitats.

When regenerative energy sources are used, no additional greenhouse gases are released. This serves as a considerable contribution to alleviating climate change and helps preserve biodiversity.

In many cases, the impact of properties on climate change is already being recorded, assessed, and minimized. Therefore, it may be possible to draw on existing reports.

5.3 Impact of Property Emissions on Local Biodiversity

Key Question

Does the company introduce any measures in order to reduce corporate property emissions that are not linked to energy consumption (such as light, sound, dust)?

Comment

Emissions such as light, sound or dust impact local biodiversity. For example, areas that use a large degree of light may confuse local nocturnal species, and likewise, strong acoustic sources may disturb local sea life.

This explains why legal regulations and permits often enforce limits with regard to these types of emissions. Regardless of these rules, emissions should be avoided whenever possible.

5.4 Non-Domestic Species on Corporate Properties

Key Question

Does the company consciously seek to include domestic species in the design of corporate properties?

Comment

Non-domestic species are often introduced in leisure, tourist or residential facilities. If they spread beyond these premises, this may result in the suppression of domestic species.

Further Information

Delivering Alien Invasive Species In Europe (DAISIE):
www.europe-aliens.org

6

Supply Chain and Raw Materials

6.1 Damage to Habitats due to Raw Material cultivation or Extraction

Key Questions

1. **Is the number of properties that are important to biodiversity as low as possible?**
2. **Do new cultivation activities promote the ecological upgrading of the areas under cultivation?**
3. **Are the areas under cultivation situated within or close to protected areas, and are negative effects on the protected areas avoided whenever possible?**

Additional Question

Does the company investigate how important managed areas may be for biodiversity?

Additional Question

Does the company consider the goal of “preserving biodiversity” in decisions about the cultivation and extraction of raw materials?

Additional Question

Does the company routinely check for the presence of endangered species on properties (and neighboring areas) in which raw materials are cultivated and extracted, and are any measures introduced in order to protect them?

Comment

The cultivation and extraction of raw materials can lead to the transformation of precious habitats and suppress native species.

IUCN and national institutions publish so-called “Red Lists”. These lists name species (and partly, habitats) whose population is endangered or critically endangered. Many of these endangered species are also protected by international and national legal regulations and institutions.

Further Information

- World Business Council for Sustainable Development (WBCSD); World Resources Institute (WRI) (2009): Sustainable Procurement of Wood and Paper-based Products, www.wri.org/publication/sustainable-procurement-wood-and-paper-based-products [07.11.2011]
- Overview of the European environmental law with regard to biodiversity: europa.eu/legislation_summaries/environment/nature_and_biodiversity/index_en.htm

6.2 Impact of the Supply Chain on Climate Change

Key Question

Does the company record, assess, and seek to alleviate the effects that the supply of raw materials has on climate change?

Additional Question

What is the carbon footprint of purchased raw materials?

Additional Question

Do any of the areas under cultivation store large amounts of CO_2, and are any greenhouse gases being released?

Comment

In many cases, the impact of corporate activities on climate change is already being recorded and assessed. Therefore, it may be possible to draw on existing reports.

When assessing the CO_2 impact of raw materials, the original characteristics of the given area may need to be considered. Swamps and forests store large amounts of CO_2, and greenhouse gases will be released when these habitats are transformed for the purpose of the production of raw materials.

6.3 Overexploitation of Natural Resources in Forestry, Agriculture, and Fishing

Key Question

Does the company ensure that resource consumption does not exceed resource regrowth?

Additional Question

Does the company ensure that there is no trade in, or utilization of endangered or protected species?

Additional Question

Do the raw materials originate from certified agriculture, forestry, or fishing industries?

Additional Question

Does the company apply traditional farming methods or cultivate old species?

Comment

Agriculture, forestry, and fishing industries put considerable strain on biodiversity. Non-sustainable farming methods, large-scale monocultures, and overfishing pose a threat to habitats and species. Moreover, the utilization of uniform high performance species in agriculture suppresses old crop plants and livestock.

Several legal regulations and institutions serve to protect some endangered species, and/or to restrict their utilization (for instance, CITES or fishing quotas for certain fish species). Several internationally recognized labels (such as FSC, MSC) document sustainable production in these fields.

Further Information

- Convention on International Trade in Endangered Species of Wild Flora and Fauna (CITES). www.cites.org

Red lists:

- International Union for Conservation of Nature (IUCN): IUCN Red list of threatened species. www.iucnredlist.org
- German Federal Agency for Nature Conservation [BfN, Bundesamt für Naturschutz]: Rote Listen gefährdeter Biotoptypen, Tier- und Pflanzenarten sowie der Pflanzengesellschaften. www.bfn.de/0322_rote_liste.html
- EU Directive 92/43 (EEC) on the conservation of natural habitats and of wild fauna and flora www.bfn.de/0316_dokumente.html
- International Council for the Exploration of the Sea (ICES): Hintergründe zum Zustand der Meere. www.ices.dk
- European Commission: Background information on European fishing policy, including fishing quota and outlawed fishing methods ec.europa.eu/fisheries/index_de.htm
- Patterson, T. M. & Coelho, D. L. (2009): Ecosystem services: Foundations, opportunities, and challenges for the forest products sector. Forest Ecology and Management, No. 257, 1637–1646.
- Fauna & Flora International (2008): Dependency and impact on ecosystem services – unmanaged risk, unrealised opportunity. A briefing document for the food, beverage and tobacco sectors: www.naturalvalueinitiative.org/download/documents/Publications/Business_case_for_managing_ecosytem_services.pdf [07.11.11]

6.4 Emissions Within the Supply Chain

Key Questions

1. **Does the company record and assess emissions that accumulate within the supply chain?**
2. **What efforts are being made in order to reduce these emissions?**

Additional Question

Does the company ensure that no (banned) pesticides, fertilizers, or other additional nutrients are produced or used in the agriculture, forestry, or fishing industries?

Additional Question

Does the company monitor dangerous emissions that accumulate in industrial or montane raw materials, and are these emissions being reduced?

Additional Question

Does the company monitor for toxic wastewaters that accumulate within the supply chain, or for and discharged warm service water?

Comment

Utilizing fertilizers or other nutritional supplements (for example, in aquacultures) is not necessarily cause for a negative assessment. However, excessive use of additional nutrients transforms and contributes to the loss of low-nutrient ecosystems.

Pesticides are chemical substances used to deter, disperse, or kill unwanted living organisms. Consequently, their utilization is regulated by the law. Even so, not all national jurisdictions create or implement such laws. It is therefore necessary to check if other regions object to or restrict the utilization of the substance in use.

Emissions that cause damage to biodiversity may also accumulate through the industrial production of goods, or during the extraction of ores and rock.

Warm water contains less oxygen than cold water. Therefore, warm water (for example, cooling water) that is released into a natural body of water may cause considerable harm to local biodiversity.

Further Information

- Directive (EC) 1107/2009 concerning the placing of plant protection products on the market
- International Council on Mining and Metals (ICComment) (ed.) (2006): Good Practice Guidancefor Mining and Biodiversity.
  www.icmm.com/document/13 [07.11.2011]

6.5 Introduction and Distribution of Neobiota

Key Question

Does the company consider and document the effects caused by newly introduced species during the production of raw materials within the agriculture, forestry, and fishing industries?

Additional Question

Does the company ensure that no genetically modified organisms (GMOs) are produced, released, or processed within the agriculture, forestry, and fishing industries?

Additional Question

Is the cultivation and introduction of plants, animals, and organisms restricted to species that already (naturally) populate this area?

Comment

In new habitats, newly introduced species may suppress domestic species, transfer diseases, or change the genetic pool through hybridization. Special precautions must be taken if a species does not have any natural enemies in its new habitat.

The impacts of genetically modified organisms on biodiversity are subject to highly controversial debates, both in the scientific community and in society. Therefore, the precaution principle has given rise to strict liability regulations.

Further Information

- Delivering Alien Invasive Species In Europe (DAISIE): www.europe-aliens.org
- Cartagena Protocol on Biosafety: http://bch.cbd.int/protocol/
- Sachverständigenrat für Umweltfragen (SRU) (2008): Umweltgutachten – Chapter 12: Gentechnik, www.umweltrat.de/SharedDocs/Downloads/DE/01_Umweltgutachten/2008_Umweltgutachten_HD_Kap12.pdf [07.11.2011]

7

Products

7.1 Habitat Loss / Impact on Natural Habits

Key Question

Does the utilization and storage of products (for example, facilities or vehicles) have a distinct effect on natural habitats?

Comment

Habitat loss or impacts on habitats may occur if properties or fences cut through natural habitats and obstruct the migratory flow of certain flora and fauna.

7.2 Climate Change

Key Question

Do the products contain substances that are harmful to climate conditions, and that might be released into the atmosphere through degassing, utilization, or disposal?

Additional Question

If there are any measures taken in order to prevent greenhouse gas emissions, do they consider the entire product lifecycle?

Comment

Products may contain gases that are harmful to climate conditions, and these gases may be released during product utilization. For example, the very strong greenhouse gas, sulfur hexafluoride (SF6), continues to be used in the electrical industry or as isolating gas for insulated glass today.

Further Information

United Nations Framework Convention on Climate Change (UNFCCC):
http://unfccc.int

7.3 Overexploitation of Natural Resources

Key Question

Does the company avoid the utilization of certain product components that originate from rare or protected species, or when extraction comes from areas linked to irreversible interventions into existing ecosystems?

Comment

Product components (for example, in pharmaceutical or cosmetic products) might be (active) ingredients that originate from rare or protected species or that are extracted from sensitive ecosystems. This entails the danger of overexploitation (for example, overfishing) and of a decrease in the regenerative capacities of populations and ecosystems. Utilizing certified raw materials may prevent overexploitation.

7.4 Emissions Through Use and Exploitation

Key Question

Does the utilization, storage, or disposal of products (for example, degassing) lead to the release of harmful emissions?

Comment

Products may contain harmful ingredients. These ingredients may also develop during utilization, destruction, or disposal. If these substances enter the air, the water or the soil, they can harm biodiversity. Examples for this are chemical plastic softeners and heavy metals

Further Information

Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal: **http://www.basel.int/**

7.5 Introduction and Distribution of Neobiota

Key Question

Does a company product cause the distribution of non-domestic species that might subsequently lead to further uncontrollable spreading?

Comment

A company product might also be the plants or seeds themselves. Exporting or importing non-domestic species is not sufficiently regulated in many fields of activity. If a newly introduced species spreads uncontrollably in a new habitat, this may have an impact on that or suppress domestic species.

Further Information

Delivering Alien Invasive Species In Europe (DAISIE):
www.europe-aliens.org

8

Production and Processing

8.1 Habitat Loss

Key Question

Do production and storage facilities have a distinct impact on natural habitats?

Comment

On the one hand, the construction of production and storage facilities may cause harm to biodiversity (for example, due to soil sealing, intense maintenance measures, and disruption of animal migration patterns). On the other hand, habitats are also affected by the systematic operations within these facilities (for example, through the discharge of warm cooling water).

8.2 Impact of Production on Climate change

Key Question

Does the company introduce any measures in order to decrease direct and indirect energy consumption?

Additional Question

Does the company introduce any measures in order to decrease the direct and indirect emission of greenhouse gases?

Comment

The emission of greenhouse gases is one of the central causes of climate change. The most widely used greenhouse gas is CO_2, which is released during the utilization of fossil fuels, for example.

However, greenhouse gases also include other gases used during the production of goods. For instance, the strong greenhouse gas, SF6, is used as protective gas in the production of magnesium.

Further Information

United Nations Framework Convention on Climate Change (UNFCCC):
http://unfccc.int

8.3 Overexploitation of Natural Resources During Production: The Example of Water Consumption

Key Question

Does water consumption during the production lead to an overexploitation of natural resources?

Comment

Water consumption may provoke damage of ecosystems (for example, wetlands, riverscapes, or ground water systems). Such damage may be caused by the supply infrastructure or the overexploitation of resources.

Further Information

- Convention on Wetlands of International Importance especially as Waterfowl Habitat (RAMSAR): **www.ramsar.org**
- German Federal Agency for Nature Conservation [BfN, Bundesamt für Naturschutz]: Rote Listen gefährdeter Biotoptypen, Tier- und Pflanzenarten sowie der Pflanzengesellschaften.
  www.bfn.de/0322_rote_liste.html
- EU Directive 92/43 (EEC) on the conservation of natural habitats and of wild fauna and flora.
  www.bfn.de/0316_dokumente.html

8.4 Wastewaters

Key Question

Are natural ecosystems negatively affected by wastewater deriving from production or cooling technology?

Comment

Wastewaters that contain harmful substances may cause considerable harm to biodiversity.

The discharge of warm cooling water may also harm local biodiversity because it contains less oxygen than cold water.

8.5 Gasiform Emissions During Production

Key Question

Are the following gases or substance groups being emitted?

- **NO_x (nitrous gases),**
- **SO_x (sulfur oxides),**
- **persistent organic pollutants (POP),**
- **volatile organic compounds (VOC),**
- **hazardous air pollutants (HAP),**
- **stack and fugitive emissions,**
- **particulate matter (PM),**
- **gases that deplete the ozone layer,**
- **other gasiform emissions that are subject to standards and regulations**

Comment

The listed emissions have negative impacts on ecosystems and human health. Therefore, they are subject to several regulations.

Further Information

- Geneva Protocol to the 1979 Convention on Long-Range Transboundary Air Pollution
- Helsinki Protocol on the Reduction of Sulphur Emissions (1985)
- Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade (1998)
- Stockholm Convention on Persistent Organic Pollutants (POP Convention, 2001, Annexes A, B and C)
- Sofia Protocol concerning the Control of Emissions of Nitrogen Oxides or their Transboundary Fluxes (1988)
- Gothenburg Protocol to the 1979 Convention on Long-Range Transboundary Air Pollution concerning the Abatement of Acidification, Eutrophication and Ground-level Ozone

8.6 Waste Accumulation During Production

Key Question

Which type and how much waste is created during production?

Additional Question

Does the company introduce any measures in order to avoid waste, and to recycle or properly dispose of inevitable waste?

Comment

High amounts of produced waste have negative effects on the environment, both in terms of their quantity and quality. Therefore, it is advised to reduce the amount of waste produced, and to prevent the occurrence of hazardous waste.

9
Transport and Logistics

9.1 Fragmentation of, and Impact on Habitats Through Transport Infrastructure

Key Question

Does the company ensure that structures, such as conveyor pipelines or new routes of transportation, do not cut through or negatively affect ecologically sensitive areas?

Comment

The construction or use of a new transport infrastructure can have permanent effects on sensitive ecosystems. Likewise, new traffic routes or conveyor pipelines can cut through routes used by migrating species.

9.2 Energy Consumption and Fumes During Transportation

Key Question

Does the company introduce any measures in order to save energy or reduce the emission of greenhouse gases during the transportation of goods?

Comment

Climate change is proven to alter ecosystems and have a considerable impact on biodiversity. One of the causes of climate change is the emission of so-called greenhouse gases. The most widely used greenhouse gas is CO_2, which is released during the use of fossile fuels, for example.

Further Information

United Nations Framework Convention on Climate Change (UNFCCC):
http://unfccc.int

9.3 Distribution of Neobiota

Key Question

Does the company introduce any measures in order to prevent the unintentional distribution of plants and animals?

Comment

The continuously growing global flow of goods and persons facilitates the distribution of species. For example, shell species are often distributed by ships – they cling to hulks or travel in ballast water. In this way, shell species are able to reach new habitats and suppress the originally occurring species.

Further Information

Delivering Alien Invasive Species In Europe (DAISIE):
www.europe-aliens.org

10
Human Resources

10.1 Information and Training for Staff Members

Key Question

Are staff members provided with information about biodiversity issues, and are they encouraged to act in environmentally friendly ways?

Additional Question

Does the company provide staff members from critical departments (for example, product development, risk management, purchasing) with training on recognizing and handling biodiversity risks?

Zusatzfrage

Does the company provide incentives that reward environmentally friendly behavior?

Comment

The active management of issues such as habitat loss, climate change, overexploitation, emissions, and the introduction of neobiota or GMOs, requires appropriate background knowledge. In addition to general awareness-raising, staff members from particularly critical departments may need specific know-how and practical support (such as data bases, check lists, industry-specific information material) or special training with regard to their area of responsibility.

Further Information

- GRI Indikatoren LA8, LA10
- Schaltegger, S. & Beständig, U. (2010): Handbuch Biodiversitätsmanagement. Ein Leitfaden für die betriebliche Praxis. Bundesministerium für Umwelt, Naturschutz und Reaktorsicherheit, Deutsche Gesellschaft für Technische Zusammenarbeit & CSM-Leuphana University (Hrsg.), www.bmu.de/naturschutz_biologische_vielfalt/downloads/doc/46143.php [08.10.2010].

11

Corporate Reporting

11.1 Habitat Loss / Impact on Natural Habitats

Key Question

Does the company provide comprehensive reports and information on its impact on natural habitats and ecosystems?

Additional Question

Do company reports include information on corporate properties (and protected neighboring areas) with a high biodiversity value?

Additional Question

Do company reports include information on the impacts of products, services, and corporate activities on areas (and neighboring protected areas) with a high biodiversity value, and are these impacts quantified by the appropriate indicators?

Additional Question

Do company reports include information on the protection of precious habitats or on the renaturation of ecologically strained areas?

Further Information

- GRI Indicator EN 11
- GRI Indicator EN12
- GRI Indicator EN 13

11.2 Climate Change and Climate Protection Measures

Key Question

Do company reports include information on the corporate commitment to climate protection?

Additional Question

Do company reports include information on direct and indirect greenhouse gas emissions?

Additional Question

Do company reports include information about initiatives, products, and services that aim to enhance energy efficiency?

Additional Question

Do company reports include information about the use and/or promotion of renewable energy sources?

Further Information

GRI Indicators EN 16, EN 17

11.3 Use, Strain, and Regeneration of Natural Resources

Key Question

According to company reports, is the corporate strategy aligned with the principle of sustainability (consumption must not exceed regrowth)

Additional Question

Do company reports include information on strategies, ongoing measures, and future plans with regard to company impacts on biodiversity?

Additional Question

Does the company routinely report on the presence of endangered species (for example, red-listed species, or species according to the EU Council Directive 92/43/EEC) on corporate properties or neighboring areas?

Additional Question

Do company reports include information on water consumption, impact on sources, and the quantity of processed water?

Further Information

GRI Indicators EN 8, EN 9, EN 10, EN 14 und EN 15

11.4 Emissions

Key Question

Do company reports include detailed information about emissions and waste?

Additional Question

Do company reports include detailed information about the individual gasiform emissions (NO, SO, CFCs listed by weight)?

Additional Question

Do company reports include detailed information about wastewaters?

Additional Question

Do company reports include information about the biodiversity value of water bodies that are considerably affected by the release of wastewater and the surface runoff coming from the reporting organization?

Additional Question

Do company reports include detailed information about the handling of waste and initiatives aimed at the reduction or prevention of this waste?

Further Information

GRI Indicators EN 19, EN 20, EN 21, EN 22 und EN 25

11.5 Non-Domestic Species Introduction, Equitable Benefit Sharing and Use of Genetially Manipulated Organisms

Key Question

Do corporate reports include information about the introduction of neobiota, the equitable sharing of benefits deriving from the use of genetic resources, and the use of genetically modified organisms?

Additional Question

Does the company report on access and benefit sharing in accordance with the Nagoya Protocol?

Comment

The Nagoya Protocol (Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization) is an international law document that regulates access to genetic resources, and the offset of the resulting benefits.

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Authors:

Uwe Beständig

Irina Detlefsen

Kristina Jahn

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