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REVIEW OF THE BIODIVERSITY REQUIREMENTS OF STANDARDS AND CERTIFICATION SCHEMES (CBD TECHNICAL SERIES #63)

Note by the Executive Secretary

1. The Executive Secretary is pleased to circulate herewith, for the information of participants in the fourth meeting of the Ad Hoc Open-ended Working Group on Review of Implementation of the Convention, an information document entitled "Review of the Biodiversity Requirements of Standards and Certification Schemes (CBD Technical Series #63)" prepared by the United Nations Environment Programme World Conservation Monitoring Centre (UNEP-WCMC).

2. The document is being circulated in the form and language in which it was provided to the Secretariat.

* UNEP/CBD/WG-RI/4/1.

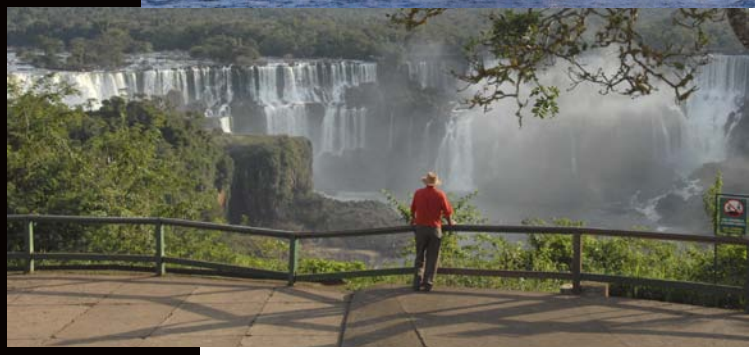
Secretariat of the Convention on Biological Diversity

CBD Technical Series No. 63

63

REVIEW OF THE BIODIVERSITY REQUIREMENTS OF STANDARDS AND CERTIFICATION SCHEMES

A snapshot of current practice



Convention on Biological Diversity

UNEP WCMC

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Review of the biodiversity requirements of standards and certification schemes

A snapshot of current practice

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FOREWORD

The Conference of Parties (COP 10) held in October 2010 in Nagoya, Japan saw a number of significant achievements in moving the Convention on Biological Diversity forward. Not least of these, was the decision taken by Parties to engage more formally with the private sector (*Decision X/21*). This decision will both encourage businesses to mainstream good biodiversity and sustainability practices into their daily activities and it will encourage companies to share their experiences and help to create more positive outcomes through dialogue with other businesses, governments and other stakeholders.

One of the most significant aspects of this is the creation and propagation of various tools and mechanisms that can help industry comply with the goals of the Convention. Standards are of fundamental importance in this endeavour. Without having standards, it is virtually impossible to measure and assess the success, or failure, of a business' efforts. However, given the increasing level of interest in this field, we have seen a plethora of standards being developed. For many governments, businesses (particularly SMEs) and other stakeholders, this ecosystem of standards can be extremely daunting and can, in some cases, actually deter industry from undertaking necessary efforts.

This study by UNEP-WCMC takes an initial snapshot at what is out there, what the various standards contain, and how they address the various issues surrounding biodiversity protection. Through this work, it is our hope that we can begin to understand what needs to be strengthened in the various standards, and this will perhaps help companies determine which standard(s) are best suited to their needs.

Companies must play a key role in protecting biodiversity both through their own efforts and in collaboration with governments and other stakeholders. Anything that we, as international organizations dedicated to the conservation of biological diversity, can do to make this task easier will surely have immense benefits in the future.

Ahmed Djoghlaf
Executive Secretary
Secretariat of the Convention on Biological Diversity

EXECUTIVE SUMMARY

Standards, including those in certification schemes, are widely used to influence environmental performance. Amongst other things, they create performance requirements related to the access to finance, internal business processes, membership of trade bodies, certification of products and services, and access to markets.

We reviewed the biodiversity requirements of 36 environmental standards sampled from eight business sectors[1] with the aims of gaining an understanding of the treatment of biodiversity across sectors, to highlight commonalities and differences, and to help businesses and funding agencies to improve their internal processes. It is also hoped that this review will stimulate the development of best practice guidelines and ultimately result in more effective and harmonised standards.

This study looked at the way standards treat; the components of biodiversity[2]; threats to biodiversity (including appropriate responses)[3]; and references to multilateral environmental agreements. This study looked at which of these three elements were included in each standard, how they were defined, and what requirements were stipulated for their management. It was beyond the scope of this study to consider the degree to which individual standards actually influence biodiversity conservation, but this is prime territory for future work.

Findings

The review found some general trends with respect to the way in which biodiversity is treated in standards and certification schemes, as well as the requirements that are proposed to protect biodiversity, limit threats to biodiversity and promote biodiversity enhancement. Some of the main findings of this review are:

- Even where standards include similar biodiversity components, there are large differences with respect to the measures adopted to safeguard them. Differences are also evident in the depth in which issues are covered. These differences are compounded by disparities in the language used and the use of internationally recognised definitions.
- All standards mention the protection of **habitats,** with 94% also giving consideration to habitat loss and/or restoration. In this regard, 44% of standards set high requirements, including that habitat should not be converted, with specific habitats (notably forests) frequently singled out for special consideration. None of the 12 agriculture standards explicitly seek to prevent habitat loss, rather they include lesser requirements to limit and mitigate loss. Few standards refer specifically to modified habitats and even fewer promote the enhancement or restoration of habitats.
- Most of the reviewed standards (86%) recognise **protected areas** and a few provide detailed guidance on how to operate near or inside protected areas. A small number (eight) prohibit operating within protected areas, but most rely on legislation or *in situ* management processes to define appropriate responses. Requirements relating to protected areas all focus on formal or legal protected areas, while none refer to Indigenous and Community Conserved Areas.
- Protection measures for **species** are included in 94% of standards sampled. Measures to protect or manage threatened species are included in 86% of standards. There are references to both sustainable use (of species) and to invasive species in the majority of standards, with the exception of agriculture standards.
- Despite several well established definitions and prioritisations of important biodiversity outside protected areas, the concept of **priority conservation areas** is incorporated in fewer than half of the standards. The High Conservation Value (HCV) approach, which is particularly common in forestry standards, is the principal vehicle for priority conservation areas.

1 The eight business sectors reviewed are agriculture, biotrade, carbon offset, finance, fisheries, forestry, mining, and tourism.
2 Components of biodiversity were considered to be habitats and species. Mechanisms to protect these, such as protected areas and priority conservation areas, were also included in the analysis.
3 Threats and responses were considered to be habitat loss and restoration, invasive species, over-exploitation, no net loss and mitigation hierarchy (based on the key themes of the Convention on Biological Diversity).

- Few standards refer to a **mitigation hierarchy** or requirements mandating its use. Similarly, concepts such as '**no net loss'** and **'net positive impact**' are infrequently included in standards, despite these concepts being linked to the objectives and decisions of the Convention on Biological Diversity.
- While measures to safeguard biodiversity are designed to manage sector-specific impacts, significant gaps in biodiversity criteria both within and across sector standards suggest there is scope for cross-fertilization of practices among the standards reviewed.

Recommendations

- **Adopt internationally recognized definitions:** The use of non-standardised terms in the establishment of criteria for species or habitats makes compliance very difficult. For example, while many standards refer to threatened or endangered species, few refer explicitly to the IUCN Red List of Threatened Species, or they do so in a way that could be misinterpreted. The adoption of accepted published definitions for the different components of biodiversity would be a major step forward.
- **Avoid the displacement of threats**: The disproportionate amount of attention paid to forest ecosystems within many standards is understandable given that forestry standards are well established and have influenced other, more recent standards. However, the emphasis on forests creates a paradox in that equally important ecosystems are often provided with less attention due to this focus on forests. There is significant scope to improve this situation.
- **Include modified habitats:** Few standards refer to modified habitats or restoration potential. Instead they focus on 'natural' habitats. Given that many standards may be applied after habitats have been modified, standards should contribute more to the conservation of biodiversity in modified habitats.
- **Provide guidance on operation inside protected areas:** Although most standards recognise the importance of protected areas and legal compliance with them, few provide guidance for operations within specific categories of protected areas. Therefore, it is advisable that standards are linked to the published and accepted IUCN protected area categories.
- **Recognise Indigenous and Community Conserved Areas:** Operating in Indigenous and Community Conserved Areas (ICCAs) presents reputational risks to development activities, both in terms of biodiversity and human rights. As ICCAs are receiving increasing international attention, they should be considered within standards, especially, but not exclusively, those associated with certification schemes.
- **Safeguard priority conservation areas:** Most standards do not consider important biodiversity areas beyond protected areas. The inclusion of such areas might help to address some shortfalls in the approach taken to protect species and habitats, while also addressing concerns of the international conservation community.
- **Adopt the mitigation hierarchy and 'no net loss' approaches:** Adoption of the mitigation hierarchy and 'no net loss' approaches by standards bodies would support, and further mainstream, these concepts, providing greater safeguards for biodiversity. The mitigation hierarchy promotes the avoidance of negative impacts and, where this is not possible, examines mitigation alternatives in a logical sequence. The 'no net loss' approach seeks to enforce the creation of positive outcomes for biodiversity through offsets and other mechanisms.

Conclusions

We conducted a thorough review of biodiversity in 36 standards and certification schemes across eight industrial sectors. Based on our results, we determined seven key recommendations for improving biodiversity criteria in future standards and certification schemes. Our key findings indicate the importance of standardising language and terminology. We also identify some areas of biodiversity importance that are currently under-represented and could be strengthened and developed in future, as well as best-practice that could be adopted by standard setting organisations to further safeguard biodiversity.

1. INTRODUCTION

Standards are established, explicit sets of requirements for a process or practices, that are widely used to influence business practices. Most economic sectors have adopted a range of standards, often associated with finance or certification schemes, to mitigate their impact on the environment. Amongst other things, standards establish requirements related to access to finance, internal business processes, membership of trade bodies and the certification of products and services. Such is the prevalence and importance of standards that it is useful to have an understanding of the way they consider and include biodiversity, highlighting commonalities as well as differences. We hope that this study will provide information to reduce confusion and contradiction for companies hoping to comply with standards, provide a basis for the development of best practice guidelines which might in turn lead to the evolution of more effective and harmonised standards, and help development banks to engage in joint funding of projects more easily.

This report presents findings on specific biodiversity requirements contained within 36 environmental standards sampled from eight business sectors. It does not assess the effectiveness of individual standards at protecting biodiversity, as this is reliant on various factors ranging from availability of relevant scientific information to implementation and auditing processes. Rather, the objective of this study is to provide a snap-shot analysis of how biodiversity is considered and what requirements are in place for its protection across these standards. In doing this, potential gaps were highlighted which could contribute to environmental standard setting processes in general. Finally, this review recognises that standards normally cover a range of issues, of which biodiversity is only one element. Standard setting organisations must strike a delicate balance between going into sufficient depth on each of the range of issues they cover, and producing excessively complicated schemes which themselves create barriers to compliance.

1.1 Methodology

For the purposes of this review, a standard was considered to be a set of global (or at least regional) requirements with which those undertaking economic and development activities are required (by the body setting the standard) to comply and against which they can be audited. While adopting a standard, or set of standards, may be a voluntary process, we only reviewed standards that oblige an organisation to adhere to mandatory requirements for which, in return, they gain some perceived benefit, and where non-compliance has consequences (e.g. the withdrawal of the benefit). The benefit in question might include access to a market through certification, membership of an industry body or access to finance.

The list of relevant sectors and standards considered in this review was drawn up after a rigorous review and consultation process. We included standards within certification schemes for particular sectors or products, as well as those set by multilateral and bilateral financial institutions which influence the performance of the range of business activities that they finance. In this way, the review covered a significant sample of some of the most widely used and adopted standards applied regionally and globally. The requirements of different standards relating to biodiversity were then examined and analysed within and across all sectors. The standards included are as follows (complete list of standards in Appendix A):

- Agriculture (AGR) – 12 standards
- Biotrade (BIO) – 2 standards
- Carbon Offset (CAR) – 3 standards
- Finance (FIN) – 5 standards
- Fisheries and Aquaculture (FIS) – 5 standards
- Forestry (FOR) – 4 standards
- Mining (MIN) – 2 standards
- Tourism (TOU) – 3 standards

The assessment criteria adopted for this review were informed by: (i) reviewing the objectives and decisions[4] and the goals of the 2010 subsidiary targets[5] of the Convention on Biological Diversity (CBD) to short-list important components of biodiversity and measures recommended to protect them, (ii) an initial screening of the sampled standards to identify the biodiversity components they include and the biodiversity-related Multilateral Environmental Agreements (MEAs) to which they commonly make reference, and (iii) by expert input from a panel of advisors. The final assessment criteria are as follows (full details on criteria used in Appendix B):

- Inclusion of different **biodiversity components**
- Treatment of **threats to biodiversity and responses** to mitigate impacts on biodiversity
- Alignment with **biodiversity-related MEAs**

For each assessment criterion, we posed three questions:

1. Is the criterion ***identified*** — does the standard mention this criterion?
2. Is it specifically ***defined*** — does the standard use an established definition from a published source, or provide a definition within the text?
3. Is it ***managed*** — what requirements are placed on specific criteria as a means of managing impacts and providing conservation benefits?

Our analyses were conducted by scanning each standard document for the answers to the aforementioned three questions. In each case, the presence/absence of each assessment criterion was recorded and detailed notes on how it was handled if present were recorded. In this way, we completed a standardised factsheet to summarise all pertinent information about biodiversity references within the standard. Completed factsheets were then sent to the relevant standard setting bodies for feedback and adjustments were made according to their responses. These factsheets are included as a separate appendix to this report. Based on the finalised factsheets, the manner by which a standard incorporates and safeguards biodiversity (hereafter termed biodiversity 'coverage') was derived and used for the final analysis

4 COP 7 Decision VII/30 Strategic Plan: future evaluation of progress (Annex II identifies a provisional framework for goals and targets on which the assessment criteria for this study were based). http://www.cbd.int/decision/cop/?id=7767

5 Secretariat of the Convention on Biological Diversity (2010) *Global Biodiversity Outlook 3*. Montréal, 94 pages.

2. RESULTS AND DISCUSSION

2.1 Overview

The analysis shows that while there is variation in the way biodiversity is included in each standard, the coverage of different biodiversity criteria is similar across sectors. The total coverage for each criterion as a percentage of all standards included in this review is shown in Figure 1[6].

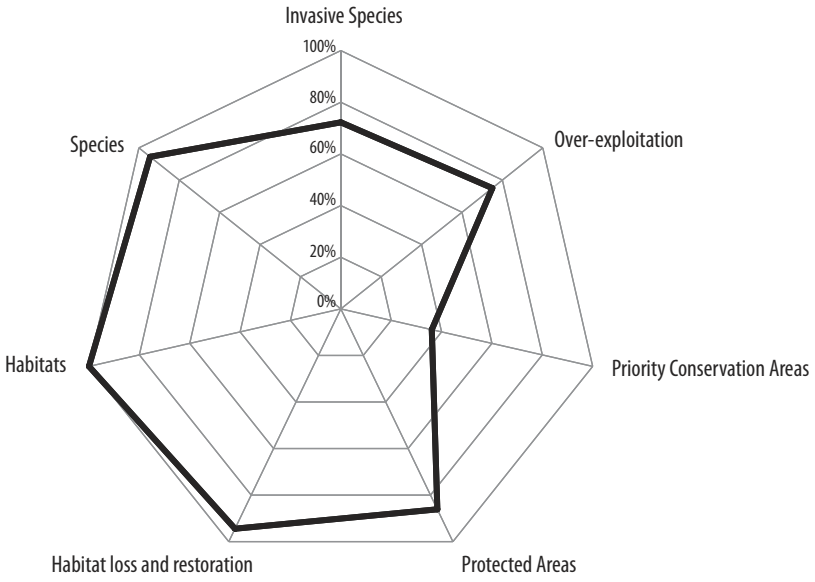

FIGURE 1: Mean percentage coverage of the biodiversity components, and threats and responses across the sample of 36 standards

- All of the 36 standards include some form of protection for **habitats** and 94% (34) mention **habitat loss** and/or **restoration**. Nonetheless, some standards prioritize specific types of habitats, and measures to prevent habitat loss do not always refer equally to all habitats in all standards.
- Some form of protection measures for **species** are included in 94% of standards sampled, most specifically relating to the management or protection of *threatened* species (86% of standards).
- **Priority conservation areas**[7] were mentioned in just 42% of standards. This is in contrast to **Protected Areas**[8] (including both nationally designated and internationally recognised areas), which are included in 86% of the standards examined.
- **Over-exploitation** is mentioned by 75% of standards, however the topic is usually considered in general terms and often in conjunction with non-biodiversity resources.
- **Invasive species** are addressed by 72% of standards, with the treatment of the subject having the most obvious variation across the standards.

6 Additional criteria considered in this study are not included in this figure. Findings for the full list of assessment criteria are discussed in more detail within each section below.

7 Priority conservation areas refer to areas of biodiversity importance that have been identified by NGOs and academics as part of prioritisation schemes, based on a set of standardised criteria.

8 Protected Areas are a clearly defined geographical space, recognised, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values (IUCN definition; Dudley, N. (Editor), 2008. Guidelines for Applying Protected Area Management Categories. Gland, Switzerland).

An assessment of the criteria by sector (Figure 2) shows that, while there are some distinct differences, overall there is limited variation among the sectors.

- **Habitat** protection is covered by every standard in each of the eight sectors. However, one of the three tourism standards does not specifically address protection against habitat loss, and neither does one of the twelve agriculture standards.
- **Species** protection is included in 94% of standards sampled, and is only absent from one mining and one carbon standard. Measures to protect or manage threatened species are included in 86% of standards. There are strong references to both sustainable use (of species) and to invasive species in the majority of standards from each sector, the principal exception being agriculture.
- **Priority conservation areas** are receiving a great deal of attention from conservation organisations and there are now a number of well established approaches to the definition and prioritisation of biodiversity outside protected areas. The concept of priority conservation areas is absent from most of the sectors and, overall, is incorporated in less than half of the standards. When mentioned, priority conservation areas tended to be linked to the definition of habitat types. The Higher Conservation Value HCV approach, which is particularly common in forestry standards, is the principal vehicle for priority conservation areas.
- Forest sector standards have the most complete coverage of the biodiversity components, followed by the finance sector, while mining standards have the least coverage.

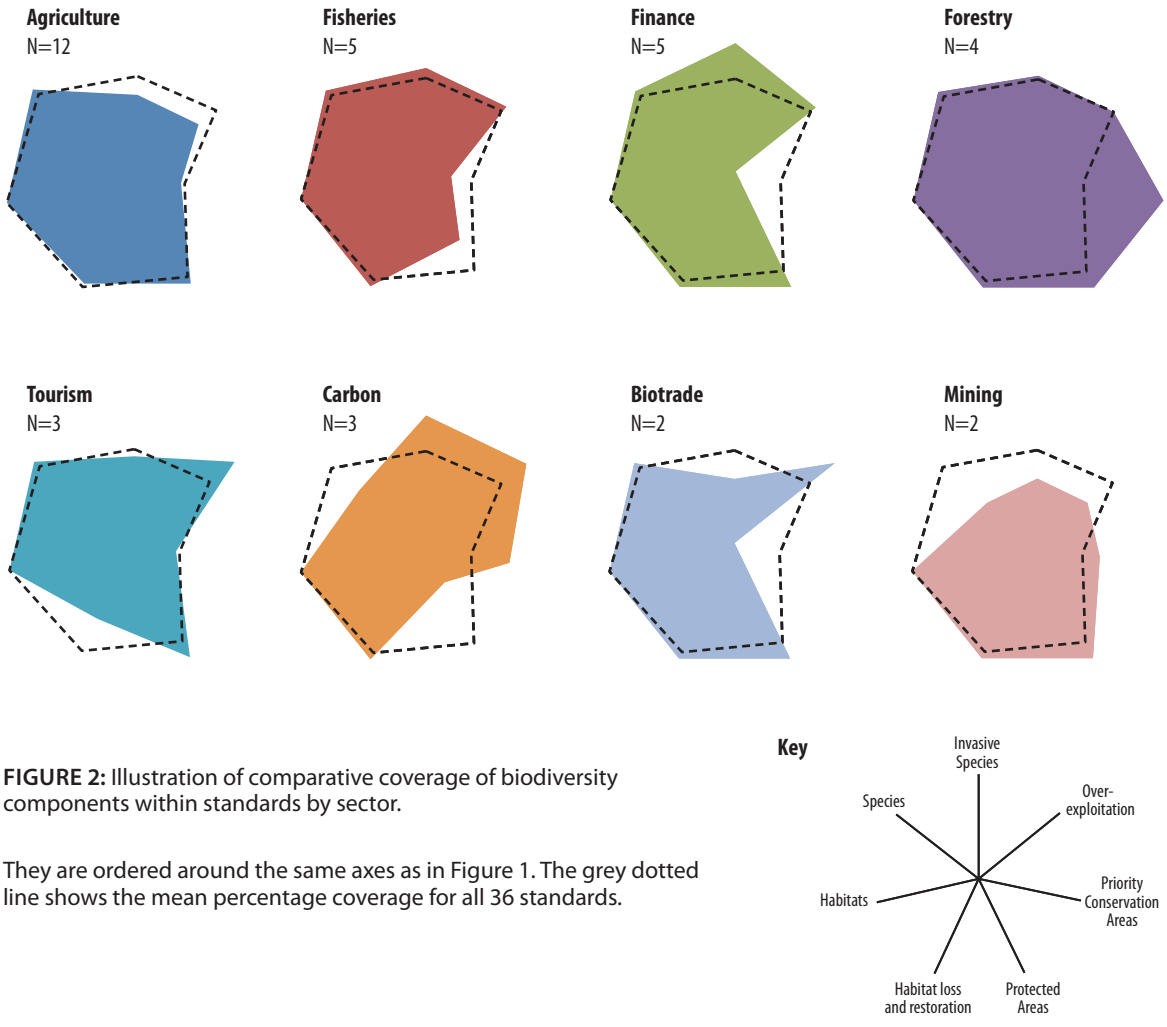

FIGURE 2: Illustration of comparative coverage of biodiversity components within standards by sector.

They are ordered around the same axes as in Figure 1. The grey dotted line shows the mean percentage coverage for all 36 standards.

2.2 Biodiversity Components

2.2.1 Species

The accurate identification of species under threat is important in order to recommend appropriate measures to protect them. In reviewing the standards we looked for references to any internationally or nationally recognised system of classification (for example the IUCN Red List). In addition to threatened species, reference to some other important characteristics such as endemism, or assemblages of migratory and congregatory species was also examined. These species characteristics form the basis of many conservation prioritisation approaches including Key Biodiversity Areas and the relevant criteria of the High Conservation Value approach.

TABLE 1: Identification of threatened species within each sector[9]

	AGR	FIS	FIN	FOR	TOU	CAR	BIO	MIN	TOTAL
Number of standards	**12**	**5**	**5**	**4**	**3**	**3**	**2**	**2**	**36**
Internationally Recognised[9]	42%	80%	80%	75%	67%	67%	100%	50%	64%
Reference to the IUCN Red List	42%	80%	80%	50%	67%	67%	50%	50%	58%
Nationally Recognised[9]	42%	60%	40%	50%	33%	33%	100%	–	44%
Other Definitions[9]	50%	80%	20%	100%	100%	67%	100%	50%	64%

Threatened species are mentioned in 30 (83%) of the standards. Reference to nationally threatened species is less common (44%) across all the sectors than those that are internationally recognised (64%) (Table 1). Most of the standards that include internationally recognised threatened species make reference to the IUCN Red List. The IUCN Red List is recognised as an authoritative guide on the status of species (at least for the taxa so far assessed) and provides globally adopted categories and associated criteria for species that are threatened at the global level. Those classified as Critically Endangered (CR), Endangered (EN) and Vulnerable (VU) are considered to be 'threatened'. Thirteen (26%) of the standards refer to specific IUCN Red List categories, with the most commonly cited categories being CR and EN (see Figure 3). Ten standards also make specific reference to VU and four refer to NT even though the IUCN itself does not include these species within its threatened category. These results imply that species conservation priorities in standards could benefit from being more closely aligned with accepted species risk categories.

Standards include a number of other references to species, including endemic, keystone, migratory, congregatory, rare, protected and unique assemblages. Endemic and migratory/congregatory species are referred to in 16 (44%) of the standards. The reasons these components are frequently mentioned together within standards is most likely because they are associated with the first value of the High Conservation Value (HCV) concept developed and promoted by the HCV Network.

Criteria relating to unique assemblages of species rarely appear in standards outside the finance sector, although they are also mentioned in one standard scheme within the forestry sector. Reference to keystone or key conservation value species are equally uncommon. Specific species are only mentioned within two agricultural standards.

For a user of standards to ascertain whether they are adequately dealing with species that are rare, keystone, migratory and so on presupposes that appropriate definitions are included within those standards. Unfortunately this is rarely the case.

9 Note that the categories for definition of threatened species are not mutually exclusive.

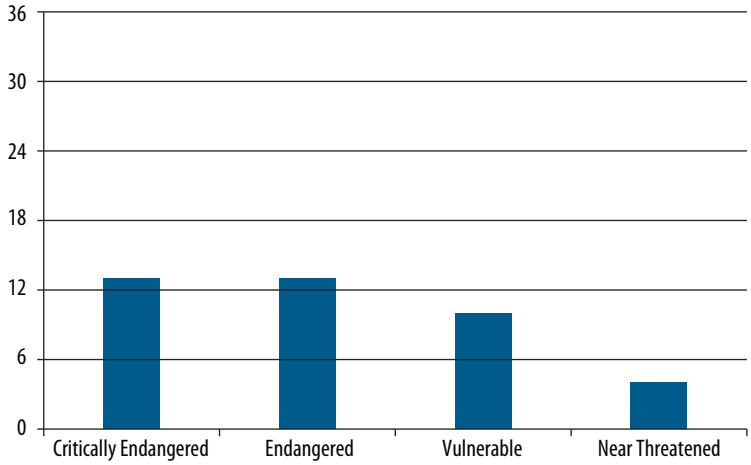

FIGURE 3: Inclusion of IUCN Red List categories within 36 standards

Management options employed for threatened species are varied and include the need to protect the species and their habitats, as well as to control their use and management. The specific measures most commonly found in relation to threatened species are shown in Figure 4, with protection of threatened species' habitats being the most widely required management activity across sectors.

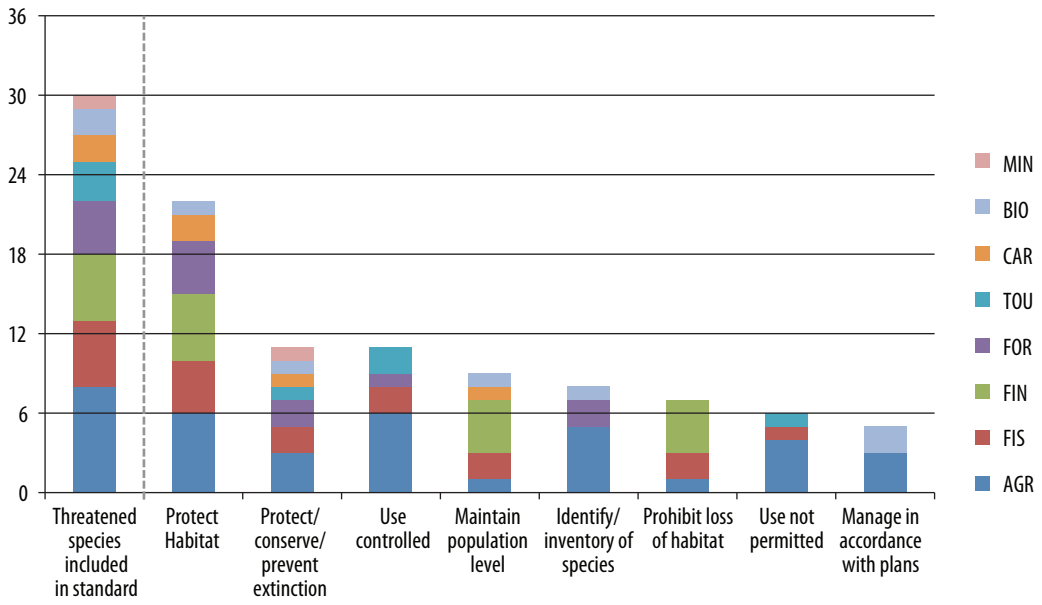

FIGURE 4: Management measures included in requirements for threatened species by sector across the sample

2.2.2 Habitat

A key challenge for biodiversity conservation is to identify and conserve areas of natural habitat that contain unique and diverse biological assemblages. This challenge was generally acknowledged and in some way addressed in all of the standards that were reviewed.

TABLE 2: Inclusion of generic habitat types within each sector

	AGR	FIS	FIN	FOR	TOU	CAR	BIO	MIN	TOTAL
Number of standards	**12**	**5**	**5**	**4**	**3**	**3**	**2**	**2**	**36**
"Natural or Native Habitat"	75%	80%	100%	50%	100%	67%	100%	100%	87%
"Modified Habitat"	25%	–	60%	50%	–	–	100%	–	28%
"Critical, Key or Priority Habitat"	75%	100%	100%	50%	33%	–	100%	–	67%

Every standard assessed (36) included criteria requiring some form of protection of habitats; with 31 referring to "natural" habitats (Table 2). However, only 11 provided a definition of "natural". Overall, 17 (47%) of the standards, predominantly those within the agriculture, finance and biotrade sectors, require plans for habitat management. In common with the other biodiversity components, the language referring to habitat protection is often generic. For example, four of the standards include a requirement to "maintain or enhance" habitats but do not provide a clear framework to do so. Similarly, out of the 31 standards mentioning "natural habitat", the majority (22) rely on general requirements that this be protected, without providing explicit instructions. On the other hand, all the finance standards place requirements on development activities within natural habitats including mitigation measures, and four finance standards specifically require that there be "no significant degradation" to these habitats.

Standards typically identify four specific types of natural habitat for additional protection: 1. forest, 2. aquatic habitats, 3. grassland, savannah and scrubland, and 4. peatlands. Forests are specifically referred to in 26 (72%) of the standards, the majority of which require that forests be managed and protected, and/or prohibit deforestation. The forestry sector provides the highest protection to forest habitats, followed by agriculture standards, of which 58% prohibit deforestation. Some standards simply use the term "forest" while others specify types of forest. Overall, the standards included 25 different forest types, some of which are internationally accepted terms (such as "primary forest"[10]) whereas others are more general and indistinct (such as "native forest" or "woodlands").

Reference is made to aquatic habitats in 23 (64%) of the standards through terms such as marine, riparian, coastal and freshwater ecosystems, but also through reference to more specific habitats such as:

- Wetlands (11 standards)
- Mangroves (6 standards)
- Marshes (2 standards)
- Seagrass beds (2 standards)
- Coral reefs (1 standard)

The agriculture and finance sectors make the most references, and offer the most protection, to aquatic habitats. The agriculture standards particularly focus on the concept of buffer zones to conserve riparian habitats. Despite being specifically concerned with aquatic environments, only two of the five fishery standards include measures explicitly designed to safeguard aquatic ecosystems.

Grasslands, inclusive of savannah and scrublands, are referenced within five (14%) of the standards and these are all in the agricultural and financial sectors. Similar to forest habitats, there are often requirements obliging organisations to adopt certain management approaches or provide outright protection for these habitats. The Sustainable Agriculture Standard recognises the importance of grasslands by requiring that 30% of farm area be dedicated to the conservation or recovery of these habitats (providing the natural vegetation was not forest) as well as the conservation of high value grasslands.

10 For example, RSPO refers to "primary forest" and uses the FAO definition. FAO (2002) *Second expert meeting on harmonizing forest-related definitions for use by various stakeholders.* Rome.

Peatlands are addressed in five standards (14%), all of which are from the agriculture sector, and all of which require that these be generally protected, without providing specific management approaches or guidance.

BOX 1: Habitats in standards

Habitat in standards

Standards in this review treated measures to conserve habitats in two distinct ways. These centre on the way in which different habitats are prioritised, either based on shared characteristics, or on a specifically defined type of habitat. Several sectors contain standards using both approaches, and in several cases, these divergent approaches are used in tandem, providing protection for specific habitats, while also protecting shared characteristics.

Habitat characteristics:

In some standards, habitats are defined based on shared characteristics. This typically results in habitats being classified using terminology such as "natural", "native", and "modified". Within "natural" habitats, there was further subdivision to "critical" or "priority" habitats. This approach prioritises habitats which share characteristics (such as supporting threatened species) and allows the standard to set criteria which are targeted at protecting certain biodiversity values, regardless of the type of habitat in which they occur. A possible weakness of this approach is that the definition of "natural", "modified" or "critical" may be subjective and difficult to identify consistently at a global scale without the provision of explicit thresholds.

Sectors using this approach: Finance, Biotrade, Mining, Agriculture, Forestry, Tourism

Specified habitat types:

Many standards specify certain types of habitat within their criteria. There is a significant emphasis on forests, but several standards also specify protection for other habitat types, including aquatic habitats, grassland and peatlands. This approach prioritises a specific type of habitat and allows the standard to set criteria targeted at, and appropriate for, managing and conserving that habitat type. A possible weakness of this approach is that it may neglect some habitat types not specifically referred to by the standard.

Sectors using this approach: Agriculture, Fisheries, Carbon offset, Forestry

In addition to 'natural' habitats, some standards refer to 'high priority', 'key' or 'critical' habitats. Certain activities are commonly prohibited within critical, key or priority habitats (17 of the 24 standards that identify these).

Only ten standards refer specifically to 'modified habitats', these are mainly within the agriculture, finance and fisheries sectors, with half of those that do, promoting the enhancement of these habitats where possible and appropriate.

In addition to these habitat definitions, some recent frameworks are adopted within standards (such as the criteria for High Conservation Value (HCV) areas). However, many standards, notably from the finance sector, use language which is similar to these concepts and terms, such as 'biodiversity values', 'conservation values', 'exceptional conservation values' and 'high value ecosystems', among others when defining habitat. This use of similar, but not identical terminology may compound ambiguities related to the lack of definitions or clear use of language.

2.2.3 Protected Areas

Protected areas are a cornerstone of national, regional and international conservation strategies. They are areas designated for a number of biological, cultural or economic reasons and their recognition and protection can contribute to biodiversity conservation. In particular, they act as a key tool in protecting biodiversity in the face of major threats such as the conversion of land for agriculture and other production activities. Most recently, the importance of protecting Indigenous and Community Conserved Areas (ICCA's) has been gaining greater prominence as a means to conserve both cultural and ecological values.

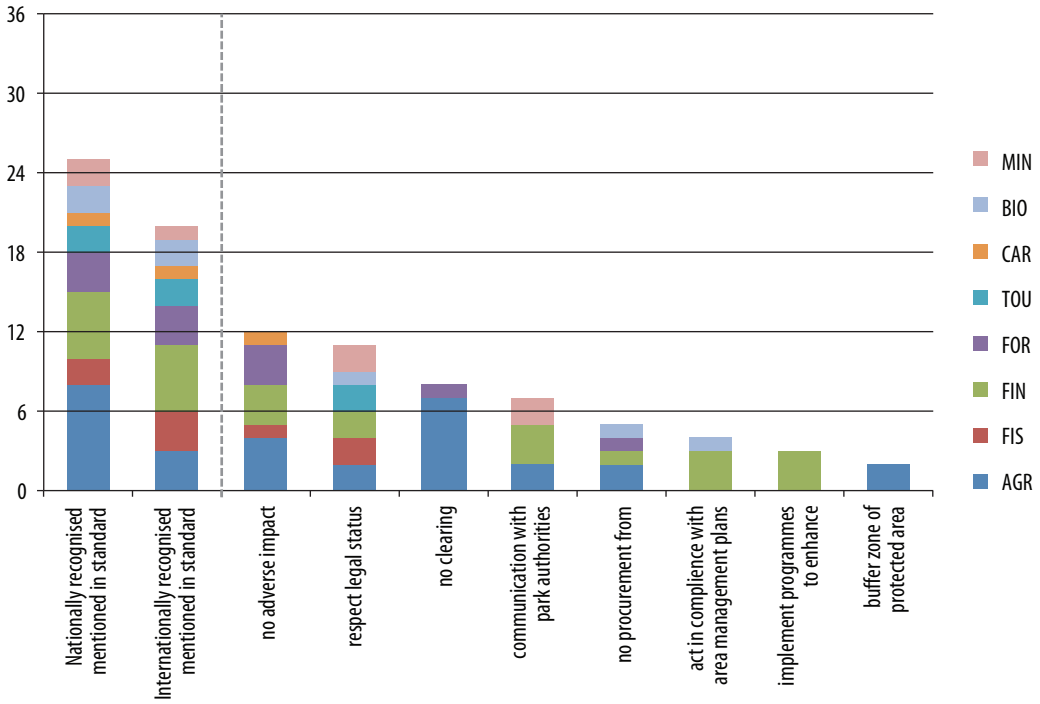

Figure 5: Management measures for protected areas by sector across the sample

Protected areas are explicitly mentioned in 31 (86%) of the standards reviewed, of which 69% specifically refer to nationally designated protected areas and 56% to internationally recognised protected areas (those recognised under international laws and conventions). The remainder may mention the term 'protected area(s)', but do not define what that means, while others only refer to protected areas indirectly, for example by including the HCV criteria. Five standards from the agriculture (1), finance (3) and forestry (1) sectors also consider areas that are 'officially proposed' for protection to be of equivalent status as protected areas.

Nine standards refer to IUCN Protected Area Management Categories, and three require management approaches that are dependent on these categories. Of the 31 standards mentioning protected areas, only nine include a type of protected area in which certain activities are prohibited, these are:

- IUCN Categories I-II (1 standard)
- IUCN Categories I-IV (2 standards)
- Wetlands of International Importance — Ramsar sites (3 standards)
- Natural World Heritage sites (3 standards)

Some standards refer in general terms to the need for development activities to observe "all legal requirements" or to conduct activities in "a manner consistent with defined protected area management plans". Given that national legislation exists to specify the activities that can take place in, or impact upon, the majority of protected areas, it is often national law rather than the requirements of a global system of standards that dictates the level of protection afforded.

The concept of Indigenous and Community Conserved Areas[11] (ICCAs) is relatively recent, so it is not surprising that it does not appear in any of the 36 standards that were reviewed. However, in some cases ICCAs may be considered to have *de facto* protection arising from specific measures relating to indigenous people and their protection under the UN declaration of Indigenous Rights, which protects the land and resources of indigenous groups. Such

11 ICCAs are defined by the IUCN as " natural and/or modified ecosystems containing significant biodiversity values, ecological services and cultural values, voluntarily conserved by indigenous peoples and local communities, both sedentary and mobile, through customary laws or other effective means".

measures are present in 47% of the standards, including all of those in the tourism, biotrade and mining sectors. In eight other cases ICCA's may be introduced through the HCV concept (e.g. Value 6).

Aligned with the concept of ICCA is the need for organisations to engage with communities. The requirement for engagement to conform to the doctrine of Free, Prior and Informed Consent (FPIC) is enshrined within the UN Declaration on the Rights of Indigenous Peoples, adopted in 2007[12]. A large number of standards do include some variation of the general principles of stakeholder engagement principles within their criteria. However, in general, the findings suggest that few standards (31%) place strong emphasis on FPIC in the way it is intended in the UN declaration.

2.2.4 Priority Conservation Areas

Priority conservation areas are sites of particular biodiversity importance that have been identified by NGOs, and academics, based on different criteria. Governments, communities and financial institutions/investors are frequently also involved in the prioritisation process. While these areas sometimes overlap with protected areas, and therefore have a management regime in place, the remainder are often unprotected and unmanaged. Despite this fact, priority conservation areas have gained significant importance as an approach to conserve areas beyond/outside protected areas and to guide conservation investment decisions. The priority conservation areas and the standards which include them are presented in Table 3.

TABLE 3: Identification and protection of priority conservation areas in each sector

	AGR	FIS	FIN	FOR	TOU	CAR	BIO	MIN	TOTAL
Number of standards	**12**	**5**	**5**	**4**	**3**	**3**	**2**	**2**	**36**
Key Biodiversity Areas[13]	8%	–	–	25%	33%	–	–	50%	11%
Alliance for Zero Extinction	8%	–	–	25%	–	–	–	–	6%
Important Bird Areas	8%	–	–	–	33%	–	–	–	6%
High Conservation Value Areas	33%	20%	–	75%	–	66%	–	–	28%

Overall, priority conservation areas, such as Key Biodiversity Areas (KBA) and High Conservation Value (HCV) areas, are only referenced, directly or indirectly, in 13 (36%) of the standards. Key Biodiversity Areas (which are inclusive of Alliance for Zero Extinction sites (AZE) and Important Bird Areas (IBAs)), are explicitly mentioned in 4 standards. HCV areas are included in 10 standards. The HCV concept includes some criteria that are remarkably close to those of KBAs, such that there is significant synergy between the two. It was originally developed by the Forest Stewardship Council to define forests of outstanding and critical importance; hence references to HCV are most common within the forestry standards (75%).

None of the finance standards specifically refer to priority conservation areas (Table 3). However, they do include language that might result in the inclusion of some priority conservation areas. As noted in section 2.2.2, several finance standards refer to areas of "high biodiversity value" and one refers to "high conservation value" but none explicitly make links to any of the existing schemes that define HCV or formally define the terms themselves.

12 http://www.un.org/esa/socdev/unpfii/en/declaration.html.

13 In some instances, "Key Biodiversity Areas" were specifically included, in others one of the constituent designations was included (e.g. AZE or IBA). Hence the references to AZEs and IBAs do not necessarily add up to equal the references to KBAs.

2.3 Threat and Response Measures

In addition to looking at how the components of biodiversity are treated by standards (see section 2.2 above), this study looked at the way major threats to biodiversity and responses to mitigate these threats are considered. The threats and responses were identified with reference to the decisions and the goals set by the 2010 subsidiary targets of the CBD. Only those that specifically relate to biodiversity were included, as opposed to those that deal more generally with threats to the environment (ie pollution). The inclusion of these threats and responses across standards is shown in Figure 6.

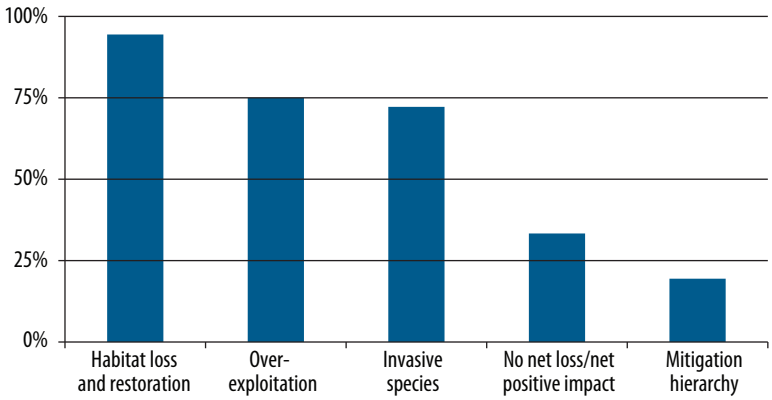

FIGURE 6: Inclusion of threats to biodiversity and response measures across the sample

2.3.1 Habitat Loss and Restoration

Habitat loss and degradation are amongst the biggest pressures on biodiversity worldwide. Over 80% of globally threatened birds, mammals, and amphibians are affected wholly or in part by habitat loss[14]. A sharp decline in populations of a number of important species has taken place due to conversion of their habitats for a wide range of activities, including agriculture, unsustainable forest management or infrastructure development.

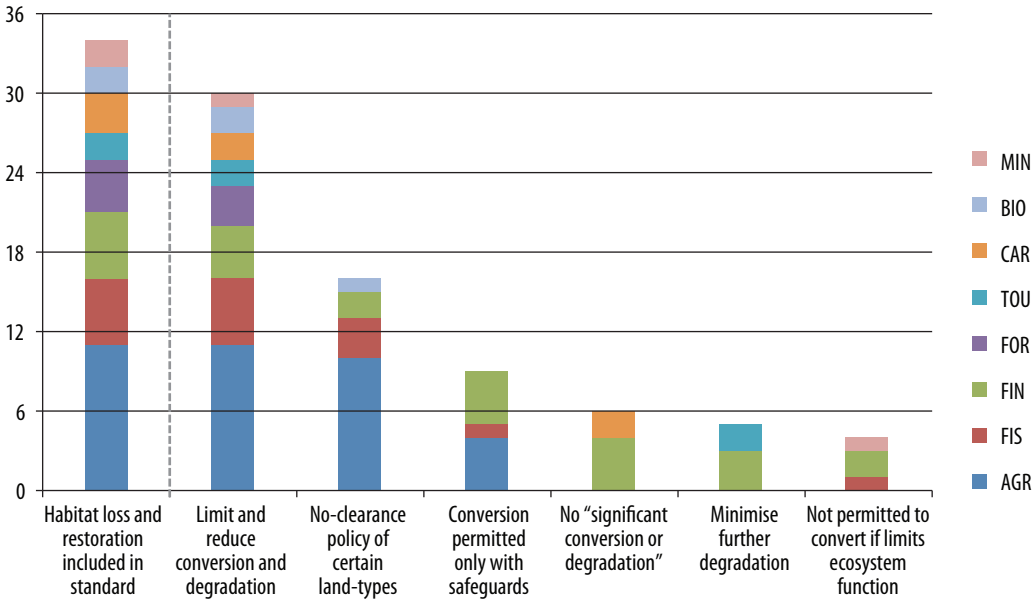

FIGURE 7: Management measures to prevent habitat loss by sector across the sample

14 Vié, J.-C., Hilton-Taylor, C. and Stuart, S.N. (eds.) (2009). *Wildlife in a Changing World — An Analysis of the 2008 IUCN Red List of Threatened Species*. Gland, Switzerland: IUCN. 180 pp.

A total of 34 standards (94%) make reference to habitat loss and restoration. Of these, 31 include a general requirement to limit conversion and degradation (Figure 7). However, each standard covering habitat loss in the Finance, Carbon, Tourism and Mining sectors also includes additional requirements for action. On top of this, four standards in the agriculture sector and two in the fisheries sector include requirements beyond the simple limitation of damage. Finance standards include the greatest level of detail and number of additional requirements by placing specific thresholds on what constitutes "significant" loss and requiring that safeguards be put in place.

The restoration of habitats is required by 25 standards, most simply requiring that restoration take place after operations cease, but three specifically require restoration to begin from the outset of operations. The three Carbon standards include restoration as a means of achieving greenhouse gas emissions reduction.

Sixteen of the standards include a no loss or habitat conversion policy — usually covering a number of different types of habitat rather than a general provision. Land types where habitat loss/conversion is prohibited by standards include:

- Forest areas
  - tropical moist forests
  - old-growth forests
  - natural forests
  - primary forests
  - secondary forests
  - virgin forests
  - native forest
- Aquatic ecosystems
  - wetlands
  - mangroves,
  - sea-grass beds
- Conservation areas
  - internationally or nationally legally protected areas
  - High Conservation Value areas (1–4)
  - land with high biodiversity value
  - areas that are identified by standards as being of global, regional or local conservation value
- Others:
  - high carbon stock areas
  - peatlands
  - buffer zones around water bodies and watershed recharge areas
  - primary ecosystems
  - permafrost zones

Where ecosystems are considered very sensitive, they are often declared off-limits by standards. However, an explicit definition of ecosystem sensitivity is rarely provided which makes compliance difficult. As a result, the use of a standardised ecosystem taxonomy may prove useful — for instance that described in section 2.2.2 in which habitats are classified as "critical, "threatened", "key", or "priority" (Box 1).

2.3.2 Over-exploitation of Biodiversity Resources

The over-exploitation of biodiversity resources, which occurs when harvesting exceeds the capacity for wild plant and animal numbers to be replenished, is a significant threat to biodiversity both locally and globally. The concept of 'sustainable use' is often applied in relation to over-exploitation and the promotion of sustainable harvesting

practices is recommended by the CBD[15]. To this end, CITES[16] has the mandate to ensure that international trade does not lead to over-exploitation.

Within the standards examined in this study, over-exploitation is usually considered in general terms and often in conjunction with non-biodiversity resources, such as the use of energy. Some standards go further by stipulating specific requirements associated with the management of harvesting (Figure 8). Only one standard in the finance sector and one in the fisheries sector include explicit consideration of the cumulative impacts of multiple parties by requiring a sustainable holistic approach to multi-user ecosystems. Within the carbon sector, references to over-exploitation are generally restricted to the sustainable management of forest plantations.

Many of the standards examined (19) deal with over-exploitation indirectly, for example through mention of by-catch, wild-derived feed for aquaculture and the effect of business operations on hunting activities .

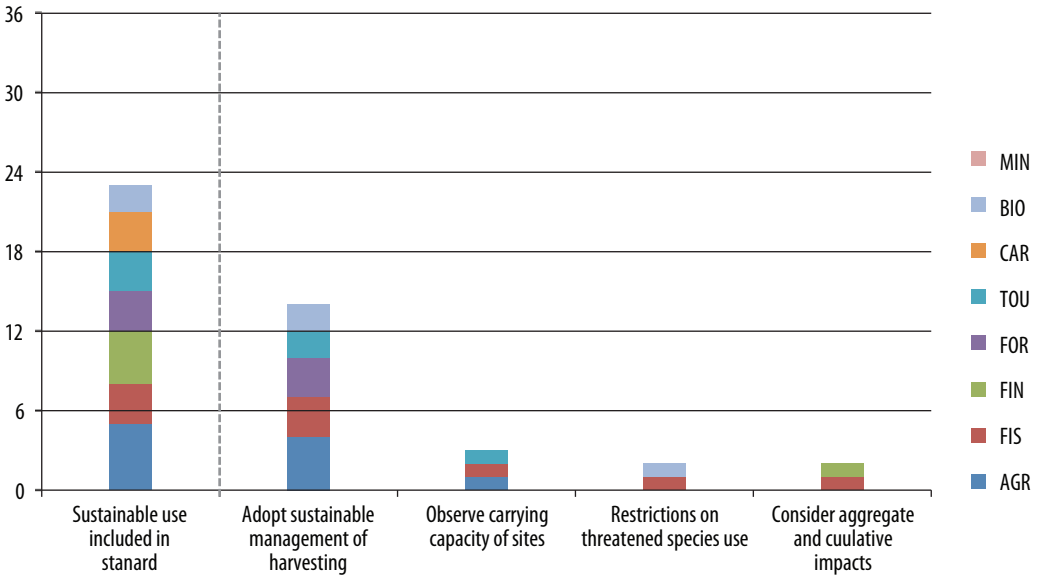

FIGURE 8: Management measures included in requirements designed to achieve the sustainable use of resources by sector across the sample

2.3.3 Invasive Alien Species

Invasive alien species are a significant threat to many ecosystems and species, and in some cases they are the biggest pressure on biodiversity. According to the CBD[17], there are no signs of a significant reduction of this pressure on biodiversity, indeed there are some indications that it is increasing. Although interventions to control invasive species have been successful in some cases, this has been outweighed by the threat to biodiversity from new invasions.

Invasive species are identified as an issue of concern in 26 (72%) standards. Two further standards state a preference for the use of native species, without mentioning invasive or alien species.

Of all the assessment criteria in this study, the treatment of invasive species has the most significant variation across the standards. Most standards favour multiple approaches. Agriculture standards are most thorough, stipulating eight requirements to counter invasive species, closely followed by forestry and fishery standards. The focus on invasives in these sectors is probably because the introduction of species is a normal part of their operations. Looking across sectors, 11 standards include three or more invasive species related requirements while a further

15 Secretariat of the Convention on Biological Diversity (2010) *Global Biodiversity Outlook 3*. Montréal, 94 pages.
16 The Convention on International Trade in Endangered Species of Wild Fauna and Flora.
17 Secretariat of the Convention on Biological Diversity (2010) *Global Biodiversity Outlook 3*. Montréal, 94 pages.

nine include at least two. There are a wide variety of management strategies contained within these requirements ranging from measures to contain invasive species to their outright prohibition (Figure 9). The variation, in particular the degree to which invasive species is embedded in the different sectors' standards, can be simply explained by the specific context of each standard. For example, some fishery standards require use of farmed species which are genetically similar to wild populations as a means of limiting the impact of escapes on wild populations. In contrast, forestry standards generally have requirements relating to the management of species used in bio-control.

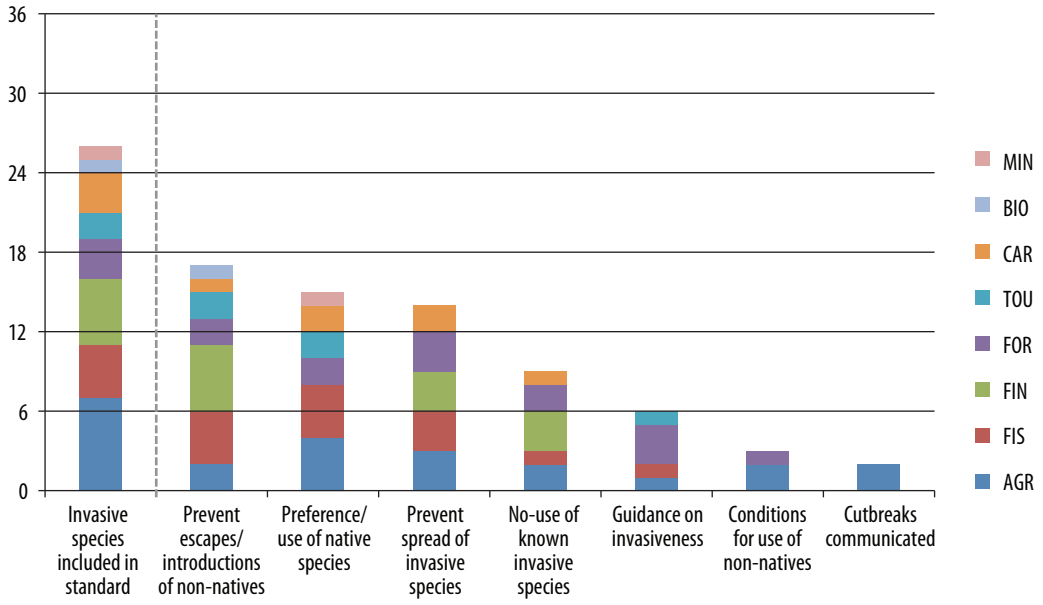

FIGURE 9: Management measures included in requirements for invasive species by sector across the sample

2.3.5 Mitigation Hierarchy

The mitigation hierarchy promotes the avoidance of impact, but where this is not possible it examines mitigation alternatives in a logical sequence. Developers are asked to minimise and reduce impacts and then repair or restore adverse effects. Under some mitigation hierarchies, any significant residual effects after these steps have been taken can be addressed via a 'biodiversity offset' and 'additional conservation actions' in order to achieve 'no net loss' or 'net gain' on biodiversity. If an offset is not possible, some other form of compensation may be implemented. This approach is at the cutting edge of efforts to mainstream biodiversity conservation into key economic sectors and is an example of a best practice approach to manage impacts on biodiversity.

Biodiversity offsets are considered to be controversial by some organisations, and the lack of support among members has impeded widespread adoption and implementation by standard setting organisations. However, decisions IX/26 and X/21 of the CBD on promoting business engagement, calls for collaboration between companies and conservationists through relevant organisations (ie Business and Biodiversity Offsets Program, BBOP) to develop guidelines for the development and implementation of biodiversity offsets.[18] BBOP has developed practical guidelines for offset design and implementation, including ten fundamental principles, one of which is that biodiversity offsets must adhere to the mitigation hierarchy.[19]

Reference to the mitigation hierarchy is most common in the finance sector standards, although two of the 12 agriculture sector standards also refer to the concept. However, not all of these standards explicitly apply the entire

18 BBOP (2010) Biodiversity Offsets: Within the Mitigation Hierarchy. Business and Biodiversity Offset Program (BBOP). Accessed online: http://bbop.forest-trends.org/offsets.php.

19 CBD (2010) Ad Hoc Open-Ended Working Group on Review of Implementation of the Convention – Engagement of Business. UNEP/CBD/WG-RI/3/2/Add.2. Decision X/21.

mitigation hierarchy. For instance, the agriculture sector standards mainly deal with compensation, and many of the finance sector standards refer only to a few components of the hierarchy and they often do not provide guidelines on how to address them. The European Bank for Reconstruction and Development (EBRD) Environmental and Social Policy guidelines on mitigation hierarchy (Box 2), are a good example of a standard providing specific information on a mitigation hierarchy and how to achieve it.

BOX 2: Example of a mitigation hierarchy

EBRD's Biodiversity Mitigation Hierarchy

Action	Response
1. Avoid	The client will seek to avoid adverse impacts on biodiversity.
2. Minimise	Where significant impacts on biodiversity cannot be avoided, the client should identify ways in which project can be modified to minimise impacts on biodiversity.
3. Mitigate	Where significant impacts on biodiversity can neither be avoided nor minimised, the client should identify measures to mitigate those impacts.
4. Offset	Where significant residual impacts on biodiversity remain, in spite of all reasonable attempts to avoid, minimise and mitigate those impacts the client will identify actions or projects to offset those impacts. Any offset projects must be structured and agreed with EBRD.

In addition to the mitigation hierarchy, some standards adopt a specific precautionary approach. For example, the Inter-American Development Bank (IDB) guidelines only support investments once appropriate measures have been put in place. In contrast, carbon offset standards do not mention a mitigation hierarchy explicitly, but provide implicit consideration of it through the requirements for land-based offsets that involve reforestation, agroforestry or reduced deforestation. Overall, the findings suggest that there has been a relatively limited uptake of the mitigation hierarchy and biodiversity offsets at this point. Furthermore, many of those which do refer to mitigation hierarchy and biodiversity offsets explicitly may not be using them to their maximum potential to reduce pressures on biodiversity.

2.3.4 No Net Loss and Net Positive Impact

The concepts of 'no net loss' or 'net positive impact' are described in the CBD Decision VIII/28 entitled "Voluntary guidelines on biodiversity-inclusive impact assessment". The background document states that 'no net loss' is a principle suitable for inclusion in impact assessments. More recently, Decisions IX/26 and X/21 of the CBD, concerned with promoting business engagement, called for guidelines on biodiversity offsets to be developed in collaboration with relevant organisations such as BBOP. One of the fundamental principles developed by BBOP is "to achieve no net loss or a net gain on biodiversity". The concept is clearly relevant to the new CBD strategic plan (COP 10[20]) which seeks to halt biodiversity loss.

Commitments towards a 'positive impact' are found across the majority of standards, whereas explicit reference to the principle of 'no net loss' is much rarer. For example, the three carbon standards require positive impacts rather than the more typical limitation of negative impacts. Clear reference to 'no net loss' appears in only six (17%) of the 36 standards, while more general references to the balancing of negative and positive impacts appear in 11 (31%). The findings of this study suggest that the use of these concepts in standards is still limited but growing as witnessed by its inclusion in the newly revised International Finance Corporation (IFC) performance standard[21].

20 CBD (2010) Ad Hoc Open-Ended Working Group on Review of Implementation of the Convention – Engagement of Business. UNEP/CBD/WG-RI/3/2/Add.2. Decision X/2.

21 International Finance Corporation (2012) *Policy on Environmental and Social Sustainability.*

2.4 Biodiversity-Related Multilateral Environmental Agreements

More than half of the sampled standards (20 out of 36) make reference to the Convention of Biological Diversity (CBD) (Table 4), although this is usually to provide a definition of biodiversity rather than the requirements that flow from it. Some standards and schemes refer to the 'alignment' of their objectives with those of the CBD but do not elaborate or make links to specific CBD decisions. Over 66% of the biotrade, forestry, tourism, finance and fisheries standards refer to the CBD. However, in the forestry sector, reference to the CBD is mainly in the context of requirements for forest management to respect all international treaties and agreements to which the country is a signatory.

The Convention on Wetlands of International Importance (the Ramsar Convention) is referenced in fourteen of the sampled standards, predominantly those in the fishery and finance standards. In the case of fisheries, a strong emphasis is placed on the conservation and sustainable use of wetlands.

The UNESCO World Heritage Convention and the Convention on International Trade in Endangered Species (CITES) were both mentioned in 25% of the standards reviewed. However, in the case of the former there are several references to 'World Heritage Sites' with no specific reference the convention itself. CITES was referred to in all the biotrade and half of the forestry standards reviewed.

References to the Convention on Migratory Species (CMS) were found in only two standards and both were from the finance sector. While not relevant to biodiversity, it is noteworthy that 26 (72%) of the standards refer to various individual articles of the International Labour Organisation (ILO) Conventions, despite the fact that the ILO conventions are more numerous and complex than the CBD and other current conventions relating to biodiversity. It may be that an examination of the ILO and its influence on standards can inform the further development of biodiversity standards.

TABLE 4: References to biodiversity-related Multilateral Environmental Agreements within each sector

	AGR	FIS	FIN	FOR	TOU	CAR	BIO	MIN	TOTAL
Number of standards	**12**	**5**	**5**	**4**	**3**	**3**	**2**	**2**	**36**
Convention on Biological Diversity	50%	60%	60%	75%	67%	33%	100%	–	56%
RAMSAR	25%	80%	80%	25%	33%	33%	–	–	39%
UNESCO WH	17%	20%	40%	25%	33%	33%	–	50%	25%
CITES	8%	40%	40%	50%	–	–	100%	–	25%
Convention on Migratory species	–	–	40%	–	–	–	–	–	6%

3. CONCLUSIONS AND RECOMMENDATIONS

The review found some general trends with respect to the way in which biodiversity is treated in standards and certification schemes, as well as the requirements that are proposed to protect biodiversity, limit threats to biodiversity and promote biodiversity enhancement. Some of the main findings of this review are:

- Even where standards include similar biodiversity components, there are large differences with respect to the measures adopted to safeguard them. Differences are also evident in the depth in which issues are covered. These differences are compounded by disparities in the language used and the use of internationally recognised definitions.
- All standards mention the protection of **habitats,** with 94% also giving consideration to habitat loss and/or restoration. In this regard, 44% of standards set high requirements, including that habitat should not be converted, with specific habitats (notably forests) frequently singled out for special consideration. None of the 12 agriculture standards explicitly seek to prevent habitat loss, rather they include lesser requirements to limit and mitigate loss. Few standards refer specifically to modified habitats and even fewer promote the enhancement or restoration of habitats.
- Most of the reviewed standards (86%) recognise **protected areas** and a few provide detailed guidance on how to operate near or inside protected areas. A small number (eight) prohibit operating within protected areas, but most rely on legislation or *in situ* management processes to define appropriate responses. Requirements relating to protected areas all focus on formal or legal protected areas, while none refer to Indigenous and Community Conserved Areas.
- Protection measures for **species** are included in 94% of standards sampled. Measures to protect or manage threatened species are included in 86% of standards. There are references to both sustainable use (of species) and to invasive species in the majority of standards, with the exception of agriculture standards.
- Despite several well established definitions and prioritisations of important biodiversity outside protected areas, the concept of **priority conservation areas** is incorporated in fewer than half of the standards. The High Conservation Value (HCV) approach, which is particularly common in forestry standards, is the principal vehicle for priority conservation areas.
- Few standards refer to a **mitigation hierarchy** or requirements mandating its use. Similarly, concepts such as '**no net loss'** and **'net positive impact**' are infrequently included in standards, despite these concepts being linked to the objectives and decisions of the Convention on Biological Diversity.
- While measures to safeguard biodiversity are designed to manage sector-specific impacts, significant gaps in biodiversity criteria both within and across sector standards suggest there is scope for cross-fertilization of practices among the standards reviewed.

Recommendations

- **Adopt internationally recognized definitions:** The use of non-standardised terms in the establishment of criteria for species or habitats makes compliance very difficult. For example, while many standards refer to threatened or endangered species, few refer explicitly to the IUCN Red List of Threatened Species, or they do so in a way that could be misinterpreted. The adoption of accepted published definitions for the different components of biodiversity would be a major step forward.
- **Avoid the displacement of threats**: The disproportionate amount of attention paid to forest ecosystems within many standards is understandable given that forestry standards are well established and have influenced other, more recent standards. However, the emphasis on forests creates a paradox in that equally important ecosystems are often provided with less attention due to this focus on forests. There is significant scope to improve this situation.
- **Include modified habitats:** Few standards refer to modified habitats or restoration potential. Instead they focus on 'natural' habitats. Given that many standards may be applied after habitats have been modified, standards should contribute more to the conservation of biodiversity in modified habitats.

- **Provide guidance on operation inside protected areas:** Although most standards recognise the importance of protected areas and legal compliance with them, few provide guidance for operations within specific categories of protected areas. Therefore, it is advisable that standards are linked to the published and accepted IUCN protected area categories.
- **Recognise Indigenous and Community Conserved Areas:** Operating in Indigenous and Community Conserved Areas (ICCAs) presents reputational riska to development activities, both in terms of biodiversity and human rights. As ICCAs are receiving increasing international attention, they should be considered within standards, especially, but not exclusively, those associated with certification schemes.
- **Safeguard priority conservation areas:** Most standards do not consider important biodiversity areas beyond protected areas. The inclusion of such areas might help to address some shortfalls in the approach taken to protect species and habitats, while also addressing concerns of the international conservation community.
- **Adopt the mitigation hierarchy and 'no net loss' approaches:** Adoption of the mitigation hierarchy and 'no net loss' approaches by standards bodies would support, and further mainstream, these concepts, providing greater safeguards for biodiversity. The mitigation hierarchy promotes the avoidance of negative impacts and, where this is not possible, examines mitigation alternatives in a logical sequence. The 'no net loss' approach seeks to enforce the creation of positive outcomes for biodiversity through offsets and other mechanisms.

Conclusions

We conducted a thorough review of biodiversity in 36 standards and certification schemes across eight industrial sectors. Based on our results, we determined seven key recommendations for improving biodiversity criteria in future standards and certification schemes. Our key findings indicate the importance of standardising language and terminology. We also identify some areas of biodiversity importance that are currently under-represented and could be strengthened and developed in future, as well as best-practice that could be adopted by standard setting organisations to further safeguard biodiversity.

APPENDIX A: STANDARDS CONSIDERED IN THIS REVIEW

Organisation	Year of Reviewed Standard	Standard/Scheme
Agriculture		
Sustainable Agriculture Network (SAN)	2010	Sustainable Agriculture Standard
International Federation for the Organic Agricultural Movement (IFOAM)	2005	The IFOAM Norms
Roundtable on Sustainable Palm Oil (RSPO)	2007	RSPO Principles and Criteria for Sustainable Palm Oil Production
Roundtable on Sustainable Biofuels (RSB)	2009	RSB Principles and Criteria for Sustainable Biofuel Production
Bonsucro	2010	Better Sugar Cane Initiative Production Standard
The Round Table on Responsible Soy (RTRS) Association	2010	RTRS Standard for Responsible Soy Production
4C Association	2009	The 4C Code of Conduct
Fairtrade Labelling Organizations International	2009	Generic Fairtrade Standards
UTZ CERTIFIED	2009/2010	UTZ CERTIFIED Code of Conduct
The Better Cotton Initiative (BCI)	2009	BCI Production Principles and Criteria
Smithsonian Migratory Bird Center (SMBC)	2002	SMBC Bird Friendly® Criteria
GLOBAL Good Agricultural Practices (GLOBALG.A.P.)	2007	GLOBALG.A.P. Control Points and Compliance Criteria
Finance		
International Finance Corporation (IFC)	2006	International Finance Corporation's Performance Standards on Social & Environmental Sustainability
Asian Development Bank (ADB)	2009	Safeguard policy
Inter-American Development Bank (IDB)	2006	Environment and Safeguards Compliance Policy
European Bank for Reconstruction and Development (EBRD)	2008	Environmental and Social Policy
European Investment Bank (EIB)	2009	The EIB Statement of Environmental and Social Principles and Standards
Forestry		
Sustainable Forestry Initiative (SFI)	2010	SFI 2010-2014 Standard
Forest Stewardship Council (FSC)	2002	FSC Principles and Criteria for Forest Stewardship
International Tropical Timber Organisation (ITTO)	2009	ITTO/IUCN guidelines for the conservation and sustainable use of biodiversity in tropical timber production forests
Global Forest Alliance	2006	Forest Certification Assessment Guide (FCAG)

Organisation	Year of Reviewed Standard	Standard/Scheme
Carbon offset		
The Climate, Community and Biodiversity Alliance (CCBA)	2008	Climate, Community & Biodiversity Standards
Plan Vivo	2008	Plan Vivo Standard
CarbonFix	2010	CarbonFix Standard
Mining		
Responsible Jewellery Council (RJC)	2009	Principles and Code of Practices
Alliance for Responsible Mining (ARM)	2009	Standard Zero
Biotrade		
Union for Ethical BioTrade (UEBT)	2007	BioTrade Verification Framework for Native Natural Ingredients
FairWild Foundation	2010	FairWild Standard
Fisheries and aquaculture		
Marine Stewardship Council (MSC)	2010	MSC Fishery Standard Principles and Criteria for Sustainable Fishing and MSC Fisheries Assessment Methodology and Guidance to Certification bodies
Marine Aquarium Council (MAC)	2001 (I, ii & iii) 2008 (iv)	International Performance Standards for the Marine Aquarium Trade on i) Core Collection, Fishing and Holding; ii) Core Ecosystem and Fishery Management; iii) Core Handling, Husbandry and Transport and ; iv) Mariculture and Aquaculture Management
Global Aquaculture Alliance	2009 (i, ii, iii, iv) 2008 (v)	Best Aquaculture Practices Standards on: i) Shrimp farms; ii) Shrimp hatcheries; iii) Tilapia; iv) Channel catfish and v) Seafood processing plants
Aquaculture Dialogue	2010 (i, ii) 2009 (iii, iv)	Aquaculture Dialogue Standards on i) Bivalve; ii) Pangasius; iii) Trout and iv) Tilapia
GLOBAL Good Aquaculture Practices (GLOBALG.A.P.)	2009	GLOBALG.A.P. Control Points and Compliance Criteria
Tourism		
Global Sustainable Tourism Council (GSTC)	2008	Global Sustainable Tourism Criteria
World Tourism Organization (UNWTO)	2010	Global Code of Ethics for Tourism
ECO-DESTINET	2009	The European Ecotourism Labelling Standard (EETLS)

APPENDIX B: ASSESSMENT CRITERIA IN STANDARDS BY SECTOR

B1 Components of Biodiversity

Biodiversity components	Justification	List of terms/concept/approaches
Species	The accurate identification of species under different threat categories or of areas of high diversity is essential if appropriate measures are to be selected to protect them.	Reference to any of the following ways of classifying species: • Threatened species according to IUCN Red List • National Red Lists • Any other definition of rare/ threatened/endangered • Migratory or Congregatory • Endemic • Unique assemblages • Keystone or key scientific value
Habitats (often referred to in full as ecosystems, habitats and biomes by CBD)	Habitat loss as a result of direct and indirect land-use changes is one of the major threats to biodiversity. A central challenge for biodiversity conservation is to identify and conserve the most important habitats for biodiversity.	Reference to habitat categories: • Natural • Modified • Critical Reference to specific habitat types: • Grassland/savannah/shrubland • Peatlands • Forest • Aquatic
Protected areas	Protected areas are the cornerstone of national, regional and international conservation strategies. These areas are created for a number of biological, cultural or economic reasons and their recognition and management is critical to biodiversity conservation.	Reference to specific protected areas: • Nationally recognised (IUCN Category) Protected Areas including marine and terrestrial • Internationally recognised (e.g. World Heritage Ramsar sites) • Indigenous and Community Conserved Areas • Others
Priority conservation areas	Priority conservation areas, which have been promoted by conservation organisations and researchers, have increasingly become important to overcome the limitations of focussing only on protected areas in conserving biodiversity can help in decisions about where to invest in conservation.	Identification and reference to globally recognised priority areas such as: • Key Biodiversity Areas (KBA) including, Alliance for Zero Extinction (AZE) sites, Important Bird Areas (IBA), Important Plant Areas (IPA) • High Conservation Value (HCV) areas • Others

B2 Threats and Response

Threats and response	Key considerations	Measures
Habitat loss and restoration	Habitat loss is a major threat to biodiversity with over 80% of globally threatened birds, mammals, and amphibians affected either wholly or in part by habitats loss.[23]	Specific reference to measures to: Limit and reduce conversion and degradation Restoration of habitats during and/or after operations
Over-exploitation	Threats from over-exploitation of natural resources pose a key threat to biodiversity conservation.[24]	Measures to promote: Sustainable use Limit indirect over-exploitation
Invasive species	Invasive alien species represent one of the primary threats to biodiversity, especially in geographically and evolutionary isolated ecosystems.[25]	Measures to address problem of invasive species in different sectors
Mitigation hierarchy	Mitigation hierarchy has gained recognition as an important approach for business to reduce its impact on biodiversity. CBD encourages business to avoid, minimize, restore and offset its negative impacts on biodiversity, and promote good practices that could be models for wider use.[26]	Mention of mitigation hierarchy or its components.
No-net-loss and/or net-positive impact	The concept of 'no net loss' of biodiversity and 'net-positive impact', as articulated by the Business and Biodiversity Offsets Programme, is a recognized practical framework for assessing efforts to implement the CBD provisions by business.	Definition and measures to achieve no-net-loss and/or net-positive impact.

B3 Biodiversity-Related MEAs

International conventions	Justification	List of conventions
Convention of Biological Diversity (CBD)	The Convention on Biological Diversity (CBD) is the principle international legal framework concerning the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of benefits arising from the utilization of genetic resources	Reference to CBD or alignment with provision of CBD.
Convention on International Trade in Endangered Species (CITES), Convention on Wetlands of International Importance (Ramsar Convention), UNESCO World Heritage Convention, Convention on Migratory Species (CMS)	These conventions were shortlisted from an initial screening of sampled standards. They were included in the assessment criteria based on their wider applicability across standards either for habitat or species conservation.	Reference to identified international conventions

22 IUCN 2008 Wildlife in a Changing World: An analysis of the 2008 IUCN Red List of Threatened Species.

23 CBD (2010) Ensuring biodiversity in a sustainable future: lessons from evaluations. http://www.cbd.int/doc/meetings/cop/cop-10/information/cop-10-inf-39-en.pdf.

24 COP 6 Decision VI/23: Alien species that threaten ecosystems, habitats or species. http://www.cbd.int/decision/cop/?id=7197.

25 CBD (2010) Ad Hoc Open-Ended Working Group on Review of Implementation of the Convention – Engagement of Business. UNEP/CBD/WG-RI/3/2/Add.2. Decision X/21.

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Biodiversity Criteria in Standards

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AGRICULTURE

4C Association

Name of Standard	The 4C Code of Conduct
Organisation	4C Association
Documents Reviewed	The 4C Code of Conduct - version approved in May 2009: Incl. Generic Indicators approved in February 2010 [4CDoc_001a_Code of Conduct_v1.2_en.doc] Table of indicators for 4C Unacceptable Practices - version approved in June 2010 [4CDoc_001a_Code of Conduct_v1.1_en.doc] 4C Unacceptable Practices: Background, Criteria and Indicators [4CDoc_036_Indicators_Unacceptable Practices_v1.2_en]
Version Reviewed	May 2009
First Version	2004[1]
Reviewed By	S. Kenney
Reviewed On	09.11.2010

DESCRIPTION / SUMMARY

The 4C Association *'for a better coffee world'* brings together producers, trade and industry, and civil society from around the world to work towards a more sustainable coffee sector. Participants first have to eliminate the ten unacceptable practices and then work to improve their practices in line with the Code of Conduct that is composed of 28 principles, including an environmental dimension. The Code of Conduct uses a "traffic light system" whereby red indicates a practice that must be discontinued, yellow a practice that needs to be further improved and green reflects a desirable practice.

THREAT BASED MEASURES

Habitat loss and restoration

Destruction of primary forest and other natural resources in protected areas is unacceptable. (Unacceptable Practice 8)

Over-exploitation

A yellow criterion of Principle 1 under the Environmental Dimension is '*No exploitation of endangered and protected species and native flora is practised.*' The current practice of exploiting of native flora and fauna, which is partly practised, must be discontinued (Red Criterion). Additionally no hunting of endangered wildlife species and extraction of protected plants needs to be an improved practice (Yellow Indicator).

Invasive species

Not specifically included.

Mitigation hierarchy

Not specifically included.

No net loss/net positive impact

Not specifically included.

BIODIVERSITY COMPONENTS

Species

'*Conservation of biodiversity, including protected or endangered native flora and fauna is supported.*' (Environmental Dimension, Principle 1)

No measures to protect or enhance native plants and fauna, and no awareness of biodiversity and respective national legislation must be discontinued. (Red Indicators, Environmental Dimension, Principle 1)

Under Principle 1 a '*programme to protect and enhance biodiversity is being developed*' (Yellow Criterion) and no hunting of endangered wildlife species and extraction of protected plants needs to be improved (Yellow Indicator).

It is a desirable practice that '*A program of conserving and enhancing wildlife and native flora is developed and implemented*' which at least meets national law. (Green Criterion, Environmental Dimension, Principle 1)

Habitats

It is unacceptable to cut primary forest or other forms of natural resources within protected areas. (Unacceptable Practice 8)

A conservation programme is desirable to have (Green Indicator) or should be being developed (Yellow Indicator)

1 http://www.4c-coffeeassociation.org/en/history.php

that protects sensitive areas, inclusive of slopes, river banks and wetlands, and at least meets national law (Environmental Dimension, Principle 1). Maps are being developed (Yellow Indicator) or land use maps exists (Green Indicator).

Protected areas

'*Cutting of primary forest or destruction of other forms of natural resources that are designated as protected areas by national and/or international legislation.*' (Unacceptable Practice 8).

Priority areas

Not specifically included, although sensitive areas should be protected. (Environmental Dimension, Principle 1)

SOCIAL COMPONENTS

Free, Prior and Informed Consent (FPIC)

Not specifically included.

Access and Benefit Sharing (ABS)

Not specifically included.

ALIGNMENT AND REFERENCE TO INTERNATIONAL CONVENTIONS

Convention on Biological Diversity (CBD)

The background document references the CBD under Unacceptable Practice 8.

The Better Cotton Initiative (BCI)

Name of Standard	Better Cotton Initiative Production Principles and Criteria
Organisation	The Better Cotton Initiative (BCI)
Documents Reviewed	Section 2/A Production Principles & Criteria 2.0 Appendix Production Principles & Criteria 2.0 Explained Benchmarks for Large Farm Employers
Version Reviewed	Version 2.0 - Dec 2009
First Version	July, 2008[2]
Reviewed By	S. Kenney
Reviewed On	05.11.2010

DESCRIPTION / SUMMARY

The Better Cotton Initiative's (BCI) Principles cover a range of environmental and social aspects, with a specific principle on habitat. There are a number of Minimum Production Criteria that outline the core requirements for farmers to grow Better Cotton. The BCI Benchmarks, structured as Understand, Plan and Do for each criterion, detail the specific issues expected to be addressed to meet each criterion. The Do Benchmark must be achieved for each of the Minimum Production Criterion. Three sets of benchmarks exist for the three different farmer types, but the benchmarks are identical for the biodiversity specific criteria in all three.

THREAT BASED MEASURES

Habitat loss and restoration

Minimum criterion 4.2: 'The use and conversion of land to grow cotton conforms with national legislation related to agricultural land use.' Benchmarks under this criterion require that:

- knowledge on the legal use and conversion of land to grow cotton is available;
- 'Producers can self-assess their situation and any areas on their farm that may be subject to specific legislative requirements regarding land-use, tree clearing/conversion to farm land are identified'
- a written plan exists detailing the legislative requirements so that all use of land and planned conversion complies with national legislation; and
- the plan is implemented 'so that cotton is only grown on legally used and converted land'.

The explanation document states in relation to this that: 'A fundamental requirement of growing Better Cotton is to abide by applicable national and other applicable laws. National legislation governing land use may include provisions that directly and indirectly protect natural habitats and biodiversity.'

Under the explanation document it is also suggested that: '*To lessen their impact on biodiversity, cotton farmers can conserve or restore areas of natural habitat on their land, and adopt practices that minimise the negative impact on the habitat that surrounds their farm.*'

Over-exploitation

Not specifically included.

Invasive species

The Understand Benchmark under criterion 4.1 calls for knowledge of the likely presence of and how to control invasive species to be presented to producers and for producers to '*self-assess their situation and identify any invasive species (weeds, animals) present on their farm*'. Written plans to control invasive species are required under the Plan Benchmark.

Mitigation hierarchy

Not specifically included.

No net loss/net positive impact

Not specifically included.

BIODIVERSITY COMPONENTS

Species

One of the minimum criterion under an Integrated Pest Management Programme is the: '*preservation and enhancement of populations of beneficial insects*' (1.1 (iii)).Ways to achieve this are noted in the explanation document as planting refugia and/or crops that provide habitats for beneficial animal species, and maintaining on-farm habitat biodiversity.

2 http://www.bettercotton.org/index/120/history.html

The explanation document also suggests the encouragement of bird and bat species to act as predators to cotton pest populations to fulfil minimum criteria 1.1 (v) on managing pest resistance.

Habitats

Principle 4: *'Better Cotton is produced by farmers who conserve natural habitats'.* A natural habitat is defined in the explanation document as '*an area where the original biodiversity remains largely undisturbed by human activities. It may also include areas where once disturbed biodiversity has been restored or regenerated by human or natural forces.*' '*Practices are adopted that enhance biodiversity on and surrounding the farm*' (4.1). Biodiversity is defined in the explanation document as referring to the variety or range of life in a particular habitat. The Benchmark calls for a written plan that use practices that enhance biodiversity on and surrounding the farm (Plan) and this to be implemented (Do).

Under criterion 3.3 '*water courses, drinking water sources and other bodies of water are protected from farm run-off.*' In its explanation document, protection of riparian land is noted as particularly important, as it supports a greater diversity of species and provides refugia. Hence it states that *'it is important that riparian land is protected from farm run-off and that it is not cleared of vegetation'* and that riparian land may require special attention to ensure this.

Protected areas

Although protected areas are not referred to explicitly, the Benchmarks for minimum criterion 4.2 require that specific legislative requirements regarding land-use are assessed, written plans detail the specific legislative requirements '*to ensure that use of the land and any planned conversion complies with national legislation*' and that cotton is only grown on legally used and converted land.

Priority areas

Not specifically included.

SOCIAL COMPONENTS

Free, Prior and Informed Consent (FPIC)

Not specifically included.

Access and Benefit Sharing (ABS)

Not specifically included.

ALIGNMENT AND REFERENCE TO INTERNATIONAL CONVENTIONS

Convention on Biological Diversity (CBD)

Not specifically included.

Bonsucro – The Better Sugar Cane Initiative (BSI)

Name of Standard	Better Sugar Cane Initiative Production Standard
Organisation	BONSUCRO, Better Sugarcane Initiative (BSI)
Documents Reviewed	Better Sugar Cane Initiative Production Standard - July 2010: Better Sugarcane Initiative Ltd ('BSI') Principles and Criteria
Version Reviewed	July 2010
First Version	July, 2010[3]
Reviewed By	S. Kenney
Reviewed On	08.11.2010

DESCRIPTION / SUMMARY

The Better Sugar Cane Initiative (BSI), a global multi-stakeholder, non-profit initiative, promotes the use of its global standard to improve the social, environmental and economical sustainability of sugar cane. To obtain a BSI certificate, 80% of the indicators contained in principles 1-5 have to be complied with, and a number of core criteria have to be met, one of which is criterion 4.1 on assessing the impacts of sugar cane enterprises on biodiversity and ecosystems services. Some criteria apply to processing and milling, some to agriculture and others to both of these.

THREAT BASED MEASURES

Habitat loss and restoration

Criterion 4.1 details that 0% of legally protected areas and High Conservation Value areas (categories 1-4), and criterion 6.2 that 0% of land with high biodiversity value, high carbon stock or peatlands, are to be planted to sugar cane after the cut-off date of the 1st of January 2008.

Over-exploitation

Not specifically included.

Invasive species

An environmental management plan that refers to alien invader plant and animal control must be developed and implemented. (Indicator, Criterion 4.1)

Mitigation hierarchy

Not specifically included.

No net loss/net positive impact

Not specifically included.

BIODIVERSITY COMPONENTS

Species

Under Criterion 4.1 an environmental management plan must exist and be implemented that takes into account endangered species, in order to conserve rare, threatened and endangered species.

Land with high biodiversity value, inclusive of '*areas designated by law or by the relevant competent authority... for the protection of rare, threatened or endangered ecosystems or species recognised by international agreements or included in lists drawn up by intergovernmental organisations or the International Union for the Conservation of Nature, subject to their recognition by the European Commission*' are to be protected (0% to be planted to sugarcane after 1st January 2008) if they have had that status since January 2008. (Criterion 6.2)

High Conservation Value areas (HCVAs) are referred to under Criterion 4.1. To comply with the standard 0% of HCVAs are to be planted to sugar cane. The six HCVs are defined in the Appendix 1 using the international HCV Network categories, with a cut-off date of the 1st January 2008. HCV 1 is inclusive of threatened and endangered species (HCV1.2), endemic species (HCV1.3) and critical temporal use areas (HCV1.4), such as migration sites, migration routes or corridors, and HCV2 includes landscapes where viable populations of most if not all naturally occurring species exist in natural patterns, according to the HCV Network guidelines.

Habitats

An environmental management plan must take into account habitats and ecosystems, as well as ecosystem services (Indicator, Criterion 4.1), '*To protect any existing riparian areas, wetlands or other significantly affected natural habitats in a satisfactory state*' and to provide habitat corridors.

'*To protect land with high biodiversity value*' 0% percent of this land is to be planted to sugarcane after the 1st January 2008 (Criterion 6.2). Land with high biodiversity value is noted as being land that has had the status since January

3 http://www.bettersugarcane.org/bulletin.html#nov08 (Draft version was created in 2008)

2008 of being primary forest and other primary wooded land, areas designated for nature protection purposes or to protect rare, threatened or endangered ecosystems or species, highly biodiverse grassland, or new nature protection areas derived from a published European Commission decision. The only exception is when '*evidence is provided that the production of that raw material did not interfere with those nature protection purposes*'.

Within Appendix 1 High Conservation Value (HCV) areas are defined as inclusive of areas containing significant large landscape level forests, areas that contain rare, threatened or endangered ecosystems and, as they have soils '*with a large risk of significant soil stored carbon*', peat lands, mangroves, wetlands and certain 100% native and natural grasslands. No HCVAs must be planted to sugar cane in order to comply with the standard, with expansion into or development of HCVAs 1-4 to be prevented, according to Criterion 4.1.

Lands with high carbon stock, with this status such since January 2008, are to be protected (0% to be planted to sugarcane after the cut-off date of 1st January 2008). These include wetlands, continuously forested areas and land spanning more than one hectare with trees higher than five meters and canopy cover between 10-30%, '*unless evidence is provided that the carbon stock of the area before and after conversion is such that when GHG emissions savings is calculated, it complies with the minimum threshold established in criterion 6.1 of BSI standard.*' (Criterion 6.2).

Peatlands are to be protected (0% to be planted to sugarcane after 1st January 2008). (Criterion 6.2)

Protected areas

Criterion 4.1 calls for assessment of the impacts of sugarcane enterprises on biodiversity and ecosystem services. As an indicator of this, the: *'Percent of areas defined internationally or nationally as legally protected or classified as High Conservation Value areas (interpreted nationally and officially as described in Appendix 1) planted to sugar cane after the cut-off date of 1 January 2008*' must be 0% in order to comply with the standard. HCVA categories included under this criterion are 1-4, with HCV1 being inclusive of protected areas according to the HCV Network guidelines.

Criterion 6.2 requires the protection of land with high biodiversity value (0% to be planted to sugar cane after 1st January 2008) that includes '*areas designated by law or by the relevant competent authority for nature protection purposes*' and '*new nature protection areas derived from a published European Commission decision*'.

Criteria 1.1 calls for compliance with relevant international conventions that includes the 'Ramsar convention on wetlands of International Importance' and the 'World Heritage Convention concerning the Protection of the World cultural and Natural heritage ' as noted in Appendix 2.

For greenfield expansion or new sugarcane projects, 0% of HCVAs are to be affected by a new project from a cut-off date of the 1st January 2008, inclusive of all HCV categories including categories 5 and 6 (Criterion 5.7). HCV 6 is defined in Appendix 1 as: '*Areas critical to local communities' traditional cultural identity (e.g. areas of cultural, ecological, economic or religious significance identified in cooperation with such local communities).*'

Priority areas

High Conservation Value Areas (HCVAs) are referred to under Criterion 4.1. To comply with the standard 0% of HCVAs are to be planted to sugarcane. Under the notes, it states that expansion or new sugarcane development is to be prevented in areas of critical biodiversity, including HCVA categories 1-4, where national definitions of HCVA take precedence over international ones. The six HCVs are defined in the Appendix 1 using the international HCV Network categories, with a cut-off date of the 1st January 2008. HCVs include areas '*containing globally, regionally or nationally significant concentrations of biodiversity values*' (HCV1).

SOCIAL COMPONENTS

Free, Prior and Informed Consent (FPIC)

Criterion 5.8: '*To ensure active engagement and transparent, consultative and participatory processes with all relevant stakeholders.*'

Relevant laws and conventions must be compiled with (Criterion 1.1) inclusive of the 'UN Declaration on the Rights of Indigenous Peoples (2007)' that protects the '*Right to free, prior and informed consent to any project affecting their lands as expressed through their own representative institutions'* (Appendix 2). The 'ILO Convention 169 (1989) on Indigenous and Tribal Peoples' and the 'Convention on the Elimination of All Forms of Racial Discrimination, International Covenant on Economic, Social and Cultural Rights, InterAmerican Human Rights System' are also referenced in relation to FPIC or a similar process.

Access and Benefit Sharing (ABS)

Not specifically included.

ALIGNMENT AND REFERENCE TO INTERNATIONAL CONVENTIONS

Convention on Biological Diversity (CBD)

Criterion 1.1 requires compliance with relevant applicable laws. The CBD is listed as a relevant international convention in Appendix 2.

The CBD is also referenced in Appendix 2 in relation to just land acquisition: '*Protect and encourage customary use of biological resources in accordance with traditional practices'.*

Fairtrade Labelling Organizations International (FLO)

Name of Standard	Generic Fairtrade Standards
Organisation	Fairtrade Labelling Organizations International (FLO)
Documents Reviewed	Generic Fairtrade Standards For Hired Labour - Current version: 15.08.2009. Generic Fairtrade Standards For Small Producers' Organizations - Current version: 15.08.2009.
Version Reviewed	15.08.2009
First Version	1990[4]
Reviewed By	S. Kenney
Reviewed On	09.11.2010

DESCRIPTION / SUMMARY

The Fairtrade Labelling Organizations International (FLO) is a group of organisations working to secure a better deal for producers. The Fairtrade Standards are set on the basis of consultations with major stakeholders, and use both minimum and progressive criteria to ensure the production and trade of Fairtrade products is environmentally responsible.

THREAT BASED MEASURES

Habitat loss and restoration

The organisation ensures that its members have identified conservation areas, buffer zones around water bodies and watershed recharge areas appropriate to the region, which will not be cultivated. (Progress Requirement, Small Producers, 3.1.2.4)

New plantings in virgin forest areas are prohibited (Minimum Requirement, Hired Labour, 3.1.1.3 and Progress Requirement, Small Producers, 3.1.2.5). Exceptions to his rule may occur if affected members are proved to have no other arable land, and in such cases any new planting done preserves and integrates into the native habitat to the maximum extent possible. (Progress Requirement, Small Producers, 3.1.2.5)

'*In operations in areas of low biodiversity, where buffer zones are bare or undifferentiated from cash crops or in areas not suitable for cultivation, members should plant trees/bushes or otherwise encourage regeneration of natural flora and fauna.*' (Progress Requirement, Small Producers, 3.1.2.7, and Hired Labour, 3.1.2.3)

'*The company assesses the environmental impacts of changes in land use.*' The plan can include the acreage devoted to biodiversity/reserves and the restoration of damaged lands. (Progress Requirement, Hired Labour, 3.1.2.6 and Small Producers, 3.1.2.8)

Over-exploitation

'*Any harvesting of wild specimens or products from natural (uncultivated) areas by members of the organization must be done in a manner that assures the sustainability/survivability of the species in its native habitat.*' (Progress Requirement, Hired Labour 3.1.2.1 and Small Producers, 3.1.2.2). Under the standards for Small Producers harvesting should maintain the viability of the species, allow the species to perpetuate itself and ensure that the product is still available to other species in the ecosystem that rely on it. Wild harvesting implies that this harvesting is the only management activity being undertaken in the production zone. Other activities should minimise human impact and transient effects as much as possible.

'*Areas from which wild products are harvested should be clearly defined on maps and verifiable/available for inspection.*' (Progress Requirement, Small Producers, 3.1.2.2)

Invasive species

Not specifically included.

Mitigation hierarchy

No formal mitigation hierarchy is referred to. However at a minimum an organisation should identify and describe mitigation methods and means of measuring the effectiveness of such methods (Progress Requirement, Small Producers, 3.1.2.3).

Also: '*Companies are expected to assess the environmental impacts of their operations, to develop plans designed to mitigate those impacts, and to monitor the implementation of those plans*' (Hired Labour, 3.1), and as part of this the company is to identify risks and methods to control and minimise such risks. (Progress Requirement, Hired Labour, 3.1.2.5)

4 http://www.fairtrade.org.uk/what_is_fairtrade/history.aspx

No net loss/net positive impact

Although no net loss is not specifically mentioned, the organisation should correct negative environmental impacts, and should notice and commend positive impacts, and '*Neutral impacts can be accepted but must not decline into negative impacts, and should be improved whenever possible.*' (Progress Requirement, Small Producers, 3.1.2.3)

BIODIVERSITY COMPONENTS

Species

'*The company has identified environmental risks, assessed impacts and developed a plan to address them. Key aspects of this plan shall include... endangered and critically endangered species*'. Associated risks are to be identified, managed, and/or avoided, as applicable. (Progress Requirement, Hired Labour, 3.1.2.2)

Habitats

As a minimum requirement a company or organisation has to ensure that a plan is produced that details how to comply with the Fairtrade environmental standards (Hired Labour and Small Producers, 3.1.1.1). For Hired Labour this plan must be implemented within one year of certification.

'*The organization ensures that its members have identified conservation areas, buffer zones around water bodies and watershed recharge areas appropriate to the region, which will not be cultivated*'. (Progress Requirement, Small Producers, 3.1.2.4)

'*Aerial spraying over buffer zones (if any), open water bodies or residential areas is not undertaken.*' (Progress Requirement, Small Producers, 3.2.2.9)

Progress requirements require that the company identifies environmental risks, assesses impacts and develops a plan to address them. This plan includes habitat protection. (Hired Labour, 3.1.2.2)

For perennial systems '*the ground cover must be managed in a way that protects soil, builds fertility, and otherwise conserves natural resources and biodiversity.*' (Minimum Requirement, Hired Labour, 3.1.1.4 and Progress Requirement, Small Producers, 3.1.2.10)

'*Buffer zones are maintained as required to protect water bodies and watershed recharge areas, virgin forest, and/or other legally protected areas.*' (Progress Requirement, Small Producers, 3.1.2.6 & Hired Labour, 3.1.2.3)

Protected areas

The company or organisation '*ensures that for certified products no plant material is gathered from protected areas or is propagated in contravention of national and international regulations.*' (Minimum Requirement, Small Producers. 3.1.1.2 and Hired Labour 3.1.1.2)

To protect legally protected areas buffer zones are to be maintained. (Progress Requirement, Small Producers, 3.1.2.6 & Hired Labour, 3.1.2.3)

Priority areas

Not specifically included, although 'conservation areas' referred to under 3.1.2.4 (Small Producers), could be interpreted as including priority areas.

SOCIAL COMPONENTS

Free, Prior and Informed Consent (FPIC)

Not specifically included.

Access and Benefit Sharing (ABS)

Not specifically included.

ALIGNMENT AND REFERENCE TO INTERNATIONAL CONVENTIONS

Convention on Biological Diversity (CBD)

No specific reference to the CBD.

No plant material is propagated that is against international regulations. (Minimum Requirement, Small Producers. 3.1.1.2 and Hired Labour 3.1.1.2)

GLOBAL Good Agriculture Practices (GLOBALG.A.P.) [Agriculture]

Name of Standard	GLOBALG.A.P. Control Points and Compliance Criteria
Organisation	GLOBAL Good Agricultural Practices (GLOBALG.A.P.)
Documents Reviewed	GlobalG.A.P. (EUREPGAP) Control Points and Compliance Criteria Integrated Farm Assurance. COFFEE (GREEN) (September 2007) GlobalG.A.P. (EUREPGAP) Control Points and Compliance Criteria Integrated Farm Assurance. TEA (September 2007) GlobalG.A.P. (EUREPGAP) Control Points and Compliance Criteria Integrated Farm Assurance. ALL FARM BASE. V3.0-2_Sep07. Valid from 30 September 2007. GlobalG.A.P. (EUREPGAP) Control Points and Compliance Criteria Integrated Farm Assurance. CROPS BASE. V.3.0-3_Feb09. Valid from 16 February 2009.
Version Reviewed	Coffee, Tea and All Farm Base: Version 3.0 - September 2007 Crops Base: Version 3.0 – February 2009
First Version	1997[5]
Reviewed By	S. Kenney
Reviewed On	23.11.2010

DESCRIPTION / SUMMARY

GLOBAL Good Agricultural Practices (G.A.P.) is a private sector body that sets voluntary standards for the certification of agricultural products. Its Control Points and Compliance Criteria must be followed by the producer/group and are audited to verify compliance, with major must, minor must and recommendation levels, and a specific section on the environment and conservation. Its coffee (CO), tea (TE) all farm base (AF) and crops base (CB) criteria overlap to some extent. The Chain of Custody is obligatory for coffee and tea certification within the GLOBALG.A.P.

THREAT BASED MEASURES

Habitat loss and restoration

Within the management plan for farms it is recommended that the contents and objectives demonstrate a reduced environmental impact (AF.5.1.3), and that '*there is a clear list of priorities and actions to rectify damaged or deteriorated habitats on the farm*' (AF.5.1.5).

Major musts for coffee and tea production are that: '*There is evidence that the farmed area has not derived from primary forest deforested after September 2004 nor from secondary forest without compensation.*' (CO/TE.2.1.1) and '*Deforestation of primary forest is prohibited whereas justified cutting for domestic use of primary forest, only under a management plan is possible. Deforestation of secondary forest is not allowed without compensation or a recovery plan.*' (CO.10.1.1, TE.11.1.1)

It is a minor must that there is '*documented evidence that the new plantations comply with the relevant local and national regulation with respect to land use and biodiversity conservation.*' (CO/TE.2.1.2)

For both coffee and tea it is recommended that all areas in the farm not suitable for coffee/tea production are reforested. (CO.10.1.2, TE.11.1.2)

Over-exploitation

'*The contents and objectives of the conservation plan imply compatibility with sustainable agriculture*' (AF.5.1.3 [Recommendation]). No mention of directly preventing over-exploitation.

Hunting and commercial collection of flora and fauna is restricted, although similarly restricting these activities to prevent over exploitation is not specifically stated. (CO.10.1.8, TE.11.1.7 [Minor Must])

In the absence of relevant regulations on biodiversity conservation and land use, new plantings must, for tea, and are recommended, for coffee, to be *'compatible with good resource conservation practice proven in comparable locations'*. (CO/TE.2.1.3)

Invasive species

Native or, on tea farms, well adapted, tree species must be preferred as shade for the coffee and tea. (CO.10.1.5, TE.11.1.5 [Minor Must]). No specific mention of invasive species however.

Mitigation hierarchy

Deforestation of secondary forest is prohibited unless there is compensation or a recovery plan. However there is no defined mitigation hierarchy.

5 http://www.globalgap.org/cms/front_content.php?idcat=19

No net loss/net positive impact

Not specifically included.

BIODIVERSITY COMPONENTS

Species

The producer is recommended to consider how to enhance the environment for the benefit of flora and fauna: '*There should be tangible actions and initiatives that can be demonstrated by the producer either on the production site or by participation in a group that is active in environmental support schemes looking at habitat quality and habitat elements.*' (AF.5.1.2)

•It is recommended that there is a commitment in the conservation plan '*to undertake a base line audit of the current levels, location, condition etc. of the fauna and flora on farm so as to enable actions to be planned*'. Also the effects of agricultural production on species *'should be audited and serve as the basis for the action plan'.* (AF.5.1.4)

'There are in place effective measures to restrict hunting or commercial collection of flora and fauna.' (CO.10.1.8, TE.11.1.7 [Minor Must])

Under rodent and bird control, non-targeted species must not have access to the bait. (CO.8.7.3 [Minor Must])

As part of Integrated Pest Management, the producer it required to show at least one activity in the "Intervention" category (CB.7.4). An intervention technique is to use natural enemies including '*managing the cropping environment to enhance the levels of natural enemies (e.g. by providing favourable habitats)*'. (Annex CB.1, Crops Base)

Habitats

'*There must be a written action plan which aims to enhance habitats and increase biodiversity on the farm*', which includes Integrated Pest Management techniques, nutrient use of crops and conservation sites. (Minor Must, AF.5.1.1)

The conservation plan for the farm is recommended to have '*a clear list of priorities and actions to enhance habitats for fauna and flora where viable and increase biodiversity on the farm.*' (AF.5.1.6)

Recommendation that: '*There should be a plan to convert unproductive sites and identified areas which give priority to ecology into conservation areas where viable.*' Unproductive sites are detailed as including low lying wet areas, woodlands, headland strip or areas of impoverished soil. (AF.5.2)

Minor must that all forest patches not being used for tea or coffee production should be conserved. (CO.10.1.3, TE.11.1.3)

'*All watersheds belonging to the farm should be protected and conserved*'. (CO.10.1.4, TE.11.1.5 [Minor Must])

Recommended that native species are planted within and around the coffee to provide wildlife habitat. (CO.10.1.5)

Native vegetation is allowed to grow along streams to protect wildlife habitat. (CO.10.1.7, TE.11.1.6 [Minor Must])

Firewood for drying coffee and tea firing must not come from native forests, unmanaged community forests or watersheds. (CO.10.2.5, TE.11.2.4)

Protected areas

Recommended that: *'Farms within a distance of two kilometres of a designated park or biological corridor should have communication with the park authorities and there should be no legal challenges to the farms´ location or operation.'* (CO.10.1.9, TE.11.1.8)

Although the term community conserved area is not specifically mentioned, it is recommended that: '*Areas of ecological, social, cultural or religious significance should be clearly identified, delineated and preserved.*' (CO.10.1.10, TE.11.1.9)

Firewood for drying coffee and tea firing must not come from protected areas. (CO.10.2.5, TE.11.2.4 [Minor Must])

Protected areas are defined within Annex I.1 inclusive of the six IUCN Protected Area Management Categories. The World Database on Protected Areas is also referenced as being the most complete compilation of protected areas data and freely available to download.

Priority areas

Not specifically included.

SOCIAL COMPONENTS

Free, Prior and Informed Consent (FPIC)

Not specifically included.

Access and Benefit Sharing (ABS)

Not specifically included.

ALIGNMENT AND REFERENCE TO INTERNATIONAL CONVENTIONS

Convention on Biological Diversity (CBD)

Not specifically included.

International Federation of Organic Agriculture Movements (IFOAM)

Name of Standard	The IFOAM Norms
Organisation	International Federation of Organic Agricultural Movements (IFOAM)
Documents Reviewed	The IFOAM Norms for Organic Production and Processing - version 2005: including IFOAM Basic Standards for Organic Production and Processing and IFOAM Accreditation Criteria for Bodies Certifying Organic Production and Processing
Version Reviewed	2005
First Version	1997[6]
Reviewed By	S. Kenney
Reviewed On	10.11.2010

DESCRIPTION / SUMMARY

IFOAM is a global umbrella organisation for the organic movement first established in 1972. The IFOAM Norms consist of the IFOAM Basic Standards along with the IFOAM Accreditation Criteria, and provide the requirements for certification bodies seeking IFOAM accreditation.

THREAT BASED MEASURES

Habitat loss and restoration

'*Clearing of primary ecosystems is prohibited*' (Organic Ecosystems 2.1.2).

The IFOAM Norms provide the following definition of a primary ecosystem: '*Primary habitat / ecosystem - pristine and anthropogenously undisturbed habitats or ecosystems.*'

'*Harvest of aquatic plants shall not disrupt the ecosystem or degrade the collection area or the surrounding aquatic or terrestrial environment.*' (Aquatic Plants 9.3.2.)

Over-exploitation

'*Wild harvested products shall only be certified organic if they are derived from a stable and sustainable growing environment. The people who harvest, gather, or wildcraft shall not take any products at a rate that exceeds the sustainable yield of the ecosystem, or threaten the existence of plant, fungal or animal species, including those not directly exploited.*' (Wild Harvested Products and Common/Public Land Management 2.4.1)

Invasive species

Within aquatic ecosystems: '*Operators shall take adequate measures to prevent escapes of introduced, or cultivated species and document any that are known to occur.*' (Aquatic Ecosystems 9.2.2)

Mitigation hierarchy

Not specifically included.

No net loss/net positive impact

Not specifically included.

BIODIVERSITY COMPONENTS

Species

Species are referred to in that the collection of products should not threaten the existence of plant, fungal or animal species (2.4.1).

Biodiversity that is inclusive species diversity, as stated in the definitions section (Section B), is required to be enhanced in quality (2.1.1)

Recommended that: '*When bees are placed in wild areas, consideration should be given to the safety and integrity of the indigenous insect population and pollination requirements of native plants.*' (Bee Keeping 5.9)

Habitats

Habitat is defined as: '*The area over which a plant or animal species naturally exists; the area where a species occurs. Also used to indicate types of habitat, e.g. seashore, riverbank, woodland, grassland.*'

'*Operators should maintain a significant portion of their farms to facilitate biodiversity and nature conservation. A farm should place appropriate areas under its management in wildlife refuge habitat.*' The areas to be wildlife refuge habitat include extensive grasslands, all areas not under rotation and not heavily manured (inclusive of forests and woodlands), ecologically rich fallow land or arable land, ecologically diverse field margins, waterways, wetlands and other water areas, areas with ruderal flora and wildlife corridors. (Recommendation, Ecosystem Management 2.1)

6 http://www.ifoam.org/about_ifoam/standards/pdfs/OGS_Brochure.pdf

'Operators shall take measures to maintain and improve landscape and enhance biodiversity quality.' (Organic Ecosystems 2.1.1)

'*Organic aquaculture management maintains the biodiversity of natural aquatic ecosystems, the health of the aquatic environment, and the quality of surrounding aquatic and terrestrial ecosystem.*' (General Principle, Aquatic Ecosystems 9.2)

The harvest of aquatic plants *'shall not disrupt the ecosystem or degrade the collection area or the surrounding aquatic and terrestrial environment.'* (9.3.2)

Under Principle 9.2 on aquatic ecosystems it is recommended that production should maintain the aquatic environment by providing for: *' biodiversity through polyculture and maintenance of riparian buffers with adequate plant cover'.*

Ecological buffer zones are also recommended in the terrestrial environment to maintain the original vegetation that houses pest predators and to create diversified ecosystems to manage pests, diseases and weeds (4.5). Buffer zones are defined in Section B.

Protected areas

Although community conserved areas are not stated as protected, it is recommended that: '*Operators should respect the rights of indigenous peoples, and should not use or exploit land whose inhabitants or farmers have been or are being impoverished, dispossessed, colonized, expelled, exiled or killed, or which is currently in dispute regarding legal or customary local rights to its use or ownership.*' (8 Social Justice)

Priority areas

Not specifically included.

SOCIAL COMPONENTS

Free, Prior and Informed Consent (FPIC)

As a general principle: '*Decisions should reflect the values and needs of all who might be affected, through transparent and participatory processes.*' (The Principle of Care). There is no specific requirement relating to FPIC however.

Access and Benefit Sharing (ABS)

Not specifically included.

ALIGNMENT AND REFERENCE TO INTERNATIONAL CONVENTIONS

Convention on Biological Diversity (CBD)

Not specifically included.

Roundtable for Sustainable Biofuels (RSB)

Name of Standard	RSB Principles and Criteria for Sustainable Biofuel Production
Organisation	Roundtable on Sustainable Biofuels (RSB)
Documents Reviewed	RSB Principles & Criteria for Sustainable Biofuel Production. [RSB-STD-01-001 (version 1.0)] RSB Guidance on Principles & Criteria for Sustainable Biofuel Production. [RSB-GUI-01-001 (version 1.0)] Use of Terms for the RSB Principles & Criteria (Glossary). [RSB-DOC-01-001 (version 1.0)] Annex to the Guidelines for environmental and social impact assessment, stakeholder mapping and community consultation specific to the biofuels sector – Ecosystem and Conservation Specialist Guidelines. [RSB-GUI-01-004 (version 1.0)]
Version Reviewed	Version 1.0 - 12-11-2009
First Version	November, 2009[7]
Reviewed By	S. Kenney
Reviewed On	09.11.2010

DESCRIPTION / SUMMARY

The Roundtable on Sustainable Biofuels (RSB) is an international initiative that brings together all partners concerned with the sustainability of biofuels production and processing. It developed a Standard for sustainable biofuel production, which is based on a set of Principles and Criteria. Principle 7 specifically addresses conservation. Some of the criteria requirements noted only apply to certain operators. A guidance document, compliance indicators, glossary and guidelines, including a complete guideline to conduct Environmental and Social Impact Assessments (ESIA), supplement the principles and criteria. Attached to this guideline is Specialist Ecosystem and Conservation Guidelines for assessing the conservation value of potential land for biofuel production. This review was based on Version One of the RSB Standard, which was approved for pilot testing in November 2009. Note that an updated Version 2 was released after the completion of this review.

THREAT BASED MEASURES

Habitat loss and restoration

A minimum requirement under criterion 7.a is that:

- *'Areas identified as "no-go areas" shall not be used for biofuel operations after the 1st of January 2009, unless feedstock production or processing operations are legally authorised as part of the conservation management for the area concerned.'*
- *'areas that contain identified conservation values of global, regional or local importance, such as natural habitats, or that serve to maintain or enhance such conservation values (e.g. natural buffer zones) shall not be converted after the 1st of January 2009 '*

Promotes the use of degraded, abandoned or marginal lands. (RSB Guidance, p.12)

'Land conversion shall not lead to the loss of conservation values. In addition, a clear conservation benefit (e.g. increased habitat or mating areas for wildlife) or a social benefit (e.g. employment or improved livelihood) is requested.' (RSB Guidance, p.13)

Criterion 7.b requires that *Biofuel Operations shall protect, restore or create buffer zones.*

Criterion 7.d requires that *Ecological corridors shall be protected, restored or created to minimize fragmentation of habitats.*

Over-exploitation

Areas containing important conservation values *'shall only be used if adequate management practices maintain or enhance the identified conversation values (e.g. sustainable biomass harvesting).'* (Criterion 7.a, minimum requirement)

Invasive species

Two definitions are given: '*An alien species is a species, subspecies or lower taxon, introduced outside its natural past or present distribution. (Source: CBD)'*; and '*An alien invasive species is an alien species which becomes established in natural or semi--natural ecosystems or habitat, is an agent of change, and threatens native biological diversity, food security, human health, trade, transport and or economic development. (Source: IUCN – ISSG & 2010 Biodiversity Partnership)'* (Glossary).

7 http://rsb.epfl.ch/page-51763-en.html

'Biofuel operations shall prevent invasive species from invading areas outside the operation site. Operators shall not use any species officially prohibited in the country of operation. If the species of interest is not prohibited in the country of operation, Operators shall seek adequate information about the invasiveness of the species to be used for feedstock production, e.g. in the Global Invasive Species Database (GISD). If the species is recorded as highly invasive under similar conditions (similar climate, and similar local ecosystems, and similar soil types), this species shall not be used. If the species has not been recorded as representing a high risk of invasiveness under similar conditions (climate, local ecosystems, soil type), this species shall not be used'. (Criterion 7.e)

If a species if is not recorded as having a high risk of invasiveness, four specific steps are to be followed, as detailed under Criterion 7.e, based on IUCN guidelines.

Mitigation measures for the introduction and spread of alien species are given in the Ecosystem and Conservation Specialist Guidelines.

Mitigation hierarchy

Within the Ecosystem and Conservation Specialist Guidelines various mitigation measures are outlined for eliminating and reducing impacts (10.1). There is no formal mitigation hierarchy defined however.

No net loss/net positive impact

Not specifically included.

BIODIVERSITY COMPONENTS

Species

'*Hunting, fishing, ensnaring, poisoning and exploitation of rare, threatened, endangered and legally protected species shall not occur on the operation site.*' (Criterion 7.a, p.17)

Operators are required to evaluate the conservation values of potential or existing operation areas following a land use impact assessment, and then maintain and enhance them. (Criterion 7.a, minimum requirement)

Conservation values include '*The presence of rare, threatened, endangered and legally protected species, including any species included in IUCN red list under the categories "vulnerable", "endangered" and "critically endangered"*', the presence of viable populations of natural species in natural distribution and abundance patterns, and outstanding biodiversity levels, such as the number of species. (Guidance Document and Ecosystem and Conservation Specialist Guidelines)

'*Biofuel operations shall only happen on higher risk areas under limited conditions, which ensure that their conservation value(s) is/are maintained or enhanced.*' (Criterion 7.a, Minimum requirements). "Higher risk areas" are noted in the Ecosystem and Conservation Specialist Guidelines as including High Conservation Value (HCV) areas. HCV 1 is inclusive of threatened and endangered species (HCV1.2), endemic species (HCV1.3) and critical temporal use areas (HCV1.4), such as migration sites, migration routes or corridors, according to the HCV Network guidelines, and HCV2 includes landscapes where viable populations of most if not all naturally occurring species exist in natural patterns, as stated in the Glossary. Other "higher risk areas" include KBAs, IBAs, Wetlands, and several others.

Habitats

Principle 7 states that biofuels operations shall avoid negative impacts on biodiversity, ecosystems and other conservation values. As a minimum requirement: *'Biofuel operations shall only happen on higher risk areas under limited conditions, which ensure that their conservation value(s) is/are maintained or enhanced.*' (Criterion 7.a). "Higher risk areas" are noted in the Ecosystem and Conservation Specialist Guidelines and include wetlands, highly biodiverse grasslands and savannahs, landscape-scale forests and ecosystems, natural and semi-natural ecosystems, peat swamps, ecological corridors, areas providing crucial ecosystem services and HCV areas, among others. HCV3 is inclusive of areas that are in or contain rare, threatened or endangered ecosystems, according to the Glossary. Highly biodiverse grasslands are also defined in the Glossary.

Criterion 7.a: '*Conservation values within the potential or existing area of operations shall be identified through a land-use planning process. Conservation values of local, regional or global importance within the potential or existing area of operation shall be maintained or enhanced.*'

The term 'conservation values' is defined as: *'Biological, ecological, social or cultural features of a delineated area, which justify the implementation of conservation measures, e.g., biodiversity.*' Within the Ecosystem and Conservation Specialist Guidelines this is noted to include pristine/primary ecosystems, natural ecosystems, landscape-scale forests or ecosystems, peatlands, and culturally important sites, among others.

'Following the land-use impact assessment (7a), operators shall implement a management plan and practices that maintain ecosystem functions and services both inside and outside the operation site, which are directly affected by biofuel operations.' (Criteria 7.b, Minimum requirements)

Ecological corridors within the site must be protected with surrounding buffer zones after 1st January 2009, and if

the operation impairs connectivity, ecological operators will be created (Criterion 7.d.1, minimum requirements). Progress requirements also state that new ecological corridors should be created if surrounding areas contain wildlife and there is evidence that they would improve connectivity, and ecological corridors destroyed between 2004-2008 will be restored. (Criterion 7.d.2)

Minimum requirement - '*Buffer Zones shall be protected, restored or created to avoid negative impacts from biofuel operations on areas that are contiguous to the operation site.*' Buffer zones are also required to be protected, restored or created within the operation site to avoid negative impacts on water courses, aquifers and in any areas with conservation values of local, regional or global importance and that '*remain unused for biofuel operations.*' (Criterion 7.c)

Protected areas

'Legally Protected Areas' are defined in the glossary as: '*Any area, which is protected by a country's law against exploitation and/or land use change, e.g. Wildlife sanctuary, biological reserve, cultural area.*' Such areas are considered "no-go areas" and include UNESCO'S World Heritage Sites, Ramsar Sites, IUCN Protected Areas I or II and other legally protected areas. (Ecosystem and Conservation Specialist Guidelines, p.5)

'*Biofuel operations shall only happen on higher risk areas under limited conditions, which ensure that their conservation value(s) is/are maintained or enhanced.*' (Criterion 7.a, Minimum requirements). "Higher risk areas" are noted in the ECSG and include High Conservation Value areas, IUCN Protected Areas 3 or 4, Natura 2000 areas, and others. HCV 6 is defined as: '*Areas critical to local communities' traditional cultural identity (e.g. areas of cultural, ecological, economic or religious significance identified in cooperation with such local communities)*' within the Glossary, and HCV1 is inclusive of protected areas, according to the HCV Network guidelines.

Priority areas

'*Areas identified as "no-go areas" shall not be used for biofuel operations after the 1st of January 2009, unless feedstock production or processing operations are legally authorised as part of the conservation management for the area concerned*' (Criterion 7.a, Minimum requirements). "No-go areas" include Alliance for Zero Extinction (AZE) areas. (Ecosystem and Conservation Specialist Guidelines)

'*Biofuel operations shall occur in priority on areas with the lowest possible risk of impacts on people and the environment. Biofuel operations shall only happen on higher risk areas under limited conditions, which ensure that their conservation value(s) is/are maintained or enhanced.*' (Criterion 7.a, Minimum requirements). "Higher risk areas" are noted in the Ecosystem and Conservation Specialist Guidelines, inclusive of High Conservation Value areas, Key Biodiversity Areas and Important Bird Areas.

SOCIAL COMPONENTS

Free, Prior, Informed Consent (FPIC)

'*Free, Prior & Informed Consent (FPIC) shall form the basis for the process to be followed during all stakeholder consultation, which shall be gender sensitive and result in consensus-driven negotiated agreements.*' (Criterion 2.b)

'*Water resources under legitimate dispute shall not be used for biofuel operations until any legitimate disputes have been settled through negotiated agreements with affected stakeholders following a free, prior and informed consent enabling process.* '(Criterion 9.a)

'*Free, Prior, and Informed Consent shall form the basis for all negotiated agreements for any compensation, acquisition, or voluntary relinquishment of rights by land users or owners for biofuel operations.*' (Criterion 12.b)

Access and Benefit sharing

'*At least one measure to significantly optimize the benefits to local stakeholders shall be implemented within a five year period of the start of the operations*' (Criterion 5.a). Although benefits in relation to resources are not referred to, these could be inclusive.

'*The Conservation Values of local, regional or global importance*' mentioned under 7.a include social components such as traditional use of land or use for subsistence.

ALIGNMENT AND REFERENCE TO INTERNATIONAL CONVENTIONS

Convention on Biological Diversity (CBD)

'*Biofuel operations shall comply with all applicable laws and regulations of the country in which the operation occurs and with relevant international laws and agreements*' (Criterion 1). The CBD is noted as a relevant international convention (RSB Guidance).

The Cartagena Protocol on Biosafety to the CBD is referenced. (Criterion 11a)

Definition of 'Alien Species' sourced from the CBD. (Glossary)

Roundtable on Sustainable Palm Oil (RSPO)

Name of Standard	RSPO Principles and Criteria for Sustainable Palm Oil Production
Organisation	Roundtable on Sustainable Palm Oil (RSPO)
Documents Reviewed	RSPO Principles and Criteria for Sustainable Palm Oil Production: including Indicators and Guidance.
Version Reviewed	October 2007
First Version	November, 2005[8]
Reviewed By	S. Kenney
Reviewed On	09.11.2010

DESCRIPTION / SUMMARY

The Roundtable on Sustainable Palm Oil (RSPO) was formed in 2004 with the objective of 'promoting the growth and use of sustainable oil palm products through credible global standards and engagement of stakeholders' and unites stakeholders from seven sectors of the palm oil industry. Principle 5 is specifically concerned with environmental responsibility and the conservation of natural resources and biodiversity.

THREAT BASED MEASURES

Habitat loss and restoration

'*New plantings since November 2005, are not to replace any area required to maintain or enhance one or more High Conservation Values.*' (Criterion 7.3) High Conservation Values (HCVs) are defined in the Definitions section, and make use of the HCV Network categories, although only refer to forest areas.

As an indicator under Criterion 7.3 it is stated that '*Development should actively seek to utilise previously cleared and/or degraded land. Plantation development should not put indirect pressure on forests through the use of all available agricultural land in an area.*'

Criterion 7.4 *'Extensive planting on steep terrain, and/or on marginal and fragile soils, is avoided.'* Indictors of this are maps identifying these soils, including peat soils, and: *'Where limited planting on fragile and marginal soils is proposed, plans shall be developed and implemented to protect them without incurring adverse impacts.*'

Over-exploitation

Not specifically included. However over exploitation is limited indirectly through controlling any illegal or inappropriate hunting, fishing or collecting activities and resolving human-wildlife conflicts. (Indicators under Criterion 5.2)

Invasive species

Invasive species are referred to under pest management: *'Pests, diseases, weeds and invasive introduced species are effectively managed using appropriate Integrated Pest Management (IPM) techniques.'* (Criterion 4.5)

Mitigation hierarchy

Aspects of palm oil plantation and mill management that have environmental impacts are required to have '*plans to mitigate the negative impacts and promote the positive ones.*' (Criterion 5.1).

No net loss/net positive impact

Not specifically included.

BIODIVERSITY COMPONENTS

Species

'*The status of rare, threatened or endangered species and high conservation value habitats , if any, that exist in the plantation or that could be affected by plantation or mill management, shall be identified and their conservation taken into account in management plans and operations.*' Information should be collated that includes*: 'Conservation status (e.g. IUCN status), legal protection, population status and habitat requirements of rare, threatened, or endangered species.*' (Criterion 5.2). Criterion 2.1 requires compliance with all applicable local, national and ratified international laws and regulations.

Appropriate management practices include ensuring any legal requirements are met, and controlling any illegal or inappropriate hunting, fishing or collecting activities and resolving human-wildlife conflicts. (Indicators under Criterion 5.2)

'*New plantings since November 2005, are not to replace any area required to maintain or enhance one or more High Conservation Values.*' (Criterion 7.3). Within the definitions section High Conservation Values (HCV) refer to forest areas

8 http://www.rspo.org/?q=page/491

only, with HCV 1 being forest areas that contain significant concentrations of biodiversity values, such as endemism or endangered species, and HCV2 being significant large landscape level forests where viable populations of most if not all naturally occurring species exist in natural patterns. According to the HCV Network guidelines, HCV 1 also includes critical temporal use areas (HCV1.4), such as migration sites, migration routes or corridors.

Habitats

High Conservation Value (HCV) areas include forest areas that contain rare, threatened and endangered ecosystems (HCV3). New plantings since November 2005 are not to replace such areas, unless in restricted areas of a landholding, where such areas must be maintained or enhanced. (Criterion 7.3)

Under criterion 5.2: '*high conservation value habitats, if any, that exist in the plantation or that could be affected by plantation or mill management, shall be identified and their conservation taken into account in management plans and operations.*'. Information collated should include the identification of high conservation value habitats, sure as rare or threatened ecosystems that could be significantly affected.

Damage and deterioration to the habitats of legally protected species is to be avoided and any legal requirements to the protection of habitats met. (Indicator under Criterion 5.2)

Criterion 4.4 on maintaining the quality and availability of water, states the '*Protection of water courses and wetlands, including maintaining and restoring appropriate riparian buffer zones*' as an indicator of this.

Protected areas

'*Information should be collated that includes both the planted area itself and relevant wider landscape-level considerations (such as wildlife corridors). This information should cover: presence of protected areas that could be significantly affected by the grower or miller are to be identified.*' (Criterion 5.2)

'*New plantings since November 2005, are not to replace any area required to maintain or enhance one or more High Conservation Values.*' (Criterion 7.3). High Conservation Value (HCV) 1 includes protected areas (HCV1.1), according to the HCV Network guidelines, and '*Forest areas critical to local communities' traditional cultural identity (e.g. areas of cultural, ecological, economic or religious significance identified in cooperation with such local communities)*' (HCV6) as stated in the definitions section.

No new plantings are established on local peoples land. (Criterion 7.5)

Priority areas

'*New plantings since November 2005, are not to replace any area required to maintain or enhance one or more High Conservation Values.* '(Criterion 7.3). HCV1 can be interpreted as including priority areas: '*Forest areas containing globally, regionally or nationally significant concentrations of biodiversity values*'. (Definitions)

SOCIAL COMPONENTS

Free, Prior and Informed Consent (FPIC)

'*No new plantings are established on local peoples land without their free, prior and informed consent*' through a documented system that allows them to express their views through their own representatives. (Criterion 7.5)

'*Use of the land for oil palm does not diminish the legal rights, or customary rights, of other users, without their free, prior and informed consent.*' (Criterion 2.3)

FPIC is to be obtained in relation to the relinquishment of rights and compensation for the acquisition of land. (Criterion 7.6)

Annex 1 lists a number of international agreements to be complied with that call for the right of free, prior and informed consent or similar practices.

Access and Benefit Sharing (ABS)

'*Negotiated agreements should be non-coercive and entered into voluntarily, carried out prior to new investments or operations and based on an open sharing of all relevant information in appropriate forms and languages, including assessments of impacts, proposed benefit sharing and legal arrangements*' (Criterion 2.3)

'*Local people are compensated for any agreed land acquisitions and relinquishment of rights, subject to their free, prior and informed consent and negotiated agreements.*' (Criterion 7.6)

Criteria 7.6 requires the inclusion of indigenous peoples, and Annex 1 is referred to, which lists a number of international standards inclusive of the ILO Convention 169 (1989) on Indigenous and Tribal Peoples, UN Declaration on the Rights of Indigenous Peoples (2007) and UN Convention on Biological Diversity (1992).

ALIGNMENT AND REFERENCE TO INTERNATIONAL CONVENTIONS

Convention on Biological Diversity (CBD)

'*Compliance with all applicable local, national and ratified international laws and regulations. ...includes laws made*

pursuant to a country's obligations under international laws or conventions (e.g. the Convention on Biodiversity, CBD).'
(Criterion 2.1)
The CBD's Article 10(c) is referred to in connection with protecting and encouraging customary use of biological resources in accordance with traditional practices. (Annex 1)

Round Table on Responsible Soy Production (RTRS)

Name of Standard	RTRS Standard for Responsible Soy Production
Organisation	The Round Table on Responsible Soy Association (RTRS)
Documents Reviewed	RTRS Standard for Responsible Soy Production Version 1.0 [RTRS_STD_001_V1-0_ENG_for responsible soy production]
Version Reviewed	Version 1.0 - 10 June 2010
First Version	June, 2010[9]
Reviewed By	S. Kenney
Reviewed On	11.11.2010

DESCRIPTION / SUMMARY

The Round Table on Responsible Soy Association (RTRS) is an initiative formed in 2006, composed of the main international soy stakeholders. It promotes the use and growth of responsible production of soy through its global standard, with Principle 4 specifically focused on environmental responsibility. The guidance in Annex 1 must be followed by all users of the standard.

THREAT BASED MEASURES

Habitat loss and restoration

'After May 2009 expansion for soy cultivation has not taken place on land cleared of native habitat' (4.4.1). An exception is when it is in line with an RTRS-approved map and system. These maps indicate four areas inclusive of: areas critical for biodiversity (hotspots) where conversion of native vegetation should not occur, areas with high biodiversity importance *'where expansion of soy is only carried out after an HCVA assessment which identifies areas for conservation and areas where expansion can occur',* areas where existing legislation is adequate to control expansion and areas already used for agriculture. (Annex 4)

If no RTRS-approved map and system exists: *'Any area already cleared for agriculture or pasture before May 2009 and used for agriculture or pasture within the past 12 years can be used for soy expansion, unless regenerated vegetation has reached the definition of native forest'* (4.4.1.2). Native forest is defined in the glossary.

'There is no expansion in native forests' (4.4.1.2). Expansion into other native habitats for which there are no RTRS-approved maps and systems only occurs if there are areas designated for expansion by zoning maps, if expansion is outside priority conservation areas as shown on maps produced by the government under the Convention on Biological Diversity, or if a High Conservation Value Area (HCVA) assessment finds no HCVA. HCVAs are defined in the glossary.

'Natural vegetation areas around springs and along natural watercourses are maintained or re-established' (5.2). To achieve this watercourses and the status of riparian vegetation are identified and mapped (5.2.1) and: *'Where natural vegetation in riparian areas has been removed there is a plan with a timetable for restoration which is being implemented'* (5.2.2).

To increase carbon sequestration opportunities *'restoration of native vegetation, forest plantations and other means are identified'* (4.3.4).

Over-exploitation

Over exploitation is indirectly limited by no hunting of rare, threatened or endangered species. (4.5.3)

Invasive species

Principle 5.8 calls for systematic measures to control, monitor and minimise the spread of invasive introduced species. Under this:

'*Where there are institutional systems in place to identify and monitor invasive introduced species and new pests, or major outbreaks of existing pests, producers follow the requirements of these systems, to minimize their spread*' (5.8.1)

'*Where such systems do not exist, incidences of new pests or invasive species and major outbreaks of existing pests are communicated to the proper authorities and relevant producer organizations or research organizations.*' (5.8.2)

Additionally the use of native vegetation is referred to multiple times.

Mitigation hierarchy

Environmental impacts of large or high risk new infrastructure are to be assessed and: '*Measures to minimize or mitigate the impacts identified by the assessment are documented and are being implemented'* to avoid any negative impacts (4.1.4). A formal mitigation hierarchy is not defined however.

9 http://www.responsiblesoy.org/index.php?option=com_content&view=article&id=9&Itemid=12&lang=en

No net loss/net positive impact

Not specifically included.

BIODIVERSITY COMPONENTS

Species

'*No hunting of rare, threatened or endangered species takes place on the property.*' (4.5.3). No definitions are given of these species, although an 'endemic species' is defined in Annex 3. Nationally recognized threatened species are addressed at the National Interpretation level however.

A RTRS-approved map and system indicates '*areas with high importance for biodiversity where expansion of soy is only carried out after an HCVA assessment*' (Annex 4). Where no RTRS-approved map and system is available a: '*High Conservation Value Area (HCVA) assessment is undertaken prior to clearing and there is no conversion of High Conservation Value Areas*' (4.4.1.2). Assessment should using existing guidance such as the HCV Toolkit according to Annex 1. High Conservation Value (HCV) 1 includes endemism and endangered species and HCV2 includes large landscape-level areas where viable populations of most if not all naturally occurring species exist in natural patterns, as stated in the Annex 3. Existing HCV Network guidance further details the inclusion of threatened and endangered species (HCV1.2), and critical temporal use areas (HCV1.4), such as migration sites, migration routes or corridors.

Habitats

Native forests cannot be forested even if an official land use map permits this (Annex 1, 4.4). The glossary defines native forest as: '*Areas of native vegetation of 1ha or more with canopy cover of more than 35 % and where some trees (at least 10 trees per hectare) reach 10m in height (or are able to reach these thresholds in situ (i.e. In that soil/climate combination)).*' (Annex 3). Where local definitions of Native Forest exist these must be considered alongside the RTRS definition, particularly if they are more stringent.

Areas previously cleared for agriculture or pasture before May 2009 cannot be used for soy expansion if '*regenerated vegetation has reached the definition of native forest.*' (4.4.1.2 a)

'*On-farm biodiversity is maintained and safeguarded through the preservation of native vegetation.*' (4.5). This is achieved through a map of the farm showing native vegetation (4.5.1) and a plan being implemented to ensure native vegetation is being maintained (4.5.2).

'*Natural wetlands are not drained and native vegetation is maintained*' (5.2.3). Wetlands are defined in Annex 3 as: '*Areas of marsh, fen, peatland, or water - whether natural or artificial, permanent or temporary- with water that is static or flowing, brackish or salt (Ramsar convention).*'

A RTRS-approved map and system indicates '*areas with high importance for biodiversity where expansion of soy is only carried out after an HCVA assessment which identifies areas for conservation and areas where expansion can occur* ' (Annex 4). Where no RTRS-approved map and system is available a: '*High Conservation Value Area (HCVA) assessment is undertaken prior to clearing and there is no conversion of High Conservation Value Areas*' (4.4.1.2). The six High Conservation Value (HCV) areas include multiple important habitats, such as HCV3 '*Areas that are in or contain rare, threatened or endangered ecosystems*', as defined under the existing HCV Network guidance.

Protected areas

A RTRS-approved map and system indicates four areas inclusive of areas critical for biodiversity (hotspots) where conversion of native vegetation should not occur and '*areas with high importance for biodiversity where expansion of soy is only carried out after an HCVA assessment*' (Annex 4).

Where no RTRS-approved map and system is available a: '*High Conservation Value Area (HCVA) assessment is undertaken prior to clearing and there is no conversion of High Conservation Value Areas*' (4.4.1.2). High Conservation Value (HCV) 1 includes protected areas (HCV1.1) under the existing HCV Network guidance, and HCV6 as defined in Annex 3 as '*Areas critical to local communities' traditional cultural identity (areas of cultural, ecological, economic or religious significance identified in cooperation with such local communities).*'

Priority areas

A RTRS-approved map and system indicates four areas inclusive of areas critical for biodiversity (hotspots) and '*areas with high importance for biodiversity where expansion of soy is only carried out after an HCVA assessment*' (Annex 4).

Where no RTRS-approved map and system is available a: '*High Conservation Value Area (HCVA) assessment is undertaken prior to clearing and there is no conversion of High Conservation Value Areas*' (4.4.1.2). High Conservation Value (HCV) 1 comprises '*areas containing globally, regionally or nationally significant concentrations of biodiversity values*', as defined under existing HCV Network guidance.

Expansion into other native habitats that are not native forest, for which there are no RTRS-approved maps and systems, only occurs if expansion is outside priority conservation areas as shown on maps produced by the government under the Convention on Biological Diversity.

SOCIAL COMPONENTS

Free, Prior, Informed Consent (FPIC)

'*There is no conversion of land where there is an unresolved land use claim by traditional land users under litigation, without the agreement of both parties.*' (4.4.2)

'*Where rights have been relinquished by traditional land users there is documented evidence that the affected communities are compensated subject to their free, prior, informed and documented consent.*' (3.2.2)

Access and Benefit sharing

Traditional land users are compensated for relinquishment of rights (3.2.2), although compensation for the use of resources or traditional knowledge is not specifically mentioned.

ALIGNMENT AND REFERENCE TO INTERNATIONAL CONVENTIONS

Convention on Biological Diversity (CBD)

Referenced in relation to expansion only occurring outside priority conservation areas as shown on maps produced by governments under the CBD. (4.4.1.2)

Smithsonian Migratory Bird Centre (SMBC)

Name of Standard	Norms for Production, Processing and Marketing of 'Bird Friendly®' Coffee
Organisation	Smithsonian Migratory Bird Center (SMBC)
Documents Reviewed	Norms for Production, Processing and Marketing of "Bird Friendly®" Coffee - Certified Organic Shade Grown Coffee
Version Reviewed	Version 1 - 04.04.2002
First Version	January, 1999[10]
Reviewed By	S. Kenney
Reviewed On	05.11.2010

DESCRIPTION / SUMMARY

The Smithsonian Migratory Bird Centre, dedicated to research and education related to the conservation of neo-tropical migratory birds, has developed the "Bird Friendly®" seal of approval that identifies coffee farms managed in ways that maintain or create quality habitat and lead to a healthy environment. Any group wishing to have their coffee certified must also have an organic certification. "Bird Friendly®" coffee is mainly grown in Central and South America.

THREAT BASED MEASURES

Habitat loss and restoration

Not specifically included.

Over-exploitation

The criteria aim to guarantee that production techniques leave intact ecosystems and contribute to the conservation and sustainable use of natural resources. There is no specific criterion relating to over exploitation *per se* however.

Invasive species

Both the upper stratum and backbone species must be native species (3.1.1 and 3.1.3). A native species is defined as '*found within the area of its natural geographical distribution*'. No reference to invasive species is made however.

Mitigation hierarchy

Not specifically included.

No net loss/net positive impact

Not specifically included.

BIODIVERSITY COMPONENTS

Species

The criteria are overall aimed at: '*Protecting structural as well as species biodiversity, in order to guarantee shelter and food for birds, especially migratory ones.*' In order to achieve this, the following criteria exist:

'*The shade must be composed of various tree species*' with at least 10 species in addition to the backbone species. (3.1.1)

'*Species like Gliricidia sepium, Grevillea robusta, Erythrina spp, Albizzia spp. and Pinus spp. are unacceptable as backbone species*' (3.1.1). Backbone species are defined in the criteria as the most common/predominant species forming the principle stratum of shade in the canopy.

'*The growth of epiphytic plants, such as bromeliads, orchids, and ferns, as well as that of parasitic plants and some mistletoes should be encouraged*' (3.1.3)

'*Selection of shade tree species and pruning practices must have a minimum impact on the epiphytes, mosses and lichens.*' (3.1.3)

Habitats

For bird friendly habitats:

'*The coffee plantation must have at least 40 percent canopy cover, even after pruning.*' (3.1.1). Under the terminology section canopy can also be referred to as arboreal or forest coverage and is the: '*Foliage above the coffee bushes*'.

'The plant coverage should include different strata,' which are clearly visible and include a lower and upper stratum (3.1.1 and 3.1.2).

'*The predominant species of the backbone species (Inga and others) must occupy no more than 60 percent of all shade trees. The remaining 40 percent of the shade trees must belong to a minimum of 10 different species*' (3.1.3) and backbone species (main canopy stratum) must be at least 12 meters high (3.1.2).

10 http://nationalzoo.si.edu/scbi/migratorybirds/about/timeline.cfm

'*The canopy's different tree species must be well distributed throughout the entire coffee plantation.*' (3.1.3)
Dead limbs and trunks are encouraged to be left to provide habitats for certain birds and insects. (3.1.3)
'*Vegetational buffer zones must be maintained and protected next to rivers, streams and lakes, as well as zones exposed to erosion*' that are at least 5 meters wide along streams and 10 meters wide along rivers, and composed of natural vegetation. (3.1.5)
'*A living fence or border strip of trees and shrubs along roadways and other borders must be maintained.*' (3.1.5)

Protected areas

According to the aims of the criteria '*the forest transformed for coffee production must not be part of any protected zone or natural reserve*'. No specific criterion is detailed in relation to this however.

Priority areas

Not specifically included.

SOCIAL COMPONENTS

Free, Prior, Informed Consent (FPIC)

Not specifically included.

Access and Benefit sharing

Not specifically included.

ALIGNMENT AND REFERENCE TO INTERNATIONAL CONVENTIONS

Convention on Biological Diversity (CBD)

Not specifically included.

Sustainable Agriculture Network (SAN)

Name of Standard	Sustainable Agriculture Standard
Organisation	Sustainable Agriculture Network (SAN) Secretariat, Rainforest Alliance
Documents Reviewed	Sustainable Agriculture Standard. Sustainable Agriculture Network. July 2010.
Version Reviewed	July 2010
First Version	2001[11]
Reviewed By	S. Kenney
Reviewed On	26.11.2010

DESCRIPTION / SUMMARY

The Sustainable Agriculture Network is a coalition of leading conservation groups that works with farmers to ensure compliance with the SAN standards. The standards are supported by the Rainforest Alliance's agricultural program and farmers that meet these are awarded the Rainforest Alliance Certified Seal. Two sections of the standard, 'Ecosystem Conservation' and 'Wildlife Protection', are of particular relevance to biodiversity.

THREAT BASED MEASURES

Habitat loss and restoration

Critical criterion: '*The cutting of natural forest cover or burning to prepare new production areas is not permitted.*' (9.5)

'*All existing natural ecosystems, both aquatic and terrestrial, must be identified, protected and restored through a conservation program. The program must include the restoration of natural ecosystems or the reforestation of areas within the farm that are unsuitable for agriculture*', with the definition of a natural ecosystem given in the document. (2.1, Critical Criterion)

The farm is not allowed to destroy any natural ecosystem from the date of certification. '*Additionally, from November 1, 2005 onwards no high value ecosystems must have been destroyed by or due to purposeful farm management activities',* with high value ecosystems defined in the document. If natural ecosystems have been destroyed between 1st November 1999 and 1st November 2005 steps for analysis and mitigation are detailed. (2.2, Critical Criterion)

'*Farms must not alter natural water channels to create new drainage or irrigation canals. Previously converted water channels must maintain their natural vegetative cover or, in its absence, this cover must be restored.*' (2.6)

Ecosystem connectivity, defined in the document, is required to be maintained and restored within the boundaries of the farm. (2.9)

Restoration of habitats on the farm used by resident and migratory wildlife species is required. (3.2)

With application to sugar cane cultivation only, fire must not be allowed to spread to conservation areas. (8.8, Critical Criterion)

Over-exploitation

'*Cutting, extracting or harvesting trees, plants and other non-timber forest products is only allowed in instances when the farm implements a sustainable management.*' The sustainable management plan must be approved by the relevant authorities, have all permits required by law, or if no applicable laws exist, be developed by a competent professional. (2.4)

'The establishment of new production areas must be based on land use capacity studies that demonstrate long-term production capacity.' (9.5)

Invasive species

Definitions are given as: '*Exotic species - those species not native to the place where they are found. Species introduced from other regions or areas.*' and '*Native Species: Those species that occur naturally in the place where they are found. For the purpose of this standard, naturalized species – exotic species that have adapted and grow and multiply as if they are native – are also considered as native if it is proven that they do not cause negative economic or environmental impacts'.*

'Exotic wildlife must not be introduced into the farm' (3.6)

'Farms that reintroduce wildlife into natural habitats must have the appropriate permit from the relevant authorities and comply with the conditions established by law, or reintroduce the animals via duly authorized and established programs. A competent professional must advise the farm on release practices'. (3.6)

Mitigation hierarchy

A mitigation plan, defined in the document as a series of actions to compensate for destruction of natural ecosystems, is required in relation to natural ecosystems that have been destroyed between 1999 and 2005 (2.2), but there is no formal mitigation hierarchy.

11 http://sanstandards.org/sitio/subsections/display/2

No net loss/net positive impact

Several sections state that there must be no negative impacts, inclusive of hunting and collection activities (3.3), production areas not causing negative impacts to a range of listed protected areas (2.3), and that compensation for destruction of natural habitats must cover negative impacts (2.2). However this is no overall reference to no net loss of biodiversity, and no reference to a net gain.

BIODIVERSITY COMPONENTS

Species

'The harvesting or other taking of threatened or endangered plant species is not permitted.' (2.4)

'An *inventory of wildlife and wildlife habitats found on the farm must be created and maintained*' (3.1). An inventory of wild species held in captivity is also required, with no endangered or threatened species allowed to be held in captivity. For these captive wild animals the farmer must '*implement policies and procedures to regulate and reduce their tenancy'* (3.4). Captive animals are allowed to be bred as long as the farm meets all requirements and legal conditions (3.5).

'*The farm takes special measures to protect threatened or endangered species*'. Habitats used by wildlife on the farm and migratory species are also protected and restored. (3.2)

'*Hunting, capturing, extracting and trafficking wild animals must be prohibited on the farm.*' The only exception to this is that cultural and ethnic groups are allowed to in designated areas in a controlled manner, as long as they follow a number of conditions that are set out. (3.3, Critical Criterion)

Threatened and endangered species are defined in the Terms and Definitions section as: '*Species of flora and fauna indicated as threatened or endangered in applicable laws as well as by the International Union for Conservation of Nature and Natural Resources' IUCN Red List of Threatened Species'.*

Criterion 1.1 states that '*The farm must have a social and environmental management system according to its size and complexity of its operations that contains the necessary policies, programs and procedures that prove compliance with this standard and respective national legislation binding for social, labor and environmental aspects on farms – whichever is stricter'.* In relation to this auditors base certification audits on national red lists, which are referenced in many of the local SAN indicator documents.

Habitats

Minimum separation is required between production areas and natural terrestrial ecosystems, with the distance defined in Annex 1. (2.5)

'*A vegetated protection zone must be established by planting or by natural regeneration between different permanent or semi-permanent crop production areas or systems.*' (2.5)

High value ecosystems are not to be destroyed after November 2005 (Criterion 2.2). High value ecosystems are defined as: '*Natural ecosystems of special importance to environmental conservation, such as habitat that enables the reproduction of endemic and endangered species or hosts viable wild animal or plant populations; provision of ecosystem services such as watershed protection in serious circumstances; or rare ecosystems. Examples are primary and secondary forests, bush and grass lands, paramo, streams, rivers, pools, lakes, lagoons, swamps, marshes and bogs. Each SAN representative provides further local interpretation to this definition - considering local biophysical conditions.*' Bogs are indicative of peatlands.

Aquatic ecosystems, inclusive of wetlands, and defined within the document, are to be identified and protected by establishing protected zones. In addition: '*Distances between crop plants and aquatic ecosystems as indicated in Annex 1 must be respected*'. (2.1 & 2.6)

'*Ecosystems that provide habitats for wildlife living on the farm, or that pass through the farm during migration, must be protected and restored.*' (3.2)

Vegetation barriers between the crop and areas of human activity must be composed of permanent native vegetation to promote biodiversity. (2.7)

'*Farms with agroforestry crops located in areas where the original natural vegetative cover is forest must establish and maintain a permanent agroforestry system distributed homogenously throughout the plantations.*' The agroforestry system is required to meet three conditions. (2.8)

'Farms in areas where the original natural vegetation is not forest – such as grasslands, savannas, scrublands or shrublands - must dedicate at least 30% of the farm area for conservation or recovery of the area's typical ecosystems'. A plan to establish and recover such vegetation must be implemented within ten years. (2.8)

The farm promotes the use of fallow areas with natural or planted vegetation, with burning not allowed to prepare for this fallow land. (9.4)

Protected areas

A 'Protected Area' is defined as: '*Land or property under legal protection in order to conserve or protect biodiversity or environmental services. Examples include: national parks, wildlife refuges, forestry reserves and private reserves. Some protected areas may contain private land where certain economic activities are allowed to be carried out according to established regulations.*' The term 'protected area' is not specifically referred to in the actual standard text although the other terms do appear.

'*Production areas must not be located in places that could provoke negative effects on national parks, wildlife refuges, biological corridors, forestry reserves, buffer zones or other public or private biological conservation areas.*' (2.3)

The farm is required to respect and not to affect areas and activities important to the communities (7.1) and to protect and conserve community natural resources (7.4).

Priority areas

Protection of other '*biological conservation areas*' (2.3) could be inclusive of priority areas, such as Key Biodiversity Areas, but they are not explicitly referred to. High value ecosystems that are referred to in the standard under criterion 2.2, significantly overlap with the High Conservation Value (HCV) concept.

SOCIAL COMPONENTS

Free, Prior and Informed Consent (FPIC)

The farm must have a legitimate right to land use and tenure. If no documentation for this exists '*The consent of local communities, regarding the land, natural and agricultural resources*' must be shown. (7.6)

Access and Benefit Sharing (ABS)

'Farms must negotiate a fair compensation with local communities and local and national authorities for resources and infrastructure used'. (7.4)

ALIGNMENT AND REFERENCE TO INTERNATIONAL CONVENTIONS

Convention on Biological Diversity (CBD)

Definitions for the 'Conservation of ecosystems' and 'Natural ecosystems' are sourced from the CBD.

UTZ CERTIFIED (UTZ)

Name of Standard	UTZ CERTIFIED *Good Inside* Code of Conduct
Organisation	UTZ CERTIFIED *Good Inside*
Documents Reviewed	For Coffee: v1.2 – Nov 2010, For Tea Farms: v1.0 – Jul 2009. For Cocoa: v1.0 – Apr 2009 For Individual Certification: Version 1.0 – Dec 2009, Summary,For Coffee: Jan 2009 Annex for Group Certification/Individual Farm Certification – For Coffee: Jan 2009 Annex: Guidance Document – For Cocoa: Version 1.0 – Jul 2009 Annex for Cocoa – For Individual Certification: Version 1.0 – Jan 2010
Reviewed Version	Version 1.2 - November 2010 (Coffee) Version 1.0 - July 2009 (Tea) Version 1.0 - April 2009 (Cocoa) Version 1.0 – December 2009 (Cocoa – Individual Certification)
First Version	2007[12]
Reviewed By	S. Kenney
Reviewed On	09.11.2010

DESCRIPTION / SUMMARY

UTZ CERTIFIED is a global certification program for coffee, cocoa and tea, founded in 2002, that ensures traceability and compliance with the Codes of Conduct. Each Code of Conduct comprises of a set of environmental, economic and social criteria for responsible growing practices, including a chapter on natural resources and biodiversity. There are separate Code of Conducts for tea, coffee and cocoa, although these do overlap. The Annexes provide guidance of the requirements of the code.

THREAT BASED MEASURES

Habitat loss and restoration

Deforestation and degradation of primary forests is prohibited on all farms. Cut off dates apply for cocoa: '*There has been no such degradation and/or deforestation after 2008*' (Cocoa, 3.C.3, 99 & 10.C.1 (Individual)), and for tea and coffee: '*The producer demonstrates that there has been no degradation and/or deforestation of primary forest in the 24 months prior to the date of first registration with UTZ CERTIFIED'* (Tea, 10.C.1 and Coffee, 11.C.1).

Guidance also states that it is '*not accepted to use practices to purposely weaken or destroy trees with the objective to deforest in a potential legal way in the future'* (Coffee Annexes, 11.C.1 & Cocoa Annexes, 3.C.3 & 10.C.1 (Individual))

Additionally for cocoa: '*There is no degradation or deforestation of forest that has not been used for agriculture in the past 20 years or more (i.e., that are older than 20 years), after initiating the certification process. This does not refer to timber plantations'.* Also producers do not plant new cocoa on land that is not classified and/or approved for agricultural use. (Cocoa, 3.C.3. 100 & 101)

Deforestation of secondary forest is not allowed unless all the following are compiled with:

- *'legal land title is available*
- *government permits are available (if required)*
- *there is compensation with at least equal ecological value, to be confirmed by an independent expert report* ' (Tea/Cocoa (Individual), 10.C.3 and Coffee, 11.C.3). According to the Annexes, compensation should be at least equal ecological value and could include a larger area, planted with mixed native species, or the establishment of wildlife corridors.

A number of other criteria also relate to clearing and restoring land:

The producer does not plant new tea, coffee or cocoa '*on land that is not classified as agricultural land and/or approved for agricultural use*', complying, as stated in the Annexes, with relevant local and national regulations on land use and biodiversity conservation for all new plantings. (Tea/Cocoa (Individual), 10.C.2 and Coffee, 11.C.2)

'*The producer re-forests and stimulates ecological restoration of areas that are not used for agricultural production on the farm as much as possible.* ' (Tea, 10.C.5, Cocoa (Individual), 10.C.6 & Coffee, 11.C.6)

'*If a producer wants to clear land in - or, when in doubt, near - identified natural habitat, he/she notifies the certificate holder beforehand to come to a joint decision. The certificate holder seeks advice from an environmental expert whether the land clearing is acceptable and how negative effects can be minimized. The joint decision is documented.* ' (Cocoa, 3.C.3, 103)

12 http://goodinside.jp/index.php?pageID=111&showdoc=111_0_54

Over-exploitation

'The producer assesses the possibilities of product diversification as a way of making the coffee production more sustainable.' (Coffee, 11.A.4 & Cocoa (Individual), 10.A.5)

'*The producer uses shade trees whenever this is compatible with the local coffee production practices and takes into consideration the productivity'*. The Annexes state that if native species are recommended by a consultant or expert, the producer follows these recommendations. (Coffee 11.C.5 & Cocoa (Individual), 10.A.5)

Invasive species

Native tree species are used as shade trees (Cocoa, 3.C.1, 94 & 10.C.5 and Summary). Preferably shade trees planted within and around tea fields are native tree species (Tea, 10.C.4).

Mitigation hierarchy

Not specifically included.

No net loss/net positive impact

Not specifically included, although a risk assessment to identify environmental impacts is conducted, identifying possible negative impacts on tea farms, and an action plan to address these risks is implemented and implemented actions are documented (Tea, 10.A.1/2, Cocoa (Individual), 10.A.1 & Coffee 11.A.1/2).

BIODIVERSITY COMPONENTS

Species

Definition of threatened and endangered species: '*species identified as threatened by national and international law, including the IUCN Red List of Threatened Species.*' (List of Definitions)

The summary of the standards states that endangered species are protected.

The certificate holder has information, on coffee farms, and communicates information, on tea and cocoa farms, about the endangered and threatened species, known or likely to be, present in the production area. These species and habitats are protected, and *'hunting, trafficking or commercial collection of such species'* and on coffee farms, habitats, is restricted. (Coffee, 11.C.9, Tea 10.C.8 & Cocoa, 3.C.3, 105 & 10.C.7 (Individual)). Within the cocoa annexes, the guidance recommends asking an external expert to advise on what falls under this category.

The conservation plan includes a baseline assessment of animal and plant diversity in the production area. On tea farms, the effects of agricultural production on, and on cocoa farms, the diversity and abundance of, flora and fauna are monitored. (Tea, 10.A.4 & Cocoa, 10.A.4 (Individual) & 3.C.3, 107 & 108)

Habitats

'The certificate holder has a conservation plan', and participates in a regional biodiversity plan (on coffee and cocoa farms), or a forest management plan (on coffee farms), or participates in a regional plan (on tea farms) to protect and enhance biodiversity on and around the farm. For tea farms and cocoa farms (individual): '*The conservation plan identifies areas of high ecological value, and specifies how they are protected'.* (Cocoa, 3.C.3, 106, & 10.A.3 (Individual), Coffee, 11.A.3 & Tea, 10.A.3)

All natural habitats on cocoa farms must be identified with relevant stakeholders, such as national environmental organisations or experts, with the Annex suggesting identification through a basic overview map (Cocoa, 3.C.3, 102). The definition of a natural habitat, taken from the World Bank is given as: '*Land and water areas where the ecosystems biological communities are formed largely by native plant and animal species and human activity has not essentially modified the area's primary ecological functions.*'

Areas not used for agricultural production, inclusive of low lying wetlands and woodlands according to the Annexes, are to be reforested and ecological restored. (Coffee, 11.C.5 & Cocoa (Individual), 10.C.6)

Shade trees seeds and seedlings are required to be planted and distributed on cocoa farms: '*The producers maintain (or plant enough to eventually have) at least 18 mature shade trees per hectare dispersed on their farms.*' Such trees must be diverse and native species, to achieve multiple canopy levels (Cocoa, 3.C.1), and if there are too few, unsuitable or not enough dispersed trees, trees are planted (Cocoa, 3.C.1 & 10.C.4/5 (Individual)). Guidance within the Cocoa Annex suggests suitable trees for West African cocoa farms.

Wood used for drying is prohibited to come from certain habitats:

'*When using wood for drying of coffee, the producer obtains this wood from managed forests or from the pruning of crops or shade trees, and not from native forests, unmanaged community forests, borders of waterways and other sources of water or protected areas.*' (Coffee, 11.C.4)

'*If wood is used for drying of cocoa, it is not obtained from cutting down trees in native forests, unmanaged community forests, borders of waterways or protected areas.*' (Cocoa, 3.C.3, 104 & 10.D.5 (Individual))

Water sources and the areas immediately surrounding them are protected:

'*The producer protects and conserves all the water streams and sources (incl. ground water) on the farm from contamination and pollution*' (Coffee, 11.B.1, Tea/Cocoa (Individual), 10.B.1 &Cocoa, 3.B.1, 86)
'*The producers allow a strip of native vegetation (at least 5m wide) to grow along water streams and sources to control erosion, filter out agrochemicals and protect the wildlife habitat '* (Coffee, 11.B.2, Tea/Cocoa (Individual), 10.B.2 & Cocoa 3.B.1, 87). The watershed and riverbank vegetation are to be protected (Coffee & Cocoa Annexes).

Protected areas

The List of Definitions states that a protected area is an: '*Area under legal protection in order to conserve biodiversity (e.g. national parks, reserves and wildlife sanctuaries)*.' Within the Annexes such areas are stated to include national parks, nature reserve, wildlife sanctuaries and private parks, and: '*If production already takes place inside protected areas measures are taken to stop these practices*'. (Coffee,11.C.7 & Cocoa, 3.C.2 & 10.C.7(Individual))
Coffee, tea and cocoa production does not take place in protected areas, including those officially proposed, and within the immediate vicinity (2km) of protected area if this is not allowed in the management plan. If production is within 2km of a protected area or biological corridor, the certification holder is in contact with park authorities, so that practices to do jeopardise the park and human-wildlife conflicts are appropriately managed. (Coffee, 11.C.7/8, Tea 10.C.6/7 and Cocoa, 3.C.2 & 10.C.7 (Individual))
For cocoa production within 2km of a protected area, the certificate holder monitors encroachment and reverses any recent encroachment through community awareness and/or reporting to the authorities. Within the Annex, encroachment is stated as a '*negative impact on a forested or protected area through deforestation or use of forest products*'. (Cocoa, 3.C.2, 98)
Wood for drying of cocoa is not sourced from protected areas. (Cocoa, 3.C.3, 104)
Community conserved areas receive protection through, although not for their biodiversity values: 'The certificate holder needs to clearly identify, delineate and preserve areas of social, cultural or religious significance on his/her farm.' (Coffee, 10.F.19, Tea & Cocoa (Individual), 9.F.21)

Priority areas

Not specifically included.

SOCIAL COMPONENTS

Free, Prior and Informed Consent (FPIC)

Not specifically included.

Access and Benefit Sharing (ABS)

2.C states that *the 'UTZ CERTIFIED program is intended to generate both tangible and intangible benefits'* for both coffee and tea producers. No explicit reference to access and benefit sharing of natural resources is made however.

ALIGNMENT AND REFERENCE TO INTERNATIONAL CONVENTIONS

Convention on Biological Diversity (CBD)

Not specifically included.

FINANCE

Asian Development Bank (ADB)

Name of Standard	Safeguard policy
Organisation	Asian Development Bank (ADB)
Documents Reviewed	ADB safeguard policy
Version Reviewed	6/1/2009
First Version	2002 (Environment Policy)[13]
Reviewed By	Matt Jones
Reviewed On	15/11/10

DESCRIPTION / SUMMARY

Development bank safeguard policy specifying requirements to receive financing

THREAT BASED MEASURES

Habitat loss and restoration

Significant Conversion or Degradation is identified and defined as "*(i) the elimination or severe diminution of the integrity of a habitat caused by a major, long-term change in land or water use; or (ii) the modification of a habitat that substantially reduces the habitat's ability to maintain viable populations of its native species.*"

The protection from conversion and degradation is dependent on the habitat type:

For modified habitats, clients must take steps to "*to minimize any further conversion or degradation*". Habitat restoration is also promoted "*depending on the nature and scale of the project*" under clause 25.

For natural habitats, projects must not *"significantly convert or degrade*" the habitat unless three conditions laid out by clause 26 are met:

"*(i) No alternatives are available.*

(ii) A comprehensive analysis demonstrates that the overall benefits from the project will substantially outweigh the project costs, including environmental costs.

(iii) Any conversion or degradation is appropriately mitigated."

Mitigation measures for conversion of Natural habitat must include *"at least no net loss*" which can include "*post project restoration*" under clause 27.

Critical habitat must not be converted unless there are "n*o measurable adverse impacts, or likelihood of such, on the critical habitat which could impair its high biodiversity value or the ability to function*" and that there will not be any "*loss in area of the habitat concerned such that the persistence of a viable and representative host ecosystem be compromised"* both of which have the effect of preventing significant conversion and degradation.

Over-exploitation

Sustainable Resource Management is identified and defined in Clause 32.

Clause 32 requires that "*renewable natural resources will be managed in a sustainable manner*" by the client. The definition includes "*safeguarding the life-supporting capacity of air, water, and soil ecosystems*" and a requirement that where possible clients demonstrate their management of resources is sustainable through an "*appropriate system of independent certification*."

Invasive species

Alien species are indentified and defined as those "*not currently established in the country or region of the project*" within clause 31.

Clients must not "intentionally introduce any new alien species" unless either it is "*carried out in accordance with the existing regulatory framework for such introduction*" or the "*introduction is subject to a risk assessment*" in line with clause 31.

Invasive species are identified by not further defined.

A clear prohibition also exists on the introduction of invasive species as clause 31 states that "*under no circumstances must species known to be invasive be introduced into new environments*." An assessment is also required to identify "*possibility of accidental or unintended introduction*" and to identify measure to minimize the risk of release.

Mitigation hierarchy

While a mitigation hierarchy is not specifically identified, Section 8 Clause 24 includes a hierarchy requiring clients to identify measures to "*avoid, minimize, or mitigate potentially adverse impacts and risks and, as a last resort, propose*

13 http://www.adb.org/safeguards/default.asp

compensatory measures, such as biodiversity offsets, to achieve no net loss or a net gain of the affected biodiversity."

No net loss/net positive impact

The Standard requires in clause 24 that clients "*achieve no net loss or a net gain of the affected biodiversity*" through a stipulated mitigation hierarchy which includes use of compensatory measures as a last resort.

BIODIVERSITY COMPONENTS

Species

Several groups of species are identified and/or defined, including:

"*Critically endangered or endangered species*" are defined based on the IUCN Red List

"*Endemic or restricted-range species*", "*migratory species*", "*globally significant concentrations or numbers of individuals of congregatory species*" and "*unique assemblages of species*" are identified but not further defined.

Endangered and critically endangered species are specifically protected under the requirement that projects must not take place in critical habitat if this leads "*to a reduction in the population*" of those species under clause 28.

Other species are protected based on the other requirements pertaining to natural habitat which must not be significantly converted or degraded such that "*ability to maintain viable populations of its native species*" is diminished.

In addition, the protection afforded to critical habitat under clause 28 includes protection of the species it supports.

Habitats

Natural habitat, Modified habitat and Critical habitat are identified and defined.

Within modified habitat the only requirement in clause 25 is for clients to "*minimize any further conversion or degradation*" and where appropriate should "*enhance habitat and protect and conserve biodiversity as part of project operations.*"

Within natural habitats, projects may only take place under clause 26 if they do not "*significantly convert or degrade*" the habitat, unless there are *"no alternatives... available"* analysis has been carried out and proven that "*the overall benefits from the project will substantially outweigh the project costs, including environmental costs."* and finally that "a*ny conversion or degradation is appropriately mitigated."*

Critical habitat is identified and defined in clause 28 as including "*areas with high biodiversity value*"

The components of critical habitat are further defined through the presence of or significance for:

"critically endangered or endangered species"

"endemic or restricted-range species"

"survival of migratory species"

"globally significant concentrations or numbers of individuals of congregatory species"

"unique assemblages of species or... key evolutionary processes or provide key ecosystem services"

"biodiversity of significant social, economic, or cultural importance to local communities"

Project activity in critical habitat is prohibited under clause 28 unless three requirements are met. The project must not have "*measurable adverse impacts, or likelihood of such*" on the habitat which could affect its "*high biodiversity value or the ability to function*". It must also not "*lead to a reduction in the population of any recognized endangered or critically endangered species"* or reduce the habitat so that the "ecosystem *be compromised*". Finally the requirements in place for other ecosystems must also be in place to mitigate lesser impacts.

An external expert must assist in the assessment of the project under clause 29.

Forest ecosystems which are "*primary tropical moist forests or old-growth forests*" are protected under the prohibited investment activities list which prevents the bank from funding commercial logging operations or purchase of equipment for logging in those habitats.

No other habitats are identified, defined or protected.

Protected areas

Protected areas are identified and defined as those which are "*legally protected*" under clause 30.

Operating in protected areas is not prohibited; however, wherever they do have activities in legally protected areas, clients are required to:

"*(i) Act in a manner consistent with defined protected area management plans.*

(ii) Consult protected area sponsors and managers, local communities, and other key stakeholders on the proposed project.

(iii) Implement additional programs, as appropriate, to promote and enhance the conservation aims of the protected area."

Protected areas and those officially proposed for protection, including those meeting IUCN classification, the RAMSAR List of Wetlands of International Importance, and the Natural World Heritage Sites are included in the definition of critical habitat and thus given additional protection.

Priority areas

Not specifically included.

SOCIAL COMPONENTS

Free, Prior and Informed Consent (FPIC)

Free prior informed consent is noted in the Statement, but is not included in the extant version of the safeguards. However, clause 19 requires that consultation take place which "*(i) begins early in the project preparation stage ... (ii) provides timely disclosure of relevant and adequate information that is understandable and readily accessible to affected people; (iii)... in an atmosphere free of intimidation or coercion; (iv) is gender inclusive and responsive, and tailored to the needs of disadvantaged and vulnerable groups; and (v) enables the incorporation of all relevant views of affected people and other stakeholders into decision making...*". This clause is considered of equivalent effect to the principle of FPIC.

Access and Benefit Sharing (ABS)

Not specifically included.

ALIGNMENT AND REFERENCE TO INTERNATIONAL CONVENTIONS

Convention on Biological Diversity (CBD)

Not specifically included.

European Bank for Reconstruction and Development (EBRD)

Name of Standard	Environmental and Social policy
Organisation	European Bank for Reconstruction and Development (EBRD)
Documents Reviewed	EBRD Environmental and Social policy, May 2008
Version Reviewed	May 2008
First Version	2003[14]
Reviewed By	Matt Jones
Reviewed On	4/10/10

DESCRIPTION / SUMMARY

Development bank environmental and social policy specifying requirements to receive financing

THREAT BASED MEASURES

Habitat loss and restoration

Land conversion is treated in different ways by the Standard dependant on the existing habitat being categorised as Modified, Natural or Critical.

For Modified habitats, Paragraph 11 states that "t*he client should aim to minimise any further degradation or conversion of habitat.*"

For Natural habitats, paragraph 12 requires that "*there must be no significant degradation or conversion...to the extent that (i) the ecological integrity and functioning of the ecosystem is compromised or (ii) the habitat is depleted to the extent that it could no longer support viable populations of its native species*" unless three requirements are met:

- "*there are no technically and economically feasible alternatives*
- *the overall benefits of the project outweigh the costs, including those to the environment and biodiversity*
- *appropriate mitigation measures are put in place to ensure no net loss and preferably a net gain of biodiversity value in the habitat concerned, or, where appropriate, a habitat of greater conservation value.*"

For Critical habitat, paragraph 14 states that it "*must not be converted or degraded.*" Clients are therefore prohibited from implementing any project activities unless four requirements are met:

- *"Compliance with any due process required under international obligations or domestic law that is a prerequisite to a country granting approval for project activities in or adjacent to a critical habitat has been complied with.*
- *There are no measurable adverse impacts, or likelihood of such, on the critical habitat which could impair its ability to function...*
- *Taking a precautionary perspective, the project is not anticipated to lead to a reduction in the population of any endangered or critically endangered species or a loss in area of the habitat concerned such that the persistence of a viable and representative host ecosystem be compromised.*
- *Notwithstanding the above, all other impacts are mitigated in accordance with the mitigation hierarchy.*"

PR6 paragraph 10 further mandates that "*Mitigation measures could include ... post-project site restoration and re-colonisation/stocking".* Whilst paragraph 11 states that "*where there is merit on conservation grounds... the client should identify opportunities to enhance habitats, protect and conserve biodiversity or encourage sustainable harvesting/management* "

Environmental restoration is also mandated following "a major accident" under Paragraph 19 of PR4

Over-exploitation

Sustainable use or management is defined within PR6 in footnote 4 to paragraph 18.

PR6 addresses both Biodiversity generally and "Sustainable Management of Living Natural Resources" and as such, paragraph 18 states that "*clients will manage living resources in a sustainable manner.*" Five principles are given for the sustainable management of living resources:

Consideration of "*the functions it plays within the ecosystem*" which provides examples of the impact of clear felling forests and overfishing

Consideration of "*aggregate and cumulative impacts*"

The need to "*minimise waste and adverse environmental impacts and optimise benefits from uses*"

Restriction on "*plantation or farming of species or populations that are not natural to the location and not tested for their invasiveness and or dominance over local species*" or the need for "*adequate studies and approval prior to utilisation*"

Consideration of "*the needs of indigenous and local communities who live in or around the development area or whose*

14 http://www.ebrd.com/pages/about/principles/sustainability/policy.shtml

use of biodiversity resources may be affected"

Reference is made to the "*Addis Ababa Principles and Guidelines for the Sustainable Use of Biodiversity*" which will guide the bank's decisions.

Invasive species

Alien and Invasive species are identified but not specifically defined within paragraph 16 of PR6.

The adverse impact of alien and invasive species is noted and a requirement that the client "*not intentionally introduce alien or non-native species into areas ... unless this is carried out in accordance with the regulatory framework governing such introduction*" in paragraph 16. Furthermore, "*under no circumstances must species known to be invasive be introduced into new environments*."

An additional requirement is made on the nature of due diligence which must "*assess the possibility of accidental transfer and release of alien species...and identify measures to minimise the potential for release, if any.*"

Mitigation hierarchy

Paragraph 28 of the Environmental and Social Policy introduces a loose mitigation hierarchy which provides that for projects there should be "*a consistent approach to seek to avoid adverse impacts on... the environment, or if avoidance is not possible, to reduce, mitigate, or compensate for the impacts*"

A more detailed and specific mitigation hierarchy is given specifically for biodiversity within PR6:

1. Avoid: The client will seek to avoid adverse impacts on biodiversity.
2. Minimise: Where significant impacts on biodiversity cannot be avoided, the client should identify ways in which project can be modified to minimise impacts on biodiversity.
3. Mitigate: Where significant impacts on biodiversity can neither be avoided nor minimised, the client should identify measures to mitigate those impacts.
4. Offset: Where significant residual impacts on biodiversity remain, in spite of all reasonable attempts to avoid, minimise and mitigate those impacts the client will identify actions or projects to offset those impacts. Any offset projects must be structured and agreed with EBRD.

No net loss/net positive impact

A stated purpose of PR6 is to "*to avoid, minimise and mitigate impacts on biodiversity and offset significant residual impacts, where appropriate, with the aim of achieving no net loss*". To achieve this, clients are expected to "*identify measures to avoid, minimise or mitigate potentially adverse impacts and, where appropriate and as a last resort, propose compensatory measures, such as biodiversity offsets, to achieve no net loss or a net gain of the affected biodiversity*."

BIODIVERSITY COMPONENTS

Species

Endangered or critically endangered species are identified in paragraph 13 of PR6, but no definition is given.

The presence of critically endangered species is one component of identifying critical habitat.

Within areas of critical habitat, PR6 paragraph 14 prohibits any activity which might lead to "lead to a reduction in the population of any endangered or critically endangered species or a loss in area of the habitat concerned such that the persistence of a viable and representative host ecosystem be compromised".

The EBRD exclusion list detailed in PR9 Annex 1 states that "*The EBRD will not knowingly finance, directly or indirectly, projects involving... trade in wildlife or production of, or trade in wildlife products regulated under CITES*"

Endemic, restricted-range, migratory and congregatory species are identified in PR6 and their presence used to define "critical habitat" as are "*assemblages of species associated with key evolutionary processes*" and "*species that are vital to the ecosystem as a whole (keystone species)*."

Within areas of critical habitat activities which might cause "measurable adverse impacts, or likelihood of such, on the critical habitat which could impair its ability to function" as a host habitat for the named species groups (including endemic, restricted-range, migratory and congregatory species and assemblages of species associated with key evolutionary processes and keystone species) are also prohibited by paragraph 14.

Habitats

Habitats are identified and defined as "modified, natural or of critical conservation value"

Natural habitats are defined as "*land and water areas where the biological communities are formed largely by native plant and animal species, and where human activity has not essentially modified the area's primary ecological functions*" and under paragraph 12, "*significant degradation or conversion*" is prohibited such that "*the ecological integrity and functioning of the ecosystem is compromised or (ii) the habitat is depleted to the extent that it could no longer support viable populations of its native species*" unless three criteria are met, including a lack of "*technically and economically feasible alternatives*" if the "*overall benefits of the project outweigh the costs, including those to the environment and*

biodiversity" and finally that "*appropriate mitigation measures are put in place to ensure no net loss and preferably a net gain of biodiversity value in the habitat concerned, or, where appropriate, a habitat of greater conservation value.*"
Modified habitats are defined as those where "*there has been apparent alteration of the natural habitat, often with the introduction of alien species of plants and animals*". Paragraph 11 provides that in modified habitats, and where appropriate, clients should "*enhance habitats, protect and conserve biodiversity or encourage sustainable harvesting/ management*"
Critical Habitat is defined based on:
"(i) its high biodiversity value;
(ii) its importance to the survival of endangered or critically endangered species;
(iii) its importance to endemic or geographically restricted species and sub-species;
(iv) its importance to migratory or congregatory species
(v) its role in supporting assemblages of species associated with key evolutionary processes;
(vi) its role in supporting biodiversity of significant social, economical or cultural importance to local communities;
(vii) its importance to species that are vital to the ecosystem as a whole (keystone species)."
Protection is clearly provided to critical habitats by paragraph 14 which states that it *"must not be converted or degraded."* Further, four requirements are made of projects within or adjacent to critical habitat, including "*compliance with any due process required under international obligations or domestic law*" the need to ensure that "t*here are no measurable adverse impacts, or likelihood of such... which could impair its ability to function*" and that it must be the case that "*the project is not anticipated to lead to a reduction in the population of any endangered or critically endangered species or a loss in area of the habitat concerned such that the persistence of a viable and representative host ecosystem be compromised*". Finally, all other impacts must be "*mitigated in accordance with the mitigation hierarchy*."
Forest habitats are identified within PR6 and clients within the forestry sector are obliged to observe additional requirements for the protection of forest habitats. Clients are required to "*ensure that all natural forests and plantations over which they have management control are independently certified to internationally accepted principles such as those of the Forest Stewardship Council*"
Aquatic habitats are identified within PR6 and clients within the fisheries sector are obliged to observe additional requirements for the protection of aquatic habitats. All fisheries activities must be "undertaken in a sustainable way" with consideration also given to re-population activities which must "ensure that the new stock does not destroy or displace existing local fish species"
Forest, aquatic, wetland and peatland habitats are given additional protection through the requirements of PR1 which states that all Category A projects must undergo detailed due diligence proceedings. Examples of Category A projects include (but are not limited to) "Large-scale logging" "Large-scale peat extraction," and "Large-scale primary agriculture or forestation involving intensification or conversion of natural habitats"

Protected areas

Protected areas are identified and defined as those designated by government agencies "*for a variety of purposes*" - there is no specific reference to designation as a protected area for the protection or conservation of biodiversity.
Clients are required by paragraph 15 to "*consult protected area sponsors and managers, local communities and other key stakeholders*" and to demonstrate that the project "*is legally permitted and that due process leading to such permission has been complied with*" and in addition, "*that the development follows the mitigation hierarchy*". Finally the client is required to"*implement additional programmes, as appropriate, to promote and enhance the conservation aims of the protected area*"
Additional due diligence requirements are placed on projects which are classified as Category A (within PR1 Appendix 1), which includes activities in "*sensitive locations*" such as "*national parks and other protected areas identified by national or international law, and other sensitive locations of international, national or regional importance*"
World Heritage Sites and Ramsar Sites are given protection by the inclusion in Appendix 2 (exclusion list) of "a*ctivities prohibited by host country legislation or international conventions relating to the protection of biodiversity resources or cultural heritage*" the definition of which includes reference to both the UNESCO World Heritage and Ramsar Conventions

Priority areas

Not specifically included.

SOCIAL COMPONENTS

Free, Prior and Informed Consent (FPIC)

Free prior and informed consent is identified and defined based on the UN Declaration on the Rights of Indigenous Peoples

The principles of FPIC are included in PR7 where indigenous people are affected and included in the introduction and in paragraph 31.

PR10 which addressed all stakeholder engagement also upholds the principles of FPIC - although the term itself does not appear in the text of the requirement, instead, paragraph 6 states that "Stakeholder engagement will be free of manipulation, interference, coercion, and intimidation, and conducted on the basis of timely, relevant, understandable and accessible information, in a culturally appropriate format" which is considered to be of equivalent effect.

Access and Benefit Sharing (ABS)

A stated objective of PR6 is to achieve "*fair and equitable sharing of the benefits... arising out of the utilisation of genetic resources*" however there are no further requirements in place to achieve this objective.

ALIGNMENT AND REFERENCE TO INTERNATIONAL CONVENTIONS

Convention on Biological Diversity (CBD)

The Convention on Biological Diversity is referenced alongside many other international and European conventions and council directives. The convention is used to define Biodiversity within the objective of PR6.

Appendix 2: EBRD Environmental and Social Exclusion List states that "*The EBRD will not knowingly finance, directly or indirectly, projects involving the following... Activities prohibited by... international conventions relating to the protection of biodiversity resources*" the footnote to this provision specifically refers to the "*Convention on Biological Diversity and Protocols*"

European Investment Bank (EIB)

Name of Standard	Environmental and social principles and standards
Organisation	European Investment Bank (EIB)
Documents Reviewed	EIB, statement of environmental and social principles and standards, 2009
Version Reviewed	2009
First Version	1996 (Environmental Statement)[15]
Reviewed By	Matt Jones
Reviewed On	10/11/10

DESCRIPTION / SUMMARY

Development bank environmental and social policy specifying requirements to receive financing

THREAT BASED MEASURES

Habitat loss and restoration

Habitat restoration is not specifically identified, however the mitigation hierarchy in clause 70 requires that measures must be taken to "*avoid, minimize or rehabilitate/mitigate impacts*" - whilst this does not prescribe rehabilitation as a requirement in every situation - it provides some impetus for promoters to rehabilitate during and after projects.

Over-exploitation

Over-exploitation or sustainable use are not specifically identified, however the Standard states that the bank seeks to promote "*sustainable land use practices, including sustainable forestry*,"

Invasive species

Invasive species are identified but not specifically defined.

Under clause 74 clients should "*take measures to avoid the introduction of invasive species*" but only in cases where there is "*potential for a significant negative biodiversity impact.*"

Mitigation hierarchy

A mitigation hierarchy is identified and defined within clause 70 which requires that:

"*to take appropriate measures to avoid, minimize or rehabilitate/mitigate impacts that may damage biological diversity. Where residual adverse impacts on biodiversity remain, the promoter may propose biodiversity offsets, where appropriate.*"

Within this hierarchy it is noted that it is not possible to offset loss of critical habitat.

No net loss/net positive impact

No net loss is referred to in the definition of Biodiversity Offsets which explains that the goal of an offset is to "a*chieve no net loss, or preferably a net gain, of biodiversity.*" Offsets are identified as an element of the mitigation Hierarchy which promoters must put in place as part of projects under clause 70.

BIODIVERSITY COMPONENTS

Species

Critically endangered, endangered and vulnerable species are all identified and defined according to the IUCN red list or other nationally held red lists of threatened species.

Endemic and restricted range species are indentified, as are "unique assemblages" and migratory or congregatory species.

In addition, "*key scientific value*" is one of the criteria used to defined critical habitats, this is often used synonymously elsewhere with keystone species and can be interpreted as offering some protection to those species.

The protection afforded to these groups of species is through protection of critical habitats under clause 71.

Habitats

Critical habitat is identified and defined as that which is "of particular ecological value and sensitivity" according to six criteria:

"1: *presence of critically endangered (extremely high risk of extinction), endangered (very high risk) or vulnerable (high risk) species, as defined by the IUCN Red List of Threatened Species and in relevant national legislation;*

2: importance to the survival of endemic or restricted-range species, or unique assemblages of species;

3: required for the survival of migratory species or congregatory species;

4: required for the maintenance of biological diversity with significant social, economic or cultural importance to local communities;

5: required for the maintenance of ecosystem functioning and the provision of key ecosystem goods and services;

15 http://www.eib.org/attachments/strategies/eib_statement_esps_en.pdf

6: key scientific value."

Critical habitats are protected under clause 71 which states that EIB will not finance projects if they have a negative impact on any one of the six criteria used to define critical habitat. However, the bank will finance projects if they "*fully comply with Community legislation on environmental protection, in particular the Habitats Directive*"

The "natural environment" is identified and defined - however the only provision of relevance to habitats not identified as critical or protected is clause 70 which requires that promoters "*demonstrate that a range of alternatives and their impacts on biodiversity has been analyzed.*" They must subsequently apply the mitigation hierarchy.

No further habitats are identified.

Protected areas

Protected areas are identified and defined as including:

- "*Natura 2000 sites designated under EU legislation,*
- *sites recognized under the Ramsar, Bern and Bonn Conventions,*
- *areas designated or identified for designation as protected areas by national Governments.*"

Projects in within these sites will only be financed if "*they are consistent with the relevant legal requirements and site management plans.*" under clause 72.

Natura 2000 sites are given special protection under clause 73 which notes that projects are likely to have a significant effect in these areas - as such the project should be "*subject to the protection regime described in Article 6 of the Habitats Directive*". This requires an assessment as described above, and if, "*a significant effect on a designated habitat type and/or species remains and/or the overall coherence of Natura 2000 is threatened, the Bank will only finance projects if there is an overriding public interest, according to the meaning in the Directive*".

ICCAs are not specifically identified in the Standard, however some de facto protection exists within the requirement of clause 53 which states that "*Where the customary rights to land and resources of indigenous peoples are affected by a project, the Bank requires the promoter to prepare an acceptable Indigenous Peoples Development Plan.*" The content of the Development Plan is required to reflect the principles of the UN Declaration on the Rights of Indigenous Peoples which provides protection to indigenous land, and territory and resources under Article 26 and conservation and protection of the environment and productive capacity of land and resources under Article 29. Furthermore, the definition of critical habitats includes are "*required for the maintenance of biological diversity with significant social, economic or cultural importance to local communities*" and these sites are thus protected as part of critical habitats.

Priority areas

Not specifically included.

SOCIAL COMPONENTS

Free, Prior, Informed Consent (FPIC)

Free, prior, informed consent is identified and references the UN Declaration on the Rights of Indigenous Peoples.

Free, prior, informed consent is required only where relocation of indigenous groups takes place under clause 53.

Access and Benefit sharing

Not specifically included.

ALIGNMENT AND REFERENCE TO INTERNATIONAL CONVENTIONS

Convention on Biological Diversity (CBD)

The Convention is referenced within clause 68 as guiding the Bank's approach.

Inter-American Development Bank (IDB)

Name of Standard	Safeguard policy
Organisation	Inter-American Development Bank (IDB)
Documents Reviewed	ENVIRONMENT AND SAFEGUARDS COMPLIANCE POLICY
Version Reviewed	6/1/2009
First Version	July, 2003 (Environmental Policy)[16]
Reviewed By	Matt Jones
Reviewed On	9/11/10

DESCRIPTION / SUMMARY

Development bank environment and safeguard policy specifying requirements to receive financing

THREAT BASED MEASURES

Habitat loss and restoration

Significant conversion and degradation are identified and specifically defined.

The approach of the Standard to conversion and degradation is dependent on the type of habitat, however a guiding principle is given in paragraph 4.23 which states that "w*henever feasible, Bank-financed operations and activities will be sited on lands already converted.*"

Critical habitat is given greatest protection, as "*the Bank will not support operations that, in its opinion, significantly convert or degrade critical natural habitats*".

Natural Habitats are also given a degree of protection, with conversion or degradation prohibited unless three requirements are met:

"*(i) there are no feasible alternatives acceptable to the Bank*

(ii) comprehensive analysis demonstrates that overall benefits from the operation substantially outweigh the environmental costs and

(iii) mitigation and compensation measures acceptable to the Bank".

Over-exploitation

Over-exploitation is not identified or defined and is only loosely referred to.

It is not explicitly prohibited, rather, paragraph 4.7 simply states that *"The Bank will proactively support borrowing member countries and clients in identifying and financing operations designed specifically to... promote the conservation and sustainable use of natural resources and ecological services*".

Invasive species

Invasive species are specifically defined within section 6.1 as one which is "*(i) non-native (or alien) to the ecosystem under consideration; and (ii) whose introduction causes or is likely to cause economic or environmental harm or harm to human health*".

Introduction of invasive species is clearly prohibited by 4.23 which states that "*the Bank will not support operations that introduce invasive species*".

Mitigation hierarchy

A mitigation hierarchy is not specifically identified or defined within the Standard. However, a de facto hierarchy is described in Section B. "*Safeguarding the Environment: Managing environmental impacts and risks*" within paragraph 1.13 the following hierarchy is described:

"*The Bank favors avoiding negative environmental impacts; when impacts are unavoidable, Bank-financed operations require mitigation measures; and for impacts that cannot be fully mitigated, compensation or offsets should be implemented.*"

In addition, and prior to the application of the mitigation hierarchy, they bank states that it "*takes a general precautionary approach to environmental impacts*".

No net loss/net positive impact

Not specifically included.

BIODIVERSITY COMPONENTS

Species

Critically endangered, endangered, vulnerable or near threatened species are identified and defined based on the IUCN Red List of Endangered Species.

16 http://www.iadb.org/news-releases/2006-01/english/idb-approves-new-environment-and-safeguards-compliance-policy-2643.html

The presence of these types of species is one component of identifying critical natural habitats based on an area's "*high conservation value*".

The protection afforded to critically endangered, endangered, vulnerable or near threatened species is based on the prohibition within paragraph 4.23 against significant conversion or degradation of critical natural habitats.

Migratory species are identified but not further defined.

The support provided by an area to the viability of migratory routes is one component of identifying critical natural habitats.

The protection afforded to migratory species is based on the prohibition within paragraph 4.23 against significant conversion or degradation of critical natural habitats.

Native or endemic species are identified but not further defined as part of the definition of "*Natural habitats*".

Protection of native or endemic species is through protection of natural habitats under paragraph 4.23 which requires operations affecting natural habitats to ensure:

"*(i) there are no feasible alternatives acceptable to the Bank;*

(ii) comprehensive analysis demonstrates that overall benefits from the operation substantially outweigh the environmental costs and;

(iii) mitigation and compensation measures acceptable to the Bank" are in place.

No further groups of species are identified or defined.

Habitats

Critical natural habitats are identified and defined as "*(i) existing protected areas, areas officially proposed by governments for protection or sites that maintain conditions that are vital for the viability of the aforementioned areas; and (ii) unprotected areas of known high conservation value.* "

Critical natural habitats are protected under paragraph 4.23 with projects in these areas which would lead to conversion or degradation prohibited.

Natural habitats are identified and defined as those in which "*(i) the ecosystems' biological communities are formed largely by native plant and animal species; and (ii) human activity has not essentially modified the area's primary ecological functions.*"

Natural habitats are extensively further identified within the definition and include: "*Humid, dry, and cloud forests; temperate and boreal forests; Mediterranean-type shrub lands; natural arid and semi-arid lands; mangrove swamps, coastal marshes, and other wetlands; estuaries; seagrass beds; coral reefs; underwater vents; freshwater lakes and rivers; alpine and sub-alpine environments, including herb fields, grasslands, and páramos; and tropical and temperate grasslands.*"

These habitats are protected from conversion or degradation unless three requirements are met:

"*(i) there are no feasible alternatives acceptable to the Bank;*

(ii) comprehensive analysis demonstrates that overall benefits from the operation substantially outweigh the environmental costs and;

(iii) mitigation and compensation measures acceptable to the Bank" are in place.

Protected areas

Protected areas are identified and defined as including "*reserves that meet the criteria of the IUCN Protected Area Management Categories I through VI; World Heritage Sites; areas protected under the RAMSAR Convention on Wetlands; core areas of World Biosphere Reserves; and areas in the UN List of National Parks and Protected Areas*" as part of the definition of critical natural habitats. As such activities within these protected areas are prohibited under the same restriction on activities in critical natural sites under paragraph 4.23.

Other areas which are not formally or legally protected are not identified.

Priority areas

An area's "high conservation value" is a component of the definition of a "critical natural habitat" - however reference is not made to the six values identified by the High Conservation Value network.

SOCIAL COMPONENTS

Free, Prior and Informed Consent (FPIC)

Free, Prior, Informed Consent (FPIC) is not specifically identified, however, reference is made to the need for a "timely and adequate consultation" as part of the EIA process under paragraph 4.19

Access and Benefit Sharing (ABS)

Not specifically included.

ALIGNMENT AND REFERENCE TO INTERNATIONAL CONVENTIONS

Convention on Biological Diversity (CBD)

Not specifically included.

International Finance Corporation (IFC)

Name of Standard	IFC performance standards
Organisation	International Finance Corporation (IFC)
Documents Reviewed	IFC performance standards
Version Reviewed	7/1/2007
First Version	1998 (Environmental and Social Safeguard Policies and its Disclosure Policy)[17]
Reviewed By	Matt Jones
Reviewed On	3/11/10

DESCRIPTION / SUMMARY

International standard for recipients of development finance. Considered an important point of reference for other standards. Performance Standard 6 specifically targets Biodiversity Conservation. Note that at the time of this review a further iteration of PS6 was being developed. It was unavailable for review during the analysis.

THREAT BASED MEASURES

Habitat loss and restoration

Land conversion is controlled by PS6 paragraph 7 which requires that for natural habitat, clients do not "significantly convert or degrade" the habitat unless:

- *"There are no technically and financially feasible alternatives;*
- *The overall benefits of the project outweigh the costs, including those to the environment and biodiversity;*
- *Any conversion or degradation is appropriately mitigated".*

Land conversion is prohibited for clients "*involved in natural forest harvesting or plantation development*" who must ensure that a project "*will not cause any conversion or degradation of critical habitat*" under PS6 paragraph 16. Restoration is mandated as one option where habitats have been converted, alongside offsets in ecologically comparable areas and compensation to direct users under Paragraph 8.

Over-exploitation

PS6 paragraph 14 requires that "*the client will manage renewable natural resources in a sustainable manner*" which is supplemented by specific requirements for clients involved in natural forest harvesting or plantation development (included in paragraph 16) and clients that are involved in the production and harvesting of fish populations or other aquatic species (included in paragraph 17). Paragraph 16 requires that "*all natural forests and plantations... are independently certified as meeting performance standards compatible with internationally accepted principles and criteria for sustainable forest management*", and paragraph 17 requires that harvesting from aquatic systems be "*undertaken in a sustainable manner, through application of an internationally accepted system of independent certification*".

Invasive species

Invasive alien species are identified and defined in PS6 paragraph 12 and further in the accompanying guidance notes

Intentional introduction of an alien species is prohibited by paragraph 13 "*unless in accordance with the existing regulatory framework for such introduction, if present*" and furthermore "*will not deliberately introduce any alien species with a high risk of invasive behavior or any known invasive species, and will exercise diligence to prevent accidental or unintended introductions*"

Mitigation hierarchy

The Standards do not contain a specific mitigation hierarchy. Mitigation activities are described, and some prioritisation is given.

No net loss/net positive impact

Under PS6 paragraph 8, clients are required to design mitigation measures *"to achieve no net loss of biodiversity where feasible"*

BIODIVERSITY COMPONENTS

Species

Endangered or Critically endangered species are defined based on the IUCN red list and national legislation. The presence of critically endangered species is one component of identifying critical habitat.

17 http://www.ifc.org/ifcext/sustainability.nsf/Content/EnvSocStandards

Within areas of critical habitat, PS6 paragraph 10 prohibits any activity which might lead to "*reduction in population of any recognized critically endangered or endangered species*".

Endemic, restricted-range, migratory and congregatory species are identified in PS6 and their presence used to define "*critical habitat*" as are "*unique assemblages of species*".

Within areas of critical habitat activities which might cause "*measurable adverse impacts on the ability of the critical habitat to support the established population of species*" (including endemic, restricted-range, migratory and congregatory species and unique assemblages of species) are also prohibited by paragraph 10.

Habitats

Habitat is identified and further defined as:

Modified Habitat: "*apparent alteration of the natural habitat, often with the introduction of alien species of plants and animals, such as agricultural areas*".

Natural Habitat: "*land and water areas where the biological communities are formed largely by native plant and animal species, and where human activity has not essentially modified the area's primary ecological functions*".

Critical Habitat: Which is defined based on areas of high biodiversity value based on the species supported and based on areas associated with key evolutionary processes, with areas that provide key ecosystem services, and with areas having biodiversity of significant importance to local communities.

Protected areas

Protected areas are identified and defined under PS6 paragraph 11 (footnote 5) as those "*legally designated for the protection or conservation or biodiversity*" this definition includes those "*proposed by government for such designation*"

Within legally protected areas, clients are expected by paragraph 11 to align with the requirements for protection of critical habitat and, in addition:

- *Act in a manner consistent with defined protected area management plans;*
- *Consult protected area sponsors and managers, local communities , and other key stakeholders on the proposed project*
- *Implement additional programs, as appropriate, to promote and enhance the conservation aims of the protected area*

Areas which might be considered to be ICCAs are given some implicit protection under the provisions of PS7 and (to a lesser extent) PS5.

PS7 objectives include protection for "*natural resource-based livelihoods of Indigenous Peoples*". Paragraph 12 provides that whilst land "*may not be under legal ownership pursuant to national law*" customary use can often be proven and should therefore be protected.

Priority areas

Not specifically included.

SOCIAL COMPONENTS

Free, Prior and Informed Consent (FPIC)

Several Performance Standards enshrine the principles of Free, Prior, Informed, *Consultation* including explicitly within PS1 and PS7 and stakeholder engagement at other levels is implicit in the consultation requirements of other Performance Standards. Free, Prior, Informed, Consent is not required in the 2006 performance standards. Instead, the IFC's Policy on Social and Environmental Sustainability defines its own internal requirement to achieve 'Broad Community Support', which is defined in paragraph 20 of the Policy.

Access and Benefit Sharing (ABS)

Not specifically included.

ALIGNMENT AND REFERENCE TO INTERNATIONAL CONVENTIONS

Convention on Biological Diversity (CBD)

Referenced in PS6 — used to define the components of biodiversity and the objectives of PS6.

FISHERIES AND AQUACULTURE

Aquaculture Dialogue

Name of Standard	Aquaculture Dialogues
Organisation	Aquaculture Dialogues Roundtable (WWF)
Documents Reviewed	Aquaculture Dialogue Standards for i) Bivalve; ii) Pangasius; iii) Trout and iv) Tilapia
Version Reviewed	31/09/2010 (Bivalve, Pangasius); Tilapia (17/12/2009); Trout (07/2009)
First Version	2004 (Initiation of dialogues)[18]
Reviewed By	Chetan Kumar
Reviewed On	15/11/2010

DESCRIPTION / SUMMARY

Standards to promote environmentally and socially sustainable aquaculture practices

THREAT BASED MEASURES

Habitat loss and restoration

The threats to habitat loss resulting from aquaculture practices of the four species is referred to under Principal 2 in their respective standards documents, where depending upon the type of aquaculture practices, measures are recommended to take into account potential risks to habitats. For the Bivalve shellfish, in the rationale for Criterion 2.3 on Critical habitats and species interactions, restrictions on harvesting methods is mentioned: '*For this reason, in the proposed standards, farming operations will not be permitted to adversely affect endangered species or the habitat on which they depend. This is particularly applicable to shellfish operations that employ dredging as a means to harvest crops that are ready for market. Although we have not excluded bottom culture from potential certification, dredging will not be allowed if there is a significant risk to endangered species or the habitat on which they depend*' (p.13). For Tilapia species, the rationale for Criteria 2.6 on Wetland conservation refers to '*Responsible tilapia aquaculture shall not result in the loss of any wetland habitat. Although it may be difficult to restore severely damaged wetlands without considerable expertise, there is potential for the revitalization of these critical habitats. Thus, wetland conversion of any type following the year 1999 will not be allowed by any producers seeking certification against the ISRTA*' (p.15). For Pangasius, under the Criteria 2.2 on Conversion of natural ecosystems, it is mentioned that '*As pangasius farming is conducted in a relatively limited production area and farms are most commonly established by converting rice fields, certified PAD farms must be able to establish and expand into land that has been allocated for farming for the last 10 years without having to convert natural ecosystems (e.g. mangroves and wetlands).*' For Trout, Criteria 2.1 on siting and location of farms requires that '*Farm siting decisions also should take into consideration Protected Areas, habitat for threatened species and natural wetlands*' (p.13).

Over-exploitation

The measures to check over-exploitation for different species are referred in Principle 5, which recommends using resources in environmentally efficient and responsible manner. This Principle encompasses the impacts of feed ingredients, feeding regime, source of marine raw material in feed, source of non-marine raw material in feed, use of wild fish for feed (dependency on marine protein and lipid source). For Pangasius, Criteria 5.1 on Sustainability of feed ingredients outlines a set of indicators and standards to check the potential impact on marine biodiversity of sourcing fishmeal and fish oil as feed ingredients from wild fish stocks and the efficiency of its conversion to farmed fish through feed. For Tilapia, Criteria 5.1 on Use of wild fish for feed (fishmeal and oil) recommends to restrict fisheries currently known to have the poorest status from being used for fishmeal and oil. For Trout, Criteria 5.3 on Responsible origin of marine raw materials proposes to restrict fisheries currently known to have the poorest status from being used for fishmeal and oil and to place traceability requirements on the fishmeal and oil used in the feed.

Invasive species

The standards on different species use terms exotic, native and non-native. The Freshwater Trout standard defines '*exotic species as non-native animals living in areas outside their native boundaries*' (p.15). For Bivalve, Principle 3 refers to the risks to wild populations through introduced cultivated species and exotic pests and pathogens from Bivalve aquaculture. It requires that species are introduced into an area with a proper assessment of potential risks. Under Criteria 3.3 on Introduced non-native cultivated species, it is recommended that '*Where introduction of a non-native bivalve species is allowed by law (e.g., a species identified on a clean list of non-harmful species), the best practice for reducing ancillary introductions is to follow the International Council for the Exploration of the Sea's (ICES 2005) -Code of Practice*'

18 http://www.worldwildlife.org/what/globalmarkets/aquaculture/aquaculturedialogues.html

(p.15). For Tilapia, Principle 2 prohibits the introduction of Tilapia for culture where Tilapia is not native or established in farm's receiving water. Under the Criteria 2.2 on Presence of natural or established Tilapia species, two set of indicators are recommended '*to discourage introductions of tilapia into water courses where tilapia species are not native or previously established*' (p.12). Furthermore, it calls for '*cultured strain to be native or established in the receiving waters on or before 1 January 2008' (p. 12)*. The standards under Principle 4 refer to prevention of escape of Tilapia from aquaculture facilities where they may function as vectors of disease in the receiving water environment, or may out-compete native fish species or native tilapia strains. For Pangasius, the standards under Principle 4 refer to impacts on pangasius aquaculture on biodiversity of wild pangasius populations when it's introduced as an exotic species and escapes into the surrounding ecosystems from culture facilities. The standards address this issue by '*ensuring that pangasius farming takes place only in locations where that species of pangasius is indigenous or has a self-recruiting stock established before January 2005*' (p.20). For Trout, standards under Principle 2 encompasses impacts related to farm siting and operation, such as conversion of eco-sensitive habitats, introduction and cultivation of exotic and transgenic species, and threats to wild populations from escapees and predator control. Criteria 2.3 on Introduction of exotic species '*discourage the introduction of trout into waterways where these species are not native or previously established*' (p.16).

Mitigation hierarchy

Not specifically included.

No net loss/net positive impact

Not specifically included.

BIODIVERSITY COMPONENTS

Species

All standards documents refer to IUCN Red Data List, endangered species and their habitat. For Bivalve, Criterion 2.3 on Critical habitat and species interactions recommends '*farming operations will not be permitted to adversely affect endangered species or the habitat on which they depend*' (p.13). For Pangasius, the protection of species is referred to both in the establishment of farms and fish ingredients. As Pangasius farms are most commonly established by converting rice fields, indicator 2.2.4 requires that '*Evidence of no negative impacts on endangered species must be submitted*' (p.12). Indicators 5.1.3 and 5.1.4 ensure '*that species classified as vulnerable or endangered, those that have protected status and those in which trade is illegal are not used as feeds or as feed ingredients*' (p.25). Besides IUCN Red List, it also refers to those listed in the Convention on International Trade in Endangered Species (CITES). For Trout, under the Criteria 2.1 on Siting and location of farms, Indicator 2.1.2 requires that '*If a farm is located within habitat for species listed on the International Union for Conservation of Nature (IUCN) "Red List of Threatened Species" as vulnerable, near threatened endangered or critically endangered, the farmer must provide adequate habitat for such species on the farm or within 1 km of the farm*' (p.13). For Tilapia, indicator 5.1.2 refers restrictions on '*use of fishmeal and fish oil in tilapia feed containing products from fisheries that are listed on the IUCN's Red List or the species list maintained by the Convention on the International Trade of Endangered Species of Wild Fauna and Flora*' (p.20).

Habitats

Wetlands are commonly referred to in all the standard documents. In the standard document for Trout, wetlands is defined as '*an area of marsh, fen, peat land or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed six meters*' (p.13). The protection of habitats is referred to, for all species, under Principle 2, which mainly recommends no wetland conversion, as quoted from various criteria and indicators, in the section on Habitat Loss, above.

For Trout, Criteria 2.2 refers to riparian buffer zone and restoration measures. It recommends that '*The zones between water bodies and the adjacent terrestrial ecosystems (i.e., riparian buffers) often serve as habitat for vulnerable or endangered species and, in the case of heavily used landscapes, are the only remaining habitats for many such species. The FTAD requires that all new or expanding farms be constructed with a natural buffer zone between the farm and the natural watercourse adjacent to a trout farm. Existing farms need to have assessed their impact on riparian buffer zones and implemented mitigation measures as recommended by that assessment and within the recommended timeline*' (p.14).

Protected areas

The identification and protected areas varies among different standards. The Bivalve standard recognises that '*Many forms of shellfish aquaculture provide ecosystem services and environmental benefits which may make them well-suited to placement within Marine Protected Areas (MPAs). However, it is recognized that there are specific concerns related to certain types of MPAs and certain critical species or benthic habitats that require special protections. Given the wide diversity of MPAs and shellfish culture approaches, it is beyond the scope of these standards to address whether a specific*

MPA should or should not allow shellfish culture. MPAs and shellfish culture approaches, it is beyond the scope of these standards to address whether a specific MPA should or should not allow shellfish culture' (p.6). Pangasius standards, refers to 'wise use' or sustainable use concept mentioned in the Ramsar Convention. Trout standards, identifies IUCN and national protected area classifications and mainly requires that 'farm siting decisions also should take into consideration Protected Areas' (p.13).

Priority areas

Trout standards identifies High Conservation Value Areas, however it refers it to be included '*in a future revision of these standards in a few years*' (p.14).

SOCIAL COMPONENTS

Free, Prior and Informed Consent (FPIC)

Not specifically included.

Access and Benefit Sharing (ABS)

Not specifically included.

ALIGNMENT AND REFERENCE TO INTERNATIONAL CONVENTIONS

Convention on Biological Diversity (CBD)

Not specifically included.

Global Aquaculture Alliance (GAA)

Name of Standard	Best Aquaculture Practices, Certification Standards, Guidelines, Sample Application/Audit
Organisation	Global Aquaculture Alliance
Documents Reviewed	Aquaculture Facility Certification : i) Shrimp farms; ii) Shrimp hatcheries; iii) Tilapia; iv) Channel catfish and v) Seafood processing plants
Version Reviewed	09/ 2009 (Channel catfish, Shrimp farms, Shrimp hatcheries, Tilapia), 10/2008 (Processing plants)
First Version	2007[19]
Reviewed By	Chetan Kumar
Reviewed On	12/11/2010

DESCRIPTION / SUMMARY

An international certification system that verifies environmentally and socially responsible processes under which shrimp, fish and other seafood are produced.

THREAT BASED MEASURES

Habitat loss and restoration

Standard 4 for different facilities mention measures to prevent habitat loss and restoration of mangrove and wetlands as well as biodiversity conservation. For example, for Channel Catfish Farms, '*Aquaculture facilities shall not be located in wetland areas where they displace important natural habitats. Farm operations shall not damage wetlands or reduce the biodiversity of other ecosystems. Wetland area removed for allowable purposes should be mitigated*' (p.11). Similarly, for Shrimp hatcheries it refers that *'Hatchery construction and operations shall not result in net loss of mangroves or otherwise affect sensitive coastal ecosystem or conservation zones. Hatchery animals shall be adequately contained'*(p.9).

Over-exploitation

It is referred to mainly in the context of limiting the amount of feed derived from oceans and more dependence on terrestrial sources than marine. Under Standard 6 on Fishmeal and Fish Oil Conservation for Tilapia and Catfish it is recommended that '*Farms shall accurately monitor feed inputs and minimise the use of fishmeal and fishoil derived from wild fisheries*' (p. 21 and p. 16 respectively).

Invasive species

The standards mainly either refer to compliance with government regulations, if any, for non-native species or take measures to minimise their escape. Standard 8 on Post larvae sources (Shrimp farms) requires that ' *Certified farms shall not use wild post larvae and shall comply with government regulations regarding the importation of native and non-native seed stock*' (p. 17). Standard 8 on Controls of Escapes, Use of GMOs (Catfish and Tilapia) requires that *'Certified farms shall take measures to minimize escapes of farm stocks and comply with government regulations regarding the importation of native and non-native species and genetically modified organisms*' (p. 19 and p. 23 respectively).

Mitigation hierarchy

Not specifically included.

No net loss/net positive impact

The goal of no-net-loss is not specifically identified – however several of the documents require that loss of specific habitats must be accompanied by restoration of those habitats. In these instances they refer to a "net loss" of habitat, and a critical requirements then relates to whether this was for an "allowable propose" and if restoration subsequently occurred. In the shrimp standard, net loss of Mangrove is not permitted, any loss of Mangrove must be offset "by restoring an area three times as large, or donation to restoration" (4.1). In the Catfish standard, any loss of "*sensitive wetland habitat"* is treated in the same way. (4.1)

BIODIVERSITY COMPONENTS

Species

Clause 4.6 in conjunction with the wording of the Tilapia Standard provides that predator species which are "*listed by the World Conservation Union red list or protected by local or national laws are not subject to control by any means*".

Habitats

The standards refer to mainly two types of habitats: mangrove or other sensitive wetland areas. Their protection is covered under Standard 4. For example, for Wetlands, Standard 4 (Tilapia) requires that '*Aquaculture facilities shall not*

19 http://www.gaalliance.org/update/GOAL10/Heerin.pdf

be located in mangrove or other sensitive wetland areas where they displace important natural habitats. Farm operations shall not damage wetlands or reduce the biodiversity of other ecosystems. Wetland area removed for allowable purposes shall be mitigated' (p. 13). For mangroves, it is states that if '*removed for allowable purposes for shrimp farms shall be replaced by replanting an area three times as large'* (p.10). It is further is recommended that ' *Shrimp farms should be located on salt flats or other lands above the normal tidal zone that are usually inundated only a few times per month by the highest tides. Farm construction shall take place outside wetlands and not infringe on areas occupied by mangroves, sea grasses, or other sensitive wetland vegetation*' (p.10). For Tilapia, the standard requires that '*In coastal zones, aquaculture ponds should be located behind mangrove areas on land that is above the average tidal zone and inundated no more than a few times per month by the highest tides*' (p. 13).

Protected areas

Not specifically included.

Priority areas

Not specifically included.

SOCIAL COMPONENTS

Free, Prior and Informed Consent (FPIC)

Not specifically included.

Access and Benefit Sharing (ABS)

Not specifically included.

ALIGNMENT AND REFERENCE TO INTERNATIONAL CONVENTIONS

Convention on Biological Diversity (CBD)

Not specifically included.

GLOBAL Good Agriculture Practices (GLOBALG.A.P.) [Fisheries]

Name of Standard	GlobalG.A.P. Standards
Organisation	GLOBAL Good Agricultural Practices (GLOBALG.A.P.)
Documents Reviewed	GlobalG.A.P. Control Points and Compliance Criteria, Integrated Farm Assurance on i) Shrimp, ii) Salmonids & iii) Tilapia
Version Reviewed	30/09/2007 (Salmonids) , 29/04/2009 (Shrimp and Tilapia)
First Version	1997[20]
Reviewed By	Chetan Kumar
Reviewed On	23/11/2010

DESCRIPTION / SUMMARY

Set of international standards certifying responsible aquaculture sources, focusing on food safety, animal welfare, environmental protection, workers welfare and social risk assessment.

THREAT BASED MEASURES

Habitat loss and restoration

Threats to habitat is explicitly recognised in the standards, mentioned as an example of Environmental and Biodiversity Impact assessment (EIA) under the Aquaculture Base Control Point and Compliance Criteria (AB 7.1.2) for Shrimp and Tilapia, which requires that '*EIA must be done and must be updated following any change in the farm operations*'. The conversion of natural habitat is cited as an example of impacts inherent to farming operations and the possible mitigation measure suggested is to consider alternative sites (p. 24). Requirements are also in place under SP.5 and TA.4 which require that "*new ponds, farms sites or related facilities are built according to national planning and legal frameworks in environmentally suitable locations, making efficient use of land and water resources and in ways that conserve biodiversity*".

Over-exploitation

Not specifically mentioned – however note that the standard only applies to aquaculture activities. No wild fish stock is allowed.

Invasive species

The aquaculture base requires that infrastructure be in place to prevent escapes, along with a requirement for "contingency plans and records of all escaped fish" under AB.7

The standards on Shrimp and Tilapia mention non-native species and refer implicitly to the threats from building of aquaculture farms in a way that may lead to *'introduction of non-native species, the extinction of local species due to introduction of pathogens, or due to environmental impacts'* (p.3). The example of mitigation measures mentioned are '*preference of native species, prevention of escapes, effluent handling*' (p.24).

Mitigation hierarchy

Not specifically included

No net loss/net positive impact

As guidance for Review and Decision-making on important biodiversity issues for aquaculture base in Shrimp standards document, it is recommended that '*For important biodiversity issues, apply the precautionary principle where information is insufficient and the no net loss principle in relation to irreversible losses associated with the proposal.*' (p. 27)

BIODIVERSITY COMPONENTS

Species

The standards on Shrimp, Pangasius and Tilapia mention IUCN Redlist species and refer to threatened species. They also refer to High Conservation Values (HCV 1-4). For Shrimp farms, the Compliance Criteria 5.2 and for Tilapia farms 4.1 require that '*if built after April 2008 (for Shrimp) and 2009 (for Tilapia), there is evidence that the area was NOT previously part of a mangrove ecosystem, within the natural inter-tidal zone, or a High Conservation Value Area (Values 1-4) before April 2008 / 2009. Evidence to be checked within biodiversity inclusive EIA, and to include: Record of land use/status and habitat types prior to farm building, presence of IUCN Redlist species, remote sensing/satellite imagery*' (p.36 and p.35 respectively). Control points, 5.3 (for Shrimp) and 4.3 (for Tilapia) further require that *'farms established between May 1998 and April 2008 (for Shrimp) and May 1999 and April 2009 (for Tilapia) within mangroves, the natural inter-tidal zone or a High Conservation Value Area must show evidence that they are in process of being retired, rehabilitating area and if necessary compensating surrounding communities. Certificate is valid for maximum of 3*

20 http://www.globalgap.org/cms/front_content.php?idcat=19

years for the process to be completed, after which it is removed and new location if any outside these areas considered for certification (p.36 and p.35 respectively).'

Habitats

The standards refer mainly to mangrove and wetlands. Besides the protection measures, as stated above in the Species section, the Compliance Criteria 5.5 (for Shrimp) and 4.5 (for Tilapia) requires that '*The removal of mangrove vegetation is only allowed for channels or piping for sites above the inter-tidal areas, and when official permits of the public sector have been granted and when a rehabilitation plan is part of the permit* (p. 37).'

Protected areas

The Standards identify Protected areas and HCV (1-4). They refer to both national and international laws: '*new ponds, farms sites or related facilities are built according to national planning and legal frameworks in environmentally suitable locations, making efficient use of land and water resources and in ways that conserve biodiversity (including Protected Areas and RAMSAR sites), ecologically sensitive habitats (High Conservation Value Areas) and ecosystem functions, recognizing other land uses, people and species depend upon these same ecosystems'* (p.4) . Compliance Criteria 5.1 (Shrimp) and 4.1 (Tilapia) requires that '*There is evidence that the area is not within a Protected Area (PA).*' It refers to use the WDPA 2006 data for evidence, which should include '*Geographic Location provided at registration. If present within PA category V or VI, auditor to contact PA authorities to establish if farm is in line with management objectives of PA.*'

For Aquaculture base, the Compliance Criteria 7.1.6 requires that '*Action plan and precautions are in place to monitor and to prevent seepage and any other modification on natural water flows, soil and ground water characteristics, as salinization, in agricultural and/or protected areas. Monthly records of salinization are available.*'

Priority areas

The standards refer to High Conservation Value Areas (Values 1-4). Their protection is mentioned in Compliance Criteria 5.2 (for Shrimp farms) and 4.1 (for Tilapia farms) as quoted above in the Species section.

SOCIAL COMPONENTS

Free, Prior and Informed Consent (FPIC)

Not specifically included

Access and Benefit Sharing (ABS)

Not specifically included

ALIGNMENT AND REFERENCE TO INTERNATIONAL CONVENTIONS

Convention on Biological Diversity (CBD)

Not specifically included

Marine Aquarium Council (MAC)

Name of Standard	Marine Aquarium Council Standards
Organisation	Marine Aquarium Council
Documents Reviewed	International Performance Standard for the Marine Aquarium Trade on i) Core Collection, Fishing and Holding; ii) Core Ecosystem and Fishery Management; iii) Core Handling, Husbandry and Transport and ; iv) Mariculture and Aquaculture Management;
Version Reviewed	July/2001(i, ii and iii) , January/ 2008 (iv)
First Version	1998[21]
Reviewed By	Chetan Kumar
Reviewed On	15/11/2010

DESCRIPTION / SUMMARY

A set of international standards to certify organisations that collect, produce, and handle marine aquarium organisms to ensure a sustainable ornamental marine fish trade.

THREAT BASED MEASURES

Habitat loss and restoration

The measures for protection are mentioned in a generic manner. In the Core Ecosystem and Fishery Management standard document, under Core Standard I : Ecosystem and Fishery Management Certification Requirements, the Management Principle 1.1.2 refers that '*destructive collection and fishing practices are prohibited* (p.7).' Management Principle 1.1.3 requires that '*collection and fishing activities within the collection area support the conservation of biological diversity in the collection area. Basic principles of environmental management and ecosystem management are applied in the collection area* (p.7).'

Over-exploitation

The standard on the Core Ecosystem and Fishery Management refers to sustainable use. Under Core Standard I: Ecosystem and Fishery Management Certification Requirements, Management Principle 1.1.1 requires that '*the collection and fishing of target marine aquarium organisms are undertaken according to the principles of sustainable use*' (p.7). The standard on Mariculture and Aquaculture Management refers to take pressure off overexploited species. One of the requirements, under Basic Materials and Stock Origin/Breeding (7.1.4), for aquaculture certification recommends '*To take pressure off species that are overexploited by the marine aquarium trade, overseas culture should focus on the most commonly overexploited species, and not only on organisms that can be cultured with ease in the country of origin* (p.12).'

Invasive species

In the Mariculture and Aquaculture Management standard, the term 'exotic' is defined '*as a species outside of its historical range. Exotic species in Mariculture are those species being grown in an area where they do not naturally occur*' (p.22). The standard recommends a number of ways to restrict use and impacts of exotic/non-indigenous/alien invasive species. Principles 2.1 on Mariculture require that '*Exotic species shall not be kept in cages or in open culture* (p.8).' Principles 2.3 states that '*a process for insuring that the cultured organisms are native to the area and could not result in the introduction of a non-indigenous species, exotics or varieties* (p.9).' Principle 4 on Cultured Live Rock states that ' *Live rock that has been maricultured (i.e., cultured in-situ in the ocean) or aquacultured in such a way as to pose a risk of subsequent alien invasive species introduction, shall be cured for a minimum of 14 days prior to dispatch*(p.10).' Principle 5 on Cage and Net/Pen/Rack/Table Placement and Grow Out states ' *Cages and net pens shall be designed and managed to prevent escape of cultured animals and shall not be used for exotic or non-indigenous species*(p.10).' Under the requirements for Aquaculture certification, Principle 7.2.2 states '*Effluent shall be monitored to ensure there is no release of non-indigenous species* (p. 13).' Principle 7.5.1 on Culturing Management refers that '*Production of live feeds shall be undertaken in accordance with national, state, provincial and local regulations, including requirements involving translocation of exotic species or strains of live feed organisms, and provisions to prevent escape*(p. 14).' Principle 7.5.9 on Introduction of Exotic/Non-Indigenous Species requires '*Any introduction of exotic species shall be undertaken in accordance with relevant licensing and local, state, provincial and national legislation as well as in accordance with international 'Best Practice' documentation (e.g., CBD, ICES Code of Practice on the Introductions and Transfers of Marine Organisms 1994; FAO / NACA Asia Regional Technical Guidelines on Health Management for the Responsible Movement of Live Aquatic Animals, IUCN Guidelines for Re-Introductions)*(p.15).'

21 http://www.aquariumcouncil.org/news_main.aspx?MACID=10

Mitigation hierarchy

Not specifically included.

No net loss/net positive impact

Not specifically included.

BIODIVERSITY COMPONENTS

Species

All standards document mention that they have tried to use terminology and definitions that have wide international acceptance and use. In the section on definitions of the terms in the Core Ecosystem and Fishery Management document, Species definition is referred to mainly from CBD and FAO '*The term "species" means: (a) a group of organisms capable of interbreeding freely with each other but not with members of other species (CBD); and (b) a group of animals or plants that have common characteristics, are able to breed together to produce fertile (capable of reproducing) offspring, and maintain their separateness from other groups. (FAO)* (p.13)'. In the Annex 4 on Unsuitable Species are defined as those that are particularly vulnerable to over-exploitation (e.g. those with intrinsic low growth or recruitment rates). It mentions that the sub-committee on Unsuitable Species will review and revise the information to determine suitability of species for trade (p.14).

Habitats

Under the definitions, the term 'habitat' is defined as '*the place or type of site where an organism or population naturally occurs. (CBD)*(p.12)'. However, no specific habitat type is referred to in the documents.

Protected areas

Not specifically included.

Priority areas

Not specifically included.

SOCIAL COMPONENTS

Free, Prior and Informed Consent (FPIC)

Not specifically included.

Access and Benefit Sharing (ABS)

Not specifically included.

ALIGNMENT AND REFERENCE TO INTERNATIONAL CONVENTIONS

Convention on Biological Diversity (CBD)

The standards refer to following sources, from where they have taken definitions of key terms :
Convention on Biological Diversity (CBD);
Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES);
UN Environment Program's Global Biodiversity Assessment (GBA);
UN Food and Agriculture Organization (FAO).

Marine Stewardship Council (MSC)

Name of Standard	MSC Principles and Criteria and Fisheries Assessment Methodology
Organisation	Marine Stewardship Council (MSC)
Documents Reviewed	MSC Principles and Criteria for Sustainable Fishing and MSC Fisheries Assessment Methodology and Guidance to Certification Bodies
Version Reviewed	Version 1.1 , 1st May 2010 and Version 2.1, 1st May, 2010
First Version	1999[22]
Reviewed By	Chetan Kumar
Reviewed On	12/11/2010

DESCRIPTION / SUMMARY

The MSC Standards define the performance needed for fisheries to be certified as sustainable and for businesses to trade in certified seafood.

THREAT BASED MEASURES

Habitat loss and restoration

Principle 2 of the MSC Fishery Standard refers to maintenance of habitats (p.5). In the Assessment Methodology and Guidance document, the Habitat Outcome Performance Indicator 2.4.1 requires that '*The fishery does not cause serious or irreversible harm to habitat structure, considered on a regional or bioregional basis, and function*' (p.59).

Over-exploitation

Prevention of over-exploitation and restoration is referred under Principle 1 in the MSC Fishery Standard '*A fishery must be conducted in a manner that does not lead to over-fishing or depletion of the exploited populations and, for those populations that are depleted, the fishery must be conducted in a manner that demonstrably leads to their recovery*' (p.5).

The Assessment Methodology and Guidance document, under the Stock Status Performance Indicator (PI 1.1.1), further elaborates that '*The stock is at a level which maintains high productivity and has a low probability of recruitment overfishing*' (p. 36).

Principle 2 also refers to preventing over-exploitation for bycatch species. The Bycatch Species Outcome Performance Indicator (PI 2.2.1) requires that '*The fishery does not pose a risk of serious or irreversible harm to the bycatch species or species groups and does not hinder recovery of depleted bycatch species or species group*s' (p.55).

Invasive species

Not specifically included.

Mitigation hierarchy

Not specifically included.

No net loss/net positive impact

Not specifically included.

BIODIVERSITY COMPONENTS

Species

The Standards refer to Endangered, threatened and protected (ETP) species. One of the criteria of Principle 2 requires that '*The fishery is conducted in a manner that avoids or minimises mortality of, or injuries to endangered, threatened or protected species*' (p.6). In the Assessment guide, under the ETP Outcome Performance Indicator (PI 2.3.1), definition of ETP species given as: '*Endangered, threatened or protected species are those that are recognised by national legislation and/or binding international agreements (e.g. CITES) to which the jurisdictions controlling the fishery under assessment are party. The Scoring Guideposts (SGs) refer to national and international requirements and unacceptable impacts. These terms relate to the requirements or impacts specified in relevant national legislation or binding international agreements*' (p. 47). Guidance for use 7.4.2 further elaborates that '*Consideration of species that are on non-binding lists (e.g. the IUCN Red List) or requirements that are recognised at intergovernmental level (e.g. FAO International Plans of Action) that are not included in national legislation or binding international agreements etc. shall be assessed under the Retained or Bycatch Species Components of the Assessment Tree*' (p.47).

Habitats

The guidelines define two types of habitat type: pelagic (encompassing the water-column), or benthic (the seafloor structure including its attached invertebrate fauna). Principle 2 of the MSC Standard detail criteria for habitat protection and management. It states that '*Fishing operations should allow for the maintenance of the structure,*

22 http://www.associatedcontent.com/article/1849219/marine_stewardship_council_environmental.html?cat=3

productivity, function and diversity of the ecosystem (including habitat and associated dependent and ecologically related species) on which the fishery depends' (p.5). Criteria 1 requires that *' The fishery is conducted in a way that maintains natural functional relationships among species and should not lead to trophic cascades or ecosystem state changes'* (p.5).

Protected areas

Not specifically included.

Priority areas

Under Criteria 10 of Principle 3, it refers to *'Identifying appropriate fishing methods that minimise adverse impacts on habitat, especially in critical or sensitive zones such as spawning and nursery areas; and Establishing no-take zones where appropriate'* (p.7).

SOCIAL COMPONENTS

Free, Prior and Informed Consent (FPIC)

Not specifically included.

Access and Benefit Sharing (ABS)

Not specifically included.

ALIGNMENT AND REFERENCE TO INTERNATIONAL CONVENTIONS

Convention on Biological Diversity (CBD)

Not specifically included.

FORESTRY

Global Forest Alliance

Name of Standard	Forest Certification Assessment Guide — Principles and Criteria
Organisation	Global Forest Alliance (WWF and the World Bank Global Forest Alliance)
Documents Reviewed	Forest Certification Assessment Guide (FCAG)
Version Reviewed	6/1/2006
First Version	2006
Reviewed By	Chetan Kumar
Reviewed On	05/11/2010

DESCRIPTION / SUMMARY

A guide for assessing certification systems of sustainable management of commercial forestry projects as per Global Forest Alliance's criteria.

THREAT BASED MEASURES

Habitat loss and restoration

It is implicitly referred to under Criteria 2 on '*Compatibility with globally applicable principles of forest management that balance economic, ecological, and equity dimensions*' (p.41) which refers to requirements for preventing threat to critical natural habitats. Criteria 8 on '*Reliable and independent assessment of forest management performance and chain of custody'* also refers to it in the context of restriction on timber from the conversion of natural forests to plantations to enter certified supply chains. Requirement 8. 3. c states that '*Chain-of-custody certificate holders are required to exclude timber from illegal sources and from conversion of forests*' (p.52).

Restoration is also implicitly referred to on requirements for minimising the environmental impacts. The Requirement 2.g, states ' *Assessment and mitigation of environmental impacts. The scheme/system explicitly requires that management systems assess and manage environmental impacts (including issues addressed in either World Bank or WWF policies) to conserve biological diversity and its associated values, water resources, soils, and unique and fragile ecosystems and landscapes*' (p.10).

Over-exploitation

Not specifically included

Invasive species

Not specifically included

Mitigation hierarchy

Not specifically included

No net loss/net positive impact

Not specifically included

BIODIVERSITY COMPONENTS

Species

The Guide does not directly mention of endangered and threatened species. However, it refers to Critical Natural Habitats. Among other features, these are sites that are critical for rare, vulnerable, migratory, or endangered species. Listings of such are based on systematic evaluations of such factors as species richness; the degree of endemism, rarity, and vulnerability of component species; representativeness; and integrity of ecosystem processes.

Habitats

The Guide refers to the concept of critical forest areas and critical natural habitats. The concept of 'critical forest areas' is described in the World Bank policy OP 4.36, Forests. Its definition is derived from the term 'critical natural habitats,' as explained in the World Bank policy OP 4.04, Natural Habitats. Requirement 2.h states that '*Maintenance of critical forest areas and related natural critical habitats. The scheme/system explicitly requires that forest operations maintain critical forest areas and other critical natural habitats affected by the operation.*' Requirement 2.i for plantations states that 'The *scheme/system has adequate and explicit requirements to ensure that the establishment of plantations does not lead to the conversion of critical natural habitats*' (p.42).

Protected areas

Protected areas are identified as those defined under the World Bank policy OP 4.04, Natural Habitats and their protection. The World Bank defines critical natural habitats as -subset of natural forest lands and natural habitat that

cover (i) existing protected areas and areas officially proposed by governments as protected areas (e.g., reserves that meet the criteria of The World Conservation Union (IUCN) classifications), areas initially recognized as protected by traditional local communities (e.g., sacred groves), and sites that maintain conditions vital for the viability of these protected areas (as determined by the environmental assessment process); or (ii) sites identified on supplementary lists prepared by the Bank or an authoritative source determined by the Regional environment sector unit. Such sites may include areas recognized by traditional local communities (e.g., sacred groves); areas with known high suitability for biodiversity conservation. No reference is made to their protection except as under the critical habitat component. Areas that come under ICCA definition are not specifically identified, but their recognition is stated in Requirement 2.b: '*The scheme/ system requires respect for any legally documented or customary land tenure and use rights*' (p.9).

Priority areas

Criterion 2, requirement g makes reference to HCV, stating that *"Assessment and mitigation of environmental impacts. The scheme/system explicitly requires that management systems assess and manage environmental impacts (including issues addressed in either World Bank or WWF policies) to conserve biological diversity and its associated values, water resources, soils, and unique and fragile ecosystems and landscapes."* The WWF policy described is "WWF-FFL Policy on High Conservation Value Forests, March 2002"

SOCIAL COMPONENTS

Free, Prior and Informed Consent (FPIC)

It is implicitly referred to in Guidance d, under Criteria 2 that *'Standards should require the protection of the rights of indigenous people and local communities where use is made of their cultural knowledge or of the biological diversity on which they traditionally depend*' (p.43). Further explanation of this is given in footnotes, which mention that the requirements of the ILO Declaration on Fundamental Principles and Rights at Work that relate to indigenous people and local communities, as following, should be met: '*The use of biological resources and indigenous traditional knowledge on the basis of prior informed consent from the contracting parties (Article 15 (5)*' (p.11).

Access and Benefit Sharing (ABS)

Not specifically mentioned

ALIGNMENT AND REFERENCE TO INTERNATIONAL CONVENTIONS

Convention on Biological Diversity (CBD)

Not specifically included.

Forest Stewardship Council (FSC)

Name of Standard	FSC International Standard
Organisation	Forest Stewardship Council (FSC)
Documents Reviewed	FSC Principles and Criteria for Forest Stewardship
Version Reviewed	FSC-STD-01-001 (version 4-0), 1996, amended 2002
First Version	1992[23]
Reviewed By	Chetan Kumar
Reviewed On	03/11/2010

DESCRIPTION / SUMMARY

Globally applicable standard to promote socially and environmentally responsible forestry. The FSC P&C are a complete package to be considered as a whole, and their sequence does not represent an ordering of priority. The document shall be used in conjunction with the FSC's Statutes, procedures for Accreditation and Guidelines for Certifiers. To be functional, the FSC P&C need to be adapted at the national or sub-national level in order to reflect the diverse legal, social and geographical conditions of forests in different parts of the world. The FSC P&C therefore require the addition of indicators that are adapted to national or sub-national conditions in order to be implemented at the FMU level. The FSC P&C together with a set of such indicators accredited by FSC constitute an FSC Forest Stewardship Standard. Forest management certification in the absence of National FSC Forest Stewardship Standards is based on the nationally adapted generic indicators of the certification bodies. Major failures in any individual Principles will normally disqualify a candidate from certification. The FSC Forest Stewardship Standards shall be used in conjunction with national and international laws and regulations.

THREAT BASED MEASURES

Habitat loss and restoration

Forest conversion is prohibited in areas which are important for biodiversity conservation. Criteria 6.10 states that: *'Forest conversion to plantations or non-forest land uses shall not occur, except in circumstances where conversion: a) entails a very limited portion of the forest management unit; and b) does not occur on high conservation value forest areas; and c) will enable clear, substantial, additional, secure, long term conservation benefits across the forest management unit'* (p.7). Role of plantations in restoration and conservation of natural forests is identified under Principle 10. Criteria 10.9 limits certification of plantations established in forests converted after 1994, immediately after the FSC was formed except *'Certification may be allowed in circumstances where sufficient evidence is submitted to the certification body that the manager/owner is not responsible directly or indirectly of such conversion'* (p.10).

Over-exploitation

Sustainable harvesting is identified under Criteria 5.6, which stipulates that 'The *rate of harvest of forest products shall not exceed levels which can be permanently sustained'*. Further Criteria 6.2 states that '*Inappropriate hunting, fishing, trapping and collecting shall be controlled'* (p.6).

Invasive species

The standard identifies exotic and native species. Exotic species are defined as 'An *introduced species not native or endemic to the area in question'* and native species as '*A species that occurs naturally in the region; endemic to the area'*. The issue of invasive species are addressed in relation to general forest health concerns, in terms of the planned introduction of exotic species in forest management, including the planting of exotic tree species and the use of exotic biological control agents, especially as treatment for invasive species. Under Principle 6 on Environmental Impacts, Criteria 8 and 9 address this as: '*Use of biological control agents shall be documented, minimized, monitored and strictly controlled in accordance with national laws and internationally accepted scientific protocols.*' and ' *The use of exotic species shall be carefully controlled and actively monitored to avoid adverse ecological impacts*' (p.7). For plantations, Criteria 10. 4 require that '*In order to enhance the conservation of biological diversity, native species are preferred over exotic species in the establishment of plantations and the restoration of degraded ecosystems. Exotic species, which shall be used only when their performance is greater than that of native species, shall be carefully monitored to detect unusual mortality, disease, or insect outbreaks and adverse ecological impacts*' (p.9). Criteria 10.8 stipulates that '*No species should be planted on a large scale until local trials and/or experience have shown that they are ecologically well-adapted to the site, are not invasive, and do not have significant negative ecological impacts on other ecosystems'* (p.10).

23 http://www.fsc.org/history.html

Mitigation hierarchy

Principle 9, which refers to maintenance of HCVF implicitly refers to mitigation hierarchy through mention of the precautionary approach: '*Management activities in HCVF shall maintain or enhance the attributes which define such forests. Decisions regarding HCVF shall always be considered in the context of a precautionary approach*'. (p.9)

No net loss/net positive impact

Not specifically included.

BIODIVERSITY COMPONENTS

Species

The Standard refers to rare, threatened and endangered species. Their definitions, which are based on IUCN Red List threat categories (additional national or regional listings are recommended for use where these may differ from the IUCN Red List), are referred in the tool-kit for definition of High Conservation Value Forests (HCVF). Principle 9 refers exclusively to maintenance and enhancement of the HCVF. Besides HCVF, Criteria 6.3, under the Principle 6 on Environmental Impact of forest management also refers to species protection: '*Safeguards shall exist which protect rare, threatened and endangered species and their habitats (e.g., nesting and feeding areas). Management plan to include the identification of these species. HCV to be maintained or enhanced. Inappropriate hunting, fishing, trapping and collecting shall be controlled*' (p. 6).

Habitats

Ecosystem, natural forest and plantations are defined in the standard. Criteria 5.5 refers to maintaining benefits from forests '*Forest management operations shall recognize, maintain, and, where appropriate, enhance the value of forest services and resources such as watersheds and fisheries*' (p. 6). Criteria 6.5 refer to protection of forest habitats: '*Written guidelines shall be prepared and implemented to: control erosion; minimize forest damage during harvesting, road construction, and all other mechanical disturbances; and protect water resources*' (p.7).

Protected areas

Protected areas are included as an element of HCVF. Besides, Principles and Criteria on HCVF, their identification and protection are also referred to under other Principles. Besides, Criteria 6.2 also refers to their safeguard '*Conservation zones and protection areas shall be established, appropriate to the scale and intensity of forest management and the uniqueness of the affected resources.* ' (p.6). Criteria 7.1 require '*Management plan to include maps describing the forest resource base including protected areas, planned management activities and land ownership*' (p.7). The standard also refers to legal or customary tenure or use rights by local communities and indigenous peoples.

Priority areas

The standard refers to various criteria under Principle 9 on Maintenance of High Conservation Value Forests (HCVF), which requires that '*Management activities in high conservation value forests shall maintain or enhance the attributes which define such forests. Decisions regarding high conservation value forests shall always be considered in the context of a precautionary approach*' (p.9).

SOCIAL COMPONENTS

Free, Prior and Informed Consent (FPIC)

FPIC is referred to under Criteria 2.2 '*Local communities with legal or customary tenure or use rights shall maintain control, to the extent necessary to protect their rights or resources, over forest operations unless they delegate control with free and informed consent to other agencies*' (p.5).

Access and Benefit Sharing (ABS)

Not specifically included.

ALIGNMENT AND REFERENCE TO INTERNATIONAL CONVENTIONS

Convention on Biological Diversity (CBD)

Principle 1 refers to forest management to respect all international treaties and agreements to which the country is a signatory. It refers to CBD under Criteria 1.3.

International Tropical Timber Organisation (ITTO)

Name of Standard	ITTO-IUCN guidelines for biodiversity conservation
Organisation	International Tropical Timber Organisation (ITTO) and The International Union for the Conservation of Nature (IUCN)
Documents Reviewed	ITTO/IUCN guidelines for the conservation and sustainable use of biodiversity in tropical timber production forests
Version Reviewed	2009
First Version	1993[24]
Reviewed By	Chetan Kumar
Reviewed On	05/11/2010

DESCRIPTION / SUMMARY

A sets of guidelines to improve biodiversity conservation in tropical production forests.

THREAT BASED MEASURES

Habitat loss and restoration

Guidelines to address threats of habitat loss in production forests are referred to under Principle 4 on 'Land use and spatial planning', which is described to have profound long-term impacts on biodiversity conservation because of its role in determining the extent of habitat loss and fragmentation. Guideline 8 state that '*Inconsistent or contradictory land-use policies and laws at national and sub national levels that conflict with biodiversity conservation and sustainable use or do not support SFM in general should be identified, reviewed and modified*' (p.33). For planted forests, Guideline 38, under Principle 10 on 'Biodiversity conservation, require that '*Planted forest establishment should focus on previously deforested or other degraded sites and not replace natural forest habitats of conservation concern*' (p.58).

Over-exploitation

Over-exploitation threats are dealt under Principle 9 on 'Biodiversity considerations at the forest management unit level'. Guideline 36 refers that ' *Measures should be taken to avoid unsustainable levels of hunting and the gathering of NTFPs*' (p.55). Various Priority Actions for relevant authorities, timber companies, conservation NGOs and other relevant stakeholders suggested under this guideline.

Invasive species

The guidelines define invasive alien species as 'An *alien (non-native) species which becomes established in natural or semi-natural ecosystems or habitats, is an agent of change, and threatens biological diversity*' (p.78). Guideline 35 under Principle 9 refers to minimizing the risk of invasive species: '*Forestry operations can encourage the introduction and spread of invasive alien species and measures should be taken to minimize this risk*' (p.54). Under Principle 10 for planted forests, guidelines encourage the use of native species. Guideline 40 requires that '*Management systems that favour natural processes and native species and enhance the productivity and resilience of the planted forest should be developed*' (p.54). Guideline 42 request that '*Measures should be taken to ensure that plantation forestry does not facilitate the introduction of invasive species, which could impact negatively on both the planted forest and neighbouring natural forests*' (p.60).

Mitigation hierarchy

Not specifically included.

No net loss/net positive impact

Not specifically included.

BIODIVERSITY COMPONENTS

Species

The guidelines recognise the IUCN's definition of threatened species and also refer to endemic species. Under Principle 1 on 'Sovereignty and societal choice', Guideline 2 states that '*Biodiversity goals and targets for tropical production forests should be developed with the involvement of all relevant stakeholders with particular attention to the needs and priorities of local communities*' (p.28). It recommends that surveys should be conducted to identify species, species' populations, and habitats that are rare, endangered, locally endemic, of special importance to local communities, or important for maintaining the composition and ecological functions of the forest. Under Principle 2 on 'International commitments', Guideline 4 mention that '*Special measures will often be required when species and populations that are internationally recognized as rare, threatened or endangered occur in or adjacent to forest management areas*' (p.30).

24 http://www.itto.int/policypapers_guidelines/

Habitats

Habitats are defined as '*The area or environment in which an organism or ecological community normally lives or occurs*'. The guidelines particularly refer to protection of hollow tree. Guidance 32 requires that '*Hollow trees, although generally of low commercial value, should be retained, as they provide important habitats for a wide range of animal species*' (p.35) Guideline 39 on habitat protection in plantation forests states that '*Large-scale planted forests can provide a forest matrix within which areas of high conservation value can be protected and managed*' (p.59). The priority action, under the Guidelines suggests that plantation developers and managers should retain natural habitats along watercourses within their plantation estates and set aside biodiversity reserves within large-scale plantation schemes.

Protected areas

Protected areas are defined as '*An area of land and/or sea especially designated for the protection and maintenance of biodiversity and of associated natural and cultural resources'* (p.78). In the guidelines there is no direct mention IUCN categories, however, under Principle 2 on International commitments, it is special measures for protection of '*habitats of global concern (such as wetlands listed under the Ramsar Convention, natural areas listed on the World Heritage List, and migratory species that cross international boundaries*)' (p.29) is mentioned.

Priority areas

The guidelines refer to High Conservation Value Forests and maintaining biodiversity values. Guideline 25 states that '*All forest management activities affect biodiversity. Forest management must ensure that changes do not impact negatively on biodiversity features identified as having special value*' (p.46). The Priority Action requires that all forest managers should identify and monitor biodiversity values that should be protected against excessive change during forest management. Under Guidelines 38 for the plantation forests, it recommends to take measures to protect features of high biodiversity value, especially when natural forest is to be converted to plantation forest. Guideline 45 states that '*Particular sites and areas of forest and other habitats that provide important ecological functions should be identified and special measures taken to ensure their protection*' (p.63).

SOCIAL COMPONENTS

Free, Prior and Informed Consent (FPIC)

Not specifically included.

Access and Benefit Sharing (ABS)

Not specifically included.

ALIGNMENT AND REFERENCE TO INTERNATIONAL CONVENTIONS

Convention on Biological Diversity (CBD)

It is referred to in the document in the context that the 'latest version of these guidelines have tried to reflect the spirit of the CBD's work on forest biodiversity' (p.4).

Sustainable Forestry Initiative (SFI)

Name of Standard	Sustainable Forestry Standard
Organisation	Sustainable Forestry Initiative (SFI)
Documents Reviewed	SFI 2010-2014 Standard
Version Reviewed	January, 2010
First Version	2002[25]
Reviewed By	Chetan Kumar
Reviewed On	04/11/2010

DESCRIPTION / SUMMARY

Forest certification standards for sustainable forest management in North America and for fiber sourcing from outside North America.

THREAT BASED MEASURES

Habitat loss and restoration

Habitat loss is not explicitly prohibited or restricted in the standard, however program participants are expected to provide information to "*landowners... for identification and protection of important habitat elements for wildlife and biodiversity, including Forests with Exceptional Conservation Value*." (PM8.1). A definition is given for "*conversion sources*" which prohibits the inclusion of wood from forests converted to other uses in the calculation of the certified content. However "*conversion sources*" are not referenced in the requirements.

Habitat restoration is mandated in Performance Measure 2.1. which requires that "*Program Participants shall promptly reforest after final harvest*." (PM2.1)

Over-exploitation

Prevention of over-exploitation is referred to under Objective 1 mainly by '*implementation of sustainable forestry by ensuring long-term productivity and yield based on the use of the best scientific information available*' (p.5). The standard requires that forest management plans include sustainable harvest levels, which are calculated for the areas available for harvests. Performance Measure 1.1 states '*Program Participants shall ensure that forest management plans include long-term harvest levels that are sustainable and consistent with appropriate growth-and-yield models*' (p.5).

Invasive species

The standard refers to limiting the introduction, impact and spread of invasive exotic plants and animals. Performance indicator 4.1.7 states that '*Participation in programs and demonstration of activities as appropriate to limit the introduction, impact and spread of invasive exotic plants and animals that directly threaten or are likely to threaten native plant and animal communities*' (p.8). The main emphasis of the standard is not on elimination of existing ones but on awareness building, monitoring, preventing new introductions, and eliminating new occurrences. Guidance 3.2 builds on indicator 4.1.7 and defines invasive exotic plants and animals according to the U.S. Department of Agriculture Animal and Plant Health Inspection Service as '*any species, including its seeds, eggs, spores, or other biological material capable of propagating that species, that is not native to that ecosystem, whose introduction does or is likely to cause economic or environmental harm or harm to human health*' (p.4).

Mitigation hierarchy

Not specifically included.

No net loss/net positive impact

Not specifically included.

BIODIVERSITY COMPONENTS

Species

The Standard defines threatened and endangered species as those listed under the U.S. Endangered Species Act or the Canadian Species at Risk Act and listed under applicable state or provincial laws requiring protection. Besides, these the term critically imperilled and imperilled species are used. Critically imperilled are defined as: '*Globally extremely rare or, because of some factor(s), especially vulnerable to extinction. Typically, five or fewer occurrences or populations remain, or very few individuals (<1,000), acres (<2,000), or linear miles (<10) exist. Often referred to as G1.*' Imperilled are defined as: '*A plant or animal or community, often referred to as G2, that is globally rare or, because of some factor(s), is very vulnerable to extinction or elimination. Typically, six to 20 occurrences, or few remaining individuals (1,000 to 3,000), or acres (2,000 to 10,000 acres or 809 to 4047 hectares), or linear miles (10 to 50 miles or 16*

25 http://www.sfiprogram.org/standard-development-process.php

to 80.5 kilometers) exist' (p.2). It recommends that in the United States and Canada, SFI Program Participants can use the NatureServe database to identify species and communities for protection. Objective 4 refer to Conservation of Biological Diversity including Forests with Exceptional Conservation Value. It uses the terms threatened and endangered as well as critically imperilled and imperilled in various performance measures, which require the program participant to have programs to protect them (p.7).For fibre sourcing from areas outside the United States and Canada, the Performance indicator 11.1.1 refers to use of IUCN, WWF and AZE data by Program Participants (p. 10).

Habitats

The standard identifies forest and aquatic habitats and requires that chemical use be maintained in a way that ensures their protection (PM 2.2) Further requirements relating to Performance Measure 3.2 expect participants to "*have or develop, implement and document riparian protection measures based on soil type, terrain, vegetation, ecological function, harvesting system and other applicable factors.*" A habitat designation of "*Forests with Exceptional Conservation Value*" is included under Performance Measure 4.2, which requires that participants "*must locate and protect known sites associated with viable occurrences of critically imperiled and imperilled species and communities also known as Forests with Exceptional Conservation Value.*". Performance Measure 4.2 requires that *"Program Participants shall apply knowledge gained through research, science, technology and field experience to manage wildlife habitat and contribute to the conservation of biological diversity".*

Protected areas

Protected areas are not specifically mentioned. However the standard prohibits illegal logging and defines this as including "*the theft of timber or logs and cutting in parks, reserves or other similar areas where otherwise precluded by laws.*" In the guidelines it refers to IUCN protected area categories for sourcing material from outside North America. Under Objective 6, the standard also requires that "*special sites*" are identified and protected which includes the requirement for "*Use of information such as existing natural heritage data, expert advice or stakeholder consultation in identifying or selecting special sites for protection.*"

Priority areas

Objective 11 identifies conservation of Biodiversity Hotspots and High-Biodiversity Wilderness and recommends use of information from Alliance for Zero Extinction, WWF, WRI and IUCN. Indicator 11.1.1 refers that '*Fiber sourcing from areas outside the United States and Canada promotes conservation of: a. biodiversity hotspots and high-biodiversity wilderness areas utilizing information from Conservation International; and b. biological diversity utilizing information from organizations such as the Alliance for Zero Extinction, World Wildlife Fund, World Resources Institute and International Union for Conservation of Nature*' (p.10).

SOCIAL COMPONENTS

Free, Prior and Informed Consent (FPIC)

FPIC is not specifically included. However it includes requirements to comply with local laws, including those relating to indigenous rights.

Access and Benefit Sharing (ABS)

Not specifically included.

ALIGNMENT AND REFERENCE TO INTERNATIONAL CONVENTIONS

Convention on Biological Diversity (CBD)

Not specifically included.

CARBON OFFSET

CarbonFix

Name of Standard	CarbonFix Standard
Organisation	CarbonFix
Documents Reviewed	CarbonFix Standard
Version Reviewed	Version 3.1, October 2010
First Version	2007[26]
Reviewed By	Chetan Kumar
Reviewed On	10/11/2010

DESCRIPTION / SUMMARY

Certification scheme for climate forestation projects worldwide to increase the amount of sustainably managed forests and decrease global CO_2 levels.

THREAT BASED MEASURES

Habitat loss and restoration

The standard refers to restoration in the context of eligible activities for certification. Criteria 1.2 states that: '*Planting area is ONLY eligible, if the land: a) is not a forest at the project start and b) is planted with trees that result in the creation of a forest and c) has not been forest within 10 years prior to the project start OR has been forest within 10 years prior to the project start and evidence is given that absolutely no relation between the project participants and the cause of deforestation exists (e.g. that the forest destruction was caused by force majeure)*' (p.7).

Over-exploitation

It is implicitly referred to in the context of selective harvesting. Criteria 4.8 under Sustainable Forest Management require that '*Evidence must be given that.[.]..and in case the timber of the forest is being used, selective harvesting management is applied*' (p. 10). Selective harvesting is defined as being done through the continuous harvest of single trees or groups of trees by maintaining forest on the area.

Invasive species

Native species are defined as those whose presence in the project area is the result of only natural resources, with no human intervention. Criteria 4.6 requires that '*only native tree species are allowed to be planted in buffer strips*' (p.10). Criteria 4.8 requires '*Evidence must be given that the project management is planting native species in mixed stands and in case the timber of the forest is being used, selective harvesting management is applied. Otherwise, the project must justify its a) choice of tree species, b)silvicultural system and c)harvesting method*' (p.10).

Mitigation hierarchy

No net negative impact on biodiversity allowed (see below)

No net loss/net positive impact

Criterion 4.2 requires that evidence must be given that project has net-positive ecological impacts.

BIODIVERSITY COMPONENTS

Species

The standard refers to endangered and critically endangered species of the IUCN Red list. Criteria 4.3 requires '*Regarding the biodiversity of a project area, all endangered and critically endangered species of the IUCN Red list must be identified and evidence must be given that appropriate activities are put into place to protect them*' (p.10).

Habitats

The standard identifies natural ecosystem. Forest and Wetlands are two habitats defined in the standard. It refers to definition of forest as per '*the Designated National Authority (DNA) of the projects host-country as per UNFCCC (http://cdm.unfccc.int/DNA). In case no forest definition is yet given by the DNA, the project developer can take the forest definition of the FAO: http://www.fao.org/docrep/003/x6896e/x6896e0e.htm or the national forest definition of the project's host country*' (p.7). Criteria 1.3 states that '*Planting area is NOT eligible, if the land: a. was deforested to generate CO_2-certificates*'. The standard defines wetlands according to the IPCC: '*This category includes land that is covered or saturated by water for all or part of the year (e.g. peatland) and that does not fall into the forest land, cropland, grassland or settlements categories*'(p.7). Criteria 1.3 states that *Planting area is NOT eligible, if the land is wetland*' (p.7). The

26 http://www.carbonfix.info/About.html?PHPSESSID=kat6v9it68ndhj78bj5u7dpfh4

natural ecosystem is defined as a unit of plants, animals, water and soil which would have occurred on the area in case of no human intervention. Criteria 3.5 requires that '*Evidence must be given that the nature conservation area is protected or managed in order to establish or re-establish the natural ecosystem of this area*' (p.9).

Protected areas

The standard refers to High Conservation Value (HCV) areas.. It is, therefore, implicitly identified.

Priority areas

The standard refers to nature conservation area, which has been defined as '*The nature conservation area is part of the project area and serves the ecological protection or management of fauna and flora in order to establish or re-establish the natural ecosystem of this area*' (p.2). It also recognises HCV areas are defined on a national or sub-national level by the networks of the HCV program (p.9). The Certification scheme can be used in combination of other schemes such as those by FSC. In case where CarbonFix is used in Combination with FSC, Criteria 3.4 requires that '*Evidence must be given that at least 10% of the project area is managed a) as a nature conservation area OR b) to meet a national or sub-national HCV area definition. This criterion needs not be fulfilled in case the project consists of more than 30% conservation forest.*' Criteria 3.5 requires that '*Evidence must be given that the nature conservation area is protected or managed in order to establish or re-establish the natural ecosystem of this area*' (p.9).

SOCIAL COMPONENTS

Free, Prior and Informed Consent (FPIC)

Not specifically included.

Access and Benefit Sharing (ABS)

Not specifically included.

ALIGNMENT AND REFERENCE TO INTERNATIONAL CONVENTIONS

Convention on Biological Diversity (CBD)

Not specifically included.

The Climate, Community and Biodiversity Alliance (CCBA)

Name of Standard	CCB Standards
Organisation	The Climate, Community and Biodiversity Alliance (CCBA)
Documents Reviewed	Climate, Community and Biodiversity Project Design Standards and Rules for the use of the Climate, Community & Biodiversity Standards
Version Reviewed	December, 2008 (Second Edition)/June 21, 2010
First Version	May, 2005[27]
Reviewed By	Chetan Kumar
Reviewed On	11/11/2010

DESCRIPTION / SUMMARY

Voluntary standards to help design and identify land management activities that simultaneously minimize climate change, support sustainable development and conserve biodiversity.

THREAT BASED MEASURES

Habitat loss and restoration

Restoration is implicit in its support for land management activities. Under GL1 'high *levels of threat to species survival from habitat fragmentation*' (p.32) is recognised in the concept.

Over-exploitation

Not specifically included.

Invasive species

The standard define invasive species as '*non-native species that threaten ecosystems, habitats or species in the project zone as identified in the Global Invasive Species database, from scientific literature, and from local knowledge*' (p.48).

Under the Net Positive Biodiversity Impacts (B1) concept, the standards stipulates that '*Invasive species populations must not increase as a result of the project, either through direct use or indirectly as a result of project activities*' (p.28).

Indicators B1.3 require that the project proponents '*Identify all species to be used by the project and show that no known invasive species will be introduced into any area affected by the project and that the population of any invasive species will not increase as a result of the project*' (p.29).

Indicator B1.4 requires '*Describe possible adverse effects of non-native species used by the project on the region's environment, including impacts on native species and disease introduction or facilitation. Project proponents must justify any use of non-native species over native species*' (p.29).

Mitigation hierarchy

Not specifically included.

No net loss/net positive impact

The standard, under the Biodiversity section (B1), identify to Net Positive Biodiversity Impacts. The Concept statement mentions that ' *The project must generate net positive impacts on biodiversity within the project zone and within the project lifetime, measured against the baseline conditions*' (p.28).

BIODIVERSITY COMPONENTS

Species

The standard refers to IUCN Red List threat categories and maintenance and enhancement of High Conservation Value (HCV), which includes biodiversity values as defined by the HCV network.

Indicator G1.8.1, under the information on Original Condition of the Area requires that the project proponents must provide description of globally, regionally or nationally significant concentrations of biodiversity values; i)threatened species; ii) endemic species and iii) areas that support significant concentrations of a species during any time in their lifecycle (e.g. migrations, feeding grounds, breeding areas) (p.28).

Indicator B1.2 under the Net Positive Biodiversity Impacts requires the proponents to '*Demonstrate that no High Conservation Values identified in G1.8.1 will be negatively affected by the project*' (p.28).

Habitats

The standard refers to forests, however no definition is provided.

Protected areas

The standard refers to Legally protected areas equivalent to IUCN Protected Area Management Categories I-VI as well as areas that have been proposed for protected area status by the relevant statutory body but have not yet been

27 http://www.climate-standards.org/standards/history.html

officially declared, and including areas protected under international conventions (e.g., Ramsar sites, World Heritage Sites, UNESCO Man-and-Biosphere Reserves, etc.). Under Indicator B1.2 it also requires for the project proponents to demonstrate that they are not negatively affected (p.13).

Priority areas

The standard refers to HCVs, as explained earlier. It also refer to KBAs under Exceptional Biodiversity Benefits (GL3) '*This Gold Level Exceptional Biodiversity Benefits criterion identifies projects that conserve biodiversity at sites of global significance for biodiversity conservation. Sites meeting this optional criterion must be based on the Key Biodiversity Area (KBA) framework of vulnerability and irreplaceability'* (p.35). Definition of Key Biodiversity Area is given in glossary.

SOCIAL COMPONENTS

Free, Prior and Informed Consent (FPIC)

Referred to under Legal Status and Property Rights (G5) of project. Indicator 1.3 require that project proponents '*Demonstrate with documented consultations and agreements that the project has obtained the free, prior, and informed consent of those whose rights will be affected by the project*' and 1.4 states that '*If any relocation of habitation or activities is undertaken within the terms of an agreement, the project proponents must demonstrate that the agreement was made with the free, prior, and informed consent of those concerned and includes provisions for just and fair compensation*' (p.20).

Access and Benefit Sharing (ABS)

Not specifically included.

ALIGNMENT AND REFERENCE TO INTERNATIONAL CONVENTIONS

Convention on Biological Diversity (CBD)

CBD and UNFCCC are mentioned

Plan Vivo

Name of Standard	Plan Vivo Standard
Organisation	Plan Vivo
Documents Reviewed	The Plan Vivo Standards
Version Reviewed	06/10/2008
First Version	September, 2008[28]
Reviewed By	Chetan Kumar
Reviewed On	10/11/2010

DESCRIPTION / SUMMARY

A framework for planning, managing and monitoring the supply of verifiable emission reductions (VERs) from community-based land-use projects.

THREAT BASED MEASURES

Habitat loss and restoration

As part of its mandate to promote sustainable land-use practices, under the eligible activities, it refers to restoration and threats from deforestation. Under 1.5.3, eligible activities are: '*Agroforestry and afforestation, including small-scale timber, fruit or fuelwood plantations*';
'*Restoration and reforestation of degraded or damaged ecosystems such as woodlands; and 'Conservation of forests and woodlands under threat from deforestation. Forests shall be deemed to be under threat from deforestation where concrete and credible evidence is provided*' (p.16).

Over-exploitation

It is implicitly referred to under activities which promote sustainable land-use and sustainable livelihoods, and produce quantifiable ecosystem benefits (p. 22). In afforestation and reforestation activities, farmers are required to show that they have sufficient land for sustainable yields from agriculture over and above tree planting. In forest conservation activities, the project must implement a sound management plan to ensure sustainable timber production from the project area, whilst minimising the exploitation of timber resources outside the project area (also known as leakage- the unintended loss of carbon stocks outside of the project boundaries which are attributable to project activities). This is to be achieved by complementary activities to reduce the demand for fuel wood such as distributing fuel-efficient stoves (p 34).

Invasive species

The standard defines native and naturalised species. Native Species: '*A species that has arrived and inhabited an area naturally, without deliberate assistance by man, or would occur had it not been removed through past management*'. Naturalised Species: '*A non-native species that reproduces consistently and sustains populations over more than one life cycle without direct intervention by humans*'. Under the theme Ecological benefits, the standard requires that '*Planting activities are restricted to native and naturalised species. Naturalised (i.e. non-invasive) species are eligible only where they can be shown to have compelling livelihood benefits and: 1.) Producers have clearly expressed a wish to use this species; 2.) The areas involve are not in immediate proximity to conservation areas or likely to have any significant negative effect on biodiversity; 3.) The activity is still additional i.e. the producers in the area are not doing this activity or able to do this activity without the intervention and support of the project; 4.) The activity will have no harmful effects on the water-table*' (p.43).

Mitigation hierarchy

Although the Standard does not explicitly mention the mitigation hierarchy in order to manage risk to biodiversity, this is an implicit element of project design. Projects should include a biodiversity impact assessment in their Project Development Document (PDD) and include evidence that the biodiversity impact is likely to be positive (p 25). This addresses the 'Avoid' stage of the mitigation hierarchy. Plan Vivo projects will not get beyond the design phase if it is deemed that they will have an adverse impact on biodiversity.

No net loss/net positive impact

The standard requires that project activities must be designed to have a net positive impact on biodiversity (p. 25).

BIODIVERSITY COMPONENTS

Species

Not specifically included.

28 http://www.planvivo.org/?page_id=24

Habitats

The definition of ecosystem is given as '*A community of plants and animals (including humans) interacting with each other and their environment watersheds*'. It recognises definition of forests as per Kyoto protocol: ' *A land area of more than 0.5 ha, with a tree canopy cover of more than 10%, which is not primarily under agricultural or other specific non-forest land-use. In the case of young forests or regions where tree growth is climatically suppressed, the trees should be capable of reaching a height of 2m in situ (Kyoto Protocol).*' The standard also identify watershed habitat. Under the ecosystem benefits, it is referred: ' *Wider ecological impacts have been identified and considered expressly including impacts on local and regional biodiversity and impacts on watersheds*' (p.43).

Protected areas

Under additional environmental and social benefits resulting from project activities certified by Plan Vivo, '*Strengthening of Protected areas*' (p.15) is referred to but no definition is provided.

Priority areas

Not specifically included.

SOCIAL COMPONENTS

Free, Prior, Informed Consent (FPIC)

Not specifically included.

Access and Benefit sharing

Not specifically included.

ALIGNMENT AND REFERENCE TO INTERNATIONAL CONVENTIONS

Convention on Biological Diversity (CBD)

Not specifically included.

TOURISM

ECO-DESTINET

Name of Standard	The European Ecotourism Labelling Standard (EETLS)
Organisation	ECO-DESTINET
Documents Reviewed	The European Ecotourism Labelling Standard (EETLS): Developed by the ECO-DESTINET Network
Version Reviewed	2009
First Version	2009[29]
Reviewed By	S. Kenney
Reviewed On	03.11.2010

DESCRIPTION / SUMMARY

ECO-DESTINET is a network developing a European quality label for ecotourism destinations. Its criteria share the same description as the Global Sustainable Tourism Criteria, with more in-depth sub-criteria relating to the ecotourism sector, alongside the rationale behind the criteria, tips on how to achieve them and examples.

THREAT BASED MEASURES

Habitat loss and restoration

Businesses minimise, rehabilitate and compensate for any disturbance of natural ecosystems, under criteria D.3.5.

Over-exploitation

'Wildlife species are only harvested from the wild, consumed, displayed, sold, or internationally traded, as part of a regulated activity that ensures that their utilization is sustainable.' (D.3.1),

'Interactions with wildlife must not produce adverse effects on the viability of populations in the wild' (D.3.5).

Businesses are required to develop a long-term sustainability policy as part of their management system under Criterion A.1 that includes '*a strict programme regarding hunting, angling and any other activity that results to loss of wildlife. The policy complies with local/national legislation and is approved by the national Ecotourism Association (if there is one) and respects the views of the local community on the subject.*' (D.3.5)

Invasive species

'*The business uses native species for landscaping and restoration, and takes measures to avoid the introduction of invasive alien species'* (D.3.3).

Under the rationale for this criterion it is stated: '*Non-local species should not be used and if used, they should be screened to avoid introducing potentially invasive plants and animals, which have negative impacts on the biodiversity and local ecosystems'.*

Mitigation hierarchy

Informal mitigation hierarchy: '*...any disturbance of natural ecosystems is minimized, rehabilitated, and there is a compensatory contribution to conservation management.*' (D.3.5)

'The business directly contributes and/or support nature conservation either financially or in-kind.' (D.3.4). An example of such is given as native tree planting to mitigate carbon dioxide emissions.

No net loss/net positive impact

Not specifically included.

BIODIVERSITY COMPONENTS

Species

'No captive wildlife is held, except for properly regulated activities, and living specimens of protected wildlife species are only kept by those authorized and suitably equipped to house and care for them.' (D.3.2)

In relation to wildlife species: *'1. The business implements, as part of its sustainability policy, a strict policy regarding wildlife species.; 2. The business abstains from any use of rare, endangered or protected wildlife species and reports illegal activities.'* (D.3.1). Suggested that businesses refer to the IUCN Red List of Threatened Species.

Referring only to Wildlife Parks and Wildlife Sanctuaries: '*No captive wildlife is held, except for properly regulated activities, and living specimens of protected wildlife species are only kept by those authorised and suitably equipped to house and care for them. Sub-criteria: The Wildlife Park or Wildlife Sanctuary operates according to national, European*

29 http://www.ecoroute.eu/destinet/en/eetls.php?id=3

and International standards and legislation and keeps native species.' (D.3.2)

'*The business respects codes of conduct for every activity that interacts with wildlife, and strictly enforces them.'* (D.3.5)

Habitats

Criterion D.3.4 states that a business contributes to the support of biodiversity conservation and under criterion D.3.5 any disturbance of natural ecosystems is minimised, rehabilitated and compensated for.

Sub-criteria under criterion D.3.4 states that the business must contribute and/or support nature conservation. To achieve this is suggested that artificial wildlife areas and habitats could be created.

'*Respect the natural or cultural heritage surroundings in siting, design, impact assessment, and land rights and acquisition.*' (A.6.2)

Protected areas

'The business contributes to the support of biodiversity conservation, including supporting natural protected areas and areas of high biodiversity value.' (D.3.4)

Criterion A.2 on legal compliance details that: '*Local regulations and recommendations for protected areas and nature conservation are respected.*'

Criterion A.6.1: '*Comply with local zoning and protected or heritage area requirements.*' Sub-criteria on this require compliance with land use zoning, environmental protection zoning and designated areas' requirements.

Natural surroundings are respected and: '*Land rights and the acquisition of land are dealt with according to the legal framework of the country, and access to the land complies with local planning schemes and regulations.*' (A.6.2)

The specific section EETLS 1. on compliance with special regulations in protected areas, requires ecotourism activities to '*comply with regulations that allow or forbid certain types of recreational activities in protected areas'*, and requires that the business knows and respects such regulations and operates within the limits of these restrictions.

Protection for community conserved areas is not explicitly stated, however it is implied through: '*The business actively contributes to the protection of local historical, archaeological, cultural and spiritually important properties and sites.'* (C.3)

Priority areas

Criterion A.6.1 states under its sub-criteria that businesses comply with environmental protection zoning and criterion A.6.2 that '*Land rights and the acquisition of land are dealt with according to the legal framework of the country, and access to the land complies with local planning schemes and regulations.*' Additionally '*areas of high biodiversity value'* are supported (D.3.4) and the rationale for the EETLS additional criteria states that: '*Activities of the business comply with zoning of sensitive areas.*' Although not explicitly referenced, these imply inclusiveness of priority areas.

SOCIAL COMPONENTS

Free, Prior, Informed Consent (FPIC)

'*A code of conduct for activities in indigenous and local communities has been developed, with the consent of and in collaboration with the community.'* (B.5)

The rationale for this criterion mentions respecting the principle of prior informed consent, and the right of communities to say no to tourism activities.

'The business supports initiatives and takes up actions that foster active participation of local communities in planning and decision making concerning tourism development and conservation of nature.' (B.1)

Access and benefit sharing

Not specifically included. Criterion C.4 on the 'Incorporation of Culture' states that: '*The business respects the intellectual property rights of local communities',* but natural resources are not referenced.

ALIGNMENT AND REFERENCE TO INTERNATIONAL CONVENTIONS

Convention on Biological Diversity (CBD)

Not specifically included. However the development of the GSTC and EETLS was done with the involvement of the CBD Secretariat, and the Convention will be included in future revisions.

World Tourism Organisation (UNWTO)

Name of Standard	Global Code of Ethics for Tourism
Organisation	World Tourism Organization
Documents Reviewed	Global Code of Ethics for Tourism: For Responsible Tourism
Version Reviewed	21 December 2001
First Version	1999[30]
Reviewed By	S. Kenney
Reviewed On	04.11.2010

DESCRIPTION / SUMMARY

The World Tourism Organization is a specialised agency of the United Nations (UNWTO). Its Global Code of Ethics for Tourism has been adopted by the UNWTO General Assembly in Santiago de Chile in 1999 and subsequently acknowledged by a UN General Assembly resolution in 2001. The latter encourages the implementation of the Code to minimise the environmental impacts of tourism, amongst other recommended actions.

THREAT BASED MEASURES

Habitat loss and restoration

Not specifically included, although the natural environment should be safeguarded. (Article 3,1)

Over-exploitation

Nature tourism and ecotourism are to be in keeping with the carrying capacity of sites. (Article 3, 5)

Invasive species

Not specifically included.

Mitigation hierarchy

The adopted Global Code of Ethics for Tourism is stated as having the objective to minimise the negative impact of tourism on the environment (Resolution). No mitigation hierarchy is referred to as such however.

No net loss/net positive impact

Not specifically included.

BIODIVERSITY COMPONENTS

Species

Tourism infrastructure and activities should be designed and carried out in order to *'preserve endangered species of wildlife'*. (Article 3, 4)

'*When travelling, tourists and visitors...should refrain from all trafficking in... protected species and products and substances that are dangerous or prohibited by national regulations*'. (Article 1, 5)

Habitats

'*All the stakeholders in tourism development should safeguard the natural environment*' (Article 3, 1);

'*Tourism infrastructure should be designed and tourism activities programmed in such a way as to protect the natural heritage composed of ecosystems and biodiversity*' (Article 3, 4);

A number of specific habitats where activities should be constrained are referred to: '*the stakeholders in tourism development, and especially professionals, should agree to the imposition of limitations or constraints on their activities when these are exercised in particularly sensitive areas: desert, polar or high mountain regions, coastal areas, tropical forests or wetlands, propitious to the creation of nature reserves or protected areas*' (Article 3, 4);

'*When travelling, tourists and visitors should... abstain from any conduct... likely to damage the local environment*' (Article 1, 5);

'*Tourism professionals, particularly investors, governed by the regulations laid down by the public authorities, should carry out studies of the impact of their development projects on the environment and natural surroundings*' (Article 5, 4);

Protected areas

Stakeholders and professionals should agree to limit or constrain their activities in particularly sensitive areas, propitious to the creation of nature reserves or protected areas (Article 3, 4);

Tourism infrastructure and activities should protect natural heritage (Article 3, 4). The '*Convention concerning the Protection of the World Cultural and Natural Heritage of 23 November 1972*' is referenced in the preamble.

Local communities are to be respected and have rights to the resources that are on their lands:

'Nature tourism and ecotourism are recognized as being particularly conducive to enriching and enhancing the standing

30 http://www.unep.org/bpsp/Tourism/WTO%20Code%20of%20Conduct.pdf

of tourism, provided they respect the natural heritage and local populations' (Article 3, 5);
'*Tourism resources belong to the common heritage of mankind; the communities in whose territories they are situated have particular rights and obligations to them*' (Article 4, 1).

Priority areas

Not specifically included.

SOCIAL COMPONENTS

Free, Prior, Informed Consent (FPIC)

Although consent is not formally mentioned, tourism professionals should make information available and transparent: '*deliver, with the greatest transparency and objectivity, information on their future programmes and their foreseeable repercussions and foster dialogue on their contents with the populations concerned*'. (Article 5, 4)

Access and benefit sharing

'Local populations should be associated with tourism activities and share equitably in the economic, social and cultural benefits they generate', although natural resources are not specifically mentioned here. (Article 5, 1)

ALIGNMENT AND REFERENCE TO INTERNATIONAL CONVENTIONS

Convention on Biological Diversity (CBD)

The Convention on Biodiversity of 6 January 1995 is referred to. It is assumed this is meant to be the CBD, although the full name is not referenced and the CBD came into force in 1993.

Global Sustainable Tourism Council (GSTC)

Name of Standard	Global Sustainable Tourism Criteria
Organisation	Global Sustainable Tourism Council (GSTC)
Documents Reviewed	Global Sustainable Tourism Criteria Glossary assessed online http://www.sustainabletourismcriteria.org/ Indicators accessed online http://www.sustainabletourismcriteria.org/
Version Reviewed	Version 5 - October 2008
First Version	2007[31]
Reviewed By	S. Kenney
Reviewed On	01.11.2010

DESCRIPTION / SUMMARY

The Global Sustainable Tourism Criteria were launched at the World Conservation Congress in 2008, and are comprised of 37 voluntary criteria representing the minimum that any tourism business should achieve in order to protect and sustain the world's natural and cultural resources. A number of potential indicators are given under each criterion.

THREAT BASED MEASURES

Habitat loss and restoration

Businesses contribute to biodiversity conservation and minimise, rehabilitate and compensate for any disturbance of natural ecosystems, which may potentially occur through habitat/land restoration, or a percentage of the annual budget being allocated to restore and rehabilitate natural protected areas or biodiversity conservation, as indicated under criteria D.3.4 and D.3.5.

Over-exploitation

'*Wildlife species are only harvested from the wild, consumed, displayed, sold, or internationally traded, as part of a regulated activity that ensures that their utilization is sustainable.*' (D.3.1), with sustainable utilization defined in the glossary. Under the comments field it notes that: *'In the case of non-local sourcing, the company should work with suppliers to ensure that products come from sustainable sources, including requesting sustainable produced certified products. For example, for seafood, several not-for-profit organizations maintain website with up to date seafood to avoid threatened fish types and region.*'

'Interactions with wildlife must not produce adverse effects on the viability of populations in the wild' (D.3.5). Wildlife is defined in the glossary as: '*Living things that are neither human nor domesticated'.*

Invasive species

'*The business uses native species for landscaping and restoration, and takes measures to avoid the introduction of invasive alien species'* (D.3.3). The IUCN definition of an alien or non-invasive species is used according to the comments section. Definitions of alien and native species are also given in the glossary.

Under the rationale for this criterion it is stated: '*Non-local species that are used should be screened to avoid introducing potentially invasive plants and animals, which have negative impacts on the biodiversity and local ecosystems'.*

Mitigation hierarchy

Informal mitigation hierarchy: '*...any disturbance of natural ecosystems is minimized, rehabilitated, and there is a compensatory contribution to conservation management.*' (D.3.5)

No net loss/net positive impact

Not specifically included.

BIODIVERSITY COMPONENTS

Species

'No captive wildlife is held, except for properly regulated activities, and living specimens of protected wildlife species are only kept by those authorized and suitably equipped to house and care for them.' (D.3.2)

Protected, rare and threatened species are defined, with reference to the IUCN Red List categories of vulnerable, endangered and critically endangered. Protected species: '*Plants, animals, or other organisms whose populations are seriously reduced and which are given special consideration for their conservation by laws, regulations, or international agreements '.* (Glossary)

31 http://www.sustainabletourismcriteria.org/

Habitats

Criterion D.3.4 states that a business contributes to the support of biodiversity conservation and under criterion D.3.5 any disturbance of natural ecosystems is minimised, rehabilitated and compensated for. A potential indicator of these is given as habitats being protected or restored.

For the design and construction of buildings and infrastructure: 'respect the natural or cultural heritage surroundings in siting, design, impact assessment, and land rights and acquisition.' (A.6.2)

Protected areas

'The business contributes to the support of biodiversity conservation, including supporting natural protected areas and areas of high biodiversity value.' (D.3.4). A potential indicator of this is given as the percentage of annual budget allocated to restore or rehabilitate natural protected areas.

A protected area is defined as *'A legally established land or water area under either public or private ownership that is regulated and managed to achieve specific conservation objectives'.*

High biodiversity value are areas that meet one or more of the following criteria according to the glossary:

1) IUCN Category I-IV protected areas
2) IUCN Category V-VI protected areas
3) Wetlands of International Importance designated under the Ramsar Convention
4) Natura 2000 sites as determined under the European Birds and Habitats Directives
5) Important Bird Areas (IBAs) as defined by Birdlife International
6) Biosphere Reserves designated under the UNESCO Man and the Biosphere Programme

Criterion A.6 states that the design and construction of buildings and infrastructure '*comply with local zoning and protected or heritage area requirements'.* (A.6.1)

Protection and local access is given to areas that are importance to local communities, although community conserved areas are not explicitly mentioned: '*The business contributes to the protection of local historical, archeological, culturally, and spiritually important properties and sites, and does not impede access to them by local residents.*' (C.3)

Such spiritually important sites are defined as: '*A site, object structure, area or natural feature or area, held by national Governments or communities to be of particular importance in accordance with the customs of an indigenous or local community because of its religious, spiritual or cultural significance'.*

Priority areas

Support Important Bird Areas under criterion D.3.4 (see above).

SOCIAL COMPONENTS

Free, Prior, Informed Consent (FPIC)

'*A code of conduct for activities in indigenous and local communities has been developed, with the consent of and in collaboration with the community.*' (B.5)

Community consent is defined in the glossary, mentioning that it is often referred to as free, prior and informed consent, and that consent should be determined pursuant to customary law and practice, or in some other way agreed upon be the community. The rationale for this criterion also mentions respecting free, prior and informed consent, and the communities right to say no to tourism activities.

The design and construction of buildings and infrastructure respects land rights and acquisition. (A.6.2)

Access and benefit sharing

Not specifically included. The intellectual property rights of local communities are respected when: 'The business uses elements of local art, architecture, or cultural heritage in its operations, design, decoration, food, or shops' (C.4), although natural resources are not mentioned.

ALIGNMENT AND REFERENCE TO INTERNATIONAL CONVENTIONS

Convention on Biological Diversity (CBD)

The CBD is mentioned under B.5 in reference to it explicitly recognising the rights of indigenous peoples.

BIOTRADE

Union for Ethical BioTrade (UEBT)

Name of Standard	BioTrade Verification Framework for Native Natural Ingredients
Organisation	Union for Ethical BioTrade (UEBT)
Documents Reviewed	STD01 - BioTrade Verification Framework for Native Natural Ingredients: Union for Ethical BioTrade (UEBT) Verification Framework PRO03 - D - Guidance to the Application of the Verification Framework 2009-10-30 DRAFT
Version Reviewed	2007-09-20
First Version	2007[32]
Reviewed By	S. Kenney
Reviewed On	05.11.2010

DESCRIPTION / SUMMARY

The Union for Ethical BioTrade (UEBT) is a non-profit association that promotes the '*sourcing with respect*' of ingredients derived from native biodiversity. Launched in 2007, members commit to gradually ensuring that their sourcing practices promote the conservation of biodiversity, respect traditional knowledge and assure the equitable sharing of benefits all along the supply chain. The UEBT's Verification Framework defines the requirements for organisations to comply with UEBT's BioTrade Principles and Criteria.

THREAT BASED MEASURES

Habitat loss and restoration

Principle 1 focuses on biodiversity conservation:

Minimum indicator 1.1.1 requires that '*There are no processes either to convert natural habitats to agricultural systems or natural forest to other productive systems.*' A habitat is defined in the terms and definitions section using the Convention on Biological Diversity (CBD) definition.

'Threatening conditions or risks to the ecosystem and the habitats where the species are being managed have been identified and measures taken to address them.' (1.1.2)

'Practices that promote biodiversity conservation and/or restoration of ecosystems or habitats of endangered species (as defined by local authorities and complemented by relevant international NGOs), where productive species are being managed, are promoted and/or implemented by the organization.' (1.1.3). Within the guidance document possible verifiers include active reforestation, maintenance of forest areas, prohibiting habitat destruction/modification and protection of fragments of natural forests, among others.

Over-exploitation

Principle 2 is specifically focused on the sustainable use of biodiversity. This includes that:

'For collected species, the harvest rate is based on an assessment of the managed populations that defines general characteristics of the population and identifies gaps in information for wild management.' (2.1.3)

'Harvest rates are sustainable in the long-term'. (2.1.4)

Collection/cultivation practices are based on existing information and the potential impact on species and their ecosystems, using the precautionary approach. (2.1.5)

'*A monitoring system is in place that allows continual adjustment of good production practices (harvest rates, collection techniques, agricultural practices) with the aim of guaranteeing an adaptive management of the resource'.* (2.1.6)

In addition over exploitation is limited indirectly through: '*Main interactions between managed species and other organisms and that could be related to their production are identified, and measures to maintain and/or restore them are defined and implemented'* (1.1.5) and through promotion and/or implementation of practices that promote the conservation of endangered species (1.1.3).

Invasive species

Explicitly states that an organisation does not introduce alien species into the natural habitats being managed (1.1.1), as a minimum indicator in compliance with criterion 1.1.

The definition of an alien species is given as 'a *species, subspecies or lower taxon, introduced outside its natural past or present distribution; includes any part, gametes, seeds, eggs, or propagates of such species that might survive and subsequently reproduce*', sourced from the Convention on Biological Diversity (CBD).

32 http://www.ethicalbiotrade.org/about/history.html

Mitigation hierarchy

Not specifically included.

No net loss/net positive impact

Not specifically included.

BIODIVERSITY COMPONENTS

Species

Endangered species are defined as: '*any species, which is in danger of extinction throughout all or a significant portion of its range',* with local authorities, complemented by relevant international NGOs, defining a species in danger of extinction.

'*Management of wild species or cultivation activities are compatible with the strategies of use and conservation stipulated in natural areas (e.g. management plans, existing conservation strategies).*' (1.3.2)

'*Main interactions between managed species and other organisms and that could be related to their production are identified, and measures to maintain and/or restore them are defined and implemented.*' (1.1.5)

The organisation maintains the varieties and wild relatives of species being managed, under its principle on maintaining genetic variability. (1.2.1)

Take the precautionary approach, through application of the Precautionary Principle as defined by the CBD that states '*the lack of full scientific certainty should not be used as a reason for postponing measures to avoid or minimize threats of significant reduction or loss of biological diversity*', when defining collection and/or cultivation practices. (2.1.5)

Habitats

A minimum indicator of criterion 1.1 is that '*there are no processes to either convert natural habitats to agricultural systems or natural forest to other productive systems.*'

Fragments and remnants of natural vegetation are connected to favour genetic exchange in managed areas. (1.2.2)

Under criterion 1.3 on taking into account national or local authority management plans for natural habitats, such management and conservation plans are to be identified in areas of collection or cultivation (1.3.1) and:

'*Management of wild species or cultivation activities are compatible with the strategies of use and conservation stipulated in natural areas (e.g. management plans, existing conservation strategies).*' (1.3.2)

'*There is no use of agricultural inputs derived from chemical synthesis in natural habitats.*' (2.1.11)

The framework defines a habitat, using the CBD definition, as a '*place or type of site where an organism or population naturally occurs.*'

Criterion 1.1.3: '*Practices that promote biodiversity conservation and/or restoration of ecosystems or habitats'* are promoted and/or implemented.

Within fragile ecosystems, buyers support the elaboration and implementation of management documents in relation to the sustainable use of biodiversity. (Guidance to clause 2.1)

Protected areas

Use the CBD definition of a protected area: '*geographically defined area, which is designated or regulated and managed to achieve specific conservation objectives'.* Protected areas for not mentioned within the principles and criteria text however.

Protected areas are suggested to be included through criterion 1.3: '*Activities shall be developed taking into account, if they exist, national or local authority management plans for natural habitats'.* Existing management and conservation plans are to be identified (1.3.1) and management of wild species or cultivation activities to be compatible with strategies of use and conservation in natural areas, such as those in existing conservation strategies and management plans (1.3.2). Additionally, in signatory countries, all international agreements shall be respected (5.3).

'Sites of special cultural, ecological, economic or religious importance to indigenous peoples are clearly identified in cooperation with such peoples, and recognised and protected by those responsible for the management of the resources' (6.2.3).

Priority areas

Not specifically included.

SOCIAL COMPONENTS

Free, Prior, Informed Consent (FPIC)

'*There is no disputes related to the use of biodiversity and traditional knowledge…*' (3.1.1)

'*The use of traditional knowledge is considered all along the supply chain and is based on the principle of prior informed consent*' (3.4.2)

'Indigenous peoples control the management of the resources in their lands and territories, unless they delegate control with free and informed consent to other organizations.' (6.2.2)

'The organization shall use the resources it manages with the prior informed consent of the party that provides them'. (7.2)

Access and Benefit sharing

Principle 3 is solely concerned with the fair and equitable sharing of benefits derived from the use of biodiversity, and deals with transparent negotiations, adequate compensation, generating local development and the recognition of traditional knowledge. Key points are:

'*Negotiations and implementation of agreements related to benefit sharing shall be transparent and based on long-term dialogue and trust and shall take place between all organisations along the supply chain'.* (3.1)

Minimum indicator under criterion 3.1 states: *'There are no disputes related to the use of biodiversity and traditional knowledge of substantial magnitude involving a significant number of interests.'* (3.1.1)

'Actors are empowered to use the established mechanisms for transparency and dialogue, if necessary with the support of a third party. Use of traditional knowledge shall be recognized, promoted and adequately compensated.' (3.1.4)

Criterion 3.2*: 'Prices shall cover the costs of production according to the Verification Framework and include an adequate profit margin, thus ensuring adequate compensation'.*

'*Use of traditional knowledge shall be recognized, promoted and adequately compensated'*. (3.4)

ALIGNMENT AND REFERENCE TO INTERNATIONAL CONVENTIONS

Convention on Biological Diversity (CBD)

The principles support the implementation of and directly correspond to the objectives of the CBD.

'*In the signatory countries, the provisions of all international agreements, such as CITES, the ILO Conventions and CBD, shall be respected.'* (5.3)

The CBD is referred to in multiple definitions.

FairWild Foundation

Name of Standard	FairWild Standard
Organisation	FairWild Foundation
Documents Reviewed	FairWild Standard Version 2.0, FairWild Standard Version 2.0 Performance Indicators
Version Reviewed	Version 2.0 - 26th August 2010
First Version	2006[33]
Reviewed By	S. Kenney
Reviewed On	29.10.2010

DESCRIPTION /SUMMARY

The FairWild Foundation (founded in 2008) maintains an international Standard for the collection and management of wild plants, promoting the sustainable use of wild-collected ingredients and a fair deal for all those in the supply chain. The Standard provides the basis for the FairWild certification scheme, guidance for resource management, and has applications in the development and implementation of laws and regulations, and private sector standards. The eleven principles provide guidance ranging across ecological, social and fair trade aspects of sustainable use and trade. Each principle has criteria and associated performance indicators. Certification is based upon compliance with set minimum requirements and a gradually increasing score against the "Total Norm Points" available when assessed against performance indicators. Some minimum requirements become compulsory in Years 2-5 of the certification scheme. A distinction is made between species determined to be at low, medium and high risk of unsustainable levels of collection, with more rigorous requirements in place for the latter.

THREAT BASED MEASURES

Habitat loss and restoration

Minimum requirement to be met in year three: '*no habitat level damage or measures / strategies to avoid habitat-level damage from collection methods are identified in the management plan and implemented at the collection site*' (2.2.c)

Over-exploitation

Principle 1 states that the *'Wild collection of plant resources shall be conducted at a scale and rate and in a manner that maintains populations and species over the long term.'* As part of this principle:

'*The conservation status of target species and populations is assessed and regularly reviewed.*' (1.1)

'*Collection and management practices are based on adequate identification, mapping, inventory, assessment and monitoring of the target species and collection impacts.*' (1.2) and

'The rate (intensity and frequency) of target resource collection does not exceed the target species' ability to regenerate over the long term.' (1.3).

A minimum indicator is that there is '*no indication that current / specified maximum collection quantities reduce resource quality or availability in the collection area'* (1.3.e).

The precautionary approach, defined as '*an approach to uncertainty that provides for action to avoid serious or irreversible environmental harm in advance of scientific certainty of such harm*', is taken in relation to the maximum collection quantities as specified in the management approach for high risk species. (1.3.e)

A minimum requirement is that population size, distribution and structure remains equal to or above baseline values. (9.2.b)

Other requirements relating to high risk species only include collection limits being justified by assessments (1.3.d), maximum collection quantities being justified by adequate estimates and well above the volumes harvested (1.3.e), collection not exceeding the rate of replacement (1.3.f) and that no over-harvesting is evident (9.3.g). (Part II, Performance Indicators)

Invasive species

Not specifically included, except to state that the FairWild Standard as applied to invasive species must be determined on a case-by-case basis.

Mitigation hierarchy

For high risk species: '*The management plan includes strategies to prevent or reduce identified threats to sustainability of collection*' (9.1.i), but no defined mitigation hierarchy.

No net loss/net positive impact

Principle 2: '*Negative impacts caused by collection activities on other wild species, the collection area and neighbouring areas shall be prevented.*' No net loss of biodiversity is not specifically referred to however.

33 http://www.fairwild.org/history/

BIODIVERSITY COMPONENTS

Species

Threatened species are defined as: *'Species of flora and fauna indicated as threatened in applicable laws or regulations or by the IUCN Red List Categories and Criteria version 3.1.'* Endangered species are also defined, using the Forest Stewardship Council Principles and Criteria.

'Rare, threatened and endangered species... that are likely to be affected by collection and management of the target species are identified and protected.' (2.1)

As a minimum requirement relating to this a '*preliminary search for information, including local / collector knowledge, supports overall assessment that collection is not likely to affect sensitive species and habitats'* must be undertaken for certification (2.1.a).

Principle 9 on applying responsible management practices, supports species management plans that define adaptive and practical management processes and good collection practices, as well as inventory, assessment and monitoring of target species.

Impacts of intensive target species management practices on sensitive species must be monitored through the management plan. (Minimum requirement, 2.2.e)

There are multiple additional performance indicators that apply to any operation that collects at least one high risk species (Part II, Performance Indicators). High risk is defined as: '*Plants which have been considered as threatened by the FairWild Foundation owing to a range of ecological and market factors'.*

For high risk species minimum requirements include high quality maps of target populations (1.2.c) and that the target species has been assessed as not threatened (1.2.l). '*Any threatened target species can only be certified if collection operation demonstrates awareness, and exceptional measures to reduce identified threats are included and implemented in the management plan*' (1.2.l). Threatened target species include those that are Critically Endangered, Endangered or Vulnerable according to the IUCN Red List or equivalent conservation authority.

Other requirements relating to high risk species include confirmation of published information or local observations (1.3.c), a management plan that has an adequate strategy to prevent or reduce identified risks (9.1.i), and adequate assessment and periodic monitoring (9.2.a).

Habitats

A habitat is defined in the glossary section using the Convention on Biological Diversity (CBD) definition

'Habitats that are likely to be affected by collection and management of the target species are identified and protected.' (2.1). A minimum requirement relating to this is that there is a preliminary search for information about rare, threatened or endangered habitats that supports assessment that collection is not likely to affect sensitive habitats (2.1.a)

'Management activities supporting wild collection of target species do not adversely affect ecosystem diversity, processes and functions.' (2.2)

'*Area management plan defines adaptive, practical management processes and good collection practices.'* (9.1)

Impacts of landscape-level management practices on ecosystem structure and function must be monitored through the management plan. An example of such management practices is given as enrichment planting. (Minimum requirement, 2.2.e)

Protected areas

Defined as: *'A geographically defined area that is designated or regulated and managed to achieve specific conservation objectives.'*

'Collection and management of target resources comply with all international agreements' and with national and local laws, regulations and administrative requirements, including those related to protected species and areas.' (3.2)

Principle 4 relates to community conserved areas: '*Local communities' and indigenous peoples' customary rights to use and manage collection areas and wild collected target resources shall be recognised, respected and protected.'*

Priority areas

Not specifically included.

SOCIAL COMPONENTS

Free, Prior, Informed Consent (FPIC)

Prior, informed consent defined in the glossary as: '*Consent obtained by the user from the State and other providers, as the case may be, after fully disclosing all the required information, that allows access to their genetic resources and associated traditional knowledge under mutually-agreed terms.'*

An operation must implement the following minimum requirement in the first year of certification and must meet it

for the second certification: '*prior informed consent (PIC) is given by the source community and the traditional knowledge holders and mutually agreed terms (MAT) are reached for access to this knowledge and the equitable distribution of benefits arising from its use.*' (4.2.c)

Access and Benefit sharing (ABS)

Principle 4 is specifically on respecting customary rights and benefit sharing.

Defined as: '*In the international legal context, [access and] benefit-sharing is the action of giving a portion of advantages/ profits derived from the use of genetic resources or traditional knowledge to resource provider. Broader definitions include the use of biological resources, community knowledge, technologies, innovations or practices.*'

Criterion 4.1 states that *'Local communities and indigenous people with legal or customary tenure or use rights maintain control, to the extent necessary to protect their rights, traditional knowledge or resources, over collection operations.*'

Minimum requirements include that traditional uses / practices and customary access-rights must be included in the resource assessment or management plan from Year 3 (4.1.b), use of the target resource does not violate or undermine legal or customary rights or practices (4.1.d), and fair compensation is provided for damage or losses (4.1.e).

Criterion 4.2 on Benefit-sharing: '*Agreements with local communities and indigenous people are based on appropriate and adequate knowledge of target resource tenure, access rights, management requirements and resource value. The agreements ensure a fair and equitable sharing of benefits for all parties involved.*'

Agreements with local communities and / or indigenous people must be '*written and mutually accepted fair and equitable agreements on use of resources and associated traditional knowledge are available; full ABS agreements are at least in preparation*' (4.2.a) and '*in compliance with relevant international and national laws and regulations concerning ABS as well as protection of traditional knowledge*' (4.2.b)

Agreements must also reflect up-to-date information and information must be freely available and openly exchanged. (4.2.d)

Implementation approaches for the Standard also refer to ABS under the CBD. (p.2)

ALIGNMENT AND REFERENCE TO INTERNATIONAL CONVENTIONS

Convention on Biological Diversity (CBD)

The CBD is referenced in the implementation approaches for the Standard. (p. 2)

Although the CBD is not specifically mentioned in the text of Criterion 3.2, it states that: '*Collection and management of target resources comply with all international agreements.*'

Several definitions inclusive of 'biological diversity', 'habitat', 'protected area' and 'sustainable use' are sourced from the text and annexes of the CBD.

MINING

Alliance for Responsible Mining (ARM)

Name of Standard	ARM standard
Organisation	Alliance for Responsible Mining (ARM)
Documents Reviewed	STANDARD ZERO FOR FAIRTRADE ARTISANAL GOLD AND ASSOCIATED SILVER AND PLATINUM
Version Reviewed	2009 Draft Version
First Version	2006[34]
Reviewed By	Matt Jones
Reviewed On	1/11/10

DESCRIPTION / SUMMARY

The Standard Zero follows the characteristic fairtrade grouping of social, economic, labour, and environmental development standards, with specific requirements for fair traders and jewellers.

THREAT BASED MEASURES

Habitat loss and restoration

It is implicitly recognised that mining activities may lead to habitat loss.

Several clauses require that rehabilitation of the "*native ecosystem*" (clause 3.3.4) take place to "*enable ecological regeneration*" (clause 4.2.1) from the "*outset of new operations*" (clause 3.3.4). Management is required to ensure that "*Ecological disruption due to mining is minimised*" and that "t*he local ecosystem is not placed beyond capacity to recover*." (Clause 3.3.2).

A progress requirement in clause 4.2.7 is in place stating that "*Intervened areas must be rehabilitated and revegetated*" however an exception is made for where "*complete rehabilitation and revegetation may result too costly and is not their responsibility*" due to "*working on tailings, dumps and areas with environmental legacies from past large or medium mining*". In such circumstances the progress requirements allows for the organisation to " *compensate by implementing conservation measures in a selected nearby area, in line with the local land management plans set by authorities*"

Clause 4.3.3 provides for rehabilitation to include use of "*topsoil... from the mining site*" and "*native species (for example, by seeding or transplanting seedlings)*" and " *in line with local land management policies*."

Under clause 4.3, "An additional premium will be recognised for gold produced under stringent environmental practices which include forest restoration in areas of high biodiversity".

Over-exploitation

Under clause 4.2.2., if the mining operation is located within a legally designated protected area they must implement "*a strict policy not to hunt for bush meat.*"

Invasive species

Invasive species are not identified or defined.

The organisation is required by clause 4.3.3.2 to demonstrate that *"revegetation includes native species".*

Mitigation hierarchy

Not specifically included.

No net loss/net positive impact

Not specifically included.

BIODIVERSITY COMPONENTS

Species

Not specifically included.

Habitats

Water bodies, aquatic and riparian systems are identified, but not specifically defined.

Some protection is provided to aquatic ecosystems through clause 4.2.4 which prohibits dumping of "Fuel residues and their containers", clause 4.1.6 which prohibits discharge of "Amalgamation and cyanide tailings and solutions" either directly into aquatic ecosystems or where they can reach aquatic ecosystems and clause 4.2.6 preventing discharge of "Tailings and contaminated water". Furthermore, additional progress requirements 4.2.6.2 and 4.2.6.3

34 http://communitymining.org/index.php/en/standard-zero/releases

recommend that organisations demonstrate both that they " reduce the load of suspended solids into water bodies" and "new input of suspended solids into water bodies is controlled in quantity and frequency, such that there is no acute and persistent disruption of the aquatic or riparian system".

Local/native ecosystems are identified, but not specifically defined.

Clause 4.3 requires that ecosystems be managed to ensure that they are "not placed beyond capacity to recover"

Forest habitats are identified.

Under clause 4.3, The operation will only qualify for the fairtrade premium if they adopt "stringent environmental practices which include forest restoration in areas of high biodiversity" giving some incentive to protect forest areas

Other habitats are not specifically identified or defined.

Protected areas

Protected areas are identified as those which are "legally designated" but not specifically defined.

For operations within a protected area, "authorization is required from the relevant authority stating that the mining activities are legal and compatible with the conservation and management objectives of the protected area" under clause 4.2.2, furthermore, Operating in protected areas is noted to be "exceptional". For an organisation to qualify for fairtrade certification they must "have an environmental mitigation plan and must have operated under the monitoring and legal permit of local authorities for more than 10 years"

Areas which might be considered to be ICCAs are not specifically identified, however some protection is implicit in clause 1.2.2 which requires that "operations are conducted with the agreement of local community authorities" and in clause 1.2.2.2 which requires the organisation to demonstrate that "their mining activities do not affect the territorial rights or the right to protect the natural resources of local communities", finally, indigenous communities and their rights are identified in clause 1.2.2.3 which requires operations to have a "permit of indigenous communities or other ethnic groups for mining activities".

Other protected or managed areas which are not legally designated are not specifically identified or provided for.

Priority areas

Not specifically included, however, clause 4.3 incentivises "forest restoration in areas of high biodiversity".

SOCIAL COMPONENTS

Free, Prior and Informed Consent (FPIC)

Free, Prior, Informed Consent is not specifically referred to, however clause 1.2.2 requires that *"operations are conducted with the agreement of local community authorities"*

Access and Benefit Sharing (ABS)

Not specifically included.

ALIGNMENT AND REFERENCE TO INTERNATIONAL CONVENTIONS

Convention on Biological Diversity (CBD)

Not specifically included.

Responsible Jewellery Council (RJC)

Name of Standard	Responsible Jewellery Council Principles and Code of Practices
Organisation	Responsible Jewellery Council (RJC)
Documents Reviewed	Responsible Jewellery Council Principles and Code of Practices
Version Reviewed	12/1/2009
First Version	2009
Reviewed By	Matt Jones
Reviewed On	29-10-10

DESCRIPTION / SUMMARY

An internationally applicable standard applied to member organisations, focussed on a specific groups of products.

THREAT BASED MEASURES

Habitat loss and restoration

It is implicitly recognised that some habitat loss is a normal side-effect of mining operations, rehabilitation at the point of decommissioning is required by clause 3.5.5 which states that the objective of rehabilitation should be *"to establish a sustainable native ecosystem, or other post-mining land use developed through engagement with key stakeholders".*

Over-exploitation

Not specifically included.

Invasive species

Not specifically included.

Mitigation hierarchy

Not specifically included.

No net loss/net positive impact

No net loss is not specifically referenced, however clause 3.5.3 requires that for "*Key Biodiversity Areas within their operating boundaries*" companies must "*implement action plans to deliver measurable biodiversity benefits commensurate with the level of biodiversity impacts*" which can be assumed to require that all negative impacts are offset by equivalent positive impacts.

BIODIVERSITY COMPONENTS

Species

Threatened species are defined based on IUCN. No further definition or identification is made regarding different classes of species.

Activities which might lead to the extinction of an IUCN-listed threatened species are prohibited by clause 3.5.4.

No reference is made to other action which might impact on different classes of species.

Habitats

Habitats are not specifically defined or identified beyond a reference to the *"native ecosystem".*

Aquatic habitat are given some *de facto* protection by clause 3.3.4 which prohibits *"riverine tailings disposal at new facilities"* and "s*ubmarine tailings disposal for land-based Mining Facilities*" unless:

" thorough environmental and social analysis of alternatives was conducted which showed that submarine tailings disposal creates fewer environmental and social impacts and risks than a land-based tailings facility, and

it can be scientifically demonstrated that a significant adverse effect on coastal resources does not result, and

the tailings are released in seawater below the surface thermocline and euphotic zone."

Protected areas

Protected Areas are identified as those which are *"legally defined".*

World Heritage Sites are defined based on the convention.

Clause 3.5.1 prohibits exploration or mining in World Heritage Sites and provides that members *"will ensure that their activities do not negatively impact directly on adjacent World Heritage Sites".*

Clause 3.5.2 provides that "Members with Mining Facilities will respect legally designated protected areas" and provides protection through the requirements that:

"a. Members have a process to identify nearby legally designated protected areas.

b. Members comply with any regulations, covenants or commitments attributed to these areas.
c. Decisions to proceed with exploration, development, operation and closure activities take into account the presence of, and impact on, legally designated protected areas".

Areas which might be considered to be ICCAs are not specifically identified, however some protection is implicit in clauses 2.11.2 which requires that *"The interests and development aspirations of affected communities must be considered"* and in clause 2.13.1 which states that *"Mining Facilities will respect the rights of Indigenous Peoples ... and their social, cultural, environmental and economic interests, including their connection with lands and waters."*

Other protected or managed areas which are not legally designated are not specifically identified or provided for.

Priority areas

KBAs are defined as *"places of international importance for the conservation of biodiversity through protected areas and other governance mechanisms. They are identified nationally, based on their importance in maintaining species populations"*

Where KBAs exist within the operational boundary, they are given some protection by clause 3.5.3 which provides that members *"implement action plans to deliver measurable biodiversity benefits commensurate with the level of biodiversity impacts."*

SOCIAL COMPONENTS

Free, Prior, Informed Consent (FPIC)

Free Prior Informed Consent is not specifically referred to, however clause 2.11.2 requires that *"Engagement must be carried out in an inclusive, equitable, culturally appropriate and rights-compatible manner."* and that *"and broad community support for proposals should be sought."*

Access and Benefit sharing

Not specifically included.

ALIGNMENT AND REFERENCE TO INTERNATIONAL CONVENTIONS

Convention on Biological Diversity (CBD)

Not specifically included.

Biodiversity
is life

2010 International Year of Biodiversity

Biodiversity
is our life

Highlights of the International Year of Biodiversity

Convention on
Biological Diversity


2010
COP 10 / MOP 5


2010
2010 Año Internacional de la Diversidad Biológica


President
Executive Secretary


2010
2010

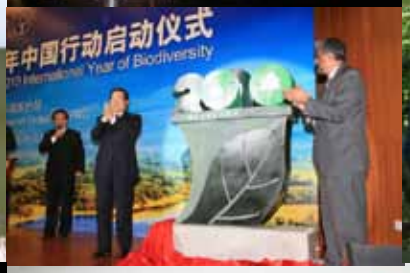

2010


2010


2010


2010


2010


年中国行动启动仪式
International Year of Biodiversity
2010


AIRBUS
2010


FIFA World Cup 2010 - South Africa
2010
Soweto
2010
Sandton


2010
2010 Año Internacional de la Diversidad Biológica


2010


2010


PALINA
DOMINICANA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PUMA


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2010

FOREWORD

Ahmed Djoghlaf, Executive Secretary, Convention on Biological Diversity

The International Year of Biodiversity was conceived as a campaign that would raise awareness of the value and importance of the diversity of life on our planet, with the goal of instilling a sense of wonder, of discovery, and ultimately of individual and collective action for a more sustainable relationship between human communities and the ecosystems of the world.

The campaign took place at a crucial time in history. The impact on biodiversity of the activities of billions of humans is such that if changes are not taken now, we run the risk of permanent transformations to some of the richest ecosystems on our planet. Action now and over the next ten years can bring us to a sustainable future.

As we look at the results of the year, it is clear that the citizens of the world have taken the first steps to this transformation. Around the planet, celebrations and activities took place in 192 countries, culminating in the commitment by leaders in Nagoya, Japan to a global strategy that will preserve biodiversity. As revealed by public opinion surveys, biodiversity has achieved a greater degree of recognition than it did at the beginning of 2010.

The activities carried out around the world are the beginning of a new era of mankind “LIVING IN HARMONY WITH NATURE”, which is the slogan of the United Nations Decade on Biodiversity during which action by all stakeholders will be required to ensure that our children will continue to enjoy all the benefits of life on Earth.

PREFACE

Achim Steiner, Executive Director,
United Nations Environment Programme

The International Year of Biodiversity commenced on a muted note: despite efforts in many nations, no single country had achieved the 2010 goal of substantially reversing the rate of loss of biodiversity.

However, the year was rapidly transformed from a sense of concern into a moment when nations re-engaged with a greater sense of purpose and determination on the biodiversity challenge.

For several years there have been calls for an 'IPCC-for-nature' to bridge the gap between the mounting levels of research and a defining policy response.

In June in the Republic of Korea, nations gave the 'green-light' for an Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services or IPBES.

Meanwhile, in October, at the Conference of the Parties to the CBD, governments agreed to the establishment of the Nagoya Protocol on Access and Benefit-sharing.

In the past, the value and economic importance of the world's multi-trillion dollar nature-based assets, including for the poor, were all but invisible in national and global accounts.

But this has changed in 2010, in part as a result of The Economics of Ecosystems and Biodiversity—an initiative requested by G8 and developing country environment ministers.

Countries including Brazil and India are now carrying out similar TEEB-like exercises bringing the global concept to the national level.

The Nagoya meeting also established a new strategic plan up to 2020. For example governments agreed to increase the extent of land-based protected areas to 17% of the Earth's land surface and to extend marine protected areas to 10%.

These developments bode well for the Rio+20 meeting in Brazil in June 2012 and the United Nations Decade on Biodiversity.

No one year will define the future of life on Earth, but 2010 may go down in the annals of history as a point in time when humanity began really valuing the wealth and richness of the natural world, and also began acting on that knowledge.

PREFACE

Satsuki Eda, Minister of the Environment, Japan

It is indeed a great honor to be able to offer this message reflecting back on 2010 as the International Year of Biodiversity (IYB). While 2010 did see the third edition of Global Biodiversity Outlook (GBO3) reaffirm a global decline in biodiversity, it was also a year in which people around the globe shared the commitment to take concrete and immediate actions to maintain rich ecosystems for future generations.

Following the IYB launching ceremonies held in Berlin and Paris in January, national committees were established in many countries and relevant entities around the world redoubled their efforts on biodiversity.

The highlights of the International Year of Biodiversity were the UNGA high-level meeting held in New York in September and the Tenth Meeting of the Conference of the Parties to the Convention on Biological Diversity (CBD COP10) in Nagoya, Aichi Prefecture, Japan in October. The summit-level political message on the importance of biodiversity was presented at the UNGA high-level meeting for the first time. The CBD COP10 achieved historic results, adopting both “Aichi Biodiversity Targets”, the new global targets on biodiversity, and the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization. The IYB closing event held in December in Kanazawa, Ishikawa Prefecture, Japan brought to an end a very fruitful year with the assessment that the IYB had prompted a worldwide expansion in activities aimed at conserving biodiversity.

This year marks the start of the United Nations Decade on Biodiversity (UNDB), a ten-year period in which all parties concerned must undertake efforts to build sustainable societies in harmony with nature based on the Aichi Biodiversity Targets.

Let us carry the successes of the IYB forward into the UNDB and further extend our endeavors to bolster biodiversity throughout the entire international community.

BRANDING AND PRODUCTS

Organic apple marked with the IYB logo.

Logo and slogan

The logo and slogan were launched on 2 October 2009 in Montreal and were in use until mid 2011 for reporting purposes. The logo was freely available on the website and translated into at least 31 languages. At the time of writing, there are 1751 registered users of the logo; this number does not include the sub-entities which fell under umbrella organisations (ex. IYB-UK). It is worth noting that there have been 57,134 visitors on the logo webpage.

Web diffusion

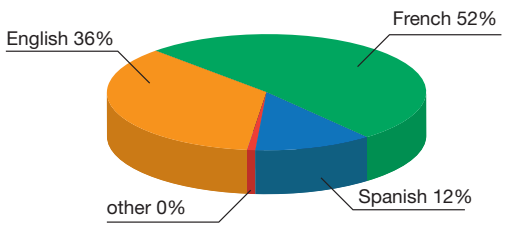
www.cbd.int/2010: since mid 2009, there has been 1,028,260 unique pageviews (individual visitors), with a peak of 13,326 views on 11 Jan 2010. Top 10 countries: USA, Canada, Australia, UK, Spain, Japan, India, France, Italy, Brazil. From 1 Jan to 31 Dec 2010, the IYB website accounted for 21% of total CBD website traffic.

www.facebook.com/iyb2010: since its creation on 15 Dec 2009, over 56,000 friends joined the page, 56% female, 40% male; age groups: 13-17 (3.7%), 18-24 (28%), 25-34 (35%), 35-44 (16%), 45-54 (8%), 55+ (5%). Top 10 countries: Australia, USA, Portugal, UK, Italy, Mexico, Canada, France, Colombia, Philippines. Top 10 cities: Lisbon, Melbourne, Mexico City, Bogota, Lima, Sydney, Makati, Rome, Madrid, Montreal.

A simple Google search for “International Year of Biodiversity” gives the following results: EN 8,020,000; ES 3,510,000; FR 2,100,000; ZH 279,000; RU 51,800; AR 16,900.

News.google.co.uk	10 900
News.google.com	9 150
News.google.ca	10 800
News.google.com.au	10 800
News.google.fr	15 800

News.google.es	3690
News.google.ru	21
News.google.cn	54
News.google.eg	66



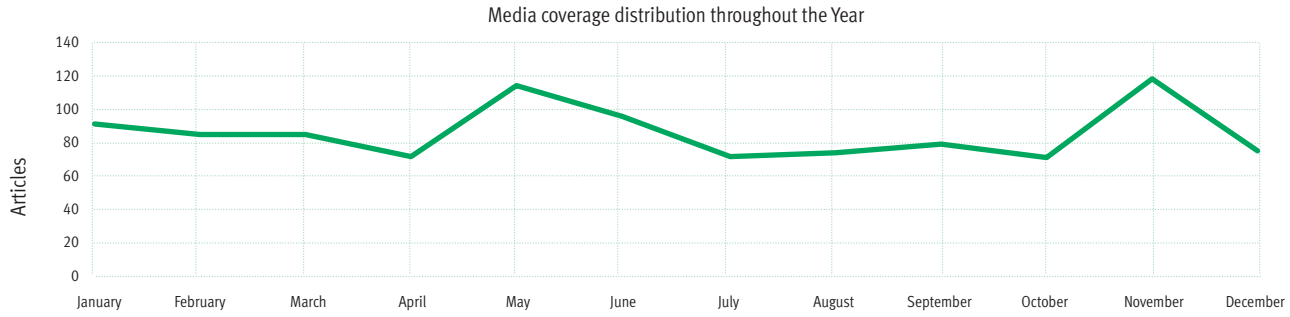
The numbers opposite correspond to the number of articles mentioning the “International Year of Biodiversity” according to Google news in the six UN languages.

As this graph represents, most articles mentioning “International Year of Biodiversity” archived on Google news are in French and English.

Media coverage distribution throughout the Year

Since the highest media coverage of the Year appeared under news.google.co.uk, the following graph will depict the yearly distribution of the coverage on a monthly basis.

The peak for the month of May represents the increased media coverage that the Year received as a result of the International Day for Biological Diversity, 22 May 2010. The World Environment Day, 5 June 2010, explains the increase during that month. The peak in November is most likely due to increased media coverage after the Tenth Conference of the Parties to the Convention on Biological Diversity, and the release of The Economics of Ecosystems and Biodiversity.



IYB museum

The IYB museum showcases samples of the information materials and promotional items created by governments and organisations. 301 items are currently part of the museum; they have been produced by 62 countries and 9 international organisations. The Secretariat of the CBD has produced and disseminated pins, t-shirts, factsheets, pens, brochures, bookmarks, posters, videos, flags, mugs, and used the logo on letterhead, notepads and all publications.

The IYB museum, located at the SCBD, showcases the materials sent by 62 countries and 9 international organisations commemorating the Year

Special mentions

28 countries and 3 UN offices have reported producing stamps or postcards to commemorate the IYB: Argentina, Belarus, Benin, Brazil, Canada, China, Hong Kong/China, Dominican Republic, Hungary, Iceland, India, Iraq, Japan, Malaysia, Malta, Morocco, Philippines, Poland, Portugal, Saint Lucia, Sao Tome and Principe, Singapore, South Africa, Switzerland, Syria, Thailand, Trinidad and Tobago, United Kingdom, and UN; Geneva, Vienna & Postal Administration.

The IYB was the 2010 Green Awards Winner as “Best Green International Campaign”.

MAIN LAUNCHES

9 Jan 2010—Launch in Brazil during The Second Curitiba Meeting on Cities and Biodiversity, with the participation of the Mayor of Curitiba, the Minister of National Development of Singapore, the United Kingdom National Focal Point and the Acting Minister of the Environment of Brazil.

11 Jan 2010—Global launch in Berlin, Germany, attended by the German Chancellor where she delivered a statement, on behalf of the CBD COP Presidency. Also attending were: the Federal Minister of the Environment of Germany, the Senior Vice-Minister of the Environment of Japan, the Environment Minister of Yemen, UNEP Executive Director and CBD Executive Secretary. Through a video message, the UNSG officially launched the IYB.

Reported launches in January: Bulgaria, China, Colombia, Czech Republic, Japan, Netherlands, UK, UNCTAD (Geneva), as well as international organisations such as Bioversity and BirdLife's launch at the European Parliament.

21-22 Jan 2010—UNESCO hosted a high-level IYB event in Paris, France, in partnership with the CBD. UNESCO Director General participated through a video message. Other keynote participants were the President of the 35th session of the UNESCO GC, the UNESCO Deputy Director-General, the CBD COP President and CBD Executive Secretary, as well as a number of high-level government representatives. The two-day event was followed by the UNESCO IYB Biodiversity Science Policy Conference on 25-29 January.

26-27 Jan 2010—Launch of the Spanish public awareness campaign "Biodiversity is music" in Madrid, and the European Commission announced a five million euro public-awareness biodiversity campaign.

1-5 Feb 2010—Trondheim Conference on Biodiversity (and IYB launch in Norway), with the participation of the Mayor of Trondheim, the Norwegian Minister of the Environment and International Development, UNEP Deputy Executive Director, CBD Executive Secretary, the Parliamentary Secretary of State of the German Federal Environment Ministry, and the Director of the Global Biodiversity Strategy Office of the Japanese Ministry of Environment, the Study Leader of The Economics of Ecosystems and Biodiversity project, the Chief Scientific Advisor of DEFRA-UK, the President of IUCN and the Director of Stockholm Resilience Centre.

Chancellor Angela Merkel during the official IYB launch in Berlin.
Credit: Thomas Koehler/photothek.net

10 Feb 2010—North American Launch of the IYB, organized by UNDP and partners at the American Museum of Natural History (AMNH) in New York, USA. The event gathered the participation of more than 400 people, which included representatives of the Permanent Missions accredited to the UN.

8 July 2010—Edward Norton was named United Nations Goodwill Ambassador for Biodiversity.

CELEBRATIONS

192 countries celebrated the International Year of Biodiversity: 190 Parties to the CBD, excluding San Marino, Haiti and the Democratic People's Republic of Korea, and involving 2 non-Parties: USA and Andorra. Countries that have submitted their final IYB report are highlighted below. The full final reports are available on the IYB website www.cbd.int/2010/countries

Africa

Burundi: With the financial support of CHM-Belge de l'Institut Royal des Sciences Naturelle de Bruxelles (IRScNB), Burundi produced and dedicated the 8th Scientific Bulletin of the National Institute for the Environment and Nature Conservation (INECN).

Photo: Workshop "Wild pollinators in agricultural and forest ecosystems in Burundi." Credit: Ministère de l'Eau, de l'Environnement, de l'Aménagement du Territoire et de l'Urbanisme

Cameroon: A trip to Mount Fako was organized. It began at the MoE (MINEP), where the participants from Yaoundé gathered to travel to Limbe. The CBD National Focal Point elaborated on the field trip site, activities to be carried out during the process.

Photo: Meeting in the botanical garden in Limbe. Credit: GTZ

Morocco: The Moulouya Caravan travelling exhibition is part of a project of IUCN and Agence du bassin hydraulique de la Moulalouya. The main objective was to sensitize and inform on aquatic biodiversity in the hydraulic basin of the Moulouya to different local actors.

Photo: Camel keeper in Morocco. Credit: flickr.com / jadis1958

Rwanda hosted the World Environment Day at the global level and celebrated it in conjunction with the annual Kwita Izina Ceremony. Successes of gorilla conservation have been celebrated in the presence of senior authorities, the private sector, local communities, conservationists and more.

Photo: "Gorillas" (people in fancy gorilla dress) waiting to be named at WED2010 Kwita Izina Ceremony. Credit: NFP/CBD RWANDA

South Africa: Stakeholders from all walks of life participated in the IYB launch, presented by the Deputy Director General: Biodiversity and Conservation Mr. Fundisile Mketeni. The result was a series of activities undertaken by various institutions throughout the country in honour of the IYB. Each month of the year had a theme dedicated to biodiversity.

Photo: 4 stamps were issued to commemorate IYB. Credit: South African Post Office

Sudan: Special issuance of the periodic of Higher Council for Environment and Natural Resources in Sep. 2010 addressed the issues of biodiversity at local and global level and distributed widely.

Photo: These gazelles hail from Sudan where they graze in hilly terrains and wooded steppes. These animals are corralled with stone cairns so they can be more easily hunted. Credit: flickr.com / Travis S.

Swaziland: The National Planning Committee for IYB comprised officials from SEA, SNTC, MTEA, MOA, MNRE, DWA, SWADE and Yonge Nawe. The committee organized and coordinated events such as IDB2010 (22 May), WED Symposium (2 June) and WED (5 June).

Photo: The Deputy Prime Minister speaking at the World Environment Day Symposium. Credit: National Planning Committee

Uganda: The NCC celebrated IYB and WED on 5 June 2010. The theme "Biodiversity for National Prosperity. Conserve it". was chosen to enable all levels of society to appreciate the importance of biodiversity in the fight against poverty, national development and conservation.

Photo: IYB-WED banner. Credit: National Environment Management Authority (NEMA)

Asia & Middle East

Bahrain: Celebration by the Youth Club of Al Muharraq and the TUNZA youth NGO: "Our Life is More beautiful with biodiversity". Activities for the public included a bicycle race and exhibition for biodiversity-related research, events by universities and NGOs, as well as exhibitions on plants and animals. UNEP-ROWA made a statement highlighting the importance of biodiversity to human well-being and the significance of human activities on loss of species.

Photo: Youth Club of Al Muharraq and TUNZA youth NGO.
Credit: UNEP-ROWA

China: An International Workshop on Agricultural Biodiversity was held in September (co-organized by the Ministry of Agriculture, UNDP and GTZ). Participants exchanged experiences and lessons in the development of agricultural biodiversity policies and ABS-related issues.

Photo: 22 May 2010, the unveiling of the IYB Action Monument in North China Beijing Zoo. Credit: MEP

India: The National Biodiversity Authority organised a number of events all over the country and also extended catalytic support for the celebration of IYB in partnership with agencies like UNDP. The State Biodiversity Boards as well as Biodiversity Management Committees held a variety of programmes.

Photo: India's stamps for IYB 2010. Credit: Department of Posts, India

Iraq: The Ministry of Culture established a competition for children and professionals drawings on biodiversity within the platform of the celebration of IYB. It also contributed to organize two exhibitions of Iraqi traditional products.

Photo: The Ministry of Culture established an exhibition of Iraqi traditional products as an exhibition at COP 10 of CBD in Nagoya, Japan. Credit: Iraqi Ministry of Culture

Israel: The National Biodiversity Plan was presented to the public in the presence of the Minister of Environmental Protection during the "Jerusalem for the Environment" Conference, organized by the Society for the Protection of Nature in Israel in cooperation with the MoE.

Photo: From Israel's National Biodiversity Plan

Japan hosted the CBD's COP-MOP5 and COP10 in Nagoya. The MoE and Aichi Prefecture held the International Youth Conference on Biodiversity to promote communication among young people from around the world and to improve their mutual awareness of biodiversity.

Photo: Featured during COP10, the MERRY PROJECT is an official partner for IYB. Credit: CBD/M.Bański

Jordan: A competition was organized among students at schools (including best article and best graphics). There was also a competition for journalists related to the best article on the Zarqa River Basin.

Photo: IYB Ceremony by the Ministry of Environment and IUCN, including Prime Minister Samir Rifai. Credit: Ministry of Environment

Lao PDR organized workshops and activities to raise public awareness on forest and biological diversity conservation in 6 districts and 41 villages. In total, 1574 participants attended the workshops.

Photo: The launching of International Year for Biological Diversity, 3 June 2010. Credit: Department of Forestry

Malaysia: Minister YB Dato Sri Douglas Uggah Embas launched a nationwide campaign to plant 26 million trees by 2014. Some 16,200 saplings were planted during the launch event.

Photo: Minister Douglas Uggah Embas launching the campaign. Credit: Ministry of Natural Resources and Environment Malaysia

Myanmar: The Ministry of Forestry hosted the celebration of IYB. About 200 representatives from ministries and enterprises, international organizations such as UNDP, FAO, Head of Universities and Basic Education High Schools, NGOs and all staffs from NCEA attended.

Photo: Myanmar's celebrations for IYB 2010. Credit: National Commision for Environmental Affairs (NCEA)

Nepal: The International Centre for Integrated Mountain Development (ICIMOD) marked the IYB by organizing various activities including participation in global conferences and meetings, hosting regional level trainings, and organising local events.

Photo: Nepal's IDB 2010 celebrations. Credit: ICIMOD

Oman: The Oman National Commission initiated a Seminar to which several institutions participated, including the Ministry of Environment and Climate Affairs, Ministry of Agriculture, Ministry of Tourism, Ministry of Fisheries and a large number of experts.

Photo: Oman's celebration for IDB 2010 and the Green Wave. Credit: Alia Saif Al-Naamany

Saudi Arabia: The Saudi Wildlife Authority (SWA) published an Arabic magazine entitled "Al-Wudaihi", which popularizes and disseminates information on wildlife in Saudi Arabia and the work of the SWA.

Photo: IYB material distributed to school children. Credit: SWA

Singapore: The World Cities Summit 2010 brought together over 230 local and overseas participants among the government, academia, research and landscape practitioners from various cities around the world.

Photo: Guided tour at Hort Park Butterfly Garden. Credit: National Parks Singapore

Vietnam: A talk show and quiz on biodiversity for the celebration of IDB 2010 was held at Giang Vo Secondary School; more than 1,000 pupils took part. At the same time, a tree planting session was organized as part of the Green Wave. Different ministries also celebrated the IDB.

Photo: IDB 2010 celebrations in Vietnam. Credit: GeoMedia GbR

Europe

Belarus: Biodiversity and related events were broadly covered by the media. Over 700 meetings were organized to raise awareness all over the country. Among the most active participants there were representatives of the mass media, business and NGOs as well as governmental bodies.

Photo: Stamps issued by Belarus for the IYB. Credit: Belpochta

Belgium, as part of its public awareness campaign, has produced an excellent booklet on simple everyday actions to protect biodiversity: *366 gestes pour la biodiversité*, adapted into a more general version: *52 actions for biodiversity* and translated into ~30 languages.

Photo: Belgium's 52 Actions for biodiversity (translated into ~30 languages). Credit: C. Desmedt

Bosnia and Herzegovina took action to address invasive alien species. The Ministry of Environment and Tourism organized an International Colloquium and the Fourth Eco-Camp of the Federation of Bosnia and Herzegovina 2010.

Photo: Bosnia and Herzegovina's action to address invasive alien species (ex. Ragweed, *Artemisia artemisiifolia*). Credit: flickr.com/gmayfield10

Bulgaria: A national programme of initiatives is featured on the Ministry's website www.moew.government.bg. The main event of the Ministry was conducting a two-day Science Conference entitled "Biodiversity and living environment".

Photo: Bulgaria's orchid exhibition featured the rare Jade Slipper Orchid (*Paphiopedilum malipoense*). Credit: flickr.com/taurielloanimaliorchidee

Czech Republic: The MoE was much involved in the campaign, producing information fact sheets, and organising competitions, exhibitions, conferences and outdoors activities. The 36th edition of Ekofilm, had IYB as main theme and received 226 films from 40 countries.

Photo: The population of Peregrine falcons (*Falco peregrinus*) in the Czech republic has been steadily increasing since 1993. Credit: flickr.com/odfw

Denmark: The Danish Society for Nature Conservation, supported by biodiversity-ambassador Anders Lund Madsen, sought the signature of all 98 mayors for the Countdown 2010 declaration.

Photo: Locals learning an old fashioned, but very effective method to manage a small, but highly valued nature conservation site near Aalborg, Denmark. Credit: Danish Society for Nature Conservation/Thyge Nygaard

Estonia: May was designated the National Nature Conservation month and many activities took place throughout the year: conferences, competitions, hiking trips, exhibitions.

Photo: Cleanup action in Harju County, Estonia. Credit: flickr.com/petskratt

European Union: The campaign generated more than 3.6 million visits of the website, more than 68,000 users of the application on Facebook, paid advertising is estimated to have reached over 58 million people. 48% of all respondents agreed that the EU campaign caused them to change their habits to preserve biodiversity.

Photo: The Living Façade project 2010, European Environment Agency (EEA). Credit: Rolf Kuchling/EEA

Finland organized a number of events, seminars and other activities in different parts of the country, ex. competition for the 'The Best Landscape project in Finland'. A set of biodiversity indicators were published on the internet.

Photo: Finland published a set of biodiversity indicators. Credit: flickr.com/monitotxi

France: The campaign, partly organized in collaboration with national TV (ex. TF1 Biodiversity Quiz), featured films, exhibitions and conferences, web diffusion (also on the IYB facebook page). More than 2800 partner organizations joined the campaign between Jan and Oct 2010.

Photo: TF1 featured a Biodiversity Quiz to raise awareness about biodiversity

Germany: BMU established a web-based calendar of events: 1,500 events realised by more than 300 different organisers addressed practitioners, politicians, nature lovers, families and children.

Photo: Biodiversity Action Day: People and organisations in 38 countries took part in this global project, www.biodiversity-day.info. Credit: BMU, BMZ and GEO Magazine

Greece: The European Centre for Environmental Research and Training collaborated with the Hellenic Network for Biodiversity Research to organise a conference; an Interdisciplinary Postgraduate Summer Training Program and Postgraduate program assignments.

Photo: Conference in Kithira, Greece: "Europe and the Environment: The case of Climate Change and Biodiversity in the 21st century". Credit: EKEPEK

Hungary launched the competition for the "European Capitals of Biodiversity" among local authorities in France, Hungary, Germany, Slovakia and Spain. 43 municipalities competed in the national version "Hungarian Capital of Biodiversity Competition".

Photo: Friends of the Earth Hungary celebrated the International Day for Biological Diversity 2010. Credit: FEH/Eszter Deri

Latvia: The Nature Conservation Agency of Latvia organized the campaign "Moments of biodiversity," which included many guided tours in national parks.

Photo: Latvia's IYB campaign "Moments of biodiversity". Credit: Nature Conservation Agency

Netherlands: The IYB National Committee took the form of a nation-wide Coalition for Biodiversity composed of about 200 local and provincial governments, NGOs, businesses and research institutes that organised a great variety of activities.

Photo: On 22 May, the International Day for Biological Diversity, young and old hiked on the trails of over 30 nature areas, farmlands and botanical gardens. Credit: flickr.com/daniduc

Norway released its NBSAP and distributed € 330,130 to various partners and provided training in support of the campaign and to help implement the National Biodiversity Act of 2009. The main partners (150) included NGOs, schools and different sectors.

Photo: NGOs, schools and various other sectors participated in the national campaign. Credit: Kristin Westby

Poland: The educational and promotional activities carried out by the MoE reached 850,000 people. The State Forests regenerated approx. 50,000 ha of forest, converting more than 10,500 ha of monolithic stand of trees into mixed forest; and afforestation of 891 ha.

Photo: *Bison bonasus* is the heaviest land animal in Europe. Credit: flickr.com/21933510@N07

Spain (Catalonia) awarded a total of € 600,000 to 21 associations and foundations to finance education and awareness-raising activities on climate change. The DoEH bestows the annual Environment Awards in 3 categories: Research, Environmental protection, Careers.

Photo: Catalonia (Spain) awarded a total of € 600,000 to 21 associations and foundations to finance education and awareness-raising activities on climate change. Credit: flickr/ironmanixs

United Kingdom: The IYB-UK, run by the Natural History Museum, and part funded by Defra, admirably adopted the IYB campaign and promoted it among its 450+ participating organisations and entities across the country delivering over 1300 events for the public.

Photo: IYB logo at the Kew Gardens in London, UK. Credit: Laurens Geffert

Latin America and the Caribbean

Antigua and Barbuda: The Environment Education Unit organised two major projects: the 1st involved primary schools (Biodiversity Jingle Competition), and the 2nd was to provide information on critical environment concerns to the general public (Biodiversity PSAs).

Caption: According to the WCMC, there are 209 known species of amphibians, birds, mammals and reptiles Antigua and Barbuda. Credit: flickr.com/sharkbait

Barbados: The campaign was focused on the outdoor way of life (visits, tree planting, sport and observations), addressing in particular the next generations. 140 people participated in the 5K walk and 98 runners participated in the 10K of the 9th edition of the *Celebrating Life on Earth RUN*.

Photo: De Heart uh Barbados 10K run and 5K walk CELEBRATING LIFE ON EARTH 2010. Credit: The Natural Heritage Department Ministry of Environment One Sturges St Thomas, Barbados

Brazil commemorated the IYB on the occasion of many international Days (IDB, WED, Health Day, etc.) with events, exhibitions, competitions and activities. One original example is the 5-day Eco Surf Festival, an ecologically-correct surfing event in partnership with Billabong.

Photo: Biologandos 2010. Universidade Nove de Julho – Uninove. Credit: Uninove

Chile: The MoE developed a new legal framework for the management of biodiversity. 2010 was also the beginning of the sixth classification process, with more than 400 species classified to date.

Photo: Short stories and poetry contest. Credit: Paulina Solís / Corporación Laguna Verde

Colombia: The Humboldt Institute lead the campaign by creating an official website and facebook page (2000 fans). A series of conferences, seminars, competitions were organized and publications and videos were produced for dissemination.

Photo: 2010 Conferences about Biodiversity, Investigacion Universitaria - (UdeA). Medellin - Colombia. Credit: Felipe Uribe

Dominican Republic: The MoE launched a conservation network to save biodiversity, the "Green Family" programme and a directory of important areas for bird conservation. Training sessions were organised for park rangers on different issues, including invasive alien species.
Photo: Workshop on Invasive Alien Species in Protected Areas. Credit: Ministerio de Medio Ambiente y Recursos Naturales

Ecuador: A series of events were organized at the national and the provincial level. More than 45 organisations, as well as the MoE, took part in a large arts and music festival. A TV spot, a widespread magazine and many printed materials featured IYB.
Photo: Biodiversity fair. Credit: Ministry of Environment

Guatemala: Lead by CONAP, many institutions were mobilized to organize activities. Information material was produced and distributed, such as bumper stickers, booklets, technical documents, and the National Strategy for Conservation Silver Fir for the period 2008-2017.
Photo: World Day for Biological Diversity. Instituto de la Costa Sur. Credit: Consejo de Areas Protegidas

Guyana: Many IYB activities (exhibitions, environmental camps, tours, films, seminars, youth forums, etc.) were organised under the patronage of the EPA. These activities coincided with the preparation and submission of Guyana's Fourth National Report to the CBD.
Photo: Green Walk and Ride. Credit: Natural Resources Management Division / Environmental Protection Agency

Saint Lucia: Media coverage (newspaper and radio interviews) and conferences on themes such as development and health. Churches raised awareness in their congregations. St. Lucia was featured as the country of the Caribbean with successful implementation of its NBSAP.
Photo: IYB stamp (set of 4). Credit: Saint Lucia Philatelic Bureau

Suriname: The Ministry of Labour, Technological Development and Environment communicated the IYB messages through television and media, and also organized conferences with expert speakers.
Photo: Yellow oriole — Warappa Creek, Commewijne, Suriname. Credit: flickr.com / michaelcobballen

North America

Canada's final IYB report profiles the many events, reports (including the first assessment of Canada's biodiversity from an ecosystem perspective), programmes, websites and communications and education initiatives.
Photo: IYB + you campaign. From Baker lake, Nunavut, Canada. Credit: Christian Tremblay

Oceania

Australia: EnviroQuest 2010 was a school programme that facilitates exploring the connections between people, plants and animals through inquiry based explorations and hands-on learning experiences.
Photo: A Bennetts wallaby. Credit: Barry Batchelor

Fiji: The National Capacity Self Assessment Unit of the Department of Environment unveiled the Biodiversity bus containing its own rubbish bin. The bus promoted the theme "Don't throw it, Bin it, Keep our Roads Clean"
Photo: A Fiji Clown Blenny (*Ecsenius fijiensis*) on a Black-banded Sea Cucumber (*Holothuria fuscopunctata*). The Bistro, Beqa Lagoon, Fiji. Credit: flickr.com / Richard Ling

New Zealand: The *Biodiversity Captured* photo competition celebrated New Zealand's unique wildlife and the value of biodiversity in our lives. The competition had sections for 'Land and Sky', 'Water' and 'People and Biodiversity', with different categories for each section. More than 350 photos were received.
Photo: Auckland schoolchildren. Credit: Department of Conservation

Palau: On 19 May 2010 a biodiversity proclamation was signed by the Vice President of the Republic of Palau, Kerai Mariur. This national proclamation designated Palau International Coral Reef Center as the local agency to implement all activities for the IYB.
Photo: Aquarium sleep-over night. Credit: PICRC Education/PR Department

Left: One young patron with a Spotted eagle owl *(Bubo africanus)* perching on his arm. Credit: WAZA. Middle: Featuring winners, runners-up and honorable mentions. Displayed at IAIA conference in Puebla, Mexico. Credit: IAIA. Right: Filipino students perform a science experiment (Science film festival). Credit: ASEAN

International Organisations

The following international organisations have submitted a final IYB report: ASEAN Centre for Biodiversity, BioNET, Bioversity International, the Convention on the Conservation of European Wildlife and Natural Habitats, Earthwatch Institute, International Association for Impact Assessment (IAIA), International Centre for Integrated Mountain Development (ICIMOD), TRAFFIC, World Association of Zoos and Aquariums (WAZA), World Future Council.

UN Organisations

The following UN offices have participated in the IYB campaign: UN Headquarters, CMS, FAO, UN Postal Administration, UNCCD, UNCTAD, UNDP, UNEP, UNEP-ROA, UNEP-ROWA, UNEP-WCMC, UNESCO, UNFCCC, UNFF, UN-Geneva, UN-interpreters, UNON Gigiri, UNU, UN-Vienna, UNWTO, WIPO.

Special Mention

UNDP celebrated the IYB through 74 country offices, including the North American launch of IYB, carrying out a series of communications and activities, and producing information materials that highlighted how people are addressing biodiversity issues, while benefiting poverty reduction efforts and contributing to livelihoods.

Closing events

22 Sep 2010—UNGA: A one-day high level meeting with the participation of Heads of States and Government officials convened, pursuant to UNGA resolution 64/203, and held as a contribution to the IYB. Also, the Ministerial Lunch Event on Biodiversity and Development (hosted by UK and Germany) brought together about 20 Environment Ministers as well as the Executive Secretary of the CBD, a World Bank Director and TEEB Study Leader to discuss the interdependency between the biodiversity and development agendas.

11-29 Oct 2010—Celebrations of the IYB during COP-MOP 5 and COP 10: In collaboration with the Government of Japan, the IYB was celebrated through a variety of events, including a high-level segment dedicated to IYB, the UNESCO IYB exhibition, UNDP's Equator Initiative Prize, Youth event, CEPA fair. More than 10,000 participants, including ministers and representatives from governments, civil society and business, attended COP-MOP5 and more than 18,000 participants attended COP10.

18-19 Dec 2010—Closing of IYB: Contribution to the International Year of Forests: Organized in collaboration with the Government of Japan, Ishikawa Prefecture, City of Kanazawa, local economic organizations and UNFF.

UN Calendar - Sustaining Life, Sustaining Our Future. Credit: UN

Top left: Vice Minister of Environment of Japan Shoichi Kondo, CI President Russ Mittermeier, Actor Harrison Ford, CBD Executive Secretary Ahmed Djoghlaf. Credit: CBD/M.Bański; Top right: Ahmed Djoghlaf receiving a selection of 20,000 messages New Zealanders have composed to preserve the kākāpō. Credit: Department of Conservation; Bottom left: IYB 2010 Closing Ceremony—A. Djoghlaf, Japan's Environment Minister Ryu Matsumoto, Japan's Agriculture Minister Michihiko Kano, UNFF Director Jan McAlpine. Credit: CBD/M.Bański; Bottom right: UNGA-65 High Level Meeting on Biodiversity—Environment Minister Solhem (Norway) and Heritage Minister Espinosa (Ecuador) co-chairing one of the thematic panels on biodiversity. Credit: CBD

www.cbd.int/2010

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