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STRATEGIC PLAN FOR BIODIVERSITY 2011-2020

PROVISIONAL TECHNICAL RATIONALE, POSSIBLE INDICATORS AND SUGGESTED MILESTONES FOR THE AICHI BIODIVERSITY TARGETS

Note by the Executive Secretary

EXECUTIVE SUMMARY

The setting of national targets and the use of national milestones and indicators will be fundamental in ensuring that the Strategic Plan for Biodiversity 2011-2020 and the Aichi Biodiversity Targets are implemented across the different levels of government and society more generally. In decision X/2 the Conference of the Parties requested the Executive Secretary to further develop the technical rationales and suggested milestones for the Aichi Biodiversity Targets contained in the note by the Executive Secretary ([UNEP/CBD/COP/10/9](#)) taking into account comments made at the tenth meeting of the Conference of the Parties. Following this request the technical rationale for the Aichi Biodiversity Targets was revised and made available as [UNEP/CBD/COP/10/27/Add.1](#). The present document is a further update of the technical rationale reflecting the outcomes of the Ad Hoc Technical Expert Group Meeting on Indicators for the Strategic Plan for Biodiversity 2011-2020 (UNEP/CBD/SBSTTA/15/INF/6). Further information on the suggested indicators for the Strategic Plan for Biodiversity is contained in UNEP/CBD/SBSTTA/15/2.

* UNEP/CBD/SBSTTA/15/1.

SUGGESTED RECOMMENDATIONS

The Subsidiary Body on Scientific, Technical and Technological Advice may wish to adopt a recommendation along the following lines:

The Subsidiary Body on Scientific, Technical and Technological Advice,

Takes note of the technical rationales, for the Aichi Biodiversity Targets for further consideration at the national level,

Requests the Executive Secretary, in collaboration with relevant organizations, to develop technical guidance on each of the Aichi Biodiversity Targets in order to further facilitate their implementation and integration into national biodiversity strategies and action plans.

I. INTRODUCTION

The Strategic Plan for Biodiversity 2011-2020, with its “Aichi Biodiversity Targets”, was adopted by the Conference of the Parties at its tenth meeting (decision X/2). This note contains the technical rationale for the Aichi Biodiversity Targets based on [UNEP/CBD/COP/10/27/Add1](#) and updated in light of the outcomes of the Ad Hoc Technical Expert Group Meeting on Indicators for the Strategic Plan for Biodiversity 2011-2020 (UNEP/CBD/SBSTTA/15/INF/6). The suggestions for possible indicators and milestones are indicative and are provided as a resource that countries and stakeholders may wish to draw upon when setting their own national targets and milestones.

II. PROVISIONAL TECHNICAL RATIONALE FOR THE GOALS AND AICHI BIODIVERSITY TARGETS OF THE STRATEGIC PLAN FOR BIODIVERSITY 2011-2020

Strategic goal A. Address the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society.

Strategic actions should be initiated immediately to address, over a longer term, the underlying causes of biodiversity loss. This requires policy coherence and the integration of biodiversity into all national development policies and strategies and economic sectors and at all levels of government. Approaches to achieve this include communication, education and public awareness, appropriate pricing and incentives, and the broader use of planning tools such as strategic environmental assessment. Stakeholders across all sectors of government, society and the economy, including business, will need to be engaged as partners to implement these actions. Consumers and citizens must also be mobilized to contribute to biodiversity conservation and sustainable use, to reduce their ecological footprints and to support action by Governments.

Target 1: By 2020, at the latest, people are aware of the values of biodiversity and the steps they can take to conserve and use it sustainably.

Increasing understanding, awareness and appreciation of the diverse values of biodiversity, are necessary to create the willingness to undertake the behavioural changes required to conserve and sustainably use biodiversity. The key audiences for such communication, education and public awareness activities will vary between Parties, but generally could focus on national and local governments, business, non-governmental organizations and civil society groups, including in their role as producers and consumers of biodiversity-related goods.

Target 2. By 2020, at the latest, biodiversity values have been integrated into national and local development and poverty reduction strategies and planning processes and are being incorporated into nation accounting, as appropriate, and reporting systems.

Integrating the values of biodiversity into national and local development and poverty reduction strategies and planning processes as well as into national accounting and reporting systems would make biodiversity a factor in the development agendas of countries and would help give biodiversity greater visibility amongst policy-makers. The integration of biodiversity into national decision-making processes will enable Parties to appropriately assess the consequences of biodiversity loss, possible trade-offs and increase coordination among government ministries and levels of government. Various tools to integrate the values of biodiversity into national accounts, strategies and planning processes already exist and include the Convention's work on economic, trade and incentive measures, the study on The Economics of Ecosystems and Biodiversity (TEEB), the United Nations System of Integrated Economic and Environmental Accounts (SEEA), spatial planning, systematic conservation planning, strategic environmental assessment, and payment for ecosystem services mechanisms.

Target 3: By 2020, at the latest, incentives, including subsidies, harmful to biodiversity are eliminated, phased out or reformed in order to minimize or avoid negative impacts and positive incentives for the conservation and sustainable use of biodiversity are developed and applied, consistent and in harmony with the Convention and other relevant international obligations, taking into account national socio-economic conditions.

Ending or reforming incentives, including subsidies, harmful to biodiversity is a critical and necessary step for implementing the Strategic Plan that would also generate broader net socio-economic benefits. Bearing in mind the principle of common but differentiated responsibilities, this target would not imply a need for developing countries to remove subsidies that are necessary for poverty reduction programmes. Current negotiations under the Doha Trade Round aim to clarify and improve World Trade Organization (WTO) disciplines on fisheries and on trade-distorting agricultural subsidies. These negotiations have the potential to generate high synergies with this target and are therefore a key vehicle for achieving it. In addition, countries or regional groups may take their own initiatives to phase out and/or reform environmentally harmful subsidies. A more effective use of strategic environmental assessment could also be one mechanism to help develop and implement effective policies and actions towards this target.

Target 4: By 2020, at the latest, Governments, business and stakeholders at all levels have taken steps to achieve or have implemented plans for sustainable production and consumption and have kept the impacts of use of natural resources well within safe ecological limits.

Bringing the use of natural resources within safe ecological limits is an integral part of the Strategic Plan. Reducing total demand and increasing resource use and energy efficiency contribute to the target which can be pursued through government regulations and/or incentives, education and research, and social and corporate responsibility. The target will be achieved through dialogue among sectors and stakeholders, supported by planning tools such as strategic environmental impact assessment and economic tools, such as incentive measures, that integrate biodiversity issues.

Strategic goal B. Reduce the direct pressures on biodiversity and promote sustainable use.

It is only possible to reduce or halt the loss of biodiversity if the drivers and pressures on biodiversity are themselves reduced or eliminated. With rising human population and income, the demand for biological resources is increasing, and without action this will translate into increased pressures on biodiversity. Thus, efforts are needed to decouple the indirect and direct drivers of biodiversity loss by means of technical improvements and more efficient use of land, sea and other resources, and through better spatial planning. Where multiple pressures are combining to weaken ecosystem structure, functioning and

resilience, decisive action to reduce those pressures most amenable to rapid intervention should be prioritized, while longer-term efforts continue to moderate more intractable pressures, such as climate change and ocean acidification. Targeting drivers and pressures over which we have more immediate control will help ecosystems to maintain the resilience needed to prevent some dangerous “tipping points” from being reached and allow us to better cope with those impacts of climate change we cannot prevent in the short term. Stakeholders in each of the economic sectors will need to be engaged. Government ministries can take a leading role in their areas of responsibility, while cities and other local authorities can play a decisive role, especially in terms of local land-use planning.

Target 5: By 2020, the rate of loss of all natural habitats, including forests, is at least halved and where feasible brought close to zero, and degradation and fragmentation is significantly reduced.

Habitat loss, including degradation and fragmentation, is the most important factor driving biodiversity loss and while economic, demographic and social pressures are likely to mean continued habitat loss, particularly due to land-use change beyond 2020, the rate of change needs to be substantially reduced. While for some ecosystems it may be possible to bring the rate of habitat loss close to zero by 2020, for others a more realistic goal is to halve the rate of loss. Significantly reducing habitat degradation and fragmentation will also be required in order to ensure that those habitats which remain are capable of supporting biodiversity. The emphasis of this target should be on preventing the loss of high-biodiversity value habitats, such as primary forests and many wetlands, and of ecosystems where continued loss risks passing “tipping points” that could lead to large scale negative effects on human well-being. Reduction in the loss of natural habitats could be achieved through improvements in production efficiency and land-use planning, the use of degraded land for agricultural production, improved ecosystem connectivity and enhanced mechanisms for natural resource governance combined with recognition of the economic and social value of ecosystem services provided by natural habitats.

Target 6: By 2020, all fish and invertebrate stocks and aquatic plants are managed and harvested sustainably, legally and applying ecosystem based approaches, so that overfishing is avoided, recovery plans and measures are in place for all depleted species, fisheries have no significant adverse impacts on threatened species and vulnerable ecosystems and the impacts of fisheries on stocks, species and ecosystems are within safe ecological limits.

Overexploitation is the main pressure on marine ecosystems globally and the World Bank estimates that overexploitation of fish stocks represents a lost profitability of some \$50 billion per year and puts at risk some 27 million jobs and the well-being of more than one billion people. Better management of harvested marine resources, such as through the increased use of ecosystem based approaches and the establishment of recovery plans for depleted species, is needed to reduce pressure on marine ecosystems and to ensure the sustainable use of marine resource stocks. Actions that build upon existing initiatives, such as the Code of Conduct for Responsible Fishing, could help to ensure this. Baseline information for this target is available from the Food and Agriculture Organization of the United Nations.

Target 7: By 2020, areas under agriculture, aquaculture and forestry are managed sustainably, ensuring conservation of biodiversity.

The increasing demand for food, fibre and fuel will lead to increasing losses of biodiversity and ecosystem services if management systems do not become increasingly sustainable with regard to biodiversity. Criteria for sustainable forest management have been adopted by the forest sector and there are many efforts by Governments, indigenous and local communities, NGOs and the private sector to promote good agricultural, aquaculture and forestry practices. The greater application of the ecosystem approach would also assist with the implementation of this target. While, as yet, there are no universally agreed sustainability criteria, given the diversity of production systems and environmental conditions,

each sector and many initiatives have developed their own criteria which could be used pending the development of a more common approach. Similarly, the use of certification and labelling systems or standards could be promoted as part of this target.

Target 8: By 2020, pollution, including from excess nutrients, has been brought to levels that are not detrimental to ecosystem function and biodiversity.

Pollution, including nutrient loading, is a major and increasing cause of biodiversity loss and ecosystem dysfunction, particularly in wetland, coastal, marine and dryland areas. Humans have already more than doubled the amount of “reactive nitrogen” in the biosphere, and business-as-usual trends would suggest a further increase of the same magnitude by 2050. The better control of sources of pollution, including efficiency in fertilizer use and the better management of animal wastes, coupled with the use of wetlands as natural water treatment plants where appropriate, can be used to bring nutrient levels below those that are critical for ecosystem functioning, without curtailing the application of fertilizer in areas where it is necessary to meet soil fertility and food security needs. Similarly, the development and application of national water quality guidelines could help to limit pollution and excess nutrients from entering freshwater and marine ecosystems.

Target 9: By 2020, invasive alien species and pathways are identified and prioritized, priority species are controlled or eradicated and measures are in place to manage pathways to prevent their introduction and establishment.

Invasive alien species are a major threat to biodiversity and ecosystem services, and increasing trade and travel means that this threat is likely to increase unless additional action is taken. Pathways for the introduction of invasive alien species can be managed through improved border controls and quarantine, including through better coordination with national and regional bodies responsible for plant and animal health. Given the multiple pathways for invasive species introductions and that multiple alien species are already present in many countries it will be necessary to prioritise control and eradication efforts on those species and pathways which will have the greatest impact on biodiversity and/or which are the most resource effective to address.

Target 10: By 2015, the multiple anthropogenic pressures on coral reefs, and other vulnerable ecosystems impacted by climate change or ocean acidification are minimized, so as to maintain their integrity and functioning.

Given the ecological inertias related to climate change and ocean acidification, it is important to urgently reduce other anthropogenic pressures on vulnerable ecosystems such as coral reefs so as to give vulnerable ecosystems time to cope with the pressures caused by climate change. This can be accomplished by addressing those pressures which are most amenable to rapid positive changes and would include activities such as reducing pollution and overexploitation and harvesting practices which have negative consequences on ecosystems.

Strategic goal C: To improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity.

Whilst longer term actions to reduce the underlying causes of biodiversity loss are taking effect, immediate actions, such as protected areas, species recovery programmes, land-use planning approaches, the restoration of degraded ecosystems and other targeted conservation interventions can help conserve biodiversity and critical ecosystems. These might focus on culturally-valued species and key ecosystem services, particularly those of importance to the poor, as well as on threatened species. For example,

carefully sited protected areas could prevent the extinction of threatened species by protecting their habitats, allowing for future recovery.

Target 11: By 2020, at least 17 per cent of terrestrial and inland-water areas and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well-connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscape and seascape.

Currently, some 13 per cent of terrestrial areas and 5 per cent of coastal areas are protected, while very little of the open oceans are protected. Therefore reaching the proposed target implies a modest increase in terrestrial protected areas globally, with an increased focus on representativity and management effectiveness, together with major efforts to expand marine protected areas. Protected areas should be integrated into the wider land- and seascape, bearing in mind the importance of complementarity and spatial configuration. In doing so, the ecosystem approach should be applied taking into account ecological connectivity and the concept of ecological networks, including connectivity for migratory species. Protected areas should also be established and managed in close collaboration with, and through participatory and equitable processes that recognize and respect the rights of indigenous and local communities, and vulnerable populations. Other effective area-based conservation measures may also include restrictions on activities that impact on biodiversity, which would allow for the safeguarding of sites in areas beyond national jurisdiction in a manner consistent with the jurisdictional scope of the Convention as contained in Article 4.

Target 12: By 2020, the extinction of known threatened species has been prevented and their conservation status, particularly of those most in decline, has been improved and sustained.

While reducing the threat of human-induced extinction requires action to address the direct and indirect drivers of change, imminent extinctions of known threatened species can in many cases be prevented by protecting the sites where such threatened species are located, by combating particular threats, and through *ex situ* conservation. Additional actions which directly focus on species include the implementation of species recovery and conservation programmes, and the re-introduction of species to habitats from which they have been extirpated. Similar actions can be used to improve the conservation status of species more broadly. The IUCN Red List provides good baseline information for this target.

Target 13: By 2020, the genetic diversity of cultivated plants and farmed and domesticated animals and of wild relatives, including other socio-economically as well as culturally valuable species is maintained and strategies have been developed and implemented for minimizing genetic erosion and safeguarding their genetic diversity.

The genetic diversity of cultivated plants and farmed or domesticated animals and of wild relatives is in decline as is the genetic diversity of other socio-economically and culturally valuable species. As such the genetic diversity which remains needs to be maintained and strategies need to be developed and implemented to minimize the current erosion of genetic diversity. While substantial progress has been made in safeguarding many varieties and breeds through *ex situ* storage in genebanks, less progress has been made *in situ*. *In-situ* conservation, including through continued cultivation on farms, allows for ongoing adaptation to changing conditions (such as climate change) and agricultural practices. The programme of work on agricultural biodiversity as well as the Global Plan of Action for the conservation and sustainable use of plant genetic resources for food and agriculture of the Food and Agriculture Organization of the United Nations (FAO), the FAO Global Plan of Action for animal genetic resources and the International Initiative on Biodiversity for Food and Nutrition provide guidance on the types of actions which can be taken to reach this target.

Strategic goal D: Enhance the benefits to all from biodiversity and ecosystem services.

Biodiversity underpins the services provided by ecosystems vital to humankind, such as the provision of food, clean water, the removal of wastes and the mitigation of the impacts of extreme events. However, as ecosystems are modified to increase the proportion of provisioning services delivered in a given time (e.g., for food, fiber, etc.) or to make them more suitable for other human requirements, their potential to deliver other services is typically reduced. Wise management of ecosystems aims to ensure the continuous delivery of a range of services or co-benefits. The potential for the delivery of ecosystem services in degraded systems is reduced and hence the benefits for human societies limited. This Strategic Goal is to enhance the delivery of ecosystem services through the promotion of management for multiple ecosystem services and the restoration of degraded systems. Efforts should focus on maintaining and, wherever possible, restoring terrestrial, freshwater and marine ecosystems to ensure the provision of valuable ecosystem services, contributing to the achievement of the Millennium Development Goals and to climate change mitigation and adaptation.

Target 14: By 2020, ecosystems that provide essential services, including services related to water, and contribute to health, livelihoods and well-being, are restored and safeguarded, taking into account the needs of women, indigenous and local communities and the poor and vulnerable.

Some ecosystems, such as those that provide ecosystem services related to the provision of water, are particularly important in that they provide services that are essential for human wellbeing, in particular for the lives and livelihoods of women and indigenous and local communities, including the poor and vulnerable. Accordingly, priority should be given to safeguarding, or restoring such ecosystems, and to ensuring that people have adequate access to these services. Ecosystems which provide essential services and that contribute to local livelihoods should be identified through participatory processes at local, national and global levels and in accordance with Article 10 of the Convention. The resulting information should be integrated into development plans to ensure that these ecosystems receive the necessary protection and investments.

Target 15: By 2020, ecosystem resilience and the contribution of biodiversity to carbon stocks has been enhanced, through conservation and restoration, including restoration of at least 15% of degraded ecosystems, thereby contributing to climate change mitigation and adaptation and to combating desertification.

Restored landscapes and seascapes can improve resilience, including adaptive capacity of ecosystems and societies, contributing to climate change adaptation and generating additional benefits for people, in particular indigenous and local communities and the rural poor. The wider application of restoration efforts could contribute significantly to the achievement of the objectives of the Convention, and generate significant synergies with the United Nations Framework Convention on Climate Change (UNFCCC), the United Nations Convention to Combat Desertification (UNCCD) and the United Nations Forum on Forests (UNFF). Appropriate incentive schemes (such as “REDD-plus”) could reduce, or even reverse, negative land-use changes and, with appropriate safeguards, including respect for local land and resource rights, could also deliver substantial co-benefits for biodiversity and local livelihoods.

Target 16: By 2015, the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization is in force and operational, consistent with national legislation..

The third objective of the Convention provides for “the fair and equitable sharing of the benefits arising out of the utilization of genetic resources...”. The tenth meeting of the Conference of the Parties adopted the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits

Arising from their Utilization. Given that this protocol is a legally-binding regime, the initial target should be for its ratification and entry into force.

Strategic goal E. Enhance implementation through participatory planning, knowledge management and capacity-building

Most actions under the Convention are initiated and carried out at the national or sub-national levels, and will be delivered through the implementation of national biodiversity strategies and action plans. National strategies need to integrate new national targets consistent with this Strategic Plan and must be implemented through action plans involving all parts of government, society and the economy. This will also require improvements in knowledge and how it is disseminated, as well as substantial increases in capacity in all countries, especially developing countries, in particular the least developed countries and small island developing States, as well as countries with economies in transition. Progress towards this strategic goal will facilitate the achievement of all other strategic goals and targets contained in this Strategic Plan.

Target 17: By 2015, each Party has developed, adopted as a policy instrument, and has commenced implementing, an effective, participatory and updated national biodiversity strategy and action plan.

National biodiversity strategies and action plans (NBSAPs) are the key instrument for translating the Convention and decisions of the Conference of the Parties into national action. For this reason it will be essential that Parties have developed, adopted as a policy instrument and commenced implementing an updated NBSAP which is in line with the goals and targets set out in the Strategic Plan by 2015. Participatory stakeholder involvement throughout the design, planning and implementation of an NBSAP is fundamental in ensuring that the plans will be effective. An NBSAP should not be static but a living planning document that allows individual Parties to identify their needs, priorities and opportunities for biodiversity in light of their broader national goals and to revise the plan accordingly. The target for 2020 implies that NBSAPs are used as effective tools for mainstreaming biodiversity across government and society.

Target 18: By 2020, the traditional knowledge, innovations and practices of indigenous and local communities relevant for the conservation and sustainable use of biodiversity, and their customary use of biological resources, are respected, subject to national legislation and relevant international obligations, and fully integrated and reflected in the implementation of the Convention with the full and effective participation of indigenous and local communities, at all relevant levels.

In line with Article 8(j) of the Convention, traditional knowledge, innovations and practices should be respected, protected, maintained and promoted, and used in local ecosystem management, drawing upon experiences of customary use, with the approval of relevant communities. Likewise, in line with Article 10(c), customary use of biological resources that is compatible with conservation and sustainable use should be protected and encouraged. The guidance developed as part of the Convention's cross-cutting issue on traditional knowledge, innovations and practices provides advice on how this target can be implemented.

Target 19: By 2020, knowledge, the science base and technologies relating to biodiversity, its values, functioning, status and trends, and the consequences of its loss, are improved, widely shared and transferred, and applied.

Each country needs access to information to identify threats to biodiversity and determine priorities for conservation and sustainable use. Action taken to reach this target will also benefit the other targets of the

Strategic Plan by encouraging new research, the development of new technologies and improved monitoring. For knowledge that is already available, access could be improved through the further development of the clearing-house mechanism at national and global levels. Further efforts are also needed, at multiple scales, to improve biodiversity-related knowledge and reduce uncertainties around the relationship between biodiversity change, ecosystem services and impacts on human well-being. With regards to the sharing of technologies related to biodiversity, this should be consistent with Article 16 of the Convention.

Target 20: By 2020, at the latest, the mobilization of financial resources for effectively implementing the Strategic Plan for Biodiversity 2011-2020 from all sources and in accordance with the consolidated and agreed process in the Strategy for Resource Mobilization should increase substantially from the current levels. This target will be subject to changes contingent to resources needs assessments to be developed and reported by Parties.

The capacity for implementing the Convention in terms of trained staff and financial resources is limited in most countries, especially in developing countries, in particular the least developed countries and small island developing States, as well as countries with economies in transition. The capacity which currently exists in countries must be further built upon so that it can be substantially increased from current levels, and in line with the process laid out in the Strategy for Resource Mobilization, in order to meet the challenges of implementing this Strategic Plan. This target should be seen as a common commitment by donors and recipient countries to take action as appropriate to both increase development cooperation funds available for biodiversity relevant activities, consistent with the Paris Declaration, and also to give appropriate priority in the use of those funds. The increase in capacity included as part of this target should be conducted bearing in mind the provisions of Article 20 of the Convention and on the resources needs assessment to be conducted and reported on by Parties during the eleventh meeting of the Conference of the Parties, in 2012.

POSSIBLE MEANS, MILESTONES AND INDICATORS FOR THE GOALS AND AICHI TARGETS OF THE STRATEGIC PLAN FOR BIODIVERSITY 2011-2020

Aichi Target	Means and examples of activities	Possible Milestones for consideration primarily at the national level	Possible Headline Indicators ²	Most relevant CBD programmes of work and cross-cutting issues	Examples of existing national biodiversity target
<i>Strategic goal A. Address the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society</i>					
1. By 2020, at the latest, people are aware of the values of biodiversity and the steps they can take to conserve and use it sustainably	Implement CEPA programmes Active engagement of citizens Develop citizen action lists Principles and messages of education for sustainable development	By 2014, national baseline surveys are carried out and comprehensive national strategies to promote awareness of the value of biodiversity are prepared and adopted	Trends in awareness, attitudes and public engagement in support of biological diversity and ecosystem services	Communication, Education and Public Awareness	By 2012, all environmental themes will be incorporated into curriculum of universities and schools. (Yemen) 10 million Europeans actively engaged in biodiversity conservation by 2010, and 15 million by 2013. (European Union)
2. By 2020, at the latest, biodiversity values have been integrated into national and local development and poverty reduction strategies and planning processes	Value biodiversity and ecosystem services Apply environmental accounting Mainstream biodiversity in poverty reduction	By 2012, work on bio-physical inventories of biodiversity and associated ecosystem services is initiated By 2014, a work programme for	Trends in integration of biodiversity, ecosystem services and benefits sharing into planning, policy formulation and implementation and incentives	Economics, Trade and Incentive Measures Biodiversity for Development	

² The possible headline indicators are based on the report of the Ad Hoc Technical Expert Group Meeting on Indicators for the Strategic Plan for Biodiversity 2011-2020 (UNEP/CBD/SBSTTA/15/INF/6). This information may need to be revised and/or updated in light of the peer review of the AHTEG's report.

Aichi Target	Means and examples of activities	Possible Milestones for consideration primarily at the national level	Possible Headline Indicators ²	Most relevant CBD programmes of work and cross-cutting issues	Examples of existing national biodiversity target
and are being incorporated into nation accounting, as appropriate, and reporting systems	and development strategies and development cooperation Develop and apply payment for ecosystem services	reflecting biodiversity and ecosystem values in national accounting, as appropriate, is developed			
3. By 2020, at the latest, incentives, including subsidies, harmful to biodiversity are eliminated, phased out or reformed in order to minimize or avoid negative impacts and positive incentives for the conservation and sustainable use of biodiversity are developed and applied, consistent and in harmony with the Convention and other relevant international obligations, taking into account national socio-economic conditions	Application of CBD guidance on SEA and incentive measures Application of relevant OECD guidance Implement national or regional measures to remove incentives, including subsidies, harmful to biodiversity Complete WTO negotiations on fishery subsidies and agricultural domestic support	By 2012, (...) subsidy inventories are established by all OECD countries, and an assessment of their effectiveness (...) cost-efficiency, and impacts on biodiversity, is being initiated By 2016, incentive programmes, including those related to subsidies, identified in the plans of actions are being effectively phased out or reformed.	Trends in integration of biodiversity, ecosystem services and benefits-sharing into planning, policy formulation and implementation and incentives	Economics, Trade and Incentive Measures Impact assessment	
4. By 2020, at the latest, Governments, business and stakeholders at all levels have taken steps to achieve or	Inter-ministerial committees Nationally-developed guidelines	By 2014, Governments and major private sector actors, at sector or company level, have	Trends in pressures from unsustainable agriculture, forestry, fisheries and aquaculture Trends in pressures from habitat conversion, pollution, invasive species, climate change, overexploitation and underlying drivers	Business and Biodiversity Initiative Sustainable use of biodiversity	By 2015, the principles of sustainable development will be integrated into country policies

Aichi Target	Means and examples of activities	Possible Milestones for consideration primarily at the national level	Possible Headline Indicators ²	Most relevant CBD programmes of work and cross-cutting issues	Examples of existing national biodiversity target
have implemented plans for sustainable production and consumption and have kept the impacts of use of natural resources well within safe ecological limits	Develop sector guidelines Ecosystem management in city districts Develop production and consumption-related sector plans Promote dialogue among sectors and stakeholders SEA and economic tools	developed assessments of their ecological footprint, and have developed sustainability plans By 2018, Governments and major private sector actors can demonstrate progress towards sustainability	Trends in integration of biodiversity, ecosystem services and benefits-sharing into planning, policy formulation and implementation and incentives	Impact assessment	and programmes (Yemen)
Strategic Goal B. Reduce the direct pressures on biodiversity and promote sustainable use					
5. By 2020, the rate of loss of all natural habitats, including forests, is at least halved and where feasible brought close to zero, and degradation and fragmentation is significantly reduced	Spatial planning Enforce existing laws & regulations Implement REDD-plus Improvements in production efficiency Recognize the value of ecosystem services Prevent loss of primary forests and other high-value habitats	By 2014, national legislation and land-use plans or zonation maps have been reviewed and updated in relation to national targets, and spatial planning tools are made available for wide use	Trends in extent, condition and vulnerability of ecosystems Trends in pressures from unsustainable agriculture, forestry, fisheries and aquaculture Trends in pressures from habitat conversion, pollution, invasive species, climate change, overexploitation and underlying drivers	Forest Biodiversity Marine and coastal biodiversity Inland water biodiversity Dry and sub-humid lands biodiversity Sustainable use	By 2010, deforestation in the Amazon Biome reduced by 75% (Brazil) Forest coverage maintained at the 2000 level of 60% coverage through 2010 and 2015. (Cambodia) By 2012 forest and tree cover will be increased to 33% (China)
6. By 2020, all fish and invertebrate stocks and aquatic plants are managed and harvested	Reduce harvesting intensity through collaborative partnerships with local communities	By 2012, Parties should have taken steps to address the management of fishing capacity for	Trends in pressures from unsustainable agriculture, forestry, fisheries and aquaculture Trends in integration of biodiversity, ecosystem services and benefits-sharing into planning, policy formulation and implementation and incentives	Sustainable use of biodiversity Marine and coastal biodiversity	Stock levels maintained or restored to levels that can produce maximum

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<p>sustainably, legally and applying ecosystem based approaches, so that overfishing is avoided, recovery plans and measures are in place for all depleted species, fisheries have no significant adverse impacts on threatened species and vulnerable ecosystems and the impacts of fisheries on stocks, species and ecosystems are within safe ecological limits</p>	<p>and fishery organizations Code of Conduct for Responsible Fisheries 2002 World Summit on Sustainable Development Development of regional mechanisms to manage share fisheries</p>	<p>international fisheries requiring urgent attention By 2012, Parties should have eliminated destructive fishing practices By 2015, pressure on marine ecosystems from fishing is halved, globally</p>		<p>Inland waters biodiversity</p>	<p>sustainable yield, where possible no later than 2015 and the ecosystem approach to the protection of the seas and implied fisheries management measures applied no later than 2016. (European Union)</p>
<p>7. By 2020, areas under agriculture, aquaculture and forestry are managed sustainably, ensuring conservation of biodiversity</p>	<p>Apply the ecosystem approach Implement sustainable forest, agriculture and aquaculture management Apply law and governance mechanisms Apply good agricultural practices Reduce pesticide use and apply integrated pest</p>	<p>By 2012, all Parties have identified or developed and promoted sustainability criteria and/or good practices for agriculture, aquaculture and forestry By 2015, the area of agriculture, aquaculture and forestry managed according to sustainability criteria has doubled</p>	<p>Trends in pressures from unsustainable agriculture, forestry, fisheries and aquaculture</p>	<p>Sustainable use of biodiversity (Addis Ababa Principles and Guidelines) Business and biodiversity initiative Agricultural biodiversity Forest biodiversity Inland water biodiversity Marine and coastal biodiversity</p>	<p>By 2015, spawning in fish cages will be halted to avoid genetic mixing of farmed cod and wild cod (Norway) By 2010, biodiversity and biological resources will be used in a sustainable manner, so that biodiversity is maintained at the landscape level.</p>

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	management Promoted certification and labelling Implement <i>Satoyama</i> and similar initiatives			Dry and sub-humid lands biodiversity	(Sweden)
8. By 2020, pollution, including from excess nutrients, has been brought to levels that are not detrimental to ecosystem function and biodiversity	Promote appropriate and efficient fertilizer use and disposal of wastes from livestock (good agricultural practices) Improve sewage treatment Wise use of wetlands Better control of point sources of pollution Develop national water quality guidelines	By 2014, Parties have developed national assessments of the impact of nutrient loading and other pollution on ecosystems and have developed strategies and policies to reduce it By 2015, most ecosystems show declining nutrient loads and levels of other pollutants	Trends in pressures from habitat conversion, pollution, invasive species, climate change, overexploitation and underlying drivers	Inland water biodiversity Marine and coastal biodiversity Impact assessment The International Initiative on Soil Biodiversity	Principal pollutant pressures on terrestrial and freshwater biodiversity substantially reduced by 2010 and again by 2013 (European Union)
9. By 2020, invasive alien species and pathways are identified and prioritized, priority species are controlled or eradicated and measures are in place to manage pathways to prevent their introduction and establishment	Increase effectiveness of border controls and quarantine measures Address pet trade Control spread of invasive species Better coordination with national and regional plant and	By 2014, potential pathways for invasive alien species are identified using a risk assessment framework, lists of the most harmful invasive species are developed, action plans are developed and	Trends in pressures from habitat conversion, pollution, invasive species, climate change, overexploitation and underlying drivers Trends in integration of biodiversity, ecosystem services and benefits-sharing into planning, policy formulation and implementation and incentives	Invasive alien species	By 2010, action plans for prevention and control prepared for all species listed under the national assessment of alien invasive species (Brazil)

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	animal health bodies WTO-SPS Standards and Trade Development Facility	relevant legislation is reviewed By 2016, actions have been taken to address the most important introduction pathways and the most serious invasions			
10. By 2015 the multiple anthropogenic pressures on coral reefs, and other vulnerable ecosystems impacted by climate change or ocean acidification are minimized, so as to maintain their integrity and functioning	Reduce CO ₂ and other GHG emissions Optimize ecosystem management to remove CO ₂ Conduct vulnerability assessments Reduce non-climate related pressures Protected areas	By 2012, assess the integrity of coral reefs and other vulnerable ecosystems and the pressures on them and to develop a strategy to minimize these	Trends in pressures from habitat conversion, pollution, invasive species, climate change, overexploitation and underlying drivers	Climate Change and Biodiversity Marine and coastal biodiversity The International Initiative on Food and Nutrition are	By 2010, support to bio-geographic studies to include the predictability of species occurrence associated with potential climate changes using geographic information systems (Brazil)
<i>Strategic goal C: To improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity</i>					
11. By 2020, at least 17 per cent of terrestrial and inland water areas and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and	Protect critical areas identified in line with CBD annex I (high biodiversity areas and areas providing critical services) Cooperation with indigenous and local communities	By 2012, in the marine area, a global network of comprehensive, representative and effectively managed national and regional protected area system is	Trends in coverage, condition, representativeness and effectiveness of protected areas and other area-based approaches	Protected Areas Dry and sub-humid lands biodiversity Inland waters biodiversity Island biodiversity Marine and coastal	By 2012, a representative network of marine protected areas established (Norway) By 2030, 713 wetland sites and 80 sites of international

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<p>ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well-connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscape and seascape</p>	<p>Effective and sustainable management of protected areas Integrate protected areas into the wider land- and seascape Apply the ecosystem approach taking into account connectivity Limit processes/activities harmful to biodiversity</p>	<p>established By 2012, all protected areas have effective management in existence By 2015, all protected areas and protected area systems are integrated into the wider land- and seascape, and relevant sectors</p>		<p>biodiversity Mountain biodiversity Global Strategy for Plant Conservation</p>	<p>importance will be established, protecting 90% of wetlands of the country (China) By end of 2013 over 49.5% of the country's land area representing all the ecosystems will be under protected areas thereby ensuring survival of all the representative species (Bhutan)</p>
<p>12. By 2020 the extinction of known threatened species has been prevented and their conservation status, particularly of those most in decline, has been improved and sustained</p>	<p>Identification and protection of priority areas Implement species recovery and conservation programmes <i>Ex situ</i> conservation measures The re-introduction of species to habitats from which they have been extirpated The identification and protection of areas important for</p>	<p>By 2012, information on threatened species has been reviewed and conservation measures have been taken to prevent imminent extinctions By 2014, preliminary national Red List assessments have been conducted By 2016, a strategy for the prevention of extinctions of all nationally threatened species</p>	<p>Trends in abundance, distribution and extinction risk of species</p>	<p>Global Strategy for Plant Conservation Global Taxonomy Initiative Programme of work on protected areas</p>	<p>By 2015, the conservation status of threatened species will have improved such that the proportion threatened species will have decreased by 30% compared to 2000, with no increase in the percentage of species that have become regionally extinct (Sweden)</p>

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	at risk species	is in place			By 2012, 50% of endangered plants will be conserved (Japan)
13. By 2020, the genetic diversity of cultivated plants and farmed and domesticated animals and of wild relatives, including other socio-economically as well as culturally valuable species is maintained and strategies have been developed and implemented for minimizing genetic erosion and safeguarding their genetic diversity	Maintenance of crop and livestock varieties on farm Establish protected areas for wild relatives and other socio-economically as well as culturally valuable species Continue to establish and develop genebanks	By 2014, programmes for <i>in situ</i> conservation of crop and livestock genetic diversity are included in national biodiversity strategies and action plans	Trends in genetic diversity of species Trends in integration of biodiversity, ecosystem services and benefits-sharing into planning, policy formulation and implementation and incentives	Agricultural biodiversity Global Strategy for Plant Conservation International Initiative on Food and Nutrition	By 2010, 60% of the genetic diversity of Brazilian wild relatives of cultivated plant species of the ten priority genera effectively conserved <i>in situ</i> and/or <i>ex situ</i> (Brazil)
Strategic goal D: Enhance the benefits to all from biodiversity and ecosystem services					
14. By 2020, ecosystems that provide essential services, including services related to water, and contribute to health, livelihoods and well-being, are restored and safeguarded, taking into account the needs of women, indigenous and local	Develop ecological networks, corridors linking protected areas, riparian strips, flyways for migratory birds, etc. Apply Integrated river basin management integrated coastal zone management. Implement the	By 2012, information on the services provided by ecosystems and the benefits received by local and indigenous communities is compiled and reviewed By 2014, national strategies or policies for	Trends in distribution, condition and sustainability of ecosystem services for equitable human well-being	Biodiversity for development and poverty reduction	By 2012, a total of 33,000 ha of upland forests and drained peatlands will be restored (Finland) Protected areas will cover 8.7% by 2013 and 12% by 2028 (South Africa) By 2012, the

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communities and the poor and vulnerable	Satoyama initiative and similar initiatives Identify biodiversity and ecosystem services of particular value to the poor and vulnerable	enhanced provision of and access to essential ecosystem services are developed as a contribution to poverty reduction and sustainable development strategies			coverage of protected areas will reach 12% of the total land area of the country and 15% by 2017 (Jordan)
15. By 2020, ecosystem resilience and the contribution of biodiversity to carbon stocks has been enhanced, through conservation and restoration, including restoration of at least 15% of degraded ecosystems, thereby contributing to climate change mitigation and adaptation and to combating desertification	Implement mechanisms related to REDD Protect peatlands and other key wetlands Improve soil management Up-scaling landscape restoration efforts Incentive schemes under discussion in the context of the climate change negotiations, and additional schemes for other terrestrial, freshwater and coastal ecosystems	By 2014, information on the potential contribution of all ecosystems to carbon storage and sequestration is compiled, reviewed and a national strategy for the enhancement of the contribution of biodiversity to ecosystem resilience and carbon storage has been prepared By 2014 a national plan for ecosystem restoration is in place and being implemented	Trends in coverage, condition, representativeness and effectiveness of protected areas and other area-based approaches Trends in distribution, condition and sustainability of ecosystem services for equitable human well-being	Climate Change and Biodiversity Forest Biodiversity Inland Waters Biodiversity	Increase afforestation to 30% by 2020 and to 33% in 2050 (Poland)
16. By 2015, the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits	Provide technical assistance to develop national ABS frameworks and legislation and implement the	By 2014, all countries have developed the domestic policies and initiated relevant measures	Trends in access and equity of benefit-sharing of genetic resources	Access to Genetic Resources and Benefit-sharing The Convention, in its article 15, sets out principles	By 2010, national programme for ABS will be fully developed and sufficient

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Arising from their Utilization is in force and operational, consistent with national legislation	international regime Implement awareness raising activities among users and providers of genetic resources Provide technical assistance to support research and utilization of genetic resources to generate value	in line with the Convention, and the international regime on access and benefit-sharing, as appropriate		and obligations of Parties related to ABS Bonn Guidelines	number of personnel for protection of indigenous traditional knowledge (Sweden)
<i>Strategic goal E. Enhance implementation through participatory planning, knowledge management and capacity-building</i>					
17. By 2015, each Party has developed, adopted as a policy instrument, and has commenced implementing, an effective, participatory and updated national biodiversity strategy and action plan	Further develop National planning processes. Further develop National clearing house mechanisms Where appropriate, regional and subnational strategies should be developed. The effective use of NBSAPs as tools for mainstreaming biodiversity across government and society	By 2012, each Party has adopted a set of national targets to contribute to the global targets of this Strategic Plan and has begun to incorporate these into its national biodiversity strategy	Trends in integration of biodiversity, ecosystem services and benefits-sharing into planning, policy formulation and implementation and incentives	All programmes of work, cross-cutting issues and initiatives	
18. By 2020, the traditional knowledge,	Implement Articles 8(j) and	By 2012, a review of the use of traditional	Trends in integration of biodiversity, ecosystem services and benefits-sharing into planning, policy formulation	Traditional knowledge, innovations and	By 2010, 100% of cases of access to

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<p>innovations and practices of indigenous and local communities relevant for the conservation and sustainable use of biodiversity, and their customary use of biological resources, are respected, subject to national legislation and relevant international obligations, and fully integrated and reflected in the implementation of the Convention with the full and effective participation of indigenous and local communities, at all relevant levels</p>	<p>10(c) Implement and support the Satoyama initiative and similar initiatives</p>	<p>knowledge, innovations and practices, has been carried out in collaboration with indigenous and local communities By 2014, adequate measures to protect traditional knowledge and the rights of indigenous and local communities to practice their traditional knowledge, innovations and practices have been put in place By 2016, a strategy to promote traditional knowledge, innovations and practices, with the approval of the knowledge holders, has been developed and put in place</p>	<p>and implementation and incentives Trends in accessibility of scientific/technical/traditional knowledge and its application</p>	<p>practices</p>	<p>traditional knowledge include prior informed consent, obligatory sharing of knowledge generated and sharing of benefits (Brazil)</p>
<p>19. By 2020, knowledge, the science base and technologies relating to biodiversity, its values, functioning, status and trends, and the consequences</p>	<p>Further development of the clearing-house mechanism at national and global levels. Improve understanding of</p>	<p>By 2012, a review of the relevant knowledge and technologies potential available in-country and of the gaps in knowledge and</p>	<p>Trends in accessibility of scientific/technical/traditional knowledge and its application</p>	<p>Identification, monitoring, indicators and assessments Technology transfer and cooperation Global Taxonomy</p>	<p>Promotion of the exchange and transfer of environmentally sustainable technologies between developing</p>

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of its loss, are improved, widely shared and transferred, and applied	biodiversity, relationship with ecosystem services and human well-being and consequences of loss; Reduce uncertainties concerning the causes and consequences of biodiversity loss in future scenarios Improve global monitoring and capacity to use indicators Improvements to the science-policy interface	technologies necessary to implement the Convention, has been carried out By 2014 a national clearing-house mechanism is established, together with a strategy to improve access to knowledge and technologies		Initiative	countries for the effective implementation of the CBD programmes of work, in accordance with Article 20, paragraph 4 and Article 16 (Brazil)
20. By 2020, at the latest, the mobilization of financial resources for effectively implementing the Strategic Plan for Biodiversity 2011-2020 from all sources and in accordance with the consolidated and agreed process in the Strategy for Resource Mobilization should increase substantially	Increase Official Development Assistance Reinforce domestic capacity Implement innovative financing mechanisms Apply appropriate allocation of resources Improve dialogue and coordination among donors and		Trends in mobilisation of financial resources		By 2010, new and additional financial resources, from public and private, domestic and international sources obtained and available for use in Brazil making possible the effective implementation of its commitments to the CBD

<p>from the current levels. This target will be subject to changes contingent to resources needs assessments to be developed and reported by Parties</p>	<p>recipients of bilateral and multilateral aid Undertake training and capacity-building Promote professional networks and exchange of expertise</p>				<p>programmes of work, in accordance with Article 20 (Brazil)</p>
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