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Biodiversity and Sustainable Development – the relevance of the Strategic Plan for Biodiversity 2011-2020 and the Aichi Biodiversity Targets for the post-2015 development agenda and the Sustainable Development Goals

Key Messages

The seventh Trondheim Conference on Biodiversity

Trondheim, Norway, 27–31 May 2013

Information document

The possible contribution by the Biodiversity agenda to the SDG process is being considered at the seventh Trondheim Conference. Annexed to this information document is the Key Messages of a document developed under the auspices of the CBD secretariat which is available in full at http://www.cbd.int/sbstta/trondheim.shtml. It complements the background document (TC7/2) and the two other information documents: a) The Role of Social Sciences in Achieving the Strategic Plan for Biodiversity 2011-2020 (TC7/INF1), b) Human well-being, biodiversity and internationally agreed goals and targets for sustainability (TC7/INF3).

The Conference, hosted by the Norwegian Government in cooperation with UNEP, CBD, FAO, UNDP and the World Bank, is by invitation only and will bring together some 350 experts from governments, organizations, academia and the non-governmental sector. Each country is invited to send two experts, one from the biodiversity side and one from the economic planning side. In Norway the Ministry of the Environment, the Ministry of Foreign Affairs, the Ministry of Finance, the Ministry of Agriculture and Food and the Ministry of Fisheries and Coastal Affairs and the Directorate for Nature Management are cooperating in organizing the Conference. The conference programme is prepared in consultation with international organizations and with input from a network of leading national experts.

ANNEX

Biodiversity and Sustainable Development – the relevance of the Strategic Plan for Biodiversity 2011-2020 and the Aichi Biodiversity Targets for the post-2015 development agenda and the Sustainable Development Goals.

KEY MESSAGES

Background

The Sustainable Development Goals (SDGs) are being developed as part of the post-2015 development agenda. They will integrate the economic, social and environmental dimensions of sustainable development and will apply to all countries. Potentially, the SDGs could provide the framework that helps nations achieve the transformations necessary to eradicate poverty and ensure sustainability.

The post-2015 development agenda is being developed under the auspices of the United Nations General Assembly. Further to the outcome of the Rio+20 Conference, an intergovernmental open-ended working group (OWG) has been established to prepare a proposal on the SDGs. In parallel, a high level panel of experts is considering the follow up to the 2015 Targets of the Millennium Development Goals. It is expected that these processes will converge into a single coherent post-2015 development agenda.

The SDGs and the broader post-2015 development agenda provide an opportunity for the mainstreaming of biodiversity. On one hand, biodiversity and the ecosystem services that it underpins are essential for continued human development. On the other hand, *sustainable* pathways for human development are needed to ensure that these life support systems continue to be maintained. Indeed, the critical role of biodiversity in development was recognized in the Rio+20 outcome, "*The Future we want*".

The Conference of the Parties (COP) to the Convention on Biological Diversity (CBD) encouraged Parties and all partners, institutions, organizations and processes concerned to consider the Strategic Plan for Biodiversity 2011-2020 and the Aichi Biodiversity Targets in developing the post-2015 United Nations development agenda and in the process of establishing SDGs .The COP requested the Executive Secretary to collaborate with the secretariats of the United Nations, the Rio conventions and other multilateral environment agreements, and other relevant bodies, in the process of developing Sustainable Development Goals.

Q1: Why is biodiversity important for sustainable development?

Biodiversity is important for sustainable development in many ways, as it provides the critical foundation for sustainable development and human well-being: (i) At the simplest level, the components of biodiversity comprise many natural resources essential for human development including food, fibre, fuel, and medicinal plants. These are provided both from managed agricultural ecosystems and less managed "natural" ecosystems. (ii) Biodiversity also underpins the functioning of these ecosystems and the provision of ecosystem services such as clean water (quality, quantity and evenness of supply), as well as services such as pollination,

regulation of pests and diseases, etc. (iii) Ecosystems, species and genetic diversity provide for adaptation to current needs and adaptability to meet future needs. Ecosystem resilience depends on biodiversity. (iv) Biodiversity also provides spiritual, psychological and cultural benefits.

The goods and services provided by biodiversity are important to all people. Some are especially important to poor and vulnerable groups as they are often most directly dependent on biodiversity and ecosystems and thus are often most immediately affected by their loss and degradation. Therefore, the goods and services provided by biodiversity constitute social safety nets. Women and men may utilise ecosystem goods and services in different ways. Some of the benefits from biodiversity are realized in the short term, others over longer periods, including over periods spanning multiple human generations.

Ultimately, the loss of biodiversity impacts negatively on all people. However, the loss of biodiversity may have particularly severe, and sometimes more immediate, impacts on the poor and vulnerable and on women and children. As biodiversity is lost, there is a risk that some thresholds will be passed, undermining the functioning of the earth system. Conversely, the conservation and sustainable use of biodiversity contributes to sustainable development and mitigation and adaptation to climate change. The SDG framework is an opportunity to reinstate that biodiversity contributes to human well- being, but also that biodiversity – as an essential element of earth's life support system – needs protection to ensure sustainability.

Q2: How are the Convention on Biological Diversity, the Strategic Plan for Biodiversity 2011-2020 and the Aichi Biodiversity Targets relevant for the SDGs?

The Convention on Biological Diversity is one of the three sustainable development conventions to emerge from the 1992 "Earth Summit" in Rio de Janeiro. The convention has three objectives: the conservation of biological diversity; the sustainable use of its components; and the fair and equitable sharing of benefits arising out of the utilization of genetic resources. The "2010 Biodiversity Target" was also supported by the 2002 Johannesburg Summit on Sustainable Development and incorporated into the framework of 2015 Targets for the Millennium Development Goals as "reduce biodiversity loss, achieving a significant reduction by 2010".

The Strategic Plan for Biodiversity 2011-2020 and the twenty Aichi Biodiversity Targets provide a universally agreed framework for action on biodiversity by all stakeholders including agencies across the United Nations System. The Strategic Plan for Biodiversity 2011-2020 was adopted at the tenth meeting of the Conference of the Parties to the CBD and has been subsequently endorsed or supported by the governing bodies of other biodiversity-related conventions. The importance of the Strategic Plan for Biodiversity 2011-2020 was reaffirmed in the Rio+20 outcome document, thereby emphasizing the role that the plan plays for the United Nations system, the international community and civil society worldwide to achieve the world we want. The Rio+20 outcome document stresses the urgency to halt and reverse the loss of biodiversity, highlighting the importance of the implementation of the Strategic Plan for Biodiversity and its Aichi Biodiversity Targets. The Strategic Plan for Biodiversity contains a number of elements which are readily available for integration into one or more of the SDGs. The incorporation of these goals and targets into the SDGs has multiple benefits, not only ensuring policy coherence and building on existing implementation processes, but also reflecting the political will of 193 Parties to the CBD.

The 2050 vision of the Strategic Plan for Biodiversity stresses the role of biodiversity for human well-being: "By 2050, biodiversity is valued, conserved, restored and wisely used, maintaining ecosystem services, sustaining a healthy planet and delivering benefits essential for all people." This could provide a basis for an SDG on biodiversity and ecosystems, if it were to be agreed that there should be such a goal. The Strategic Plan for Biodiversity establishes five more specific goals towards the 2050 vision, to protect nature (Goal C), to maximize the benefits for all people (Goal D), to reduce pressures on biodiversity (Goal B) and to address the underlying causes of loss (Goal A). Additionally, Goal E provides for enabling activities.

The Strategic Plan for Biodiversity includes twenty internationally agreed time bound targets, mostly for 2020. Aichi 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", could also provide elements for an SDG. While the target focuses on ecosystem services, it explicitly highlights their role as a basis for human health, livelihoods and well-being, which in turn are crucial elements of sustainable development. The target also integrates the concept of equity by emphasizing the needs of different groups such as women, indigenous and local communities, and the poor and vulnerable.

Among the Aichi Biodiversity Targets are quantitative targets which could provide useful elements for targets related to the SDGs, for example: by 2020, at least halving deforestation and the loss of other natural habitats (Target 5), protecting at least 17% of land and 10% of oceans through protected areas (Target 11), and restoring at least 15% of degraded lands (Target 15). Indicators have been developed, or are being developed, for each target.

The Strategic Plan for Biodiversity addresses the need for sustainable production and consumption. Some of the targets of the Strategic Plan for Biodiversity are relevant to sustainable development in general. Target 4, for example, provides for Governments, business and stakeholders to develop plans for, and to take steps to achieve sustainable production and consumption by 2020, and to have kept the impacts of use of natural resources well within safe ecological limits. Other targets relate to particular sectors (e.g. Target 6 on sustainable fisheries, and Target 7 on sustainable agriculture, aquaculture and forestry).

The Strategic Plan for Biodiversity recognizes the need for the mainstreaming of biodiversity. Aichi Target 2 specifically calls for biodiversity values to be integrated into national and local development and poverty reduction strategies and planning processes and national accounting, and reporting systems. The most convincing arguments for biodiversity mainstreaming are those highlighting the development outcomes of biodiversity friendly policies, actions and investments. Important development benefits result from effective biodiversity mainstreaming approaches. Capturing those synergies and resolving critical tradeoffs between biodiversity and development goals are fundamental to sustainability. Effective mainstreaming will result in greater impacts of investments, lowered costs, and improved coordination among institutions.

The Strategic Plan for Biodiversity provides a framework for national action. While the CBD is an international environmental agreement, it is primarily implemented by countries at the national, sub-national and local level. The goals and targets of the Strategic Plan comprise both: (i) aspirations for achievement at the global level; and (ii) a flexible framework for the establishment of national or regional targets. Parties are invited to set their own targets within this framework, taking into account national needs and priorities, while also bearing in mind national contributions to the achievement of the global targets. National biodiversity strategies and action

plans (NBSAP) are key instruments for translating the Strategic Plan to national circumstances, including through the national targets, and for integrating biodiversity across all sectors of government and society. Aichi Target 17 calls for Parties to develop, adopt as a policy instrument, and commence implementing an effective, participatory and updated NBSAP by 2015.

The ecosystem approach is a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way. It is based on the application of appropriate scientific methodologies focused on levels of biological organization which encompass the essential processes, functions and interactions among organisms and their environment. It recognizes that humans, with their cultural diversity, are an integral component of ecosystems, and is therefore central to sustainable development. The ecosystem approach requires adaptive management to deal with the complex and dynamic nature of ecosystems and the absence of complete knowledge or understanding of their functioning. The ecosystem approach, as described by the COP, is the primary framework for action for the 193 Parties of the CBD.

Q3: How could biodiversity and the Aichi Biodiversity Targets be integrated into potential SDGs?

Biodiversity could be integrated into the SDGs in various ways. The process for the development of the SDGs is at an early stage, and the outcome of this process cannot be prejudged. However, for the purposes of considering how biodiversity may be integrated into the SDG framework, different types of SDGs may be envisaged, each with different linkages to biodiversity. For example, it may be decided that some SDGs should be related: (Type 1) to constituents or determinants of human well-being that directly depend on, and impact, biodiversity and ecosystems, such as sustainable food security ("food for all"), water security, universal clean energy and medicines; (Type 2) to constituents or determinants of human well-being that do not directly depend on, or impact, biodiversity and ecosystems, such as education, equality, gender equity, governance, participation or human rights; (Type 3) to underlying global "life support systems" such as healthy and productive ecosystems; and also (Type 4) to overarching concepts that encompass multiple dimensions of sustainable development such as poverty eradication, "green economy", human well-being, etc. These types are closely interrelated (see Figure 1), and the link to biodiversity should, for each type, be ideally realized at the appropriate level in the structure of the SDGs, including goals, targets and indicators. The "life support systems" (Type 3) directly underpin, and at the same time can be negatively affected by, the determinants of well-being (Type 2). Types (1), (2) and (3) underpin the achievement of goals related to broader concepts (Type 4).

Indeed, a number of proposals have been made already which relate to these categories (see Table 1). **Food security (a Type 1 goal), for example, has a particularly direct and two-way link to biodiversity.** Biodiversity is essential to the continued provision of food, and is an important determinant of its quality. Biodiversity is the source of our crops and livestock as well as fish and other wild food sources. A nutritious diet requires a diversity of these plants and animals. The provision of these goods depends on functioning agricultural and other ecosystems. Essential processes such as pollination, nutrient cycling and the regulation of pests and diseases all depend on biodiversity – on the interactions among a diverse range of organisms. The genetic diversity of crops and livestock allows not only adaptation to current needs, but also the adaptability to meet future changes, including those resulting from climate change, and the potential for further

increases in yields that will be necessary to meet expected food demands. On the other hand, food production, through agriculture as well as fisheries has major impacts on biodiversity through land use, nutrient use, pollution, etc. Similarly, there are direct and two-way linkages between water security and biodiversity.

Biodiversity may be integrated into potential SDGs related to food security through targets, indicators or both (see Table 2). Targets and indicators should relate not only to production (yield, quantity) but also to nutritional quality including diversity, as well as to distributional and sustainability aspects. These could relate to the maintenance of important components of agricultural biodiversity such as pollinators, or to limiting pesticide use and improving fertilizer use efficiency. The most relevant Aichi Biodiversity Targets in this regard include Targets 7, 8 and 13.

The achievement of SDGs related to constituents or determinants of human well-being that do not directly depend on, or impact, biodiversity and ecosystems, such as education, equality, gender equity, governance, participation or human rights (Type 2) is unlikely to place demands on biodiversity and ecosystems. However, an understanding of the role biodiversity and the ecosystems it underpins play for related constituents of human well-being may inform these goals and the targets and indicators under them (e.g. the role of biodiversity for gender equality from the perspective of food and water security). The achievement of SDGs of this type is at the same time expected to positively affect the achievement of SDGs of types more directly related to biodiversity.

Type 3 goals such as "healthy and productive ecosystems" would, in effect, be biodiversity-related goals, with supporting targets and indicators. The vision of the Strategic Plan could provide useful elements for such a goal. All of the Aichi Biodiversity Targets, especially Targets 5 to 15, are relevant. Target 14 is particularly relevant.

Efforts to develop comprehensive measures of progress towards sustainable development, as alternatives to GDP, offer opportunities for the integration of biodiversity in SDGs on broader concepts such as poverty eradication, "green economy", human well-being, and sustainable development. It is increasingly recognized that GDP (or GNP) is too narrow an indicator of human progress. Broader indicators would focus on wealth (stocks) rather than income (a flow), and encompass not only manufactured and financial assets (capital), but also natural, human and social assets. In most countries, assessments of natural capital are currently limited to tangible assets such as mineral reserves, timber stocks and fish stocks. However, efforts are underway to also measure the status of ecosystems, taking into account pollution and other forms of degradation. Aichi Target 2 calls for the biodiversity values to be integrated into such national accounting systems.

Q4: How can we promote the integration of biodiversity and consideration of the Strategic Plan for Biodiversity in the SDG process for developing the SDGs?

The development of the post-2015 development agenda comprises thematic discussions at the global level and national discussions with civil society forums as well as the formal UNGA-based discussions. Each of these processes provides opportunities for the biodiversity community to actively engage in these discussions, in particular those at the national level. United Nations is supporting a process of national consultations in more than 55 countries.

The SDGs provide a unique opportunity to highlight the critical role of the conservation and sustainable use of biodiversity in maintaining ecosystems that provide essential services, and which are the foundations for sustainable development and human well-being.

The biodiversity community can demonstrate how biodiversity-based approaches ("nature-based solutions") can contribute to addressing a range of contemporary priority issues from food security to adaptation to climate change. An analysis of responses from over 60 countries regarding Sustainable Development Goals priority areas place food security and sustainable agriculture on top of the list, followed by water and sanitation, energy, education, poverty eradication. Biodiversity has a central role to play in most of these areas. Countries also recognized "Biodiversity" as such as one of the top twenty priority areas. Well targeted integrated policies, institutional actions and investments in biodiversity offer pathways to meeting these challenges.

The integration of biodiversity into the SDG framework would be facilitated by the identification of suitable targets, indicators and metrics. In order to achieve the mainstreaming agenda, reliable and systematic collections of relevant and robust data on the status and trends of ecosystems, associated ecosystem services, and underlying biodiversity, including statistical information, are necessary. It is precisely for this reason that Aichi Target 2 also calls for the incorporation of biodiversity values into national accounting, as appropriate, and reporting systems more generally.

The SDGs provide a unique opportunity to translate the complex challenges and interrelationships facing biodiversity and sustainable development into easily communicated and understood goals and targets and engage in a renewed dialogue between the biodiversity and development communities at all levels.

Additional questions for discussion at the Trondheim Biodiversity Conference

AQ1: From the perspective of your country's circumstances, does the above analysis on the contribution of biodiversity to sustainable development and the SDGs address the critical elements? Does the analysis adequately highlight the role of the Strategic Plan for Biodiversity? What is missing? Please provide a concise description.

AQ2: Are you actively involved in the national preparatory process of defining the post-2015 development agenda? If so, what are your experiences? Do you think biodiversity and its contributions to sustainable development are adequately covered and reflected in your country's national preparatory process, and the biodiversity community adequately represented? If so, what are, in your view, the drivers/reasons for success? If not, what are the main obstacles/barriers?

AQ3: How should biodiversity be integrated into the SDGs? i.e., full integration, dedicated biodiversity target, or a hybrid approach? What are the advantages/limitations of each modality?

AQ4: Building on the answers to AQ2 above, can you identify good practices and/or lessons learned from your experiences in engaging in the national preparatory process? Or options to upscale or replicate drivers of success, or to overcome obstacles identified?

AQ5: What could the CBD Secretariat do to strengthen the strategic inroads of the Convention's national focal points, and the biodiversity community more generally, into the SDG preparatory process, at national and at international levels?

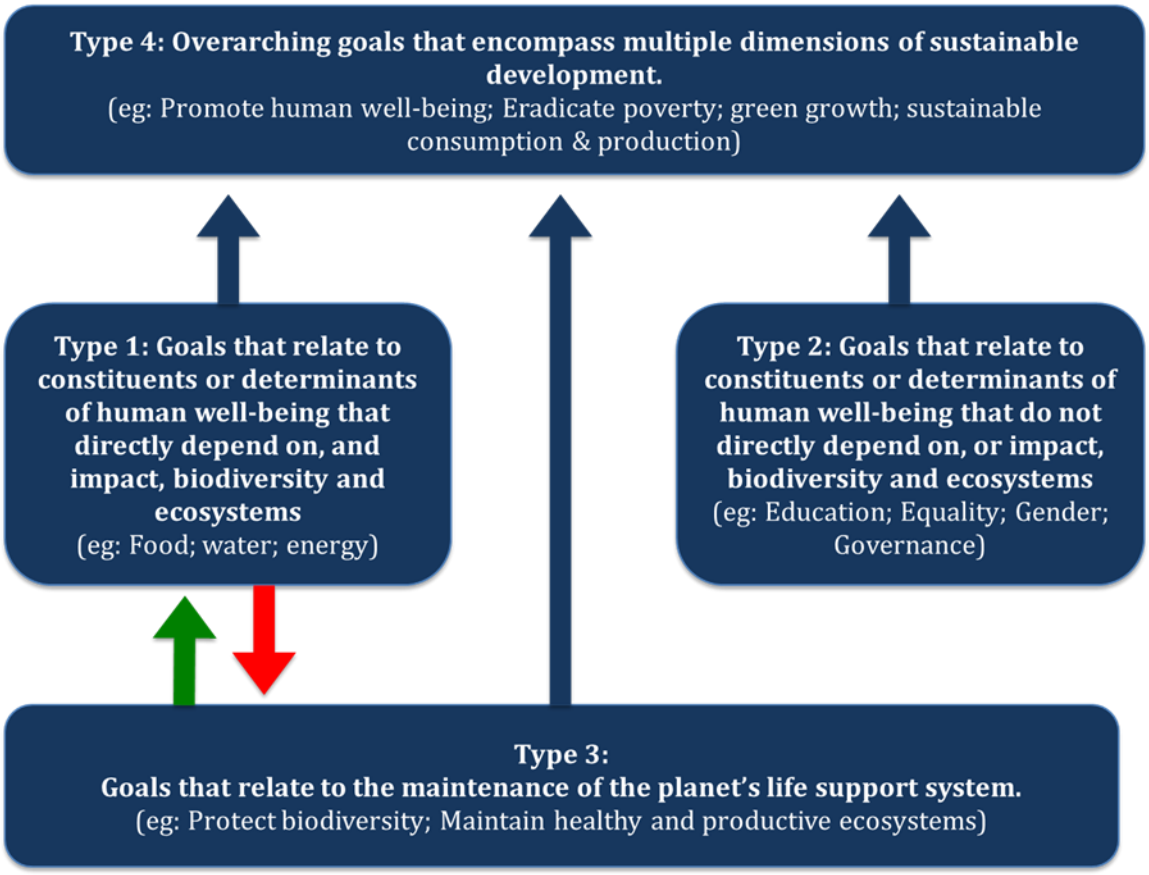

Figure 1: Potential types of goal that may be included in the SDG framework

Sustainable Development Goals may relate to particular tangible constituents or determinants of human well-being, including those addressing basic needs, such as food and water (Type 1; e.g. "food for all") as well as social aspects such as education and equality (Type 2). The former depend directly on biodiversity and ecosystems for their production (green arrows) and, in turn, impact, often negatively, (red arrows) on those ecosystems, while the latter do not. Finally, goals may also relate to overarching goals that encompass multiple dimensions of sustainable development (Type 4). Goal Types 1, 2, and 3 may all be regarded as contributing to the broader Type 4 Goals (blue arrows). While Type 3 Goals may themselves be biodiversity goals, Type 1 and Type 4 Goals should include targets and indicators relating to biodiversity and ecosystems, reflecting that the sustainable provision of thee goods requires ecosystem services. Type 2 Goals have less obvious links to biodiversity and ecosystems. The achievement of Type 2 Goals is also expected to positively affect the achievement of SDGs of types more directly related to biodiversity (1 and 3).

1 **Table 1. Examples of proposed SDGs categorised according to the four types (see figure 1)**

Type	Griggs et al (2013)	Boltz et al (2013)	Colombia / Guatemala proposal (DESA, 2012)
Type 1: Goals that relate to constituents or determinants of human well-being that directly depend on, and impact, biodiversity and ecosystems	Goal 2: **Sustainable food security.** End hunger and achieve long-term food security — including better nutrition — through sustainable systems of production, distribution and consumption. Goal 3: **Sustainable water security**. Achieve universal access to clean water and basic sanitation, and ensure efficient allocation through integrated water-resource management. Goal 4: **Universal clean energy.** Improve universal, affordable access to clean energy that minimizes local pollution and health impacts and mitigates global warming.	**Food security for all:** physical and economic access to sufficient, nutritionally adequate and safe food and its effective utilisation; founded upon ecologically sustainable agriculture, fisheries and rural development policies and practices. **Water security for all**: access to safe drinking water and sanitation, secure environmental flows to sustain human and ecosystem health, and protection against water-related hazards. **Health for all**: health equity, health security and healthy environments, ensuring access to treatment for infectious disease and family health, mitigating the emergence and incidence of disease. **Sustainable energy for all:** universal access to energy, with increased share of renewable energy sources and improved energy efficiency.	**Advancing Food Security** **Energy, including from renewable sources**
Type 2: Goals that relate to constituents or determinants of human well-being that do not directly depend on, or impact, biodiversity and ecosystems		**Opportunities for all:** reduced poverty and inequality, access to social services and security. **Peace and justice for all:** personal security, political voice, transparent and equitable governance and access to fair justice.	**Promoting Sustainable Human Settlement Development**
Type 3: Goals that relate to the maintenance of the planet's life support system	Goal 5: **Healthy and productive ecosystems**. Sustain biodiversity and ecosystem services through better management, valuation, measurement, conservation and restoration.	**Earth system security**: policies and incentives for an effective global programme of ecosystem conservation, restoration and low emissions to avoid harmful or irreversible damage to	**Biodiversity and Forests** **Oceans** **Water Resources**

		ecosystems.	
Type 4: Overarching goals that encompass multiple dimensions of sustainable development.	Goal 1: **Thriving lives and livelihoods**. End poverty and improve well-being through access to education, employment and information, better health and housing, and reduced inequality while moving towards sustainable consumption and production. Goal 6: **Governance for sustainable societies.** Transform governance and institutions at all levels to address the other five sustainable development goals.		**Combating Poverty** **Changing Consumption Patterns**

2

Table 2. How biodiversity and the Strategic Plan and Aichi targets may be integrated into the different types of potential goals

Type	Modality for integration of biodiversity	Relevant targets and other elements of the Strategic Plan	Example indicators
Type 1: Goals that relate to constituents or determinants of human well-being that directly depend on, and impact, biodiversity and ecosystems	Targets or indicators related to biodiversity could be integrated under this type of goal	Targets 5, 6, 7, 8, 9, 13	Eg for Food: Diversity of crops and livestock in production Fertilizer use efficiency Pesticide use Water use. Land use change. Catch per unit effort (fisheries)
Type 2: Goals that relate to constituents or determinants of human well-being that do not directly depend on, or impact, biodiversity and ecosystems	Biodiversity considerations inform the development of goals and targets	Target 1, target 18	
Type 3: Goals that relate to the maintenance of the planet's life support system	The goal itself could be a biodiversity goal which could be derived from the vision of the Strategic Plan. This could be supported by more specific targets and indicators	Vision statement Potentially all targets, but especially Targets 5, 10, 11, 12, 13, 14, 15	Forest area Wetland area Protected areas. Abundance (Living Planet Index; fish stocks) Threatened species status.
Type 4: Overarching goals that encompass multiple dimensions of sustainable development.	Targets or indicators related to biodiversity could be integrated under this type of goal	Vision statement Target 4: Reference to sustainable consumption and production (*Goal or Target*) Goal A and Targets 1 – 4	Broad based measures of societal progress – (beyond GDP (*Indicator*) in line with Target 2