WWF welcomes the IAEG-SDG’s indicator proposal (August 11, 2015) as a constructive basis for further improvement. However, we highlight three core observations:

* **The environmental dimensions of many targets are being lost**. In addition, the August 11 list of proposed indicators is weighted more heavily towards coverage of social measures of development. The IAEG’s refined list must improve the balance across social, economic and environmental dimensions.
* **There is an opportunity to improve measures of certain environmental targets and more fully measure biodiversity-related targets** while restricting the total number of indicators needed across the full framework.
* **For proposed indicators that are considered currently difficult to measure** but which are important to a balanced measure of progress against the SDGs, **WWF calls for the IAEG to clearly indicate how those indicators will be rapidly developed within the Agenda2030 timeframe**.

The suggestions below aim to:

* further strengthen the coverage of core environmental issues while supporting the intent to limit the total number of indicators,
* improve the balance across the full set of indicators across the social, economic and environmental dimensions of sustainability,
* provide specific technical suggestions on individual indicators.

Goal 1: End poverty in all its forms everywhere

**Target 1.1: By 2030, eradicate extreme poverty for all people everywhere, currently measured as people living on less than $1.25 a day**

WWF suggests disaggregating this data by sector of activity or employment to highlight trends for individuals dependent on natural resource use (fishers, etc.) who are often among the poorest.

**Target 1.2: By 2030, reduce at least by half the proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions**

A multidimensional approach to poverty better reflects the intent of this target than the proposed indicator. In addition, because people in low- and middle-income communities disproportionately experience the burden of poor environmental quality, *poverty in living standards*, including “poverty in environment of good quality” (related to noise, pollution, and crime) should be included here alongside more standard MPI components as outlined in the European Commission report “Monitoring multidimensional poverty in the regions of the European Union” (<https://ec.europa.eu/jrc/sites/default/files/mpi_report_online.pdf>). Alternatively, the indicator for target 3.9 (deaths and illness from hazardous chemicals, pollution and contamination) could also be combined here with other MPI components to better capture some of the environmental dimensions of poverty.

**Target 1.4: By 2030, ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance**

WWF believes Indicator 1.4.2 “Proportion of adult population with tenure that is legally recognised and documented or perceived as secure, by sex and age group” is important and preferable to the proposed indicator “Share of women among agricultural land owners by age and location (U/R)”. We would propose as broad a consideration of tenure as feasible to include tenure/use rights over natural resources, including access to wild capture marine fisheries. In addition, this indicator should be disaggregated not only by sex and age group, but also to provide information on trends for indigenous/ethnic peoples, as per the proposal by UNEP: “Percentage of women, men, indigenous peoples and local communities with secure tenure rights to individually or communally held land, property and natural resources”.

**Target 1.5: By 2030, build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters**

WWF supports the suggested indicator: “Number of deaths, missing people, injured, relocated or evacuated due to disasters per 100,000 people”, and the UNISDR definition of disaster as a "serious disruption of the functioning of a community or a society involving widespread human, material, economic or **environmental losses and impacts**, which exceeds the ability of the affected community or society to cope using its own resources." Disaggregation of disasters by type of event (storm, erosion, climate related, rising sea levels, habitat destruction) would provide valuable policy guidance.

**Target 1.b: Create sound policy frameworks at the national, regional and international levels, based on pro-poor and gender-sensitive development strategies, to support accelerated investment in poverty eradication actions**

WWF supports the suggested indicator “Number of national action plans related to multi-lateral environmental agreements that support accelerated investment in actions that eradicate poverty and sustainably use natural resources.”

Goal 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture

**Target 2.3: By 2030, double the agricultural productivity and incomes of small-scale food producers, in particular women, indigenous peoples, family farmers, pastoralists and fishers, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets and opportunities for value addition and non-farm employment**

WWF supports the suggested indicator amended to include Fisheries in the classes of enterprise: “Value of production per labour unit (measured in constant USD), by classes of farming/pastoral/forestry/fisheries enterprise size”. Fisheries are included in the Agriculture Orientation Index and should be explicitly mentioned. The indicator should be disaggregated by size, gender and ethnic/indigenous groups. We suggest an additional indicator “% credibly certified sustainable production (as defined by ISEAL<http://www.isealalliance.org/our-members> ) of overall production”, with data from FAO and ISEAL/Credible certification schemes. An increasing body of literature shows the positive impacts of credible schemes, e.g. farmer outreach and increased yields/reduced inputs compared to conventional production, protection of areas of High Conservation values from conversion. This indicator would also inform 2.3, 2.5, 6a, 8.4, 12a, 14.1 & 14.2.

**Target 2.4: By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality**

WWF supports the suggested indicator. In addition, this target indicator should be informed by the amended indicator proposal for Target 6.4 “Percentage of change in water use efficiency over time”. This would address interlinkages and adequate understanding of the water aspect of resource-use efficiency in agriculture. It should also inform target 14.2 and be informed by target 14.2 indicators.

Goal 3: Ensure healthy lives and promote well-being for all at all ages

**Target 3.9: By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination**

WWF would support a broader coverage of issues beyond only air pollution to better capture the intent of this target, for example as proposed by UNEP: Alternative: Death and disability (disaggregated by sex and age) from indoor and outdoor air quality, water/sanitation, and contaminated sites.

Goal 4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

**Target 4.7: By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture’s contribution to sustainable development**

The suggested indicator is too narrow, with a limited view of ESD while suggested tools such as PISA need to be revised. WWF suggests replacing it with “Percentage of 10 and 15-year old students enrolled in education for sustainable development demonstrating at least a fixed level of knowledge and skills to argue, take a stand, and take action for sustainable development across a selection of topics.” (Source: UNESCO country reports/ ICCS reports next to be updated 2016). An additional indicator could include: “Number of countries with ESD integrated in national curricula (including efforts for entrepreneurial skills for sustainable development and active participation in other programmes for SDGs) (Same source as above).

Goal 5: Achieve gender equality and empower all women and girls

**Target 5.a: Undertake reforms to give women equal rights to economic resources, as well as access to ownership and control over land and other forms of property, financial services, inheritance and natural resources, in accordance with national laws**

WWF supports the 2nd, rights-based indicator (proposed by FAO/IFAD/UN Women): "The legal framework includes special measures to guarantee women's equal rights to land ownership and control". We encourage as broad an interpretation of “land” as feasible to include natural resources.

Goal 6: Ensure availability and sustainable management of water and sanitation for all

**Target 6.3: By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally**

WWF supports the suggested indicator: “Percentage of receiving water bodies with ambient water quality not presenting risk to the environment or human health”. The concept of risk can be defined and quantified. We further note that using an index approach for this may result in unintended consequences, and therefore we would recommend instead the maintenance of risk thresholds.This target should also be used to inform Target 14.1.

**Target 6.4: By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity**

WWF supports the following indicator: “Freshwater withdrawal as a percentage of available, sustainable freshwater supply.” The concept of sustainability is central to this target and should be reflected in the indicator to ensure that environmental requirements are accounted for. Additionally, basin-level and temporal information will both be important in measuring the sustainability of water withdrawals. WWF’s suggests disaggregation to basins, with country-level data to then be developed using proportional averages within country boundaries. To address the need to include temporal water withdrawal information, WWF suggests that a third metric around spatio-temporal monitoring of supply and demand would be highly useful.

**Target 6.5: By 2030, implement integrated water resources management at all levels, including through transboundary cooperation as appropriate**

WWF supports the inclusion of both an IWRM and a transboundary indicator as priority indicators in order to accurately capture the full intention of target 6.5. We support the following indicator: “Percentage of international watercourses with a formal operational arrangement between all riparians for water cooperation disaggregated by inclusiveness of gender-specific arrangements, objectives and commitments.” This language uses terminology which is consistent with the UN Watercourses Convention, a global treaty adopted by the UN General Assembly in 1997. It is also in line with suggestions for gender-sensitive indicators by World Water Assessment Program/UNESCO.

**Target 6.6: By 2020, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes**

In recognition that the proposed indicator on wetland extent has limitations as a purely area-based indicator, WWF supports the inclusion of an additional priority indicator: “Coverage of important sites for freshwater biodiversity by protected areas” (which has interlinkages with the targets 14.2, 14.5, 15.1, 15.2, 15.4, 15.5). A third indicator which may be useful is the River Fragmentation and Flow Regulation BIP indicator (<http://www.bipindicators.net/riverfragmentation>).

Goal 7: Ensure access to affordable, reliable, sustainable and modern energy for all

**Target 7.1: By 2030, ensure universal access to affordable, reliable and modern energy services**

WWF supports the suggested indicator 7.1.1 “Percentage of population with electricity access”. We recommend modifying proposed indicator 7.1.2 “Percentage of population with primary reliance on non-solid fuels” to read “Percentage of population depending on traditional and inefficient use of solid fuels.”

**Target 7.2: By 2030, increase substantially the share of renewable energy in the global energy mix**

WWF recommends amending the suggested indicator to read: “Percentage of renewable energies of all primary energy consumed” in order to capture energy conversion losses in fossil fuel powered plants. In addition, as the suggested indicator 7.3 on Energy Efficiency is also based on primary energy, this would improve consistency in the metrics for this goal area. This target could also be informed by the proposed amended indicator in Target 6.4 “Percentage of change in water use efficiency over time”: this would address interlinkages and build understanding of the water aspect of resource-use efficiency in energy.

**Target 7.3: By 2030, double the global rate of improvement in energy efficiency**

WWF supports the suggested indicator “Rate of improvement in energy intensity (%) measured in terms of primary energy and GDP”.

**Target 7.a: By 2030, enhance international cooperation to facilitate access to clean energy research and technology, including renewable energy, energy efficiency and advanced and cleaner fossil-fuel technology, and promote investment in energy infrastructure and clean energy technology**

WWF would propose alternative or additional indicators on “Percentage of Renewable Energy investments of all energy investments” and “Percentage of energy efficiency investments of all energy investments”.

Goal 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all

**Target 8.4: Improve progressively, through 2030, global resource efficiency in consumption and production and endeavour to decouple economic growth from environmental degradation, in accordance with the 10-year framework of programmes on sustainable consumption and production, with developed countries taking the lead**

WWF supports the suggested indicator “Resource productivity” but it would be important to ensure that the definition of resource productivity includes ‘resources within exclusive national jurisdiction and control’. “Territories” do not cover the fishing waters of states (EEZ), and so this definition would not include most fisheries in the resource productivity of a state. Catch data would be available in national catch data documentation

**Target 8.7: Take immediate and effective measures to eradicate forced labour, end modern slavery and human trafficking and secure the prohibition and elimination of the worst forms of child labour, including recruitment and use of child soldiers, and by 2025 end child labour in all its forms**

WWF supports the suggested indicator “Percentage and number of children aged 5-17 years engaged in child labour, per sex and age group” and recommends that it also be disaggregated by sector of activity in order to capture child labour in agriculture, aquaculture and fisheries.

**Target 8.8: Protect labour rights and promote safe and secure working environments for all workers, including migrant workers, in particular women migrants, and those in precarious employment**

WWF supports the suggested indicator “Number of ILO conventions ratified by type of convention” but recommends that it also be broadened to other relevant labour codes, to read: “Number of ILO conventions and other relevant labour safety instruments that are ratified and implemented”. Other conventions and instruments would include the Cape Town Agreement of 2012 on the Implementation of the Provisions of the 1993 Torremolinos Protocol and IMO International Convention on Standards of Training, Certification and Watchkeeping for Fishing Vessel Personnel. If proposed indicator 8.8.2 is retained, it should also be disaggregated by sector of activity.

**Target 8.9: By 2030, devise and implement policies to promote sustainable tourism that creates jobs and promotes local culture and products**

WWF strongly supports the UNWTO proposal under 8.9.2 to replace the indicator ‘Tourism consumption” with “Environmental pressure indicator; residual flows and natural inputs...derived from a SEEA for Tourism” which would better reflect the intent of this target.

Goal 9: Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation

**Target 9.1 Develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all.**

The proposed indicator does not capture sustainability dimensions of this target.WWF proposes an additional indicator to measure application of protective safeguards, without which infrastructure projects risk damaging the environment, climate, and communities—and actually hindering growth: "Number of infrastructure projects that meet best practice international standards for social and environmental safeguards." Source information (World Bank, regional development banks)

**Target 9.4 By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities.**

The proposed indicator does not capture sustainability dimensions of this target.WWF proposes an additional indicator to measure application of protective safeguards, without which infrastructure projects risk damaging the environment, climate, and communities—and actually hindering growth: "Number of infrastructure projects that meet best practice international standards for environmental and social safeguards." Source information (World Bank, regional development banks)

Goal 11: Make cities and human settlements inclusive, safe, resilient and sustainable

**Target 11.1: By 2030, ensure access for all to adequate, safe and affordable housing and basic services and upgrade slums**

It will be important to ensure a clear and appropriate definition of the world ‘slum’ using UN HABITAT’s five characteristics as a starting point. A large problem has been countries and cities limiting the definition as a means to neglect these areas and their inhabitants. Indicator data provided by UN HABITAT could possibly be complemented by CSOs data collection such as Slum Dwellers International.

**Target 11.2: By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons**

WWF strongly supports the WB proposed indicator “Proportion of income spent by families on transport to reach services such as employment, health, education and community services” in addition to the suggested indicator.

**Target 11.3: By 2030, enhance inclusive and sustainable urbanization and capacity for participatory, integrated and sustainable human settlement planning and management in all countries**

Suggested indicators should be enhanced with qualitative indicators to measure participation and level of integration of planning and management to fully reflect the intent of this target. This could include for example, the number of cities employing participatory budgeting practices with data from UN Habitat, and number of cities incorporating climate strategy into their development plans (source reporting to ICLEI’s carbonnClimate Registry, see [www.carbonn.org](http://www.carbonn.org/)).

**Target 11.4: Strengthen efforts to protect and safeguard the world’s cultural and natural heritage**

WWF supports the UNSD and IUCN proposed indicators.

**Target 11.6: By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management**

WWF supports the suggested indicators and would propose an additional indicator “GHG emissions per city as measured per capita and per USD of GDP”. Source information could include reporting to the Compact of Mayors launched by UN Secretary-General. The target should also be informed by the Global Food Loss Indicator under 12.3.

**Target 11.7: By 2030, provide universal access to safe, inclusive and accessible, green and public spaces, in particular for women and children, older persons and persons with disabilities**

WWF supports the WB comment in that the suggested indicator 11.7.1 also needs to incorporate distribution of spaces in the city as a means to measuring inclusiveness and accessibility.

Goal 12: Ensure sustainable consumption and production patterns

**Target 12.1: Implement the 10-year framework of programmes on sustainable consumption and production, all countries taking action, with developed countries taking the lead, taking into account the development and capabilities of developing countries**

WWF supports the suggestion by UNEP for indicator 12.1.2 to include other organisations actively engaged in regional cooperation supporting the implementation of SCP activities.

**Target 12.2: By 2030, achieve the sustainable management and efficient use of natural resources**

WWF strongly supports the suggested indicator 12.2.2 Material footprint (MF) and MF/capita. This should cover for non-food production such as wood, cotton, mining etc. This indicator can also inform targets 8.4 and 12.5.

**Target 12.3: By 2030, halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest loss**

WWF supports the suggested indicator “Global Food Loss Index”. It shouldinclude post-harvest losses and food waste via discards and waste in the fishing sector, and be disaggregated for rural and urban. Trends on the latter would inform Target 11.6 and 12.5.

**Target 12.6: Encourage companies, especially large and transnational companies, to adopt sustainable practices and to integrate sustainability information into their reporting cycle**

WWF supports the suggested indicator “Number of companies publishing sustainability reporting”. However there needs to be a clear definition of what is meant by "sustainability reporting"; this definition should refer to high quality standards such as the Global Reporting Initiative and the UN Global Compact Global Corporate Sustainability Report.

**Target 12.7: Promote public procurement practices that are sustainable, in accordance with national policies and priorities**

WWF supports the suggested indicator, however there needs to be a clear definition of ‘sustainable procurement’, this could include specification of credible certification schemes; or commitment to zero-deforestation procurement etc.

**Target 12.a: Support developing countries to strengthen their scientific and technological capacity to move towards more sustainable patterns of consumption and production**

WWF would propose an additional/alternative indicator: “Percentage of credibly certified sustainable production (as defined by ISEAL http://www.isealalliance.org/our-members) of overall production” as proxy for ‘sustainable production”.

Goal 13: Take urgent action to combat climate change and its impacts

**Target 13.1: Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries**

WWF supports the proposed Indicator 13.1.1. “X % of all countries that report having progressed from a perceived low …” and the suggested indicator “Number of deaths…” in that order of priority. We also believe it is critical to track both economic and non-economic loss and damage from climate impacts for critical ecosystem and species and thus would support the proposed indicator 13.1.2 amended to include non-economic losses, or through amendments to the suggested Indicator to read: “Percentage of casualties and amount of economic and non-economic loss and damage resulting from extreme weather and slow onset events compare to previous years.”

**Target 13.2: Integrate climate change measures into national policies, strategies and planning**

In order to ensure differentiated ambition between developed and developing countries for this target WWF suggests amending the suggested indicator to read “Number of countries, which have formally communicated and implemented the establishment of integrated zero-carbon and low-carbon, climate-resilient, disaster risk reduction development strategies (e.g. a national adaptation plan process)”.

**Target 13.3: Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning**

WWF supports the suggested indicator “Number of countries that have integrated mitigation, adaptation, impact reduction and early warning into primary, secondary and tertiary curricula” and the proposed indicator 13.3.2 in that order of priority.

**Target 13.a: Implement the commitment undertaken by developed-country parties to the United Nations Framework Convention on Climate Change to a goal of mobilizing jointly $100 billion annually by 2020 from all sources to address the needs of developing countries in the context of meaningful mitigation actions and transparency on implementation and fully operationalize the Green Climate Fund through its capitalization as soon as possible**

The suggested indicator does not reflect the intent of the target. WWF proposes to amend the indicator to read “Mobilized amount of USD per year by 2020 accountable towards the developed country parties commitment to address the needs of developing countries for mitigation and adaptation action.”

Goal 14: Conserve and sustainably use the oceans, seas and marine resources for sustainable development

**Target 14.1: By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution**

The suggested indicator “Nitrogen use efficiency” does not adequately reflect the intent of the target. WWF suggests to replace it with the suite of HELCOM (Baltic Marine Environment Protection Commission) indicators in order to capture a more comprehensive set of pollution indicators. Data are collected by regional seas organisations and national coastal management organisations. WWF supports proposed indicator 14.1.2 on the understanding that “all sources” includes non-land based sources. Vessel based garbage into sea could be measured via proxy: MARPOL Annex V ratified and implemented by all flag states. Indicators for 14.1 can also be used to inform targets 6.3 and 6.6. The Red List Index and Living Planet Index of species threatened by pollution would also be of use and have interlinkages with other targets.

**Target 14.2: By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans**

WWF suggests replacing the suggested indicator (% of coastal and marine development with ICM/MSP plans) with a combination of appropriate BIP indicators with interlinkages to other targets: The Living Planet Index (6.6, 14.1, 14.4, 14.5, 15.1, 15.2, 15.4, 15.5, 15.7, 15.8), The Red List Index (14.1, 14.4, 15.2, 15.4, 15.5, 15.7, 15.8), coverage of protected areas (6.6, 14.5, 15.1, 15.2, 15.4, 15.5), PA management effectiveness (6.6, 14.5, 15.1, 15.2, 15.4, 15.5) coverage of habitat (6.6, 15.1, 15.4, 15.5). Note that the LPI is already disaggregated by marine species. Protected areas should include a wide range of management regimes.

**Target 14.4: By 2020, effectively regulate harvesting and end overfishing, illegal, unreported and unregulated fishing and destructive fishing practices and implement science-based management plans, in order to restore fish stocks in the shortest time feasible, at least to levels that can produce maximum sustainable yield as determined by their biological characteristics**

WWF supports the suggested indicator but it should be complemented with a suite of BIP indicators with interlinkages to other targets: The Living Planet Index (6.6, 14.1, 14.2, 14.5, 15.1, 15.2, 15.4, 15.5, 15.7, 15.8) AND The Red List Index (14.1, 14.2, 15.2, 15.4, 15.5, 15.7, 15.8), which will show population trends and conservation status of key species. Because bycatch is one of the most pervasive and devastating destructive practices we also suggest the indicator “Numbers of bycaught individuals/weight of bycaught catch”. Data are not currently compiled at global level but could be by the FAO with data from countries and Regional Fisheries Management Organisations where available.

**Target 14.5: By 2020, conserve at least 10 per cent of coastal and marine areas, consistent with national and international law and based on the best available scientific information**

WWF supports the indicator of Coverage of protected areas (linked to 6.6, 14.2, 14.5, 15.1, 15.2, 15.4, 15.5) but this must be supplemented with additional BIP indicators to give the full picture: the Living Planet Index (also 6.6, 14.1, 14.2, 14.4, 15.1, 15.2, 15.4, 15.5, 15.7, 15.8) and PA management effectiveness (6.6, 14.2, 15.1, 15.2, 15.4, 15.5). It is also important to ensure representativeness (coherence/connectivity) of Protected Areas and we support IUCN’s comments on 14.5.2 and the need to link to Key Biodiversity Areas. Other possible indicators include those under Aichi Target 11 indicators.

**Target 14.6: By 2020, prohibit certain forms of fisheries subsidies which contribute to overcapacity and overfishing, eliminate subsidies that contribute to illegal, unreported and unregulated fishing and refrain from introducing new such subsidies, recognizing that appropriate and effective special and differential treatment for developing and least developed countries should be an integral part of the World Trade Organization fisheries subsidies negotiation**

WWF supports the suggested indicator “Dollar value of negative fishery subsidies against 2015 baseline” although the definition of negative subsidies will need to be clear and should be determined through interagency collaboration between FAO, UNEP, RFMOs, and WTO.

**Target 14.7: By 2030, increase the economic benefits to Small Island developing States and least developed countries from the sustainable use of marine resources, including through sustainable management of fisheries, aquaculture and tourism**

To capture the sustainability and productivity dimensions of this target, 14.7 should be informed jointly by the suggested indicator for 14.4 “Proportion of fish stocks within biologically sustainable level” and the suggested indicator “Fisheries as a percentage of GDP”. In addition, in order to better represent the economic benefits for SIDS and LDCs WWF suggests an additional indicator on “Volume of aquaculture production certified against credible independent certification schemes” with data collected from the certification bodies.

**Target 14.b: Provide access for small-scale artisanal fishers to marine resources and markets**

WWF suggests moving the suggested indicator to 14.4 and replacing it with “Improved capacity (number/proportion of trained staff) within key stakeholders to manage small scale fisheries and enhance coordination and collaboration between fisheries and policy management institutions.” Source FAO voluntary guidelines for small scale fisheries.

**Target 14.c: Enhance the conservation and sustainable use of oceans and their resources by implementing international law as reflected in UNCLOS, which provides the legal framework for the conservation and sustainable use of oceans and their resources, as recalled in paragraph 158 of The Future We Want**

WWF suggests amending the suggested indicator to add other relevant agreements: ‘Number of countries implementing the provisions set out in all relevant agreements and instruments (including UN Fish Stocks Agreement, IMO MARPOL and annexes, Cape Town Agreement, STWC-F, FAO Port State Measures Agreement, ILO Labour in Fishing Agreement, the UNGA annual oceans and fisheries resolutions).

Goal 15: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss

**Target 15.1: By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements**

WWF suggests amending the suggested indicator “Forest area as a percentage of total land area” to harmonize with the BIP definition: “Percentage of change in forest extent over time”. This would work in tandem with the similar wetlands indicator under target 6.6. The data could be obtained through digitization of aerial or satellite images where available and otherwise rely on FAO resource assessments. The data could be disaggregated by forest type, and should distinguish natural forests from plantations. Regional and global datasets are already available from 1990 to the present. It could also be supplemented with additional BIP indicators to provide a larger picture of the extent of conservation or restoration (e.g. The Living Planet Index, Red List Index, PA cover and PA management effectiveness)

**Target 15.2: By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally**

WWF suggests the indicator “Area of forest under Sustainable Management Certification”. Certification is geographically precise and is a strong verifier of better levels of management. PEFC and FSC schemes currently cover 400 million ha -- a decent proportion of the world's production forests, and this portion should grow if forest management improves in line with the SDG target. While this is only around 10% of total forests, it could be as much as 40% of forests under active management. This indicator could be complemented by FAO’s proposed index which would ensure that no areas are excluded, i.e. production systems where certification is not feasible due to high transaction costs. It could also be supplemented with additional BIP indicators to provide a larger picture of the extent of sustainable management and the reduction in forest loss (e.g. The Living Planet Index, Red List Index, PA cover and PA management effectiveness).

**Target 15.4: By 2030, ensure the conservation of mountain ecosystems, including their biodiversity, in order to enhance their capacity to provide benefits that are essential for sustainable development**

WWF supports the suggested indicator “Coverage of Protected Areas” but recommends that this target be more fully informed with a combination of appropriate BIP indicators with interlinkages to other targets: The Living Planet Index of montane species (also 6.6, 14.1, 14.2, 14.4, 14.5, 15.1, 15.2, 15.5, 15.7, 15.8), The Red List Index (14.1, 14.2, 14.4, 15.2, 15.5, 15.7, 15.8) and PA management effectiveness (6.6, 14.2, 14.5, 15.1, 15.2, 15.5) as well as a measure of habitat cover (6.6, 14.2, 15.1, 15.5).

**Target 15.5: Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species**

A combination of indicators is needed to capture adequately the different elements of this target. We propose to use a combination of appropriate BIP indicators with interlinkages to multiple targets: The Living Planet Index (also 6.6, 14.1, 14.2, 14.4, 14.5, 15.1, 15.2, 15.4, 15.7, 15.8), The Red List Index (14.1, 14.2, 14.4, 15.2, 15.4, 15.7, 15.8) and habitat cover measures such as “Percentage of change in forest extent over time” (6.6, 14.2, 15.1, 15.4).

**Target 15.7: Take urgent action to end poaching and trafficking of protected species of flora and fauna and address both demand and supply of illegal wildlife products**

WWF supports the inclusion of 15.7.1 Red List Index for species in trade, especially if used with the Living Planet Index for species in trade. Both are established BIP indicators. We also support 15.7.2 as an established indicator managed by CITES that more directly measures the Target. It could be the primary indicator if supported by the RLI and Living PIanet Index; it’s linked to targets 16.4 and 16.5. Clarity is needed on use of the term “protected”. For 15.7.2, data concern species protected within a defined framework (CITES) but overlook non-CITES-listed species regulated under forestry/fisheries management regimes and trafficked illegally. Combined with data collection challenges, it would underestimate illegal wildlife trade. The RLI and LPI include a broad range of species and provide a basis to assess species status but do not always distinguish between legal and illegal trade: their utility for trafficked species is limited unless linked to trade systems through 15.7.2.

**Target 15.8: By 2020, introduce measures to prevent the introduction and significantly reduce the impact of invasive alien species on land and water ecosystems and control or eradicate the priority species**

The suggested indicator is weak in that it considers only one “measure to prevent” invasives (legislation). It would be much stronger if the impact of those measures was monitored, which could be done with a combination of appropriate BIP indicators with interlinkages to multiple targets: The Living Planet Index for species threatened by invasives (also 6.6, 14.1, 14.2, 14.4, 14.5, 15.1, 15.2, 15.4, 15.5, 15.7) and the Red List Index for species threatened by invasives (14.1, 14.2, 14.4, 15.2, 15.4, 15.5, 15.7). These would allow both “measures” taken and “impact” to be tracked.

IAEG Section 3: Cross-cutting Issues

Topic 18: Verify and match the indicator proposed against existing major indicator frameworks, including those developed at the regional level

It is vital that, wherever possible, the SDG indicator framework builds on existing, established measures being used in other fora. For the environment-related indicators, we advocate the use of indicators already developed by the Biodiversity Indicators Partnership (BIP) and applied by many governments for use in tracking CBD Aichi Biodiversity Targets. In particular, we propose the multiple use of a small number of strong, appropriate, well-established, BIP-developed indicators with strong scientific foundations and existing databases, which have interlinkages to each other and to multiple SDG targets and which can be disaggregated at multiple levels, biomes and taxa. The primary indicators are: (a) The Living Planet Index (LPI): relevant to SDG targets 6.6, 14.2, 14.4, 14.5, 15.1, 15.2, 15.4, 15.5, 15.7, 15.8 (Database available and managed by WWF/ZSL); (b) The Red List Index (RLI): relevant to 14.2, 14.4, 15.2, 15.4, 15.5, 15.7, 15.8 (Database available and managed by IUCN); (c) Coverage of Protected Areas (PA cover): relevant to 6.6, 14.2, 14.5, 15.1, 15.2, 15.4, 15.5 (World Database on Protected Areas managed by UNEP-WCMC and IUCN WCPA); (d) PA management effectiveness (PAME): relevant to 6.6, 14.2, 14.5, 15.1, 15.2, 15.4, 15.5 (Global Database on PA Management Effectiveness managed by UNEP-WCMC, IUCN WCPA, Universities of Queensland and Oxford); and (e) Habitat cover (several remote sensing databases exist for this purpose - e.g. NASA, ESA, Google Earth, University of Maryland, etc.). We also actively encourage the use of other BIP indicators where they enhance the overall picture for any given target (e.g. area of forest under certification, River Connectivity Index, an improved Ocean Health Index, etc.).

Topic 20: Address the issue of data disaggregation, and other cross-cutting issues such inequality, special groups etc

Effective indicators are those that can be used at multiple levels to allow their use and application by multiple stakeholders. This is one argument for using the BIP CBD indicators such as the Living Planet Index and the Red List Index which can be disaggregated by geography (local, national, regional, global), taxonomy (e.g. vertebrates, mammals, birds, etc.), biome (e.g. marine, terrestrial, freshwater) or their threats (e.g. those impacted by invasives, trade or pollution). The LPI is especially strong as it is more sensitive to change than most other indicators and will be of greater use at national level for States wanting to track progress regularly. The LPI is continually updated, uses freely available data and provides sensitivity to annual changes in biodiversity. It therefore complements the RLI which uses assessments made at coarser intervals (e.g. 5-yearly or longer). It will be important to disaggregate some indicators by sector of activity and by ethnic/indigenous identity to ensure that trends for groups highly dependent on natural resources for their livelihoods/income and well-being are captured. WWF recommends disaggregation by *sector of activity* for indicators 1.1, 8.7, and 8.8.2 to capture trends for smallholders and small scale fisheries; and by *ethnic/indigenous group* for indicators 1.4.2 and 2.3 in addition to other indicators already identified in the document.

Topic 21: Identify interlinkages across goals and targets with the purpose of reducing the total number of indicators, using text and scientific analysis

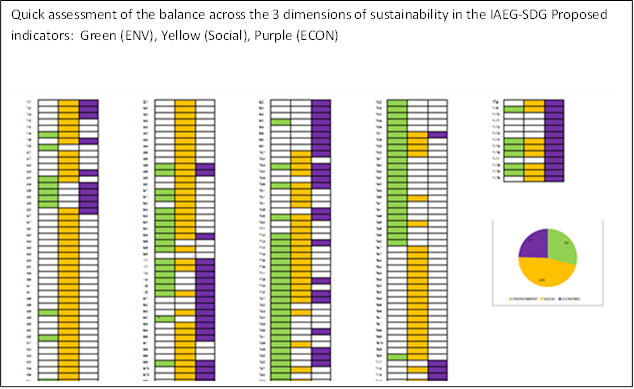
Many of the targets with relevance to the environment can be measured by a small cluster of well-established indicators developed scientifically by the Biodiversity Indicator Partnership (BIP). For the full list, please see WWF’s response to Topic 18. In these cases, countries could be provided with time series data from existing databases at no or minimal cost. Although several indicators would be used to monitor one target, using the same indicators for multiple targets would ultimately reduce the overall number of indicators employed. The interlinkages across goals and targets can be made with the following cluster of indicators:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Target | Multiple use BIP indicators | | | | |
| LPI | RLI | PA cover | PAME | Habitat cover |
| 6.6 | X |  | X | X | X |
| 14.2 | X | X | X | X | X |
| 14.4 | X | X |  |  |  |
| 14.5 | X |  | X | X |  |
| 15.1 | X |  | X | X | X |
| 15.2 | X | X | X | X |  |
| 15.4 | X | X | X | X | X |
| 15.5 | X | X | X | X | X |
| 15.7 | X | X |  |  |  |
| 15.8 | X | X |  |  |  |

IAEG Section 4: General comments

Topic 22: Please use the space below to provide any additional comments/proposals on the indicator framework that you believe would be useful to the IAEG-SDGs in their work towards developing an indicator framework. Note that there is a character limit of 2,500 (approximately 500 words).

(1) Recalling the guidance from Member States that the SDG indicator framework will preserve the balance, integration and ambition of the goals and targets, (para 75, Transforming our World) WWF conducted an informal “back of the envelope” assessment of the degree to which the set of suggested indicators (bright blue lines) balance the three dimensions of sustainable development. Out of a total of 313 indicators (some indicators tick one or more boxes: social, economic, environmental) nearly 50% are “social” with the remaining closely split between “env” and “econ”. As the IAEG refines the full set we encourage them to improve the balance to ensure an adequate coverage of environmental issues.



(2) We would also like to highlight the need to ensure that the indicators chosen for SDGs are of relevance to national monitoring as well as global monitoring. Whereas many indicators already have at least some datasets available, implementation of the framework and monitoring of SDG delivery will only be effective if an international effort is made to build capacity in countries that have most of the biodiversity and most of the poverty. Many countries need help with accessing existing data (especially in formats of use to them), collecting new data and managing, analyzing, interpreting and sharing data. The CBD Secretariat’s efforts to mobilize resources for environmental monitoring should also be supported.