Cover Note for Area A: Coordination, Discussion on UN Sustainable Development Goals (SDGs)

At the 49th Session of the UN Statistical Commission, the Commission "Noted the strong support for using SEEA in compiling Sustainable Development Goal indicators when relevant, and requested that the Committee of Experts take an active role in the Sustainable Development Goal indicators process in view of the review of the indicators in 2020." In past sessions of the Statistical Commission, the Commission has similarly stressed the value of the SEEA in measuring the SDG indicators.

The UNCEEA has engaged with the Inter-Agency Expert Group on Sustainable Development Goals (IAEG-SDG) since 2015. This engagement has taken the form of providing the IAEG-SDG with summary documents and reports on the advantages of aligning SDG indicators with the SEEA standard as well as specific roadmaps for aligning SDG monitoring mechanisms with the SEEA. For example, in 2015, the UNCEEA submitted a *Broad Brush Analysis of all the proposed SDG indicators to the IAEG-SDGs* (an updated version of which is supplied as a background document for the 13th meeting of the UNCEEA), which outlines 'SEEA relevant' indicators and how they are or could be aligned with the SEEA [**Annex I**].

In addition, the UNCEEA has worked with custodian agencies to ensure that the System of Environmental-Economic Accounting (SEEA) is represented where relevant. As a result, the methodology of certain environmental indicators is aligned with the System of Environmental-Economic Accounting (SEEA). This alignment has occurred for example, for select Goal 6 indicators on water (6.3.1, 6.4.1), select Goal 8 indicators (8.4.1, 8.4.2) and select Goal 15 indicators (15.3.1). The UNCEEA has continued to engage with custodian agencies in the present period. The UNCEEA has most recently engaged with UN Environment on indicators 6.6.1 and 6.3.2 to ensure that they are aligned with the SEEA. For indicators 6.6.1 and 6.3.2, the Committee has further encouraged testing in countries and requested the addition of the indicators to the research agenda.

However, the UNCEEA's efforts have to date achieved limited success. The SEEA is relevant to many environmental indicators which are not currently aligned with the standard. For instance, Goal 7 indicators 7.2.1 (renewable energy share in total final energy consumption) and 7.3.1 (energy intensity measured in terms of primary energy and GDP) can both be derived from the SEEA energy accounts. However, the methodology of these indicators currently specifies that the indicators should come from energy balances, due to their use of the territory principle.

At its 48th session, the Statistical Commission agreed with the revised global indicator framework as proposed by the IAEG as well as with a process for annual and comprehensive indicator reviews. The comprehensive indicator reviews (in 2020 and 2025) provide a window of opportunity for the SEEA. The comprehensive reviews would include the addition, deletion, refinement or adjustment of indicators on the basis of the following: (a) Indicator does not map well to the target; (b) Additional indicator(s) is needed to cover all aspects of the target; (c) New data sources are available; (d) Methodological development of

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tier III indicator has stalled or has not produced expected results; (e) Indicator is not measuring progress towards meeting the target.

The 2020 revision provides a window of opportunity for the SEEA and the UNCEEA. The UNCEEA is invited to consider how best to influence the 2020 revision and engage with the IAEG-SDG. A proposal has been put forward by the co-chairs of the IAEG-SDG to the IAEG-SDG Working Group on Interlinkages to form a subgroup of the Working Group on Interlinkages that focuses specifically on the SEEA. The primary objective of the Working Group on Interlinkages is to identify possible interlinkages in the statistics underlying the global SDG indicators and research and identify ways in which these interlinkages can be harnessed to facilitate SDG monitoring and analysis. A subgroup focusing on the SEEA could help drive forward the alignment of the relevant SDGs to the SEEA by engaging with countries, IAEG-SDG members and custodian agencies alike.

The UNCEEA is asked to consider:

1. *How should the UNCEEA best engage with the IAEG-SDG, considering the existing proposal to form a subgroup?*
2. *How should the UNCEEA prioritize its focus on indicators?*
   - *Should the UNCEEA focus on Tier 3 indicators?*
   - *Or should the UNCEEA propose complementary indicators for Tier I indicators that are aligned with the SEEA?*
   - *Alternatively, should the UNCEEA prioritize those indicators for which engagement with custodian agencies is ongoing?*

Annex I: Broad Brush Analysis of SDG Indicators

The purpose of the *Broad Brush Analysis of SDG Indicators* is to identify SEEA-relevant Sustainable Development Goal (SDG) indicators and provide more information on how indicators currently are aligned with the SEEA, or how they could be aligned with the SEEA.

This analysis is an updated version of the *Broad Brush Analysis of all the proposed SDG indicators*, which the UNCEEA submitted to the IAEG-SDG on 7 September 2015. As the Statistical Commission agreed with the revised global indicator framework as proposed by the IAEG at its 48th session, the current document only lists those indicators in the revised global indicator framework. The document identifies the custodian agency and tier of each SEEA-relevant indicator. The document also provides a summary of the metadata, the data availability and sources and previous engagement or work done on the indicator. For those indicators that are currently aligned with the SEEA, the connection to the SEEA is specified. For those indicators that are not currently aligned with the SEEA, a prosed connection to the SEEA is provided, as are next steps being taken (if engagement is currently taking place).

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			Updated broad brush analysis of SEEA-relevant SDG indicators			
Existing Indicator	**Custodian Agency**	**Tier**	**Notes/Meta-Data**	**Data Availability and Sources**	**Previous engagement/work done on indicator**	**Way forward**
GOAL 2 -						
2.4.1 - Proportion of agricultural area under productive and sustainable agriculture	FAO; partner with UNEP	Tier III	N/A	N/A		
GOAL 6 -						
6.3.1 - Proportion of wastewater safely treated	WHO, UN-Habitat, UNSD; partner with UNEP, OECD, Eurostat	Tier II	**Definition:** Proportion of wastewater generated by households and by economic activities which is safely treated (both off-site and on-site), compared to total wastewater generated by households and economic activities. **Connection to the SEEA:** -"Wastewater safely treated" is based on treatment ladders as defined by the SEEA. -Measurement of wastewater is aligned with the SEEA and encompasses all wastewater generated and treated by the economy. -The indicator is disaggregated for households and non-households (industrial and commercial establishments, as per ISIC Rev. 4).	Started data collection and will run through 2017. Preliminary estimates are available for 140 countries for 6.2.1, which provides the household portion of the indicator by the World Bank and the JMP (http://www.worldbank.org/en/topic/water/publication/the-costs-of-meeting-the-2030-sustainable-development-goal-targets-on-drinking-water-sanitation-and-hygiene). Goal website: www.wssinfo.org		
6.3.2 - Propoprtion of bodies of water with good ambient water quality	UNEP; partner with UN-Water	Tier II	**Definition:** Proportion of all water bodies in the country that have good ambient water quality. Ambient water quality refers to natural, untreated water in rivers, lakes and groundwaters. The methodology uses a water quality index which combines data from the analysis of basic core water quality parameters. Some of these parameters are direct measures of water quality for ecosystem or human health, and the others are included to characterise the water body. Deviation from normal ranges (in the case of electrical conductivity and pH), or values which exceed (phosphate and nitrogen), or fall below expected (dissolved oxygen) target values may be symptomatic of impacts on water quality. The methodology proposes that river basins for the unit of	No data is currently available. However, countries are proposed to either use their own capacity to monitor or to engage with GEMS/Water for guidance and support. Countries will need to define river basins, define water bodies, define monitoring stations, collect water quality data and finally assess water quality. The indicator will make use of a progressive monitoring approach, with Level 1 consisting of a water quality index of core physico-chemical parameters and optional Level 2 monitoring, including monitoring of additional parameters and approaches such as biological, microbiological or earth observation.	**April 2018:** Metadata sent to SEEA EEA TC for review; revised notes will be submitted to the UNCEEA for approval.	**Proposed connection to the SEEA:** Water quality provides an indication of the services that can be obtained from the aquatic ecosystems, such as clean water, preserved biodiversity, etc. Providing additional information (as Level 2 monitoring) on the supply and use of ecosystem services and ecosystem condition will provide insight as to how water quality is impacting key provisioning, regulating and cultural services. Countries that are already producing ecosystem accounts can use aggregations of ecosystem assets as they reflect river basins. **Next steps:** UNCEEA to review metadata. Coordination with the big data task force on Earth observation (and imparticular with chair of Statistics Canada) needs to be ensured.
6.4.1 - Change in water-use efficiency over time	FAO; partner with UNEP, IUCN, UNSD, OECD, Eurostat	Tier II	**Definition:** Water use efficiency (WUE) is the change in the ratio fo the value added of a given major sector to the volume of water use, over time. Following ISIC 4, the sectors are: 1. agriculture, forestry, fisheries (ISIC A) 2. mining and quarrying; manufacturing; electricity, gas, steam and air conditioning supply; construction (ISIC B, C, D, and F) 3. all service sectors (ISIC E and G-T) The indicator can also be aggregated by summing the weighted (by water use over total use) efficiencies of each sector. The unit of the indicator is expressed in value/volume (USD/m3, usually). **Connection to SEEA:** The definitions of water use and abstraction come directly from the SEEA. Like the SEEA, the indicator follows ISIC 4. Physical flow accounts for water can provide this data. **Other notes:** It should be noted, that what they are measuring is actually water productivity, NOT efficiency.	Data will come from FAO's AQUASTAT. The data will be compiled from administrative data collected at the country level at technical (for water and irrigation) or economic (for value added) institutions. Presently, the data needed for the indicator are collected by AQUASTAT and the other databases for 168 countries worldwide.	**September 2017:** UNSD reviewed metadata and provided comments to FAO.	

6.4.2 - Level of water stress: freshwater withdrawal as a proportion of available freshwater resources	FAO; partner with UNEP, IUCN, UNSD, OECD, Eurostat	Tier I	**Definition:** Total freshwater withdrawn by all major sectors as a proportion of total renewable freshwater resources (after taking into account environmental water requirements). Total renewable water resources (TRWR) is sum of internal and external renewable water resources, where IRWR refers to long-term average annual flow of rivers and recharge of groundwater generated from endogenous precipitation and ERWR refers to flows entering a coutry, taking into consideration the quantity of flows reserved to upstream and downstream countries. Total freshwater withdrawal is volume of freshwater extracted from sources (rivers, lakes aquifers). Calculated as sum of total water withdrawal by sector, minus direct use of wastewater, direct use of agricultural drainage water and use of desalinated water.	Forty-eight countries have data for 2010-present. New data for the indicator are planned to be produced for most countries between 2017-2018 and will be available through Aquastat.		**Proposed connection to SEEA:** SEEA is not explicitly mentioned but calculation of TRWR generally matches up with IRWS, with the exception of any mention of overlaps. In IRWS, Total Actual Renewable Water Resources = [Internal Renewable Water Resources + **Actual** External Renewable Water Resources] = [external inflows + surface water run-off + groundwater recharge - (overlap + treaty obligations)], where overlap is defined as natural transfers of groundwater to surface water - natural transfers of surface water to groundwater. = (B.1.a + D.6 + B.2.1 + B.2.2.b - C.2.1.1.a.a - *olp*)
6.6.1 - Change in the extent of water-related ecosystems over time	UNEP, Ramsar; partner with UN-Water, IUCN	Tier II	**Definition:** Water-related ecosystems includes five categories: 1) vegetated wetlands, 2) rivers and estuaries, 3) lakes, 4) aquifers and 5) artificial waterbodies. The majority of ecosystem types contain freshwater, with the exception of mangroves and estuaries, which are included but contain brackish water. The definition of vegetated wetlands is consistent with the Ramsar Convention. Extent has been expanded beyond spatial extent to capture additional basic parameters. Thus, extent includes spatial extent or surface area, the quality and the quantity of water-related ecosystems. The methodology applies a progressive monitoring approach, with Level 1, relating to spatial extent and water quality and an optional Level 2, relating to quantity of water discharge in rivers and estuaries, water quality imported from 6.3.2 and quantity of groundwater within aquifers.	N/A	**April 2018:** Metadata sent to SEEA EEA TC for review; revised notes will be usbmitted to the UNCEEA for approval.	**Proposed connection to the SEEA:** Ecosystem accounting can inform the spatial extent of water-related ecosystems. However, the applicability of the SEEA EEA to this indicator depends on the extent to which the ecosystem type classifications used by countries coincide with the ecosystem types proposed by the indicator. The SEEA-Water asset accounts can inform the quantity of groundwater within aquifers for the level 2 subindicator. **Next steps:** UNCEEA to review metadata.
6.a.1 - Amount of water- and sanitation-related official development assistance that is part of a government-coordinated spending plan	WHO, UNEP, OECD; partner with UN-Water	Tier I	N/A	N/A		
GOAL 7						
7.2.1 - Renewable energy share in the total final energy consumption	UNSD, IEA, IRENA; partner with World Bank, UN-Energy	Tier I	**Definition:** The percentage of final consumption of energy that is derived from renewable resources. Renewable energy consumption includes consumption of energy derived from: hydro, solid biofuels, wind, solar, liquid biofuels, biogas, geothermal, marine and waste. Total final energy consumption is calculated from national balances and statistics as total final consumption minus non-energy use.	Data available through national energy balances from IEA and UNSD for more than 180 countries. Between existing data sources, data for every country and area can be collected.		**Proposed connection to the SEEA:** From a use perspective, total final energy consumption aligns with net domestic energy use as defined in the SEEA (end use of energy products less inventories plus losses). The renewable portion of the end use can be estimated from the physical supply and use tables
7.3.1 - Energy intensity measured in terms of primary energy and GDP	UNSD, IEA; partner with World Bank, UN-Energy	Tier I	**Definition:** Energy supplied to the economy per unit value of economic output. Total energy supply is made up of production plus net imports minus international marine and aviation bunkers plus stock changes. GDP is the measure of economic output; for international comparison purposes, GDP is measured in constant terms at purchasing power parity.	Data is available for all countries on an annual basis. In terms of total energy supply, it is typically calculated in making of energy balances, which are avaialble for larger countries from IEA and for all countries by UNSD.		**Proposed connection to the SEEA:** Energy accounts use the same scope, definitions and industry classification as the national accounts. As such energy intensity can be calculated for the economy and particular sectors. Numerator can be found in the energy use table (end use of energy by each sector of the economy); denominator can be found in the national accounts. No adjusments would be needed as energy accounts and national accounts are fully aligned.
7.a.1 - International financial flows to developing countries in support of clean energy research and development and renewable energy production, including hybrid systems	OECD, IRENA; partner with IEA, UN-Energy, UNEP	Tier II	N/A	N/A		

7.b.1 - Investments in energy efficiency as a proportion of GDP and the amount of foreign direct investment in financial transfer for infrastructure and technology to sustainable development services	IEA	Tier III	**N/A**	**N/A**		
GOAL 8						
8.4.1 - Material footprint, material footprint per capital, and material footprint per GDP	UNEP; partner with OECD	Tier III (old metadata up?)	**Definition:** Material footprint is defined as the attribution of global material extraction to domestic final demand of a country. It is the sum of the material footprinting for biomass, fossil fuels, metal ores and non-metal ores.

It is calculated as raw material equivalent of imports plus domestic extraction minus raw material equivalents of exports. For the attribution of the primary material needs of final demand a global, multi-regional input-output (MRIO) framework is employed. The attribution method based on I-O analytical tools is described in detail in Wiedmann et al. 2015. It is based on the EORA MRIO framework developed by the University of Sydney, Australia (Lenzen et al. 2013) which is an internationally well-established and the most detailed and reliable MRIO framework available to date.

Connection to the SEEA: Material flow accounts (product flow or parts of economy-wide) could be used (latest edition of Eurostat guidebook for MFA is listed as reference).

Domestic Material Consumption (DMC) is derived from economy-wide material flow accounts (EW-MFA) a physical flow account included in the SEEA-CF. DMC is defined as the domestic extraction of materials (excluding bulk flows of water and air) plus physical imports minus physical exports. DMC measures the total amount of materials (excl. bulk flows of water and air) that are directly/actually used in a national economy, i.e. by resident units. | The global material flows database is based on country material flow accounts from the EU and Japan and estimated data for the rest of the world. Estimated data is produced on the bases of data available from different national or international datasets in the domain of agriculture, forestry, fisheries, mining and energy statistics. International statistical sources for DMC and MF include the IEA, USGS, FAO and COMTRADE databases. | | |
| **8.4.2 - Domestic material consumption, domestic material consumption per capital, and domestic material consumption per GDP** | UNEP; partner with OECD | Tier I | **Definition:** Direct imports (IM) of material plus domestic extraction (DE) of materials minus direct exports (EX) of materials measured in metric tonnes. DMC measures the amount of mateirals used in economic processes and does not include materials that are mobilized in the process of domestic extraction but do not enter the economic process.

For disaggregation, indicator can be disaggregated into imports, domestic extraction and exports by a large number of material flow categories. DMC is usually reported for 11 material categories.

Connection to the SEEA: Follows MFA as part of the Central Framework of the SEEA, and in particular, the Eurostat guidebooks for MFA accounts (latest edition of 2013). | Data is based on country material flow accounts for EU and Japan and estimated for the rest of the world. Estimated data is produced based on data from IEA, USGS, FAO and COMTRADE databases. Currently data covers more than 170 countries and spans a period of 40 years (1970-2010). | | |
| **8.9.1 - Tourism direct GDP as a proportion of total GDP and in growth rate** | UNWTO; partner with UNEP | Tier II | **Not yet posted** | **Not yet posted** | | |
| **8.9.2 - Proportion of jobs in sustainable tourism industries out of total tourism jobs** | UNWTO | Tier II | **Not yet posted** | **Not yet posted** | | |

Goal 9						
9.4.1 - CO2 emission per unit of value added	UNIDO, IEA; partner with UNEP	Tier I	**Definition:** CO2 emissions per unit value added is computed as the ratio between CO2 emissions from fuel combustion and the value added of associated economic activities. Gross value added is defined as output minus intermediate consumption and equals the sum of employee compensation, gross operating surplus of government and corporations, grossed mixed income of unincorporated enterprises and taxes less subsidies on production and imports, except for net taxes on products. Disaggregation can be performed by ISIC Rev. 4, by manufacturing sector and industrial subsector. **Connection to the SEEA:** Gross value added is consistent with the SNA 2008 and thus the SEEA. The use of ISIC is also consistent with the SEEA.	Data on total CO2 emissions from fuel combustion (also disaggregated by sector) are taken from IEA database. GVA figures will come from UNIDO; figures for updates are obtained from UNSD. Data are currently available for more than 130 countries.		**Proposed connection to the SEEA:** Air emission accounts should be used since they utilize the same definitions and classifications as the national accounts. This allows for the calcualtion of CO2 emissions per value added for the economy and for economic sectors. Furthermore, the scope of CO2 emissions should also include industrial processes and emissions due to land use change as noted in the emission accounts.
Goal 11						
11.4.1 - Total expenditure (public and private) per capita spent on the preservation, protection and conservation of all cultural and natural heritage, by type of heritage (cultural, natural, mixed and World Heritage Centre designation), level of government (national, regional and local/municipal), type of expenditure (operating expenditure/investment) and type of private funding (donations in kind, private non-profit sector and sponsorship)	UNESCO-UIS; partner with IUCN	Tier III	N/A	N/A		
11.6.1 - Proportion of urban solid waste regularly collected and with adequate final discharge out of total urban solid waste generated, by cities	UN-Habitat, UNSD; partner with UNEP	Tier II	**Definition:** Proportion of MSW regularly collected and with adequate treatment and disposal out of total MSW generated. MSW is waste generated by households, and waste of a similar nature generated by commerical and business estabilshments, industrial adn agricultural premises, institutions such as schools and hospitals, public spaces such as parks and streets and construction sites. Disaggregation can be done at the city and town levels (location), by income group, by source of waste generation and type of final discharge.	UN-Habitat is collecting data in more than 400 cities that are part of the City Prosperity Initiative. Information can come from municipal records, service providers, commuity profiles and household surveys. For countries/cities that have data already, the data will be collected through questionnaire. However, in many cities, solid waste collection and recycling data are incomplete or not available. For these countries, a household survey will be done. Data is available for over 1000 cities at the latest update. Time series data will be generated over the course of the SDGs.		**Proposed connection to the SEEA:** While there is no standard international classification of solid waste, it is recommended in the SEEA CF to use the European Waste Catalogue (EWC-Stat). The category of municipal wastes can be used as a starting point. It is noted in the metadata that disaggregation can be done at the city and town levels (location) or by type of final treatment and disposal. SEEA physical flow accounts in waste can disaggregate along both these dimensions, particularly for type of final treatment and disposal.

11.7.1 Average share of built-up area of cities that is open space for public use for all, by sex, age and persons with disabilities	UN-Habitat	Tier III	**Definition:** The indicator requires 1) spatial analysis to delimit the built-up areas of cities; 2) estimation of the total open public space and; c) estimation of total area allocated to streets. The indicator is calculated as the sum of the total surface of open public space and land allocated to streets divided by the total surface of built up area of the urban agglomeration.	It is expected that regional/global estimates will be derived from national figures; specialized tools will be developed and agreed with local and international stakeholders. For estimating total surface of built-up area, the indicator will rely on satellite imagery. For the inventory of open public space, information may be taken from legal documents outlining publicly owned land and well-defined land use plans (as well as open sources and community-based maps where formal documents are lacking). Data is available for 200 cities which are part of UN-Habitat's city prosperity initiative. More cities are expected to join this initiative.		**Proposed connection to SEEA:** The surface area of open public space, land allocated to streets and the total surface of built up area of the urban agglomeration can be considered through ecosystem types and land cover classes. The SEEA EEA technical recommendations present urban parks and road infrastructure as possible ecosystem types for the land cover class of artificial areas. Ecosystem asset accounts for urban parks and road infrastructure can provide the spatial information needed for this indicator.
11.c.1 - Proportion of financial support to the least developed countries that is allocated to the construction and retrofitting of sustainable, resilient and resource-efficient buildings utilizing local materials	UN-Habitat	Tier III	**N/A**	**N/A**		
Goal 12						
12.2.1 - Material footprint, material footprint per capita, and material footprint per GDP	UNEP; partner with OECD	Tier III	See 8.4.1	See 8.4.1		
12.2.2 - Domestic material consumption, domestic material consumption per capita and domestic material consumption per GDP	UNEP; partner with OECD	Tier I	See 8.4.2	See 8.4.2		
12.5.1 - National recycling rate, tons of material recycled	UNSD, UNEP; partner with OECD, Eurostat	Tier III	**N/A**	**N/A**		
12.b.1 - Number of sustainable tourism strategies or policies and implemented action plans with agreed monitoring and evaluation tools	UNWTO; partner with UNEP	Tier III	**N/A**	**N/A**		
12.c.1 - Amount of fossil-fuel subsidies per unit of GDP (production and consumption) and as a proportion of total national expenditure on fossil fuels	UNEP	Tier III	**N/A**	**N/A**		

Goal 14						
14.1.1 - Index of coastal eutrophication and floating plastic debris density	UNEP; partner with IOC-UNESCO, IMO, FAO	Tier III	N/A	N/A		
14.4.1 - Proportion of fish stocks within biologically sustainable levels	FAO	Tier I	**Definition:** Proportion of fish stocks wtihin biologically sustainable levels, where biologically sustainable is defined as a fish stock of which abundance is at or greater than the level that can produce the maximum sustainable yield (MSY) classified as biologically sustainable. The basic benchmarks for the sustainability of fisheries are set out by the UN Convention on the Law of the Sea.	There is no data at a country level at the moment. To compute the indicator, one needs to carry out a stock assessment that uses fish catch statistics, fishing effort data and biological information and fit the data to a population dynamics model. After completing the stock assessment for all stocks concerned, fish stocks that have abundance at or above the level associated with the maximum sustainable yield are counted as biologically sustainable and otherwise are considered as overfished. FAO has estimated fish stocks around the world since 1974 to 2013, representing 70% of global landings. However, these assessments have not been done at the country level.		**Proposed connection to the SEEA:** The indicator requires a stock assessment of fish stocks within a country. The SEEA asset accounts for aquatic resources can provide information on the stocks and changes in stocks of the quantity (and value) of aquatic resources within a country's coastal and inland fisheries in its exclusive economic zone. The asset accounts cover both natural and cultivated stocks and also include those on the high seas over which the country holds ownership rights.
14.5.1 - Coverage of protected areas in relation to marine areas	UNEP-WCMC, UNEP; partner with Ramsar	Tier I	**Definition:** Coverage of protected areas in relation to marine areas; the indicator's intent is to show temporal trends in the mean percentage of each important site for marine biodiversity that is covered by designated protected areas. Protected areas are defined by the International Union for Conservation of Nature (IUCN). Sites contributing significantly to the global persistence of biodiversity are identified following globally standard criteria for the identification of Key Biodiversity Areas (IUCN) applied at national levels.	Protected area data are compiled by ministries of environment and other ministires responsible for the designation/maintenance of protected areas. Protected area data is also available for sites designated under the Ramsar Convention and the UNESCO World Heritage Convention. These data are aggregated globally into the World Database on Protected Data (IUCN & UNEP-WCMC). UNEP-WCMC produces the UN List of Protected Areas every 5-10 years. Key Biodiversity Areas are identified at national scales through multi-stakeholder processes and aggregated into the World Database on Key Biodiversity Areas. The indicator is then derived from a spatial overlap between digital polygons for protected and digital polygons for marine Key Biodiversity Areas.		**Proposed connection to the SEEA**: SEEA can inform classification of marine ecosystems and protected areas via land-use classifications. Biodiversity accounts for key biodiversity areas can link drivers of and pressures contributing to biodiversity loss.
14.6.1 - Progress by countries in the degree of implementation of international instruments aiming to combat illegal, unreported and unregulated fishing	FAO	Tier II	**Not yet posted**	**Not yet posted**		
14.7.1 - Sustainable fisheries as a proportion of GDP in small island developing States, least developed countries and all countries	FAO, UNEP-WCMC	Tier III	N/A	N/A		**Proposed connection to the SEEA:** The indicator requires a stock assessment of fish stocks within a country. The SEEA asset accounts for aquatic resources can provide information on the stocks and changes in stocks of the quantity (and value) of aquatic resources within a country's coastal and inland fisheries in its exclusive economic zone. The asset accounts cover both natural and cultivated stocks and also include those on the high seas over which the country holds ownership rights.
14.a.1 - Proportion of total research budget allocated to research in the field of marine technology	IOC-UNESCO; partner with UNEP	Tier II	N/A	N/A		

Goal 15						
15.1.1 - Forest area as a proportion of total land area	FAO; partner with UNEP	Tier I	**Definition:** Forest area as a proportion of total land area. Forest land is defined as land spanning more than 0.5 hectares with trees higher than 5 metres and a canopy cover of more than 10% or trees able to reach these thresholds in situ. Does not inlcude land that is predominantly under agricultural or urban land use and is not strictly defined on the basis of changes in tree-covered areas.	FAO collects data on forest areas from countries every 5-10 years as part of the Global Forest Resources Assessment (FRA). FRA 2015 contains information for 234 countries and territories on more than 100 variables related to the extent of forests, their conditions, uses and values for 1990, 2000, 2005, 2010 and 2015. For countries and territories where no information was provided for FRA 2015, a report was prepared by FAO using existing information from previous assessments and literature search. However, countries/territories which did not provide information only represent an estimated 1.2 percent of the global forest area.		**Proposed connection to the SEEA:** Definition of forest is that of FAO, which is same as that used in SEEA. Asset accounts for land can be used to obtain the amount of forest area, in particular physical asset accounts for forests.
15.1.2 Proportion of important sites for terrestrial and freshwater biodiversity that are covered by protected areas, by ecosystem type	UNEP-WCMC, UNEP; partner with Ramsar	Tier I	**Definition:** Proportion of important sites for terrestrial and freshwater biodiversity that are covered by protected areas. This indicator shows temporal trends in the mean percentage of each important site for terrestrial and freshwater biodiversity that is covered by designated protected areas. Protected areas are defined by the International Union for Conservation of Nature--clearly defined georgraphical spaces recognized, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values.	Protected area data are compiled by ministires of environment and other ministires responsible for the designation/maintenance of protected areas. Protected area data is also available for sites designated under the Ramsar Convention and the UNESCO World Heritage Convention. These data are aggregated globally into the World Database on Protected Data (IUCN & UNEP-WCMC). UNEP-WCMC produces the UN List of Protected Areas every 5-10 years. Key Biodiversity Areas are identified at national scales through multi-stakeholder processes and aggregated into the World Database on Key Biodiversity Areas. The indicator is then derived from a spatial overlap between digital polygons for protected and digital polygons for terrestrial and freshwater Key Biodiversity Areas.		**Proposed connection to the SEEA:** SEEA can inform the different ecosystem types for disaggregation and the classification of protected areas via land-use classifications.
15.2.1 - Progress towards sustainable forest management	FAO; partner with UNEP, UNFCCC	Tier I	**Definition:** "Sustainable forest management" SFM is defined by the UN General Assembly as a *"dynamic and evolving concept [that] aims to maintain and enhance the economic, social and environmental values of all types of forests, for the benefit of present and future generations."* The indicator is composed of five sub-indicators that measure progress towards all dimensions of sustainable forest management: 1) Forest area net change rate, 2) Above-ground biomass stock in forest, 3) Proportion of forest area located within legally established protected areas, 4) Proportion of forest area under a long-term forest management plan, 5) Forest area under an independently verified forest management certificate scheme.	FAO collects data on the sub-indicators every 5-10 years as part of the Global Forest Resources Assessment (FRA). FRA 2015 contains information for 234 countries and territories on more than 100 variables related to the extent of forests, their conditions, uses and values for 1990, 2000, 2005, 2010 and 2015. For countries and territories where no information was provided for FRA 2015, a report was prepared by FAO using existing information from previous assessments and literature search. However, countries/territories which did not provide information only represent an estimated 1.2 percent of the global forest area.		**Proposed connection to the SEEA:** Definition of forest is that of FAO, which is same as that used in SEEA. Asset accounts for land can be used for subindicator one, in particular physical asset accounts for forests. SEEA EEA asset accounts can also be used for subindicator 1, 4 and 5. In terms of subindicators 4 and 5, the SEEA EEA Technical Recommendations clarify that the delination of ecosystem assets will ideally involve a range of ecological and non-ecological criteria, including land management and use.

15.3.1 - Proportion of land that is degraded over total land area	UNCCD; partner with FAO, UNEP	Tier II	**Definition:** Land degradation is defined as the reduction or loss of the biological or economic productivity and complexity of rain fed cropland, irrigated cropland, or range, pasture, forest and woodlands resulting from a combination of pressures, including land use and management practices. This definition was adopted by and is used by the 196 countries that are Party to the UNCCD. Total land area excludes the area covered by inland waters, such as major rivers and lakes. The indicator follows "one out, all out" based on evaluation of change in subindicators. Subindicators include land cover, land productivity, carbon stock. Baseline year for the indicator is 2015 and subsequent values for the indicator during each monitoring period are derived from the quantification/assessment of changes in subindicators as to whether there has been a positive, negative or no change for each land unit relative to the baseline value. **Connection to the SEEA:** Sub-indicators are cited as begin technically and economically feasible for systematic observation under the SEEA. SEEA EEA carbon accounts can be used for the subindicator on carbon stocks, though the metadata indiciates that IPCC contains the most relevant definitions and standards. In terms of land cover, the land cover classification proposed in the metadata is compatible with the SEEA--the ISO standard, Land Cover Meta Language (LCML).	Data on indicator and sub-indicators will be provided by national authorities to the UNCCD in their national reports following a standard format every 4 years beginning in 2018 (or through other national data platforms/mechanisms endorsed by UNSC). National data is not currently available for all sub-indicators, though regional and global data are.	**June 2017:** UNCCD has actively engaged with the UNCEEA and presented their metadata at the 12th UNCEEA meeting in 2017.	
15.4.1 - Coverage by protected areas of important sites for mountain biodiversity	UNEP-WCMC, UNEP	Tier I	**Definition:** Measures coverage by protected areas of important sites for mountain biodiversity, which shows temporal trends in the mean percentage of each important site for mountain biodiversity that is covered by designated protected areas. Protected areas are defined by International Union for Conservation of Nature (IUCN); designation must be made for the purpose of biodiversity conservation, not de facto protection.	Protected area data are compiled by ministires of environment and other ministries responsible for the designation/maintenance of protected areas. Protected area data is also available for sites designated under the Ramsar Convention and the UNESCO World Heritage Convention. These data are aggregated globally into the World Database on Protected Data (IUCN & UNEP-WCMC). UNEP-WCMC produces the UN List of Protected Areas every 5-10 years. Key Biodiversity Areas are identified at national scales through multi-stakeholder processes and aggregated into the World Database on Key Biodiversity Areas. The indicator is then derived from a spatial overlap between digital polygons for protected and digital polygons for mountain Key Biodiversity Areas.		**Proposed connection to the SEEA:** Key Biodiversity Areas span all ecosystem types, including mountains. The indicator can therefore be reported in combination with SEEA EEA ecosystem types. In addition, the SEEA can inform classification of protected areas via land-use classifications.
15.4.2- Mountain Green Cover Index	FAO; partner with UNEP	Tier I	**Definition:** Change of green vegetation in mountain areas (forest, shrubs, trees, pasture land, crop land, etc.). Mountains are defined according to UNEP-WCMC classifications, based on altitutde, slope and local elevation range. Green cover includes forest land, grassland/shrubland and cropland. The amounts of land covered by these three IPCC land cover/land use classes is aggregated to calculate the size of total mountain area covered in each country and expressed as a percentage of the total mountain area.	Data for the indicator comes from land cover data extracted from FAO Collect Earth tool and the global map of mountains produced by FAO/MPS in 2015 based on the UNEP-WCMC mountain classification.		**Other comments:** The indicator may also require additional tracking of trends in snowpack and glacial mass balance.
15.5.1 - Red List Index	IUCN; partner with UNEP, CITES	Tier I	**Definition:** The Red List Index measures change in aggregate extinction risk across groups of species and is based on geniune changes in the number of species in each category of extinction risk on the IUCN Red List of Threatened Species. It is expressed as changes in an index ranging from 0 to 1. The indicator is calculated by multiplying the number of species in each Red List Category by a weight (1=near threatened to 5=extinct) and summing these values. This value is divided by a maximum threat score (total number of species multiplied by the weight assigned to extinct). The final value is subtracted from 1 to give the Red List Index Value.	National data comes from governments, NGOs and academia, working jointly or separately. Data are submitted by national agencies to IUCN or are gathered by Red List Partnership. Current data are available for all countries in the world and updated approximately once every four years.		**Proposed connection to the SEEA**: SEEA EEA biodiveristy accounts can provide measurement of changes in species. Linking biodiversity accounts with the land-cover, land-use and EPEA of SEEA CF can also support analysis of the cost-effectiveness of expenditures on habitat/species conservation and the assessment of returns on investment. In addition, using the links to economic accounting, one can link biodiveristy accounts to key drivers of/pressures contributing to biodiversity loss (e.g. energy use, carbon emissions and sinks, built-up land, etc).

15.9.1 - Progress towards national targets established in accordance with Aichi Biodiversity Target 2 of the Strategic Plan for Biodiversity 2011-2020	CBD-Secretariat, UNEP	Tier III	**N/A**	**N/A**	
15.a.1 - Official development assistance and public expenditure on conservation and sustainable use of biodiversity and ecosystems	OECD, UNEP, World Bank	Tier I/III	**Definition:** Gross disbursements of total offical development assistance from all donors for biodiversity. ODA is defined as the flows from countries and territories on the Development Assistance Committee's list of ODA recipients and to multilateral institutions which are i) provided by official agencies, including state and local governments, or by their executive agencies; and ii) each transaction is administered with the promotion of the economic development and welfare of developing countries as its main objective; and is concessional in character and conveys a grant element of at least 25 per cent (calculated at a rate of discount of 10 per cent). ODA marked for biodiversity is captured through the Creditor Reporting System via a marker, introduced in 2002.	Data is taken from the Creditor Reporting System, for which OECD/DAC has been collecting resource flows since 1960, with a biodviersity marker introduced in 2002.	**Proposed connection to the SEEA:** The effectiveness of the disbursements on biodiversity can be measured through SEEA EEA accounts on biodiversity. In addition, biodiversity accounts can also be linked with land-cover, land-use and EPEA SEEA CF accounts to support analysis of cost-effectiveness of expenditures on habitat and species conservation and the assessment of returns on investment.