Session 3
Environment Statistics for Monitoring the Sustainable Development Goals and Multilateral Environmental Agreements

National Workshop on Environment Statistics in Namibia

Windhoek, 3-5 December 2019

Outline

1. Sustainable Development Goals
2. Multilateral Environment Agreements
3. Data issues

Sustainable Development Goals

and

- Environmental statistics
- National examples

The Sustainable Development Goals

All but goals 10, 16 and 17, have corresponding FDES statistics:
https://unstats.un.org/unsd/envstats/fdes/SDGsInd_BasicSetMatrix.pdf

SDG Preamble

Plan of action for people, planet and prosperity. It also seeks to strengthen universal peace in larger freedom. All countries working together.

- **People:** to end poverty and hunger **in a healthy environment**
- **Planet:** to **protect the planet** from degradation, including through sustainable consumption and production, **sustainably managing its natural resources** and taking urgent action on **climate change**, so that it can support the needs of the present and future generations.
- **Prosperity** : ensure prosperous and fulfilling lives and that economic, social and technological progress **occurs in harmony with nature.**
- **Peace:** to foster peaceful, just and inclusive societies

Source: https://sustainabledevelopment.un.org/post2015/transformingourworld

SDG Preamble

Plan of action for people, **planet** and prosperity. It also seeks to strengthen universal peace in larger freedom. All countries working together.

- **People:** to end poverty and hunger **in a healthy environment**
- **Planet**: to **protect the planet** from degradation, including through sustainable consumption and production, **sustainably managing its natural resources** and taking urgent action on **climate change**, so that it can support the needs of the present and future generations.
- **Prosperity** : ensure prosperous and fulfilling lives and that economic, social and technological progress **occurs in harmony with nature**.
- **Peace:** to foster peaceful, just and inclusive societies

Source: https://sustainabledevelopment.un.org/post2015/transformingourworld

Tiering within SDG Indicators

- SDG Tier Classification (not to be confused with FDES tiering)
  - **Tier 1:** Indicator is conceptually clear, has an internationally established methodology and standards are available, and data are regularly produced by countries for at least 50 per cent of countries and of the population in every region where the indicator is relevant.
  - **Tier 2:** Indicator is conceptually clear, has an internationally established methodology and standards are available, but data are not regularly produced by countries.
  - **Tier 3:** No internationally established methodology or standards are yet available for the indicator, but methodology/standards are being (or will be) developed or tested.
  - Tiers assist in developing global implementation strategies
  - Tiering revised by IAEG-SDGs based on work by custodian agencies

Process to develop indicators

- Lead by Inter-agency and Expert Group on SDG Indicators (IAEG-SDGs), (46th Session of UN Statistical Commission 2015)
- IAEG-SDGs: Led by national statistical offices, open and transparent
- Global indicator framework adopted by UN General Assembly 6 July 2017
- Official list of (232) SDG Indicators https://unstats.un.org/sdgs/indicators/indicators-list/
- Tier I and II are with metadata repository; Tier III have workplans
- SDG Metadata repository https://unstats.un.org/sdgs/metadata/
- SDG Tier III Workplans https://unstats.un.org/sdgs/tierIII-indicators/
- SDG Tier Classification https://unstats.un.org/sdgs/iaeg-sdgs/tier-classification/

SDG indicators related to UNSD Water and Waste Data Collections

SDGs compiled by international custodian agencies

- UNSD working with custodian agencies on methodologies

UNSD Data collections on water and waste can be used by countries to provide context around the SDG indicators

Allows for comparison on progress of policy achievements to countries in similar situations…

Ensure availability and sustainable management of water and sanitation for all

Make cities and human settlements inclusive, safe, resilient and sustainable

Ensure sustainable consumption and production patterns

SDG indicators related to UNSD Water and Waste Data Collections

Source: Inter-Agency Expert Group-SDGs tier classification for global SDG indicators (updated 15 Dec 2017): https://unstats.un.org/sdgs/iaeg-sdgs/tier-classification/

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.

=> Indicator 6.3.1: Proportion of wastewater safely treated

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.

=> Indicator 6.4.1: Change in water-use efficiency over time

=> Indicator 6.4.2: Level of water stress: freshwater withdrawal as a proportion of available freshwater resources

Indicator 6.4.1: Change in water-use efficiency over time
(tier II)

- Custodian Agency: FAO; partner agencies: UNSD, UN Environment, IUCN, OECD and Eurostat
- Application of International Standard Industrial Classification of All Economic Activities (ISIC) Rev. 4.
- Ensuring data provided by countries can inform SDG indicator compilation, but also environment statistics, and environmental-economic accounting.
- Available metadata are here: https://unstats.un.org/sdgs/metadata/

Indicator = (water abstracted [by all or various industries])/(gross freshwater supplied by water supply industry)

SDG Indicators on Climate, Oceans and land

UNSD Indicator Code*	Target	Indicator	Updated
	Goal 13. Take urgent action to combat climate change and its impacts[a]		
C200303	13.1 Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries	13.1.1 Number of deaths, missing persons and directly affected persons attributed to disasters per 100,000 population	Tier II
C200304		13.1.2 Number of countries that adopt and implement national disaster risk reduction strategies in line with the Senda	Tier I
C200305		13.1.3 Proportion of local governments that adopt and implement local disaster risk reduction strategies in line with n	Tier II
C130201	13.2 Integrate climate change measures into national policies, strategies and planning	13.2.1 Number of countries that have communicated the establishment or operationalization of an integrated policy/s	Tier III
C130301	13.3 Improve education, awareness-raising and human and institutional capacity on climate change ...	13.3.1 Number of countries that have integrated mitigation, adaptation, impact reduction and early warning into prima	Tier III
C130302		13.3.2 Number of countries that have communicated the strengthening of institutional, systemic and individual capaci	Tier III
C130a01	13.a Implement the commitment undertaken by developed-country ... mobilizing jointly $100 billion..by 2020 ..	13.a.1 Mobilized amount of United States dollars per year between 2020 and 2025 accountable towards the $100 billio	Tier III
C130b01	13.b Promote mechanisms for raising capacity for .. planning and management in least developed .. and small isla	13.b.1 Number of least developed countries and small island developing States that are receiving specialized support,	Tier III
	Goal 14. Conserve and sustainably use the oceans, seas and marine resources for sustainable development		
C140101	14.1 By 2025, prevent and significantly reduce marine pollution of all kinds..	14.1.1 Index of coastal eutrophication and floating plastic debris density	Tier III
C140201	14.2 By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts.	14.2.1 Proportion of national exclusive economic zones managed using ecosystem-based approaches	Tier III
C140301	14.3 Minimize and address the impacts of ocean acidification, including through enhanced scientific ..	14.3.1 Average marine acidity (pH) measured at agreed suite of representative sampling stations	Tier II
C140401	14.4 By 2020, effectively regulate harvesting and end overfishing, illegal, unreported and unregulated fishing ..	14.4.1 Proportion of fish stocks within biologically sustainable levels	Tier I
C140501	14.5 By 2020, conserve at least 10 per cent of coastal and marine areas, consistent with.. law ..	14.5.1 Coverage of protected areas in relation to marine areas	Tier I
C140601	14.6 By 2020, prohibit certain forms of fisheries subsidies which contribute to overcapacity and overfishing..	14.6.1 Degree of implementation of international instruments aiming to combat illegal, unreported and unregulated fi	Tier II
C140701	14.7 By 2030, increase the economic benefits to small island developing States and least developed countries ..	14.7.1 Sustainable fisheries as a proportion of GDP in small island developing States, least developed countries and all	Tier I
C140a01	14.a Increase scientific knowledge, develop research capacity and transfer marine technology..	14.a.1 Proportion of total research budget allocated to research in the field of marine technology	Tier II
C140b01	14.b Provide access for small-scale artisanal fishers to marine resources and markets	14.b.1 Degree of application of a legal/regulatory/policy/institutional framework which recognizes and protects access	Tier II
C140c01	14.c Enhance the conservation and sustainable use of oceans and their resources by implementing international la	14.c.1 Number of countries making progress in ratifying, accepting and implementing through legal, policy and institut	Tier III
	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		
C150101	15.1 By 2020, ensure the conservation, restoration and sustainable use of .. ecosystems and their services...	15.1.1 Forest area as a proportion of total land area	Tier I
C150102		15.1.2 Proportion of important sites for terrestrial and freshwater biodiversity that are covered by protected areas, by	Tier I
C150201	15.2 By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation...	15.2.1 Progress towards sustainable forest management	Tier I
C150301	15.3 By 2030, combat desertification, restore degraded land and soil..	15.3.1 Proportion of land that is degraded over total land area	Tier II
C150401	15.4 By 2030, ensure the conservation of mountain ecosystems, including their biodiversity...	15.4.1 Coverage by protected areas of important sites for mountain biodiversity	Tier I
C150402		15.4.2 Mountain Green Cover Index	Tier I
C150501	15.5 Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity ..	15.5.1 Red List Index	Tier I
C150601	15.6 Promote fair and equitable sharing of the benefits arising from the utilization of genetic resources ..	15.6.1 Number of countries that have adopted legislative, administrative and policy frameworks to ensure fair and equ	Tier I
C200206	15.7 Take urgent action to end poaching and trafficking of protected species ..	15.7.1 Proportion of traded wildlife that was poached or illicitly trafficked	Tier II
C150801	15.8 By 2020, introduce measures to prevent the introduction and significantly reduce the impact of invasive ..	15.8.1 Proportion of countries adopting relevant national legislation and adequately resourcing the prevention or cont	Tier II
C150901	15.9 By 2020, integrate ecosystem and biodiversity values into national and local planning..	15.9.1 Progress towards national targets established in accordance with Aichi Biodiversity Target 2 of the Strategic Plar	Tier III
C200207	15.a Mobilize and significantly increase financial resources from all sources to conserve biodiversity ..	15.a.1 Official development assistance and public expenditure on conservation and sustainable use of biodiversity and	Tier I/III
C200207	15.b Mobilize significant resources from all sources and at all levels to finance sustainable forest management ...	15.b.1 Official development assistance and public expenditure on conservation and sustainable use of biodiversity and	Tier I/III
C200206	15.c Enhance global support for efforts to combat poaching and trafficking of protected species, ..	15.c.1 Proportion of traded wildlife that was poached or illicitly trafficked	Tier II

SDG indicator example from SDG database

SDG indicator: Forest area as a proportion of total land area (%)

Geographic area: Southern Africa

Years: 2000 to 2015

Forest area as a proportion of total land area (%)

Goal	Target	Indicator	SeriesCod	SeriesDes	GeoAreaC	GeoAreaName	TimePeric	Value	Source	FootNote	Nature	Units	[Reporting Type]
15	15.1	15.1.1	AG_LND_F	Forest are	18	Southern Africa	2000	11.46	FAO, Glob	Aggregate, may include official, semi-official, e	E	PERCENT	G
15	15.1	15.1.1	AG_LND_F	Forest are	18	Southern Africa	2005	11.10	FAO, Glob	Aggregate, may include official, semi-official, e	E	PERCENT	G
15	15.1	15.1.1	AG_LND_F	Forest are	18	Southern Africa	2010	10.75	FAO, Glob	Aggregate, may include official, semi-official, e	E	PERCENT	G
15	15.1	15.1.1	AG_LND_F	Forest are	18	Southern Africa	2015	10.43	FAO, Glob	Aggregate, may include official, semi-official, e	E	PERCENT	G
15	15.1	15.1.1	AG_LND_F	Forest are	72	Botswana	2000	22.12	FAO, Glob	Official country data submitted to FAO	C	PERCENT	G
15	15.1	15.1.1	AG_LND_F	Forest are	72	Botswana	2005	21.07	FAO, Glob	Official country data submitted to FAO	C	PERCENT	G
15	15.1	15.1.1	AG_LND_F	Forest are	72	Botswana	2010	20.03	FAO, Glob	Official country data submitted to FAO	C	PERCENT	G
15	15.1	15.1.1	AG_LND_F	Forest are	72	Botswana	2015	19.13	FAO, Glob	Official country data submitted to FAO	C	PERCENT	G
15	15.1	15.1.1	AG_LND_F	Forest are	516	Namibia	2000	9.76	FAO, Glob	Official country data submitted to FAO	C	PERCENT	G
15	15.1	15.1.1	AG_LND_F	Forest are	516	Namibia	2005	9.31	FAO, Glob	Official country data submitted to FAO	C	PERCENT	G
15	15.1	15.1.1	AG_LND_F	Forest are	516	Namibia	2010	8.85	FAO, Glob	Official country data submitted to FAO	C	PERCENT	G
15	15.1	15.1.1	AG_LND_F	Forest are	516	Namibia	2015	8.40	FAO, Glob	Official country data submitted to FAO	C	PERCENT	G

Source: https://unstats.un.org/sdgs/indicators/database/

Examples of SDG from international data sheet for Namibia - energy

ENERGY AND MINERALS

3. Proportion of households with access to electricity

	2005	2010	2016
National electrification rate	34	44	56
Urban electrification rate	..	..	66
Rural electrification rate	..	..	13

.. = Data not applicable or not available

Last update: 5 July 2019

Source of data: International Energy Agency (IEA), https://www.iea.org/energyaccess/database/

SDG 7.1.1(Tier 1) Proportion of population with access to electricity

	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Rural electrification rate	18.9	20.5	20.9	22.4	21.8	20.7	22.8	21.6	24.0	27.3	25.5	26.2	27.5	29.3
Total (national level) electrification rate	36.5	39.7	40.5	43.7	42.3	44.1	44.2	42.3	46.2	47.4	48.4	49.6	50.9	52.5
Urban electrification rate	73.2	72.9	73.1	77.6	73.7	78.4	74.3	70.1	74.9	72.2	75.6	76.0	76.3	76.7

SDG 7.1.2(Tier 1) Proportion of population with primary reliance on clean fuels and technology

	2000	2005	2010	2015	2016	2017
Proportion	32	36	40	42	44	44

Last update: 6 August 2019

Source of data: https://unstats.un.org/sdgs/indicators/database/ Energy Balances, UN Statistics Division (2018)

SDG 7.2.1(Tier 1) Renewable energy share in the total final energy consumption

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Percent	36.08	31.53	35.34	34.93	34.35	34.22	35.05	34.96	29.19	30.54	29.04	30.39	30.72	30.13	29.46

Last update: 6 August 2019

Source of data: https://unstats.un.org/sdgs/indicators/database/ Energy Balances, UN Statistics Division (2018)

Examples of SDG from international data sheet for Namibia - disasters

NATURAL DISASTERS

1. Human and economic loss due to type of natural disaster (2000-2017)

Type	Year	Occurrence	Total deaths	Injured	Affected	Homeless	Total affected	Total damage ('000 USD)
Riverine flood	2006	2	5	0	2,300	0	2,300	8,490
Viral disease	2006	1	10	0	47	0	47	0
Bacterial disease	2007	1	7	0	250	0	250	0
Riverine flood	2007	1	7	0	15,000	0	15,000	0
Bacterial disease	2008	1	9	0	203	0	203	0
Riverine flood	2008	1	42	0	65,000	0	65,000	0
Riverine flood	2009	1	92	0	350,000	0	350,000	0
Riverine flood	2010	1	8	0	110,000	0	110,000	0
Riverine flood	2011	1	108	0	500,000	0	500,000	12,000
Riverine flood	2012	1	0	0	650	0	650	0
Air	2013	1	33	0		0	0	0
Bacterial disease	2013	1	17	518		0	518	0
Drought	2013	1	0	0	780,000	0	780,000	64,000
Riverine flood	2013	1	0	0	14,500	0	14,500	0
Drought	2015	1	0	0	580,000	0	580,000	60,000
..	2017	1	0	0	2,502	0	2,502	0

Examples of SDG from international data sheet for Grenada – biodiversity

BIODIVERSITY

SDG 15.1.2 (Tier 1) Proportion of important sites for territorial and freshwater biodiversity that are covered by protected areas, by ecosystem type, in percentage (%)

	2005	2010	2015	2018
Territorial	43.72	74.01	83.53	83.53
Freshwater	85.36	53.60	77.38	85.36

Last update: 6 August, 2019

Source of data: United Nations Global SDG Database, BirdLife International, IUCN and UNEP-WCMC (2018)

https://unstats.un.org/sdgs/indicators/database/

SDG 15.5.1 (Tier 1) Red List Index

	2005	2010	2015	2018
Red List Index (Upper Bound)	0.9672	0.9677	0.9688	0.9694
Red List Index (Middle Point)	0.9669	0.9664	0.9659	0.9657
Red List Index (Lower Bound)	0.9530	0.9522	0.9517	0.9531

Last update: 23 September 2019

Source of data: United Nations Global SDG Database, BirdLife International and IUCN (2018)

https://unstats.un.org/sdgs/indicators/database/

2. Threatened species (totals by taxonomic group)

	Mammals	Birds	Reptiles*	Amphibians	Fishes*	Molluscs*	Other Inverts*	Plants*	Fungi & Protists *	Tota
Number	15	32	6	0	31	2	2	27	0	11

* Reptiles, fishes, molluscs, other invertebrates, plants, fungi & protists: please note that for these groups, there are still many species that have not yet been assessed for the IUCN Red List and therefor their status is not known (i.e., these groups have not yet been completely assessed). Therefore the figures presented below for these groups should be interpreted as the number of species known to be threatened within those species that have been assessed to date, and not as the overall total number of threatened species for each group.

Multilateral Environmental Agreements

And

- Data reporting requirements
- SDGs in MEAs
- Namibia MEAs ratification dates

1. Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal
2. Centre for Research on the Epidemiology of Disasters
3. Convention on Biological Diversity (CBD)
4. Convention on the Conservation of Migratory Species of Wild Animals (CMS)
5. Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)
6. The Convention on Wetlands of International Importance (The Ramsar Convention)
7. Food and Agriculture Organization of the United Nations (FAO); FAOSTAT
8. Food and Agriculture Organization of the United Nations (FAO); FISHSTAT
9. Food and Agriculture Organization of the United Nations (FAO); FRA Global Forest Resource Assessment
10. Food and Agriculture Organization of the United Nations (FAO); AQUASTAT
11. International Union for Conservation of Nature (IUCN)
12. Stockholm Convention on Persistent Organic Pollutants (POPs)
13. United Nations Children's Fund (UNICEF)
14. United Nations Convention to Combat Desertification (UNCCD)
15. United Nations Environment Programme (UNEP); Global Environment Monitoring System for Water
16. United Nations Environment Programme (UNEP); Ozone Secretariat
17. United Nations Environment Programme (UNEP); World Conservation Monitoring Centre (WCMC)
18. United Nations Framework Convention on Climate Change (UNFCCC)
19. UN-Habitat
20. United Nations Office for Disaster Risk Reduction (UNDRR)
21. United Nations Statistics Division (UNSD); Waste and water statistics
22. United Nations Statistics Division (UNSD); Energy statistics
23. World Bank
24. World Health Organization (WHO)
25. World Heritage Convention
26. UNESCO Man and Biosphere Programme (MAB)

Institution	**Food and Agriculture Organization of the United Nations (FAO); FISHSTAT**				
Website	http://www.fao.org				
Description of data collection	Fishery and Aquaculture Statistics (FISHSTAT) Topics include: global fishery and aquaculture production, global aquaculture production, global capture production, global number of fishers and fish farmers, global fishery commodities production and trade, Global fleets, Global apparent consumption of fish and fishery products, CECAF Eastern Central Atlantic capture production, GFCM Mediterranean and Black Sea capture production, RECOFI Regional Commission for Fisheries capture production, Southeast Atlantic capture production, Atlas of tunas and billfish catches.				
Periodicity of data collection	Annual	**Geographical coverage**	Global and regional	**Temporal coverage**	Data from 1950, with availability varying according to domain.
SDG coverage	14.4.1 Proportion of fish stocks within biologically sustainable levels 14.6.1 Progress by countries in the degree of implementation of international instruments aiming to combat illegal, unreported and unregulated fishing (Tier II) 14.7.1 Sustainable fisheries as a proportion of GDP in small island developing States, least developed countries and all countries (Tier I) 14.b.1 Progress by countries in the degree of application of a legal/regulatory/policy/institutional framework which recognizes and protects access rights for small-scale fisheries (Tier II) 14.c.1 Number of countries making progress in ratifying, accepting and implementing through legal, policy and institutional frameworks, ocean-related instruments that implement international law, as reflected in the United Nations Convention on the Law of the Sea, for the conservation and sustainable use of the oceans and their resources				

Institution	**United Nations Framework Convention on Climate Change (UNFCCC)**				
Website	http://unfccc.int/2860.php http://newsroom.unfccc.int				
Description of data collection	Country level data on nationally determined contributions (NDCs) (every 5 years). including adaptation components (as a component of or in conjunction with other communications or documents, including a national adaptation plan, a nationally determined contribution as referred to in Article 4, paragraph 2, and/or a national communication); long-term low greenhouse gas emission development strategies; Data collection instruments at: http://unfccc.int/focus/items/10240.php http://unfccc.int/focus/long-term_strategies/items/9971.php				
Periodicity of data collection	Determined by each Party (no standardized guidelines on that matter have been adopted so far).	**Geographical coverage**	All Parties to the Paris Agreement	**Temporal coverage**	Determined by each Party individually (no standardized guidelines on that matter have been adopted so far).
SDG coverage	13.a.1 Mobilized amount of United States dollars per year between 2020 and 2025 accountable towards the $100 billion commitment (Tier III)				

Institution	**Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal**				
Website	http://www.basel.int				
Description of data collection	Hazardous and other wastes Topics covered: generation, import, export and transit of hazardous and other wastes Qualitative information on legislative and regulatory measures to enforce the Convention. Data collection instrument at: http://www.basel.int/Countries/NationalReporting/ElectronicReportingSystem/tabid/3356/Default.aspx				
Periodicity of data collection	Annual	**Geographical coverage**	Parties to the Convention.	**Temporal coverage**	Since 1993 (reports from 2001 and onwards are available online).
SDG coverage	12.4.1 Number of parties to international multilateral environmental agreements on hazardous waste, and other chemicals that meet their commitments and obligations in transmitting information as required by each relevant agreement (Tier I) 12.4.2 Hazardous waste generated per capita and proportion of hazardous waste treated, by type of treatment (Tier III)				

Institution	**The Convention on Wetlands of International Importance (The Ramsar Convention)**				
Website	http://www.ramsar.org/				
Description of data collection	Information on protected wetland areas Topics include: wetland locations, area. Data collection instrument at: https://rsis.ramsar.org/about				
Periodicity of data collection		**Geographical coverage**	Global (169 parties to the Convention)	**Temporal coverage**	From 1971 (came into force in 1975)
SDG coverage	6.6.1 Change in the extent of water-related ecosystems over time (Tier I)				

Institution	**United Nations Environment Programme (UNEP); Global Environment Monitoring System for Water**				
Website	http://gemstat.org/about/#gemstat				
Description of data collection	GEMS-Water: http://gemstat.org/data/data-submission/, Topics include: water quality data of ground and surface waters.				
Periodicity of data collection		**Geographical coverage**		**Temporal coverage**	
SDG coverage	6.3.2 Proportion of bodies of water with good ambient water quality (Tier II) 6.5.1 Degree of integrated water resources management implementation (0–100) (Tier I) 6.6.1 Change in the extent of water-related ecosystems over time (Tier I)				

Institution	**United Nations Statistics Division (UNSD); Energy statistics**				
Website	https://unstats.un.org/home/				
Description of data collection	Topics include: production, trade and final consumption of primary and secondary energy products from renewable and non-renewable energy sources. Data collection instrument at: http://unstats.un.org/unsd/energy/quest.htm				
Periodicity of data collection	Annual	**Geographical coverage**	Worldwide, including 229 countries and areas. Data for OECD and EU countries collected through the IEA questionnaire.	**Temporal coverage**	6 years, with possibility of historic revisions.
SDG coverage	7.2.1 Renewable energy share in the total final energy consumption (Tier I) 7.3.1 Energy intensity measured in terms of primary energy and GDP (Tier I)				

Institution	**United Nations Statistics Division (UNSD); Waste and water statistics**				
Website	https://unstats.un.org/home/				
Description of data collection	UNSD/UNEP Questionnaire on Environment Statistics. Waste: the share of economic activities and households in the generation of waste, the generation and treatment of hazardous waste, and the generation, collection, treatment and composition of municipal waste. Water: renewable freshwater resources, freshwater abstraction and use, the water supply industry (ISIC 36), wastewater generation and treatment, and population connected to wastewater treatment. Data collection instrument at: http://unstats.un.org/unsd/environment/questionnaire.htm				
Periodicity of data collection	Biennial	**Geographical coverage**	For waste and water: Global (excluding respondents of Joint OECD/EUROSTAT Questionnaire on the State of the Environment) For energy: Global (excluding OECD member states)	**Temporal coverage**	Varies (e.g. water and waste from 1990 to 2017)
SDG coverage	6.3.1 Proportion of wastewater safely treated (Tier II) 11.6.1 Proportion of urban solid waste regularly collected and with adequate final discharge out of total urban solid waste generated, by cities (Tier II) 12.4.2 Hazardous waste generated per capita and proportion of hazardous waste treated, by type of treatment (Tier III) 12.5.1 National recycling rate, tons of material recycled (Tier III)				

Participation in Selected International Environmental Agreements (year)

Country	Basel Conv.	CITES	Conv. on Biological Diversity	Conv. on Migratory Species	Kyoto Protocol	Montreal Protocol	Paris Agreement	Ramsar Conv.	Rotterdam Conv.	Stockholm Conv.	UN Conv. on the Law of the Sea	UN Conv. to Combat Desertification	UN Framework Conv. on Climate Change	World Heritage Conv.
Namibia	1995	1990	1997	...	2003	1993	2016	1995	2005	2005	1983	1997	1995	2000
South Africa	1994	1975	1996	1991	2002	1990	2016	1975	2002	2002	1997	1997	1997	1997

Sources:

Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal (accessed 1 December 2017): http://www.basel.int/Countries/StatusofRatifications/PartiesSignatories/tabid/449

Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) (accessed 1 December 2017): https://www.cites.org/eng/disc/parties/chronolo.php

Convention on Biological Diversity (CBD) (accessed 1 December 2017): https://www.cbd.int/information/parties.shtml

Convention on the Conservation of Migratory Species of Wild Animals (CMS) (accessed 1 December 2017): http://www.cms.int/en/parties-range-states

Kyoto Protocol (accessed 1 December 2017): http://unfccc.int/kyoto_protocol/status_of_ratification/items/2613.php

Montreal Protocol on Substances that Deplete the Ozone Layer (accessed 1 December 2017): http://ozone.unep.org/sites/ozone/modules/unep/ozone_treaties/inc/datasheet.php

Convention on Wetlands of International Importance especially as Waterfowl Habitat (Ramsar Convention) (accessed 1 December 2017): http://archive.ramsar.org/cda/en/ramsar-about-parties-parties-in-order/main/ra

The Paris Agreement (accessed on 1 December 2017): http://unfccc.int/paris_agreement/items/9444.php

Data quality issues related to MEAs and SDGs

and

- Example: Land statistics in SDGs
- Accessing country data on SDGs
- Country examples of data quality issues

Land statistics support many SDGs

unstats.un.org/sdgs/indicators/database/

SDG indicators
United Nations Global SDG Database

Welcome to the dissemination platform of the Global SDG Indicators Database. This platform provides access to data compiled through the UN System in preparation for the Secretary-General's annual

Observations

Scroll down and click on series title to see respective observations

Indicator 15.1.1, Series: Forest area as a proportion of total land area (%) AG_LND_FRST

Country	Reporting Type	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Mauritania	G	0.30756 fn, C	-	-	-	-	0.25905 fn, C	-	-	-	-
Morocco	G	11.18754 fn, C	-	-	-	-	12.10173 fn, C	-	-	-	-
Namibia	G	9.75598 fn, C	-	-	-	-	9.30535 fn, C	-	-	-	-
Niger	G	1.04839 fn, C	-	-	-	-	0.99945 fn, C	-	-	-	-
Nigeria	G	14.42406 fn, C	-	-	-	-	12.17541 fn, C	-	-	-	-
Saint Helena	G	5.12821 fn, E	-	-	-	-	5.12821 fn, E	-	-	-	-
Senegal	G	46.21617 fn, C	-	-	-	-	45.04753 fn, C	-	-	-	-

Data quality issues

FORESTS AND WOODLANDS

1. Total forest area

	1990	2000	2005	2010	2015
1,000 ha	8,762	8,032	7,661	7,290	6,919

4.1 Land cover, 1000 Ha (Climate Change Initiative, European Space Agency)

	1990	1995	2000	2005	2010	2012	2013	2014	2015
Artificial surfaces (including urban and associated areas) [6970]		38	50	51	53	54	55	56	56
Grassland [6983]		37,457	37,917	38,691	39,306	39,589	39,592	39,591	39,591
Herbaceous crops [6971]		1,784	1,833	1,875	2,036	2,043	2,044	2,045	2,045
Inland water bodies [6981]		479	479	478	493	502	502	502	502
Mangroves [6975]		0	0	0	0	0	0	0	0
Shrub-covered areas [6976]		17,673	17,663	17,646	17,610	17,611	17,612	17,607	17,607
Shrubs and/or herbaceous vegetation, aquatic or regularly flooded		144	145	144	128	128	128	128	128
Sparsely natural vegetated areas [6978]		4,785	4,407	3,584	2,796	2,548	2,538	2,524	2,524
Terrestrial barren land [6979]		15,332	15,252	15,207	15,109	15,053	15,056	15,039	15,039
Tree-covered areas [6974]		4,707	4,653	4,719	4,854	4,857	4,859	4,893	4,893
Woody crops [6972]		9	9	14	23	23	23	23	23

4.2 Land cover, 1000 Ha (MODIS land cover type)

	1990	1995	2000	2005	2010	2012	2013	2014	2015	2016	2017
Artificial surfaces (including urban and associated areas) [6970]				26	27	27	27	27	27	27	27
Grassland [6983]				22,397	23,354	23,131	22,633	22,321	21,697	21,348	21,227
Herbaceous crops [6971]				97	77	82	85	83	80	79	85
Inland water bodies [6981]				7	27	27	21	19	17	12	12
Permanent snow and glaciers [6980]				2	1	0	1	1	1	10	7
Shrub-covered areas [6976]				42,372	42,269	42,272	42,289	42,389	42,716	42,888	42,629
Tree-covered areas [6974]				2	6	4	3	3	3	2	3
Woody crops [6972]				1	1	1	1	1	1	1	1

Last update: June 20, 2019

Data quality issues

Possible reasons for discrepancies:

- Different definitions
- Classifications
- Timing of data-collection
- Units of measurement?
- Several focal points/institutions producing same data (for example land use)
- Methods of interpretation/mapping

Sustainable Development Goal indicators correspondence with the Basic Set of Environment Statistics of the FDES 2013

SDG Indicators and FDES Statistics

- One SDG indicator, but many statistics with:
  - different sources (surveys, admin records, …)
  - various agencies
  - different periodicities

- For environmentally-related SDG indicators, need for a framework to:
  - structure the data
  - provide interlinkages

=> The FDES can play this role.

Details and uses of the Matrix

- Developed by UNSD using the available metadata of the SDG indicators
- Correspondence between the environmentally-related SDGs indicators and the Basic Set of Environment Statistics (BSES) contained in the FDES
- For Tier I and II indicators the BSES may provide either some or all statistics needed to compile the indicators
- For Tier III indicators workplans are under development => tentative correspondence
- Includes FDES statistics directly used in the SDG indicators and related statistics
  - ⇒Provides a framework for underlying SDG indicators
  - ⇒Links SDG indicators to existing statistics
  - ⇒Gives an idea of required statistics per SDG indicator

Example

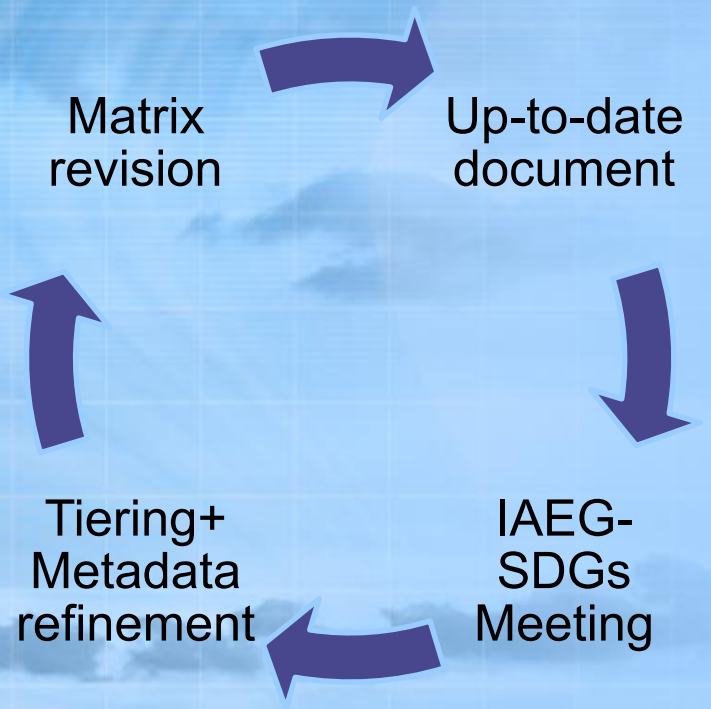
SDGs	
Target	**SDG Indicators**
15.3 By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world	15.3.1 Proportion of land that is degraded over total land area (Tier II)

FDES			
Location in the FDES: Component Sub-Component and Topic	**Statistics used in the SDG Indicator corresponding to BSES (SDG Indicator can be compiled either fully or partially from BSES statistics)**	**Statistics related to but not directly used in SDG Indicators OR Statistics related to Tier III indicators (either fully or partially linked to BSES)**	**Supporting Information**
Component 1: Environmental Conditions and Quality, Sub-component 1.1: Physical Conditions, Topic 1.1.4: Soil characteristics	1.1.4.a. Soil characterization **1.1.4.a.1. Area by soil types** 1.1.4.b. Soil degradation **1.1.4.b.1. Area affected by soil erosion** **1.1.4.b.2. Area affected by desertification** 1.1.4.b.3. Area affected by salinization 1.1.4.b.4. Area affected by waterlogging *1.1.4.b.5. Area affected by acidification* *1.1.4.b.6. Area affected by compaction* 1.1.4.c. Nutrient content of soil, measured in levels of: 1.1.4.c.1. Nitrogen (N) 1.1.4.c.2. Phosphorous (P) *1.1.4.c.3. Calcium (Ca)* *1.1.4.c.4. Magnesium (Mg)* *1.1.4.c.5. Potassium (K)* *1.1.4.c.6. Zinc (Zn)* *1.1.4.c.7. Other*		The indicator proposes sub-indicators of land cover and land cover change; land productivity and carbon stocks above and below ground.
Component 1: Environmental Conditions and Quality, Sub-component 1.2: Land Cover, Ecosystems and Biodiversity, Topic 1.2.1: Land cover	1.2.1.a. **Area under land cover categories**		

Example

SDG Indicators	Location in the FDES: Component Sub-Component and Topic	Statistics used in the SDG Indicator corresponding to BSES (SDG Indicator can be compiled either fully or partially from BSES statistics)
15.3.1 Proportion of land that is degraded over total land area (Tier II)	Component 1: Environmental Conditions and Quality, Sub-component 1.1: Physical Conditions, Topic 1.1.4: Soil characteristics	1.1.4.a. Soil characterization **1.1.4.a.1. Area by soil types** 1.1.4.b. Soil degradation **1.1.4.b.1. Area affected by soil erosion** **1.1.4.b.2. Area affected by desertification** 1.1.4.b.3. Area affected by salinization 1.1.4.b.4. Area affected by waterlogging *1.1.4.b.5. Area affected by acidification* *1.1.4.b.6. Area affected by compaction* 1.1.4.c. Nutrient content of soil, measured in levels of: 1.1.4.c.1. Nitrogen (N) 1.1.4.c.2. Phosphorous (P) *1.1.4.c.3. Calcium (Ca)* *1.1.4.c.4. Magnesium (Mg)* *1.1.4.c.5. Potassium (K)* *1.1.4.c.6. Zinc (Zn)* *1.1.4.c.7. Other*

Ongoing Work



- Matrix as of 12 July 2019
- Systematic revision process to keep it up to date
- Available at: https://unstats.un.org/unsd/envstats/fdes/SDGsInd_BasicSetMatrix.pdf

Thank you for your attention!

For more information please contact
the Environment Statistics Section
at the UN Statistics Division:
E-mail: envstats@un.org

website: https://unstats.un.org/unsd/envstats/