

FRAMEWORK FOR THE DEVELOPMENT
OF ENVIRONMENT STATISTICS (FDES 2013)



Session 3

Environment Statistics for Reporting on the Sustainable Development Goals and Multilateral Environmental Agreements

Regional Workshop on Environment Statistics and Climate Change Statistics for the Caribbean Community (CARICOM) Region

St. George's, Grenada

4-8 November 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



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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** 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 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/>



Measuring Sustainable Development Goal Indicators

- The **national policies** to achieve these goals in each and every country need to be **informed by high-quality, timely and reliable data** dis-aggregated by income, gender, age, race, ethnicity, migratory status, disability, geographic location and other characteristics relevant in national contexts
- Gaining the **political will** and resources to ensure the production of these statistics signals intent to measure and monitor progress in sustainable development.
- Global indicators: **Complemented by indicators at the regional and national level** to be developed by member states



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 Sendai Framework for Disaster Risk Reduction 2015-2030	Tier I
C200305		13.1.3 Proportion of local governments that adopt and implement local disaster risk reduction strategies in line with the Sendai Framework for Disaster Risk Reduction 2015-2030	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/strategy on climate change	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 primary, secondary and tertiary education	Tier III
C130302		13.3.2 Number of countries that have communicated the strengthening of institutional, systemic and individual capacities for climate change adaptation, mitigation and early warning	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 billion goal	Tier III
C130b01	13.b Promote mechanisms for raising capacity for .. planning and management in least developed .. and small island developing States	13.b.1 Number of least developed countries and small island developing States that are receiving specialized support, training and technical assistance for climate change adaptation, mitigation and early warning	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, including marine pollution of all kinds	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 research, improved monitoring and reporting, and enhanced coastal and marine management and protection	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 local and national legislation and international 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 fishing	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 small island developing States	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 and management of small-scale artisanal fishers	Tier II
C140c01	14.c Enhance the conservation and sustainable use of oceans and their resources by implementing international law as agreed upon	14.c.1 Number of countries making progress in ratifying, accepting and implementing through legal, policy and institutional measures, including international law, to conserve and sustainably use the oceans, seas and marine resources	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 type of ecosystem	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 equitable sharing of the benefits arising from the utilization of genetic resources	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 control of invasive alien species	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 Plan for Biodiversity 2011-2020	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 ecosystems	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 ecosystems	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: Small Island Developing States (SIDS)

Years: 2000 to 2015

Indicator	GeoAreaName	TimePeriod	Value	Time	Source	FootNote	Nature	Units	[Re
15.1.1	Americas	2005	42	2005	FAO, Global Forest Resources Assessment	Aggregate, may include official, semi-official,	E	PERCENT	G
15.1.1	Antigua and Barbuda	2005	22	2005	FAO, Global Forest Resources Assessment	FAO Estimate	E	PERCENT	G
15.1.1	Caribbean	2005	28	2005	FAO, Global Forest Resources Assessment	Aggregate, may include official, semi-official,	E	PERCENT	G
15.1.1	Bahamas	2005	51	2005	FAO, Global Forest Resources Assessment	FAO Estimate	E	PERCENT	G
15.1.1	Barbados	2005	15	2005	FAO, Global Forest Resources Assessment	Official country data submitted to FAO	C	PERCENT	G
15.1.1	Bermuda	2005	19	2005	FAO, Global Forest Resources Assessment	FAO Estimate	E	PERCENT	G
15.1.1	Belize	2005	62	2005	FAO, Global Forest Resources Assessment	FAO Estimate	E	PERCENT	G
15.1.1	Lesotho	2015	2	2015	FAO, Global Forest Resources Assessment	Official country data submitted to FAO	C	PERCENT	G
15.1.1	Latvia	2015	54	2015	FAO, Global Forest Resources Assessment	Official country data submitted to FAO	C	PERCENT	G
15.1.1	Bonaire, Sint Eustatius	2000	6	2000	FAO, Global Forest Resources Assessment	FAO Estimate	E	PERCENT	G
15.1.1	New Caledonia	2000	46	2000	FAO, Global Forest Resources Assessment	FAO Estimate	E	PERCENT	G
15.1.1	Oceania (exc. Australia)	2000	71	2000	FAO, Global Forest Resources Assessment	Aggregate, may include official, semi-official,	E	PERCENT	G
15.1.1	Vanuatu	2000	36	2000	FAO, Global Forest Resources Assessment	FAO Estimate	E	PERCENT	G
15.1.1	New Zealand	2000	39	2000	FAO, Global Forest Resources Assessment	Official country data submitted to FAO	C	PERCENT	G
15.1.1	Nicaragua	2000	32	2000	FAO, Global Forest Resources Assessment	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 Grenada

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	86.0	87.9	88.2	88.5	90.0	89.2	89.6	88.8	90.5	91.0	91.5	92.6	93.7	94.7
Total (national level) electrification rate	86.0	87.9	88.2	88.5	90.0	89.2	89.6	88.8	90.5	91.0	91.5	92.6	93.7	94.7
Urban electrification rate	85.9	87.9	88.3	88.6	88.8	89.1	89.4	89.7	90.1	90.6	91.1	91.7	92.2	92.8

Last update: 6 August 2019

Source of data: <https://unstats.un.org/sdgs/indicators/database/> World Bank

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

	2000	2005	2010	2015	2016	2017
Proportion	94	>95	>95	>95	>95	>95

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	2015	2016
Percent	10.47	10.4	10.44	10.41	10.54	10.54	10.34	9.88	10.66	10.44	10.5	11.24	11.34	10.89	11.12	10.92	11.17

Last update: 6 August 2019

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

SDG 7.3.1(Tier 1) Energy intensity level of primary energy (megajoules per constant 2011 purchasing power parity GDP)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Percent	3.0	3.1	3.2	3.1	3.0	2.8	3.0	3.0	3.1	3.3	3.4	3.3	3.5	3.9	2.9	3.0	2.9

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 Grenada

NATURAL DISASTERS

1. Human and economic loss due to type of natural disaster (2000-2015)

Type	Year	Occurrence	Total deaths	Injured	Affected	Homeless	Total affected	Total damage ('000 USD)
Tropical Cyclone	2004	1	39	0	60,000	0	60,000	889,000
Drought	2010	1	0	0	0	0	0	0

Last update: 23 September 2019

Source of data: EM-DAT - The OFDA/CRED International Disaster Database

<https://www.emdat.be/>

SDG 11.5.2 (Tier 2) Direct disaster economic loss in relation to global GDP, including disaster damage to critical infrastructure, disruption of basic services, and the in the housing sector

	2011
Direct economic loss attributed to disasters (Current USD)	155,100

Last update: 23 September 2019

Source of data: United Nations Global SDG Database

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

SDG 13.1.2 (Tier 1) Number of countries that adopt and implement national disaster risk reduction strategies in line with the Sendai Framework for Disaster Risk Reduction 2015-2030

Year	2017
Number	..

.. = Data not available

Last update: 23 September 2019

Source of data: United Nations Global SDG Database

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

SDG 14.5.1 (Tier 1) Coverage of protected areas in relation to marine areas, in percentage (%)

	2018
Coverage of protected areas in relation to marine areas (Exclusive Economic Zones)	52.23

Last update: 23 September 2019

Source of data: United Nations Global SDG Database, Protected Planet: The World Database on Protected Areas (WDPA) [On-line], December, 2018, International Union for Conservation of Nature (IUCN) and United Nations Environment Programme's World Conservation Monitoring Centre (UNEP-WCMC).

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

BIODIVERSITY

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

	2005	2010	2015	2018
Territorial	34.46	34.46	34.46	34.46
Freshwater	..	..	..	..

.. = Data not available

Last update: 23 September 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)	0.7721	0.7806	0.8275	0.8601
Red List Index (Middle Point)	0.7661	0.7664	0.7644	0.7628
Red List Index (Lower Bound)	0.6905	0.6577	0.6231	0.6132

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/>

SDG 15.a.1 ((Tier 1(ODA) / Tier 3(public expenditure))

Official development assistance and public expenditure on conservation and sustainable use of biodiversity and ecosystems

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Total official development assistance for biodiversity (Millions of constant 2017 USD)	0.658	0.013	0.056	..	0.020	0.130	0.426	0.014	0.044	0.177	0.005	0.074	0.17

.. = Data not available

Last update: 23 September 2019

Source of data: United Nations Global SDG Database, Organisation for Economic Co-operation and Development (OECD)

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

Multilateral Environmental Agreements

And

- Data reporting requirements
- SDGs in MEAs
- CARICOM countries ratification dates



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

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.
Antigua and Barbuda	1993	1997	1993	2007	1998	1992	2016	2005	2010	2003	1989	1997	1993	1983
Bahamas	1992	1979	1993	...	1999	1993	2016	1997	...	2005	1983	2000	1994	2014
Barbados	1995	1992	1994	...	2000	1992	2016	2006	...	2004	1993	1997	1994	2002
Belize	1997	1986	1994	...	2003	1998	2016	1998	2005	2010	1983	1998	1994	1990
Dominica	1998	1995	1994	...	2005	1993	2016	...	2005	2003	1991	1997	1993	1995
Grenada	...	1999	1994	...	2002	1993	2016	2012	...	...	1991	1997	1994	1998
Guyana	2001	1977	1994	...	2003	1993	2016	...	2007	2007	1993	1997	1994	1977
Haiti	0	...	1996	...	2005	2000	2017	...	...	...	1996	1996	1996	1980
Jamaica	2003	1997	1995	...	1999	1993	2017	1998	2002	2007	1983	1997	1995	1983
Saint Kitts and Nevis	1994	1994	1993	...	2008	1992	2016	...	2012	2004	1993	...	1993	1986
Saint Lucia	1993	1982	1993	...	2003	1993	2016	2002	...	2002	1985	...	1993	1991
Saint Vincent and the Grenadines	1996	1988	1996	...	2004	1996	2016	...	2010	2005	1993	...	1996	2003
Suriname	2011	1980	1996	...	2006	1997	...	1985	2000	2011	1998	2000	1997	1997
Trinidad and Tobago	1994	1984	1996	...	1999	1989	...	1993	2009	2002	1986	2000	1994	2005



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





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 report on "Progress towards the Sustainable Development Goals"

Please read our [Frequently Asked Questions](#) if you need help using this site. The development of this global SDG database dissemination platform is an ongoing process. Please send your feedback and suggestions for improvements to statistics@un.org

Starting 2019, major updates are expected to be released in March, June/July, September and December. Earlier versions of the database are available [here](#).

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
Grenada	G	49.9705 g m, E	-	-	-	-	49.9705 g m, E	-	-	-	-

^(f) Footnotes ^(c) Country data ^(ca) Country adjusted data ^(e) Estimated data ^(g) Global monitoring data ^(m) Modeled data ⁽ⁿ⁾ Non-relevant ^(na) Data nature not available

Data quality issues – example Grenada

FORESTS AND WOODLANDS

1. Total forest area

	1990	2000	2005	2010	2015
1,000 ha	16.99	16.99	16.99	16.99	16.99

Last update: 23 September 2019

Source of data: *FAO Global Forest Resources Assessment 2015*

<http://www.fao.org/forest-resources-assessment/en/>

SDG 15.1.1 (Tier 1) Forest area as a proportion of total land area

	2005	2010
Forest area as a proportion of total land area (%)	49.97	49.97

Last update: 23 September 2019

Source of data: *United Nations Global SDG Database*

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

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

	2010	2012	2013	2014	2015
Artificial surfaces (including urban and associated areas) [6970]	7.0	7.3	7.8	8.5	8.8
Grassland [6983]	1.7	1.7	1.7	1.7	1.7
Herbaceous crops [6971]	0.2	0.2	0.2	0.2	0.2
Inland water bodies [6981]	0.8	0.8	0.8	0.8	0.8
Mangroves [6975]	0.2	0.2	0.2	0.2	0.2
Shrub-covered areas [6976]	0.1	0.1	0.1	0.1	0.1
Shrubs and/or herbaceous vegetation, aquatic or regularly flooded	0.0	0.0	0.0	0.0	0.0
Sparsely natural vegetated areas [6978]	0.0	0.0	0.0	0.0	0.0
Terrestrial barren land [6979]	0.0	0.0	0.0	0.0	0.0
Tree-covered areas [6974]	28.0	28.0	28.0	28.0	28.0
Woody crops [6972]	0.2	0.2	0.2	0.2	0.2

Last update: 20 June 2019

Source of data: *Food and Agriculture Organization of the United Nations (FAO):* <http://www.fao.org/fa>

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

	2010	2012	2013	2014	2015
Artificial surfaces (including urban and associated areas) [6970]	0.9	0.9	0.9	0.9	0.9
Grassland [6983]	4.6	3.9	3.8	3.8	3.3
Herbaceous crops [6971]	0.3	0.2	0.2	0.2	0.2
Inland water bodies [6981]	0.1	0.1	0.1	0.1	0.1
Permanent snow and glaciers [6980]	0.0	0.0	0.0	0.0	0.0
Shrub-covered areas [6976]	0.0	0.0	0.0	0.0	0.0
Tree-covered areas [6974]	24.0	24.8	24.9	24.8	25.4
Woody crops [6972]	0.4	0.3	0.3	0.3	0.3

Last update: 20 June 2019

Source of data: *Food and Agriculture Organization of the United Nations (FAO):* <http://www.fao.org/fa>

Unit: hectares, Source: Ministry of Agriculture, Environment

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)

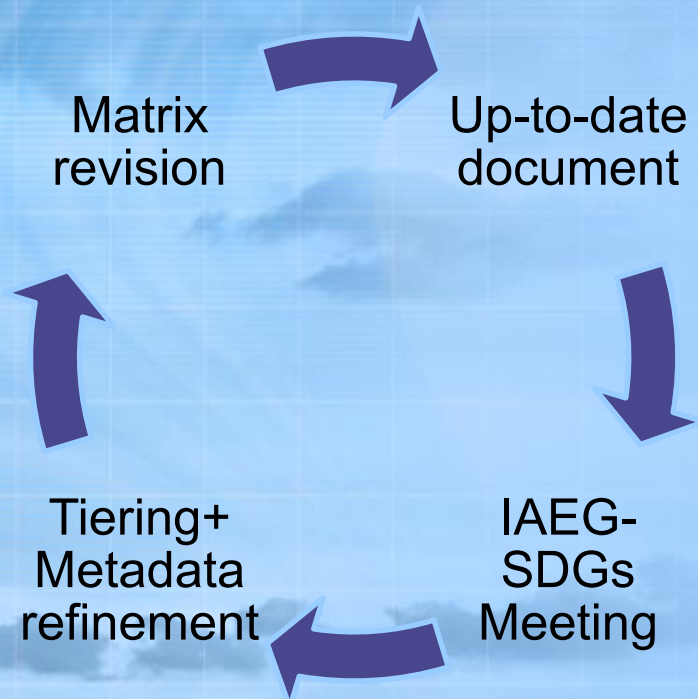
FDES			
Location in the FDES: Component Sub-Component and Topic	Statistics used in the SDG Indicator corresponding to BSES (SDG Indicator can be compiled either fully or partially from BSES statistics)	Statistics related to but not directly used in SDG Indicators OR Statistics related to Tier III indicators (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	<p>1.1.4.a. Soil characterization</p> <p>1.1.4.a.1. Area by soil types</p> <p>1.1.4.b. Soil degradation</p> <p>1.1.4.b.1. Area affected by soil erosion</p> <p>1.1.4.b.2. Area affected by desertification</p> <p>1.1.4.b.3. Area affected by salinization</p> <p>1.1.4.b.4. Area affected by waterlogging</p> <p>1.1.4.b.5. Area affected by acidification</p> <p>1.1.4.b.6. Area affected by compaction</p> <p>1.1.4.c. Nutrient content of soil, measured in levels of:</p> <p>1.1.4.c.1. Nitrogen (N)</p> <p>1.1.4.c.2. Phosphorous (P)</p> <p>1.1.4.c.3. Calcium (Ca)</p> <p>1.1.4.c.4. Magnesium (Mg)</p> <p>1.1.4.c.5. Potassium (K)</p> <p>1.1.4.c.6. Zinc (Zn)</p> <p>1.1.4.c.7. Other</p>		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	<p>1.1.4.a. Soil characterization</p> <p style="padding-left: 20px;">1.1.4.a.1. Area by soil types</p> <p>1.1.4.b. Soil degradation</p> <p style="padding-left: 20px;">1.1.4.b.1. Area affected by soil erosion</p> <p style="padding-left: 20px;">1.1.4.b.2. Area affected by desertification</p> <p style="padding-left: 20px;">1.1.4.b.3. Area affected by salinization</p> <p style="padding-left: 20px;">1.1.4.b.4. Area affected by waterlogging</p> <p style="padding-left: 20px;">1.1.4.b.5. Area affected by acidification</p> <p style="padding-left: 20px;">1.1.4.b.6. Area affected by compaction</p> <p>1.1.4.c. Nutrient content of soil, measured in levels of:</p> <p style="padding-left: 20px;">1.1.4.c.1. Nitrogen (N)</p> <p style="padding-left: 20px;">1.1.4.c.2. Phosphorous (P)</p> <p style="padding-left: 20px;">1.1.4.c.3. Calcium (Ca)</p> <p style="padding-left: 20px;">1.1.4.c.4. Magnesium (Mg)</p> <p style="padding-left: 20px;">1.1.4.c.5. Potassium (K)</p> <p style="padding-left: 20px;">1.1.4.c.6. Zinc (Zn)</p> <p style="padding-left: 20px;">1.1.4.c.7. Other</p>

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/SDGsIndex/BasicSetMatrix.pdf>



Group work



Group exercise, part I

- List and discuss the MEA reporting needs in your country, from list on slide 20 (and table on slide 25)
- Identify the corresponding SDGs (from print out)
- Consider the following questions:
 1. Are you aware/in communication with the focal points of the MEAs in your country (see slide with CARICOM countries ratification dates)?
 2. Are you able to obtain data and compile statistics addressing these international reporting requirements?
 3. Have you included the statistics in national compendia/yearbooks on environment statistics?
 4. What issues of data quality have you faced? Have you found discrepancies between national and international sources of these data?
 5. What options are you considering to resolve issues of quality and discrepancies?
 6. What is the first option for the National Statistical Office (NSO) to deal with cases where compilation of a statistic goes beyond the expertise of statisticians inside the NSO, and may require specialist expertise from another ministry/agency?
 7. Does your country have a mechanism whereby the NSO can meet on a regular basis to discuss compilation and dissemination of environment statistics (e.g. an inter-institutional working group)?



Group exercise, part II

- Review the listed indicators in the assigned SDGs

1 Goal per group

~~(6)~~.....(7,11) .. (9, 12 and 13) (14 and 15) ..

- Identify the corresponding Environment statistics for **one indicator** using the ESSAT print-outs (or the FDES)

1. How useful is ESSAT in order identify environment statistics to compile SDG indicators?
2. What are some of the main challenges in producing, disseminating and sharing the indicators under the various environmentally-related Goals?
3. If your country produces the data for the indicators which differs from the internationally available data produced/ or modelled by the custodian agencies; how can this be reconciled to avoid reporting multiple values of the same indicator from the same country?
4. If your country does not have capacity to produce the indicators and there are internationally available data produced or modelled by the custodian agencies how can this be better aligned?
5. What are the capacity building needs of the countries to assist them to produce the indicators?

Please report your discussion



The Sustainable Development Goals



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/>

