Mapping of UNECE Environmental Indicators with SEEA-CF, OECD Green Growth indicators and Sustainable Development Goals indicators

(The 14 JTF Core Indicators are shown in bold)

Environmental Indicators	SEEA CF	No.	Data sets	OECD Green Growth Indicators	SDGs (Annex IV of Report of IAEG on SDG Report to 47th UNSC)
A1. Emissions of pollutants into the atmospheric air	Air Emission Accounts	**1**	**Emissions of sulphur expressed in sulphur dioxide (total, stationary and mobile sources)**		
		2	**Emissions of nitrogen oxides expressed in nitrogen dioxide (total, stationary and mobile sources)**		
		3	**Emissions of non-methane volatile organic compounds (NMVOCs) (total, stationary and mobile sources)**		
		4	**Emissions of ammonia (total, stationary and mobile sources)**		
		5	**Emissions of carbon monoxide (total, stationary and mobile sources)**		
		6	**Emissions of lead (total, stationary and mobile sources)**		
		7	**Emissions of cadmium (total, stationary and mobile sources)**		
		8	**Emissions of mercury (total, stationary and mobile sources)**		
		9	**Emissions of polycyclic aromatic hydrocarbon (PAH) (total, stationary and mobile sources)**		
		10	**Emissions of polychlorinated biphenyl (PCB) (total, stationary and mobile sources)**		
		11	**Emissions of polychlorinated dibenzo-p-dioxin and polychlorinated dibenzofuran (PCDD/F) (total, stationary and mobile sources)**		
		12	**Emissions of total suspended particles (TSP)**		

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			(total, stationary and mobile sources)		
		13	**Emissions of PM_{10} (total, stationary and mobile sources)**		
		14	**Emissions of $PM_{2.5}$ (total, stationary and mobile sources)**		
A2. Ambient air quality		**15**	**Annual average concentration of sulphur dioxide**		3.9.1: Mortality rate attributed to household and ambient air pollution 11.6.2: Annual mean levels of fine particulate matter (i.e. PM2.5 and PM10) in cities (population weighted)
		16	**Annual average concentration of nitrogen dioxide**		
		17	**Annual average concentration of ground-level ozone**		
		18	**Annual average concentration of PM**		
A3. Consumption of ozone-depleting substances		**19**	**Total ozone depleting potential(ODP) of chlorofluorocarbons (CFCs)**	Even if the consumption of ODPs is fading out (target of the Montreal Protocol), these substances have a global warming potential. Basic data sets on the mass of the individual ODPs and their substitutes are needed to calculate the total greenhouse gas (GHG) emissions and related indicators.	
		20	**Total ODP of Halons**		
		21	**Total ODP of other fully halogenated CFCs**		
		22	**Total ODP of carbon tetrachloride**		
		23	**Total ODP of 1,1,1-trichloroethane**		
		24	**Total ODP of hydrochlorofluorocarbons (HCFCs)**		
		25	**Total ODP of methyl bromide**		
B1. Air temperature		26	Average annual deviation from the long-term average temperature		
B2. Atmospheric precipitation		27	Annual deviation from the long-term average precipitation		
B3. Greenhouse gas emissions	Air Emission	**28**	**Aggregated GHG emissions including emissions/removals from LULUCF**	Production-based CO2 productivity, GDP per unit of	9.4.1: CO2 emission per unit of value added

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	Accounts	**29**	**Aggregated GHG emissions by energy, industrial processes, solvent and other product use, agriculture, land use and forestry, waste**	energy-related CO2 emissions Production-based CO2 intensity, energy-related CO2 per capita Production-based CO2 emissions, index 1990=100 Demand-based CO2 productivity, real income per unit of energy-related CO2 emissions	
C1. Renewable freshwater resources	Physical water flow accounts	**30**	**Renewable freshwater resources**	Total freshwater abstraction per capita Water stress, total freshwater abstraction as % total available renewable resources Water stress, total freshwater abstraction as % total internal renewable resources	6.4.2: Level of Water Stress: freshwater withdrawal as a proportion of available freshwater resources
C2. Freshwater abstraction		**31**	**Total freshwater abstraction (per river basin, season and year)**		
		32	**Freshwater abstraction by water supply industry, households, agriculture forestry and fishing, manufacturing, electric industry, other economic activities**		
		33	**Water exploitation index**		
C3. Total water use C4. Household water use per capita C7. Water losses		**34**	**Total freshwater available (calculated with volume of water abstraction + desalinated + reused + imports – exports)**		6.4.1: Change in water use efficiency over time
		35	**Total freshwater use**		
		36	**Losses of water during transport**		
		37	**Freshwater use by households, agriculture forestry and fishing of which irrigation, manufacturing, electric industry, other economic activities**		
C5 and C6. Water supply industry and	Physical water flow	38	Population connected and not-connected to water supply industry		6.1.1: Proportion of population using safely managed drinking water services

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population connected to water supply industry	accounts				3.9.2: Mortality rate attributed to unsafe water, unsafe sanitation and lack of hygiene
C8. Reuse and recycling of freshwater	Physical water flow accounts	39	Reuse of water by economic activity: • Agriculture, forestry and fishing • Manufacturing • Other economic activities		
C9. Drinking water quality		40	Number and percentage of samples with exceeded standards		6.1.1: Proportion of population using safely managed drinking water services 3.9.2: Mortality rate attributed to unsafe water, unsafe sanitation and lack of hygiene
C10. BOD5 and concentration of ammonium in rivers		**41**	**Mean concentration of BOD in major rivers**		6.3.2: Proportion of bodies of water with good ambient water quality
		42	**Mean concentration of ammonium in major rivers**		
C11. Nutrients in freshwater Link		**43**	**Mean concentration of phosphates in major rivers**		
		44	**Mean concentration of nitrates in major rivers**		
		45	**Mean concentration of total phosphorus in major lakes**		
		46	**Mean concentration of nitrates in major lakes**		
		47	**Mean concentration of nitrates in groundwater**		
C12. Nutrients in coastal seawaters		48	Mean summer/autumn/winter/spring concentration of phosphates		14.1.1 Index of coastal eutrophication and floating plastic debris density
		49	Mean summer/autumn/winter/spring concentration of nitrates		
C13. Concentrations		50	Mean concentration of ammonium nitrogen		

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of pollutants in coastal seawater and sediments (except nutrients)		51	Mean concentration of dissolved oxygen		
		52	Mean concentration of oil hydrocarbons		
		53	Mean concentration of phenols		
		54	Mean concentration of synthetic surface-active compounds (SSAC)		
		55	Mean concentration of chlorinated pesticides		
		56	Mean concentration of other chemical compounds		
		57	Mean concentration of faecal coliforms		
		58	Mean concentration of different metals (Cd, Co, Cu, Cr, Fe, Hg, Mn, Ni, Pb, Zn, other)		
C14. Population connected to wastewater treatment	Physical water flow accounts	59	Population connected to a wastewater collecting system (with and without treatment facilities)		6.2.1: Proportion of population using safely managed sanitation services, including a hand-washing facility with soap and water 3.9.2: Mortality rate attributed to unsafe water, unsafe sanitation and lack of hygiene
C15. Wastewater treatment facilities	Water emission accounts	60	Wastewater treated in urban wastewater treatment plants (primary, secondary, tertiary)		6.3.1: Proportion of wastewater safely treated
C16. Polluted (not-treated) wastewaters	Physical water flow accounts	61	Wastewater discharged		
	Water emission accounts	62	Non-treated/not adequately treated wastewater		
D1. Protected areas	Land accounts	**63**	**Total areas under protection (per IUCN-category and per national category)**		14.5.1: Coverage of protected areas in relation to marine areas

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					15.4.1: Coverage by protected areas of important sites for mountain biodiversity 6.6.1: Change in the extent of water-related ecosystems over time
D3. Forests	Land accounts	64	Total forest area (forest and other wooded land)	Forest, % total land area	15.1.1: Forest area as a proportion of total land area
D4. Threatened and protected species		**65**	**Number of species protected — mammals, birds, fishes, reptiles, amphibians, invertebrates, vascular plants, mosses, lichens, fungi, algae**		15.5.1: Red List Index 15.9.1 Progress towards national targets established in accordance with Aichi Biodiversity Target 2 of the Strategic Plan for Biodiversity 2011-2020
		66	**Number of species threatened — mammals, birds, fishes, reptiles, amphibians, invertebrates, vascular plants, mosses, lichens, fungi, algae**		
D5. Trends in the number and distribution of selected species		67	Trends in the number and distribution of selected species		
E1. Land uptake	Land accounts	68	Total land uptake		11.3.1 Ratio of land consumption rate to population growth rate
		69	Land uptake by mining and quarrying, construction, manufacturing, technical infrastructure, transport and storage infrastructure, residential including recreational, landfills waste dumps tailing pits		
E2. Area affected by soil erosion	Soil accounts	70	Agricultural areas affected by water erosion		15.3.1 Proportion of land that is degraded over total land area
		71	Agricultural areas affected by wind erosion		
F2. Fertilizer consumption	Material flow accounts	**72**	**Consumption of mineral fertilizers**		
		73	**Consumption of organic fertilizers**		

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F4. Pesticide consumption	Material flow accounts	74	Consumption of insecticides		
		75	Consumption of herbicides and desiccants		
		76	Consumption of Fungicides and bactericides		
		77	Consumption of Rodenticides		
		78	Consumption of other pesticides		
G1. Final energy consumption	Physical energy flow accounts	79	Total final energy consumption	Energy productivity, GDP per unit of TPES Energy intensity, TPES per capita Renewable energy supply, % TPES Renewable electricity, % total electricity generation	7.2.1: Renewable energy share in the total final energy consumption 7.3.1 Energy intensity measured in terms of primary energy and GDP
		80	Final energy consumption by category (industry, transport, households, commercial and public services, agriculture forestry and fishery, non-specified, non-energy use)		
G2. Total primary energy supply		81	Total primary energy supply (production, export, import, bins, stock changes)		
		82	Total primary energy supply by source (coal, crude oil, oil products, natural gas, nuclear energy, hydropower, geothermal and solar energy, biofuels and waste, electricity, and heat)		
G3. Energy intensity		83	Energy intensity: final energy consumption/GDP		
		84	Energy intensity: total primary energy supply/GDP		
G4. Renewable energy consumption		85	Total primary energy supply by renewable energy category (hydropower, biomass, biofuels, wind, solar, geothermal, other)		
H1. Passenger transport demand		**86**	**Private cars**		9.1.2: Passenger and freight volumes, by mode of transport
		87	**Road transport (private cars, road public transport, long distance road public transport)**		
		88	**Railway transport**		
		89	**Inland waterways transport**		
		90	**Maritime transport**		

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		91	**Domestic aviation**		
		92	**Underground transport**		
H2. Freight transport demand		93	Road transport		9.1.2: Passenger and freight volumes, by mode of transport
		94	Railway transport		
		95	Inland waterways transport		
		96	Maritime transport		
		97	Domestic aviation		
H3. Composition of road motor vehicle fleet by fuel type		98	Number of passenger cars by fuel type (gasoline, diesel, gas, electricity, biofuels, other)		
		99	Number of motor coaches and buses by fuel type (gasoline, diesel, gas, electricity, biofuels, other)		
		100	Number of trolleybuses by fuel type (gasoline, diesel, gas, electricity, biofuels, other)		
		101	Number of trucks by fuel type (gasoline, diesel, gas, electricity, biofuels, other)		
		102	Number of road tractors by fuel type (gasoline, diesel, gas, electricity, biofuels, other)		
H4. Age of road motor vehicle fleet		103	Number of passenger cars by age group		
		104	Number of motor coaches and buses by age group		
		105	Number of trolleybuses by age group		
		106	Number of trucks by age group		
		107	Number of road tractors by age group		
I1. Waste generation	Solid waste accounts Material	**108**	**Total waste generation**	Non-energy material productivity GDP per unit of DMC Biotic materials, % of DMC	11.6.1: Proportion of urban solid waste regularly collected and with adequate final discharge out of total urban waste generated, by cities.
		109	**Waste generation by source (agriculture forestry and fishery; mining and quarrying; manufacturing; electricity, gas, steam and air**		

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	flow accounts		**conditioning supply; construction; other economic activities; households)**	Construction materials, % of DMC Other abiotic materials (excluding construction), % of DMC Municipal waste generated	12.2.1: Material footprint, material footprint per capita, and material footprint per GDP 12.2.2: Domestic material consumption, domestic material consumption per capita, and domestic material consumption per GDP 12.5.1: National recycling rate, tons of material recycled
I2. Management of hazardous waste		110	Hazardous waste generated		12.4.1: Number of Parties to international multilateral environmental agreements on hazardous and other chemicals and waste that meet their commitments and obligations in transmitting information as required by each relevant agreement 12.4.2: Hazardous waste generated per capita and proportion of hazardous waste treated, by type of treatment
		111	Hazardous waste imported		
		112	Hazardous waste exported		
		113	Total hazardous waste treated or disposed		
		114	Hazardous waste treated or disposed of which recycling, incineration, landfilling, other disposal		
		115	Stock of hazardous waste		
I3. Waste reuse and recycling		116	Waste managed (per type: municipal, non-hazardous industrial, hazardous)	Non-energy material productivity GDP per unit of DMC Biotic materials, % of DMC Construction materials, % of DMC Other abiotic materials (excluding construction), % of DMC	11.6.1: Proportion of urban solid waste regularly collected and with adequate final discharge out of total urban waste generated, by cities.
		117	Waste reused and recycled (per type: municipal, non-hazardous industrial, hazardous)	Municipal waste recycled or composted	12.5.1: National recycling rate, tons of material recycled
I4. Final waste disposal		118	Municipal waste collected	Municipal waste generated	11.6.1: Proportion of urban solid waste regularly collected and with adequate final discharge out of total urban waste
		119	Municipal waste managed (per type: re-use and recycling, composting, incineration without energy	Non-energy material productivity GDP per unit of DMC	

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			recovery, incineration with energy recovery, landfilling on a controlled site, landfilling on a non-controlled site, other disposal)	Biotic materials, % of DMC Construction materials, % of DMC Other abiotic materials (excluding construction), % of DMC Municipal waste recycled or composted Municipal waste incinerated Municipal waste deposed to landfills	generated, by cities.
		120	Non-hazardous industrial waste generated (per type of management: recycling, composting, incineration without energy recovery, incineration with energy recovery, landfilling on a controlled site, landfilling on a non-controlled site, other disposal)	Non-energy material productivity GDP per unit of DMC Biotic materials, % of DMC Construction materials, % of DMC Other abiotic materials (excluding construction), % of DMC	