

SDG indicator 8.4.2/12.2.2 and UNEP Questionnaire on EW-MFA for these SDG indicators

Session 4: Domestic Material Consumption as an indicator of economic pressure on the environment

Global Webinar on Geospatial and Other Data Sources for Environment Statistics: Assessing the Impact of the Economy on the Environment

Why is EW-MFA important?

- **Sustainable resource management:** identify which materials are being consumed in large quantities and where, develop policies and strategies to manage resources sustainably
- **Pollution prevention:** identify potential sources of pollution from emissions during extraction and disposal (release of toxic chemicals) and develop policies and regulations to prevent pollution and protect public health and the environment.
- **Improve resource efficiency:** include measures such as recycling, reusing, and reducing waste and conserve resources to reduce the environmental impact of economic activities

EW-MFA and the SDGs

- International Resource Panel (IRP): Produces EW-MFA data for all countries and this data is updated every two to three years
- The data is available from 1970 to 2019 for all countries and covering Domestic Material Consumption (DMC) and Material Footprint (MF)
- DMC is reported under SDGs 8.4.2 and 12.2.2, in tonnes, Kg per capita and as KG per constant USD for all countries, regional and global disaggregated by 17 different raw materials and the total
- MF is reported under 8.4.1 and 12.2.1, in tonnes, KG per capita and KG per constant USD at global level

EW-MFA questionnaire for SDGs

The pre-filled [EW-MFA questionnaire](#) with estimated data for SDG indicators 8.4.1/12.2.1 and 8.4.2/12.2.2 was sent to countries for the compilation of national data for these indicators.

The EW-MFA questionnaire included:

- tables that are important for SDG reporting
- Reviewing or replacing data in tables A, B and C with national data where exist
- Link to national EW-MFA where exist
- Asks agencies if they would like to get a compiler that can assist in building EW-MFA

Introduction

To SDGs

- EW-MFA questionnaire data used to calculate Sustainable Development Goal (SDG) Indicators:
 - 8.4.1/12.2.1 Material footprint, material footprint per capita, and material footprint per GDP
 - 8.4.2/12.2.2 Domestic material consumption, domestic material consumption per capita, and domestic material consumption per GDP

Navigation (1/3)

Overview



United Nations Environment Programme

QUESTIONNAIRE ON ECONOMY-WIDE MATERIAL FLOW ACCOUNTS for the SDG indicators 8.4.1/12.2.1 and 8.4.2/12.2.2

(EW-MFA Questionnaire for SDGs)

Country:

Deadline for returning the EW-MFA Questionnaire for SDGs:

If you have any questions, please contact us at the following email address:

unep-ewad-sdgs@un.org

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Sheet	Title	Status
Intro & Contents	Introduction and table of contents	<i>for information</i>
Guidance	Guidance	<i>for information</i>
Description & Definitions	Description of tables and definitions	<i>for information</i>
Table_A	Domestic extraction	<i>to review / re-fill in</i>
Table_B	Imports of materials	<i>to review / re-fill in</i>
Table_C	Exports of materials	<i>to review / re-fill in</i>
Table_D	Headline indicators	<i>to be filled in automatically</i>
Table_E	Material flow accounts in raw material equivalents	<i>for information and possible comments</i>
Table_F	Supplementary information from the country	<i>to fill in</i>

Navigation (2/3)

Example: Table_A - Domestic Extraction

Table_A - Domestic material extraction																						
(tonnes)																						
Material category	indicator_id	Description	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
A.1	801	Biomass	13439042	14384685.8	15845627.6	17452082.1	18928932.3	20085938.1	20882534.3	15621036.7	16290630.4	16733584.8	17982988.6	16435075.1	15546950.6	16656271	16141677.3	16706919	16734099.7	15492237.8	15258509	14999367.5
A.1.1	1142	Crops	3942020	4109301	4570905	4927483	5340802	5711577	5919531	3955570	3770133	4235635	4648357	4104839	3772591	4246872	4023978	4227273	4258334	3761331	3695026	3585980.15
A.1.2.1	1141	Crop residues (used)	5012310	5308455.75	5467125.75	5845271.25	6608353.5	7008476.25	7091303.25	3993566.7	3958607.4	4529569.8	5329211.58	4431641.37	3750635.49	4420899	4117799.25	4456422.83	4400581.85	3684459.38	3492769.41	3297506.14
A.1.2.2	1143	Fodder crops and grazed biomass	4470800	4952500	5792500	6662500	6962500	7348600	7849900	7650100	8540090	7946580	7983620	7876794.7	8008724.1	7973500	7984900	8008223.2	8060183.9	8031447.4	8055713.6	8100880.98
A.1.3	1145	Wood	1684	1680	2284.8	2284.8	2284.8	2284.8	6800	6800	6800	6800	6800	6800	0	0	0	0	0	0	0	0
A.1.4	1144	Wild harvest n.e.c.	12228	12749	12812	14543	14992	15000	15000	15000	15000	15000	15000	15000	15000	15000	15000	15000	15000	15000	15000	15000.2
A.2	808	Metal ores (gross ores)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A.2.1	1150	Iron ores	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A.2.2-A.2.3	1151	Aluminium ores and other metal ores	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A.3	809	Non-metallic minerals	4419410.9	4290301.9	4323251.9	4162101.9	4774379.5	5386627.1	6332718.5	8643615.99	8019401.28	8168971.3	9343530.14	12684521.7	18856742.7	22249187.7	24305615.7	27318409.1	28954230.6	29907086	31576681.2	33545376.3
AGG3A	1152	Construction dominant	4126051.9	3980051.9	4016051.9	3855051.9	4467379.5	5079707.1	6025198.5	8336095.99	7711631.28	7861181.3	8125515.14	10418491.7	16185677.7	18098077.7	19805577.7	22537577.7	23903577.7	24586577.7	25952577.7	27661332.1
AGG3B	1153	Industrial or agricultural dominant	293359	310250	307200	307050	307000	306920	307520	307520	307770	307790	1218015	2266030	2671065	4151110	4500038	4780831.43	5050652.86	5320508.29	5624103.49	5884044.22
A.4	807	Fossil fuels	39727024	43247708	46122116	51042234	50679862	53222126	52195622	56871292	58742150	36015370	41204696	56395358	58803230	66065234	67331252	70113562	66417308	66144170	68227246	69755485.4
A.4.1	1146	Coal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A.4.2.1	1149	Crude oil	7729000	8261000	9635000	10695000	10735000	10256000	9059000	9895000	10661000	9997000	10310000	11240000	11711000	12569000	12737000	13030000	12014000	11243000	10639000	10800921.4
A.4.2.2	1147	Natural gas	31998024	34986708	36487116	40347234	39944862	42966126	43136622	46976292	48081150	26018370	30894696	45155358	47092230	53496234	54594252	57083562	54403308	54901170	57588246	58954564
A.4.3	1148	Oil shale and tar sands	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL DOMESTIC EXTRACTION			57,585,477	61,922,696	66,290,995	72,656,418	74,383,174	78,694,691	79,410,875	81,135,945	83,052,182	60,917,926	68,531,215	85,514,955	93,206,923	104,970,693	107,778,545	114,138,890	112,105,638	111,543,494	115,062,436	118,300,229

7 SDG indicator 8.4.2/12.2.2 and UNEP Questionnaire on EW-MFA for these SDG indicators

Navigation (3/3)

Table_A - Domestic Extraction

Table_A - Domestic extraction																									
(tonnes)																									
Material category	Indicator_i	Description	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
A.1	801	Biomass																							
A.1.1	1142	Crops																							
A.1.2	1810	Crop residues (used), fodder crops, grazed biomass																							
A.1.2.1-A.1.2.2	1141	Straw; Other crop residues (sugar and fodder beet leaves, other)																							
A.1.2.3-A.1.2.4	1143	Fodder crops (including biomass harvest from grassland); Grazed biomass																							
A.1.3	1145	Wood																							
A.1.4	1144	Wild harvest n.e.c.																							
A.2	808	Metal ores																							
A.2.1	1150	Iron ores																							
A.2.2-A.2.3	1151	Aluminium ores; Other metal ores																							
A.3	809	Non-metallic minerals																							
A.3.1	6037	Ornamental or building stone																							
A.3.2	5050	Carbonate minerals important in cement																							
A.3.4	5051	Chemical and fertilizer minerals																							
A.3.5	6044	Salt																							
A.3.6	6045	Gypsum																							
A.3.7	5052	Clays																							
A.3.8	5053	Sand and gravel																							
A.3.9	6050	Other non-metallic minerals n.e.c.																							
A.4	807	Fossil fuels																							
A.4.1	1146	Coal and peat																							
A.4.2	1811	Crude oil, natural gas and natural gas liquids																							
A.4.2.1	6057	Crude oil																							
A.4.2.2	1147	Natural gas																							
A.4.2.3	6058	Natural gas liquids																							
A.4.3	1148	Oil shale and tar sands																							
TOTAL DOMESTIC EXTRACTION			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

EW-MFA Data validation

2022 - 2023

The **UNEP International Resource Panel** provides estimation of Domestic material consumption and Material footprint for all countries

UNEP communicates with countries (develops a questionnaire; sends a pre-filled questionnaire to countries for review or replace the data with national data)

Countries revise/replace the data with national data if possible/needed and provide feedback to UNEP

UNEP analyzes the replacement data and prepares them for publication on various platforms (Global SDG database, UNEP WESR)

In April 2022, UNEP sent out a pre-filled questionnaire to 193 UN Members (NSOs);

SEEA focal points were also informed

As of 31 August 2022, UNEP has received feedback from 30 UN Members

On 1 March 2023, UNEP reported national DMC data to UNSD for 26 countries

Access the indicator and resources

SDG Global Database

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

World Environment Situation Room

[Data, Information and Knowledge on the Environment](#)

National Scorecard

[Assists UN Country Teams and national stakeholders in their Common Country Analysis \(CCA\) and the SDG Voluntary National Reviews \(VNR\)](#)

EN_MAT_DOMCMPT

EN_MAT_DOMCMPG

EN_MAT_DOMCMPC

+ Indicator 8.4.2, 12.2.2, Series : Domestic material consumption, by type of raw material (tonnes) EN_MAT_DOMCMPT

+ Indicator 8.4.2, 12.2.2, Series : Domestic material consumption per unit of GDP, by type of raw material (kilograms per constant 2015 United States dollars) EN_MAT_DOMCMPG

+ Indicator 8.4.2, 12.2.2, Series : Domestic material consumption per capita, by type of raw material (tonnes) EN_MAT_DOMCMPC

Thank you



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