

Presentation of the Economy-Wide Material Flow Accounts (EW-MFA)

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What's Economy-Wide Material Flow Accounts (EW-MFA)

EW-MFA represents a framework for describing the interaction of a domestic economy with the natural environment and the economy of the rest of the world in terms of flows of materials, waste and emissions.

EW-MFA accounts deliver a comprehensive overview of the natural resource extraction, trade in natural resources, waste disposal and emissions.

EW-MFA data sets are basic for calculating SDG indicators related to resource productivity (SDG 8.4) and sustainable use of natural resources (SDG 12.2).



Methodological support

Global manual on EW-MFA:

[UNEP \(2023\). The use of natural resources in the economy: A Global Manual on Economy-Wide Material Flow Accounting](#)

- First published in 2021
- Revised in 2023

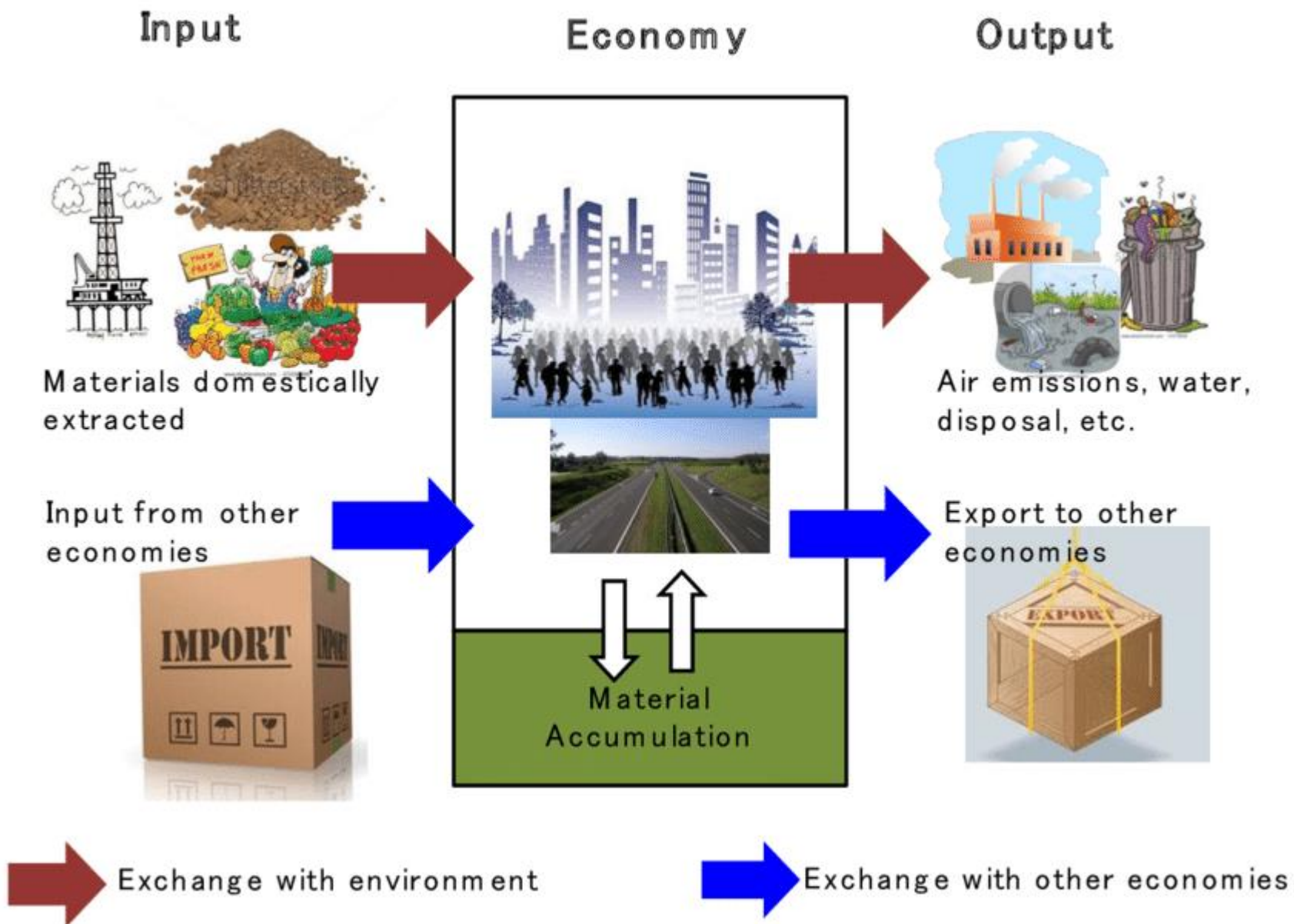
Economy-Wide Material Flow Accounting

Step-by-step guide to the compiler

Methodological support

[UNEP \(2024\). Economy-Wide Material Flow Accounting. Step-by-step guide to the compiler](#)

- Published in 2024



Source, Development of Indicators for EW-MFA in the Province of Palawan, Philippines (2015). Martinico-Perez, Marianne Faith

Simplified structure of EW-MFA



Unused extraction

Concepts related to EW-MFA (II)

Raw material equivalents of trade are the material requirements to produce direct imports and exports.

Material outflows are waste going to landfills, emissions to air and emissions to water.

Stocks is the amount of materials that are stockpiled in buildings and infrastructure in the national economy. It is a proxy for potential material flows that may become secondary raw materials or waste.



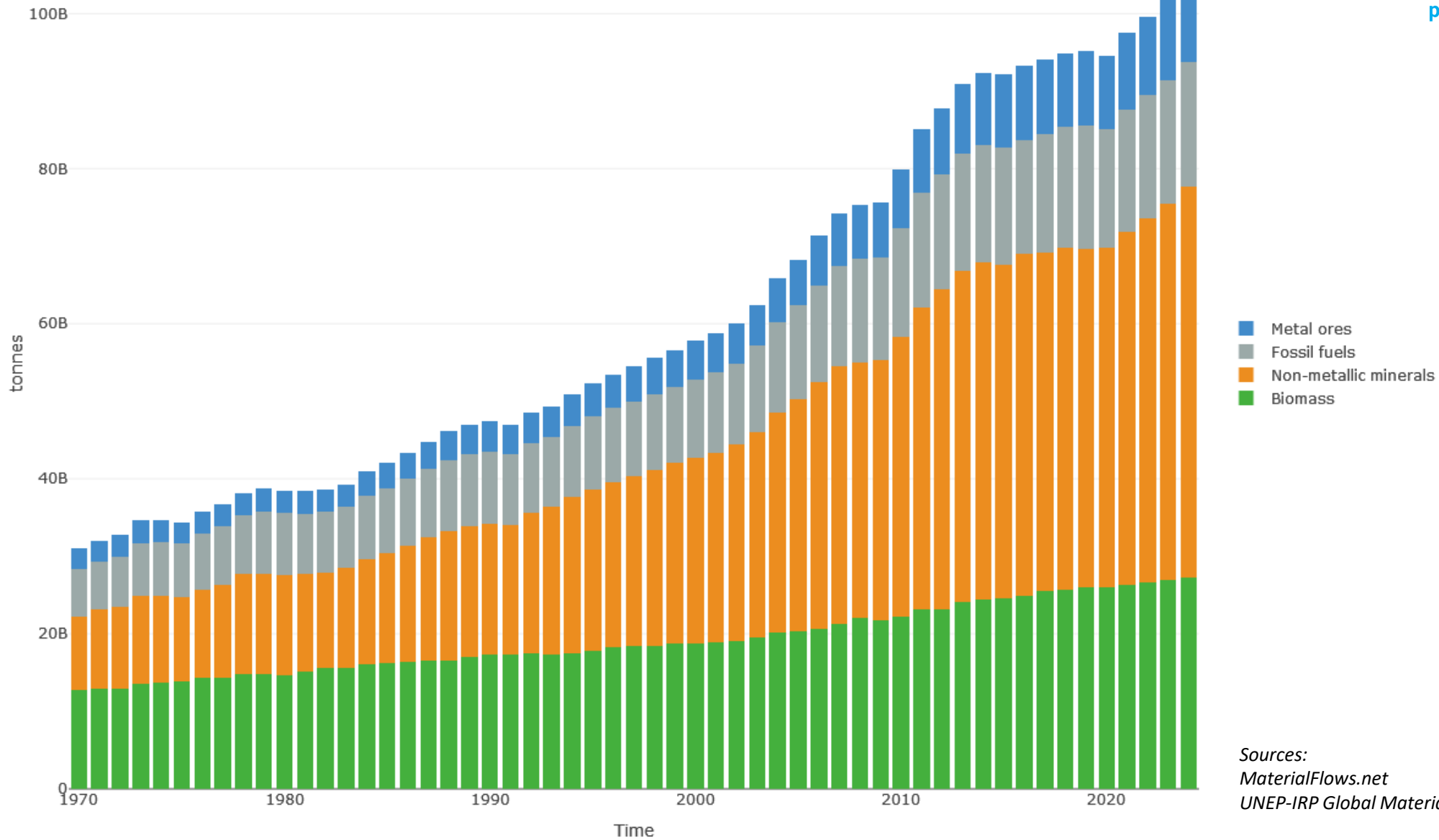
Global Material Flows Database

Supporting evidence-based decision-making by policy and business communities

[Here](#)

- Coverage: [217 countries/territories](#)
- Period: [1970 – 2024](#)
- Aligned with the [SEEA Central Framework](#)
- Provides indicators on extraction and direct trade of raw materials, as well as indirect trade flows (including material footprints)
- Material categories: [biomass](#), [fossil fuels](#), [metals](#), [non-metallic minerals](#) (disaggregated into 13 sub-categories)
- Main data sources: FAO, UNSD, UN COMTRADE, IEA, US EIA, World Mining Data, British Geological Survey, US Geological Survey

Domestic Extraction of World in 1970-2024, by material group



Sources:
MaterialFlows.net
UNEP-IRP Global Material Flows Database

National Data: Data collection tool

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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| Intro & Contents | Introduction and table of contents | <i>for information</i> |
| Methodology & Guidance | Methodological sources and guidance for working with this Questionnaire | <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>filled automatically</i> |
| Table E | Material flow accounts in raw material equivalents | <i>to review / re-fill in</i> |
| Table F | Supplementary information from the country | <i>to fill in</i> |

Last update: June 1, 2024

Concepts related to EW-MFA (I)

DE: Domestic extraction (materials which are further used in economic processes)

* Biomass, Fossil fuels, metal ores and non-metallic minerals

IM: Imports

EX: Exports

PTB: Physical Trade Balance = $IM - EX$

DMC: Domestic Material Consumption = $DE + IM - EX = DE + PTB$

DMI: Direct Material Input $DE + IM$

Indicators based on EW-MFA

| |
|--|
| Domestic extraction (DE) |
| Imports |
| Exports |
| Direct material input (DMI) |
| Domestic material consumption (DMC) |
| Physical trade balance (PTB) |
| Domestic processed output (DPO) |
| Net additions to stock (NAS) |

Thank you



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