

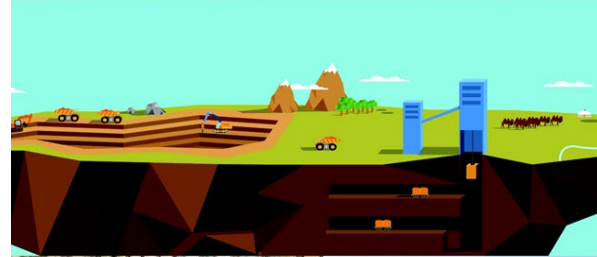


# Global estimates for individual countries

The basis for Domestic Material Consumption accounts in the Global MFA Database

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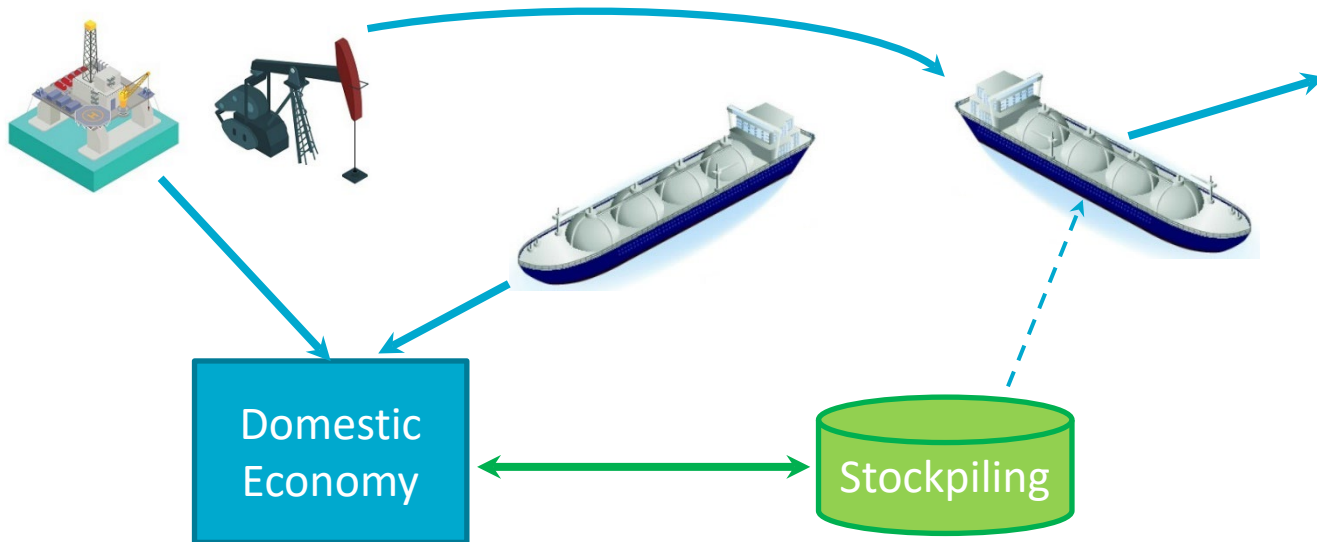
# Domestic material consumption

## Domestic material consumption (DMC)

- Method of calculation, definition.
- Important simplifying assumption.
- Base data underlying the accounts.
- Quality / applicability of base data used.
- Where additional input from national statistical agencies is most needed.

# DMC – Underlying accounts and derivation

Domestic Extraction + Physical Imports - Physical Exports





# For detail on how Global Accounts are created, see Technical Annex

UN environment programme International Resource Panel

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## Global Material Flows Database

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

Material flows and resource productivity indicators are central to monitoring the changing patterns of resource use as global economies grow. They are essential for monitoring progress towards SDG targets 8.4 'Resource Productivity' and 12.2 'Sustainable Use of Natural Resources'.

The Global Material Flows Database provides data to help governments, policy researchers and interested stakeholders understand and trace the linkages between economic growth and raw material usage. Such information is basic for the development of effectively targeted sustainable consumption and production strategies. It also builds a strong quantitative basis upon which the success or failure of those strategies in lowering resources use can subsequently be assessed.

The database is based on authoritative, publicly accessible international data sources wherever possible, combined with the most recent methodologies for establishing material flow accounts. It covers the period 1970-2019, for more than 200 countries and reports extraction and direct trade of raw materials, indirect trade flows (including material footprints), as well as intensities derived from these material measures.

Please refer to the [technical annex](#) for detailed descriptions of the data sources and methods used.

- National 4+ categories material flows
- National 13+ categories material flows
- National material totals and ratios



# Major primary categories and data quality

<b>DE Category</b>	<b>DE Subcategory</b>
Biomass	Crops
	Crop Residues
	Grazed biomass and fodder crops
	Wood
	Wild catch and harvest
Fossil Fuels	Coal
	Petroleum
	Natural Gas
	Oil shale and tar sands
Metal ores	Ferrous ores
	Non-ferrous ores
Non-metallic minerals	Non-metallic minerals - construction dominant
	Non-metallic minerals - industrial or agricultural dominant



# Major primary categories and data quality

<b>DE Category</b>	<b>DE Subcategory</b>
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	Oil shale and tar sands
Metal ores	Ferrous ores
	Non-ferrous ores
Non-metallic minerals	Non-metallic minerals - construction dominant
	Non-metallic minerals - industrial or agricultural dominant



# Fossil fuels

DE Category	DE Subcategory
Biomass	Crops
	Crop Residues
	Grazed biomass and fodder crops
	Wood
	Wild catch and harvest
Fossil Fuels	Coal
	Petroleum
	Natural Gas
	Oil shale and tar sands
Metal ores	Ferrous ores
	Non-ferrous ores
Non-metallic minerals	Non-metallic minerals - construction dominant
	Non-metallic minerals - industrial or agricultural dominant

*DE and Trade based on high quality, direct data for all subcats. -UN Energy Statistics, then IEA, EIA.*



# Biomass

DE Category	DE Subcategory	
Biomass	Crops	<i>Major subcats. based on high quality, direct data from FAO, both DE and Trade. Others require modelling and some major assumptions over FAO data.</i>
	Crop Residues	
	Grazed biomass and fodder	
	Wood	
	Wild catch and harvest	
Fossil Fuels	Coal	
	Petroleum	
	Natural Gas	
	Oil shale and tar sands	
Metal ores	Ferrous ores	
	Non-ferrous ores	
Non-metallic minerals	Non-metallic minerals - construction dominant	
	Non-metallic minerals - industrial or agricultural dominant	





# The Global EW-MFA Manual – how you can build improved national accounts

- Intended for national statistical offices
- Manual + tools + tutorial materials to construct best national accounts
- Consult UNEP about access to latest versions





# Metal ores

DE Category	DE Subcategory
Biomass	Crops
	Crop Residues
	Grazed biomass and fodder crops
	Wood
	Wild catch and harvest
Fossil Fuels	Coal
	Petroleum
	Natural Gas
	Oil shale and tar sands
Metal ores	Ferrous ores
	Non-ferrous ores
Non-metallic minerals	Non-metallic minerals - co
	Non-metallic minerals - inc

*DE Largely modelled - combines metals data from USGS, BGS, WMD with publicly accessible mine grade data. Trade from Comtrade – very poor detail.*



# Non-metallic minerals

DE Category	DE Subcategory
Biomass	Crops
	Crop Residues
	Grazed biomass and fodder crops
	Wood
	Wild catch and harvest
Fossil Fuels	Coal
	Petroleum
	Natural Gas
	Oil shale and tar sands
Metal ores	Ferrous ores
	Non-ferrous ores
Non-metallic minerals	Non-metallic minerals - construction dominant
	Non-metallic minerals - industrial or agricultural dominant

*Dominant subcategory almost entirely modelled from scant, indirect data, using huge assumptions.*



# Thank you

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## The use of natural resources in the economy

A Global Manual on  
Economy Wide Material Flow  
Accounting

