








Natural Resource Use Indicators in the SDGs

For more information, please visit
<http://www.unep.org/asiapacificindicators>
or contact janet.salem@unep.org

SDG Goal	SDG Target	IAEG Indicator ¹	Year 2015	
			Philippines	Asia-Pacific Developing
6 CLEAN WATER AND SANITATION 	6.4 – Increase water-use efficiency	6.4.1 – Water Intensity (<i>litres per US dollar</i>)	463	220
7 AFFORDABLE AND CLEAN ENERGY 	7.2 – Increase share of renewable energy	7.2.1 – Renewable energy share in total primary energy supply ² (<i>percentage</i>)	42.5%	18.3%
	7.3 – Improve energy efficiency	7.3.1 Energy Intensity (<i>megajoules per dollar</i>)	12.9	25.1
8 DECENT WORK AND ECONOMIC GROWTH 	8.4 – Resource efficiency and decouple economic growth from environmental degradation	8.4.1 and 12.2.1 – Material Footprint Total (<i>million tonnes</i>)	489	40,728
		Per capita (<i>tonnes</i>)	4.8	10.8
12 RESPONSIBLE CONSUMPTION AND PRODUCTION 	12.2 – Sustainable management and efficient use of natural resources	Per dollar (<i>kilograms per dollar</i>)	2.8	4.5
		8.4.2 and 12.2.2 – Domestic Material Consumption Total (<i>million tonnes</i>)	481	47,813
		Per capita (<i>tonnes</i>)	4.7	12.7
		Per dollar (<i>Kilograms per dollar</i>)	2.7	5.3
17 PARTNERSHIPS FOR THE GOALS 	17.11 – Exports of developing countries	17.11.1 – Developing countries and least developed countries export value Exports (<i>million dollars</i>)	73,452	3,189,657
		Exports (<i>million tonnes</i>)	51.3	2,304
		Unit price of exports (<i>dollars per kilogram</i>)	1.4	1.4

¹ According to the "Report of the Inter-Agency and Expert Group on Sustainable Development Goal Indicators", Item 3 (a) of the provisional agenda, Forty-seventh session of the Statistical Commission on 8-11 March 2016 at <http://unstats.un.org/unsd/statcom/47th-session/documents/2016-2-SDGs-Rev1-E.pdf>

² Share of Renewables and Hydro of the Total Primary Energy Supply.



Materials

Materials are the 'things' that make up the products and infrastructure of our society. They include biomass (crops, livestock, forest products, fish), fossil fuels (coal, oil, gas), metals and minerals.

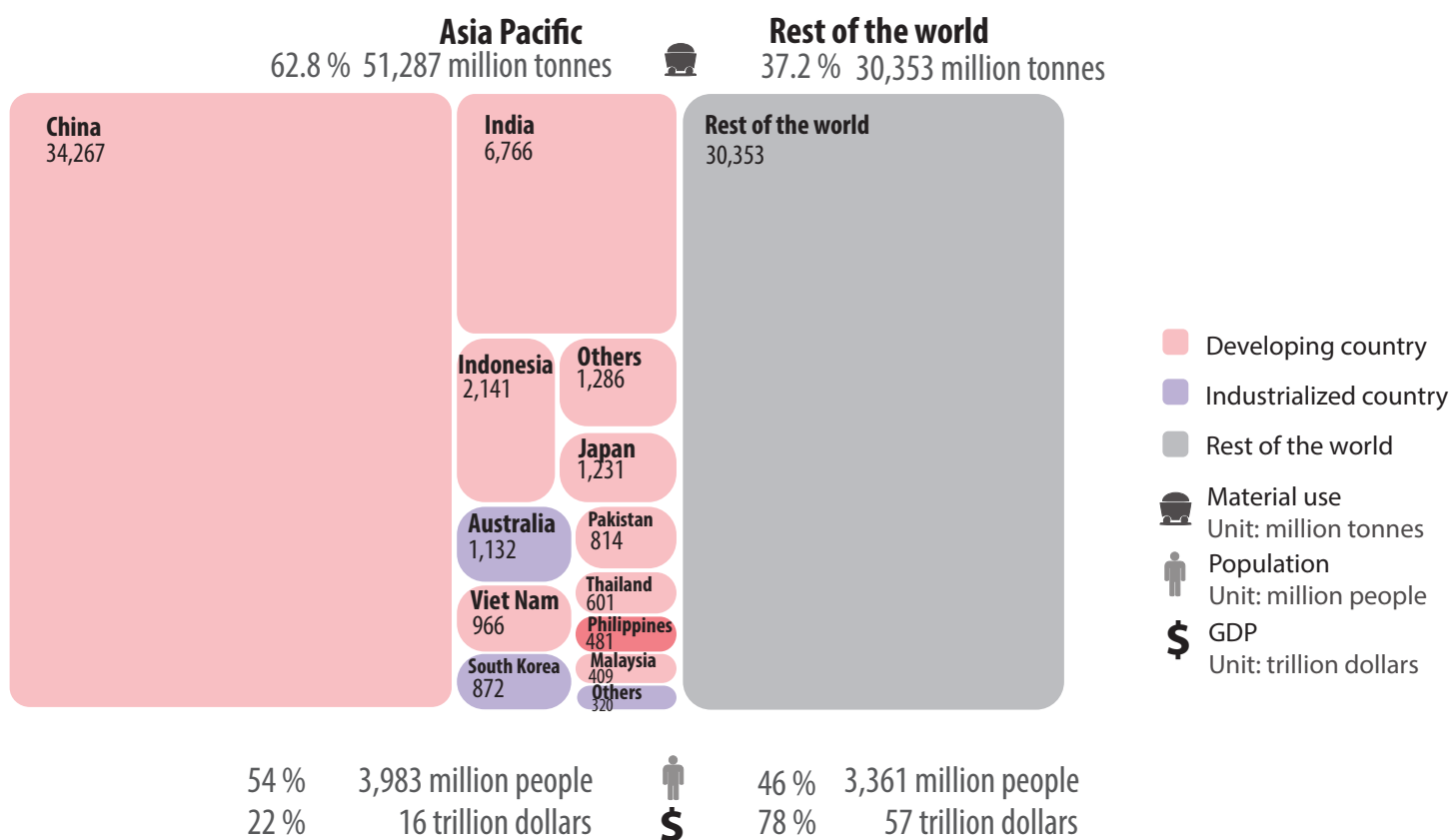
These materials underpin human nutrition and health, fuel energy systems and provide the structural base for buildings, transport networks, vehicles and all consumer goods.

The SDGs relevant to materials are:

SDG Target	IAEG Indicator	Philippines		Asia-Pacific Developing	
		2010	2015	2010	2015
8.4 – Resource efficiency and decouple economic growth from environmental degradation	8.4.1 and 12.2.1 – Material Footprint				
	Total (<i>million tonnes</i>)	364	489	28,833	40,729
	Per capita (<i>tonnes</i>)	3.9	4.8	7.9	10.8
	Per dollar (<i>Kilograms per dollar</i>)	2.8	2.8	4.4	4.5
12.2 – Sustainable management and efficient use of natural resources	8.4.2 and 12.2.2 – Domestic Material Consumption				
	Total (<i>million tonnes</i>)	358	481	33,885	47,813
	Per capita (<i>tonnes</i>)	3.8	4.7	9.3	12.7
	Per dollar (<i>Kilograms per dollar</i>)	2.7	2.7	5.2	5.3

IAEG indicator 12.2.2:

Philippines has a domestic material consumption of 481 million tonnes of materials per year. It grew by 34.3% between 2010 and 2015.



IAEG indicator 12.2.1:

Philippines's Domestic Material Consumption is 482 million tonnes. This consists of 463 million tonnes of extraction from its environment, and 70 million tonnes of imports. From that we subtract the 51 tonnes of materials that were exported.

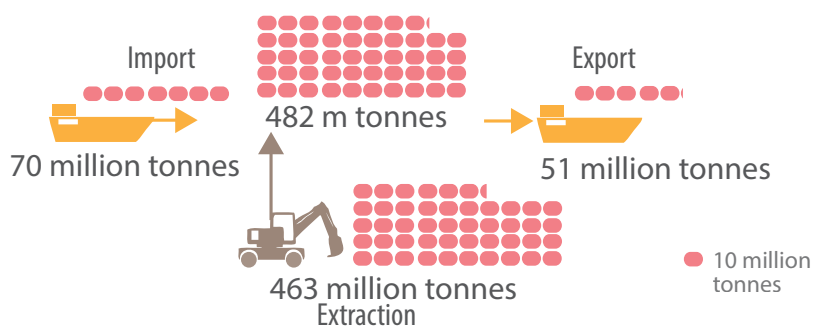
IAEG indicator 12.2.2:

Philippines uses 2.7 kilograms per dollar – this is called material intensity. It is 52% lower than other developing asia pacific countries.

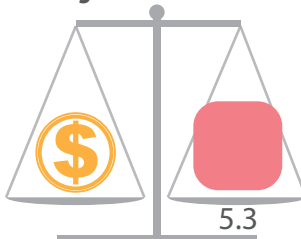
IAEG indicator 12.2.1

What about material footprint per capita in 2015?

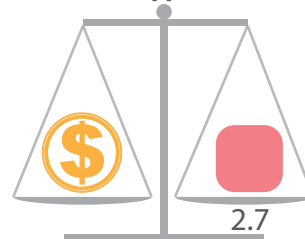
Domestic Material Consumption



Average in the Asia-Pacific



Philippines



Units: Kilograms per dollar

Material

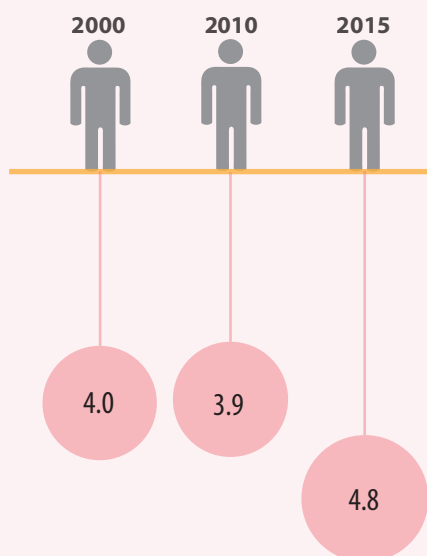
1 USD



The rise of per capita material footprint

(Unit: tonnes per person)

Material footprint



If we only look at Philippines's material use for its own consumption, and exclude materials used to make exports, then we have the Material Footprint. For the Philippines, the total Material Footprint was 489 million tonnes in 2015, which almost equal to the total Domestic Material Consumption.

This is 4.8 tonnes per capita per year. It is about a quarter of the regional average, but grew 23% in the past 5 years alone.

(Unit: tonnes per person)

Material footprint

40

76



Energy

Energy use is measured with the indicator primary energy supply. This indicator reports the total amount of energy (in joules) available to businesses and households in an economy by summing up domestically produced energy and energy imports and subtracting energy exports. The supply of primary energy may come from different energy sources including coal, petroleum, natural gas, uranium, and renewable energy sources such as hydro, solar and wind. Electricity is only included if it is exported or imported – in all other cases it is derived from one of the energy sources already measured.

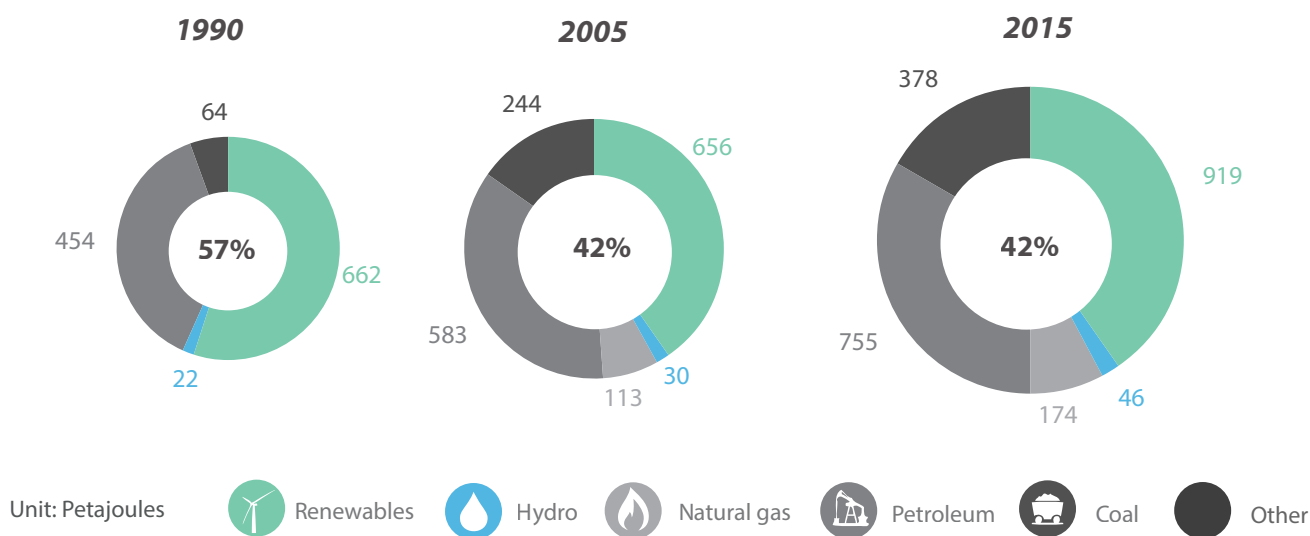
The SDGs relevant to materials are:

SDG Target	IAEG Indicator	Philippines		Asia-Pacific Developing	
		2010	2015	2010	2015
7.2 – Increase share of renewable energy	7.2.1 – Renewable energy share in total primary energy supply ³ (percentage)	39.9%	42.5%	17.7%	18.32%
7.3 – Improve energy efficiency	7.3.1 – Energy Intensity (Megajoules per dollar)	12.9	12.9	25.0	25.1

IAEG indicator 7.2.1:

Philippines used 2,272 petajoules of energy in 2015. Of this, 42.5% was renewable.

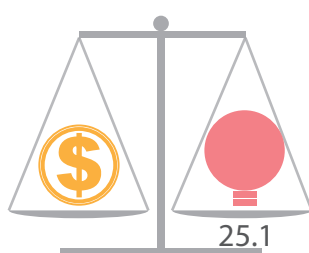
The amount of renewable energy grew each year, but the amount of non-renewable energy grew faster, therefore the share of renewable energy is declining.



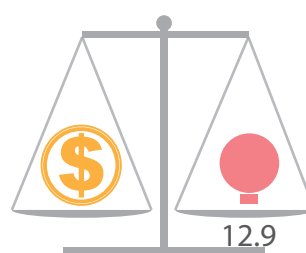
IAEG indicator 7.3.1:

The Philippines energy intensity is 12.9 megajoules per dollar GDP, which is half of the average of the Asia-Pacific region (25.1 megajoules per dollar). At the economy-wide level the Philippines are more energy efficient than many other Asia-Pacific developing countries.

Average in the Asia-Pacific



Philippines



Units: Megajoules per dollar

Energy

1 USD

³ For this report we include "renewables" and "hydro" as renewable energy sources.



Trade

No country is 100% self sufficient in its resource use. Each country imports products that complement domestic supplies, and exports products to generate export earnings. SDG target 17.11 calls on developing countries to increase their share of global exports, measured in economic value. Countries may wish to monitor the amount of natural resources that are exported as well as the value. This will determine whether developing countries are able to increase their share of exports by adding value to their natural resource exports or by increasing the physical amount of exports.

The SDGs relevant to materials are:

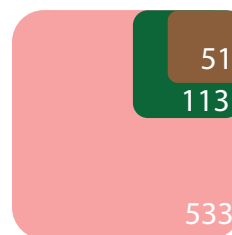
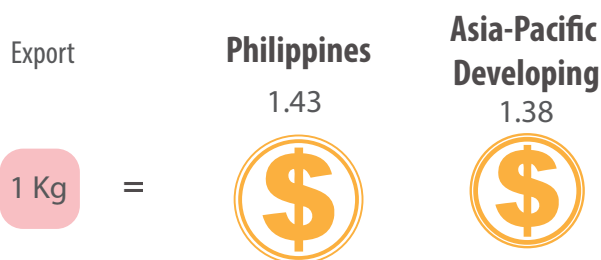
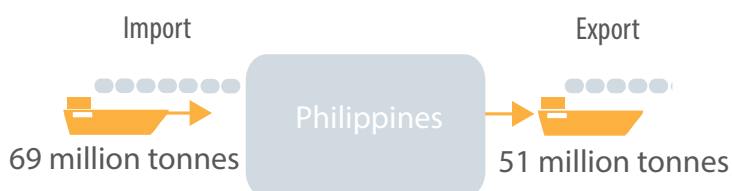
SDG Target	IAEG Indicator	Philippines		Asia-Pacific Developing	
		2010	2015	2010	2015
17.11 – Exports of developing countries	17.11.1 – Developing countries and least developed countries export value				
	Exports (<i>million dollars</i>)	61,990	73,452	2,299,614	3,189,657
	Exports (<i>million tonnes</i>)	38	51	1,706	2,305
	Unit price of exports (<i>dollars per kilogram</i>)	1.6	1.4	1.3	1.4

Philippines exported 51 million tonnes of materials in 2015. On a per capita basis, this is 504 kilograms per year.

In 2015 the value of exports was 73 billion dollars in total, or 722 dollars per capita. This was less than the average value across Asia-Pacific region (844 dollars per capita).

The unit price of exports was \$1.43 per kg, slightly higher than the regional average of \$1.38 per kg.

The footprint of the exports was 113 million tonnes in 2015, which was 21% of materials entering into Philippines's economy.



- **Materials exported:** 51 million tonnes
- **Materials needed to produce exports:** 113 million tonnes
- **Materials entering Philippines's economy:** 533 million tonnes



Water

Unlike other natural resources, water is often reused multiple times in the same year. Furthermore, the great majority of it is extracted from sources which will replenish themselves naturally, via the hydrological cycle, so issues of its usage are really those of managing a renewable resource flow rather than managing a depleting non-renewable resource stock. The water use indicator presented here reports total fresh water abstractions for use in agriculture, industry and in the residential sector, from all surface and underground sources. Direct rain fed onto crops is not included. The total water withdrawals indicator by itself is not an indicator of water stress as it does not include information on the natural availability of water in the region where withdrawals take place.

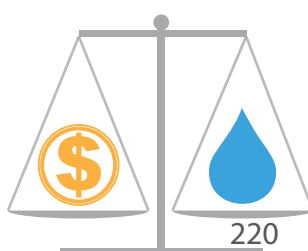
The SDGs relevant to materials are:

SDG Target	IAEG Indicator	Philippines		Asia-Pacific Developing	
		2010	2015	2010	2015
6.4 – Increase water-use efficiency	6.4.1 – Water Intensity (<i>litres per US dollar</i>)	622	463	304	220

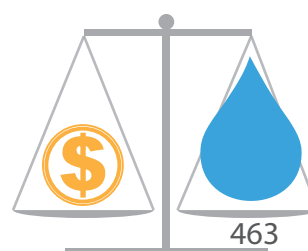
IAEG indicator 6.4.1:

Philippines used 463 liters of water per dollar in 2015. This is more than double the average for Asia-Pacific developing countries.

Average in the Asia-Pacific



Philippines



Units: litres
per dollar

Water

1 USD

Want to know more information?

Indicators for Resource Efficient and Green Asia

<http://www.unep.org/asiapacificindicators>

Indicators data

<http://uneplive.unep.org/>

UNEP

www.unep.org

SWITCH-Asia

<http://www.switch-asia.eu/news/indicators-for-a-resource-efficient-and-green-asia-and-the-pacific>



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