Pakistan

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THE GLOBAL GOALS For Sustainable Development

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 Pakistan	Year 2015 Asia-Pacific Developing
6 CLEAN WATER AND SANITATION	**6.4** – Increase water-use efficiency	**6.4.1** – **Water Intensity** *(litres per US dollar)*	1,070	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] *(percentage)*	36.9%	18.3%
	7.3 – Improve energy efficiency	**7.3.1 Energy Intensity** *(megajoules per dollar)*	25.4	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 *(million tonnes)*	577	40,728
		Per capita *(tonnes)*	3.1	10.8
		Per dollar *(Kilograms per dollar)*	3.4	4.5
12 RESPONSIBLE CONSUMPTION AND PRODUCTION	**12.2** – Sustainable management and efficient use of natural resources	**8.4.2** and **12.2.2** – **Domestic Material Consumption**		
		Total *(million tonnes)*	814	47,813
		Per capita *(tonnes)*	4.3	12.7
		Per dollar *(kilograms per dollar)*	4.7	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 *(million dollars)*	21,573	3,189,657
		Exports (*million tonnes*)	32.9	2,304
		Unit price of exports *(dollars per kilogram)*	0.7	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.

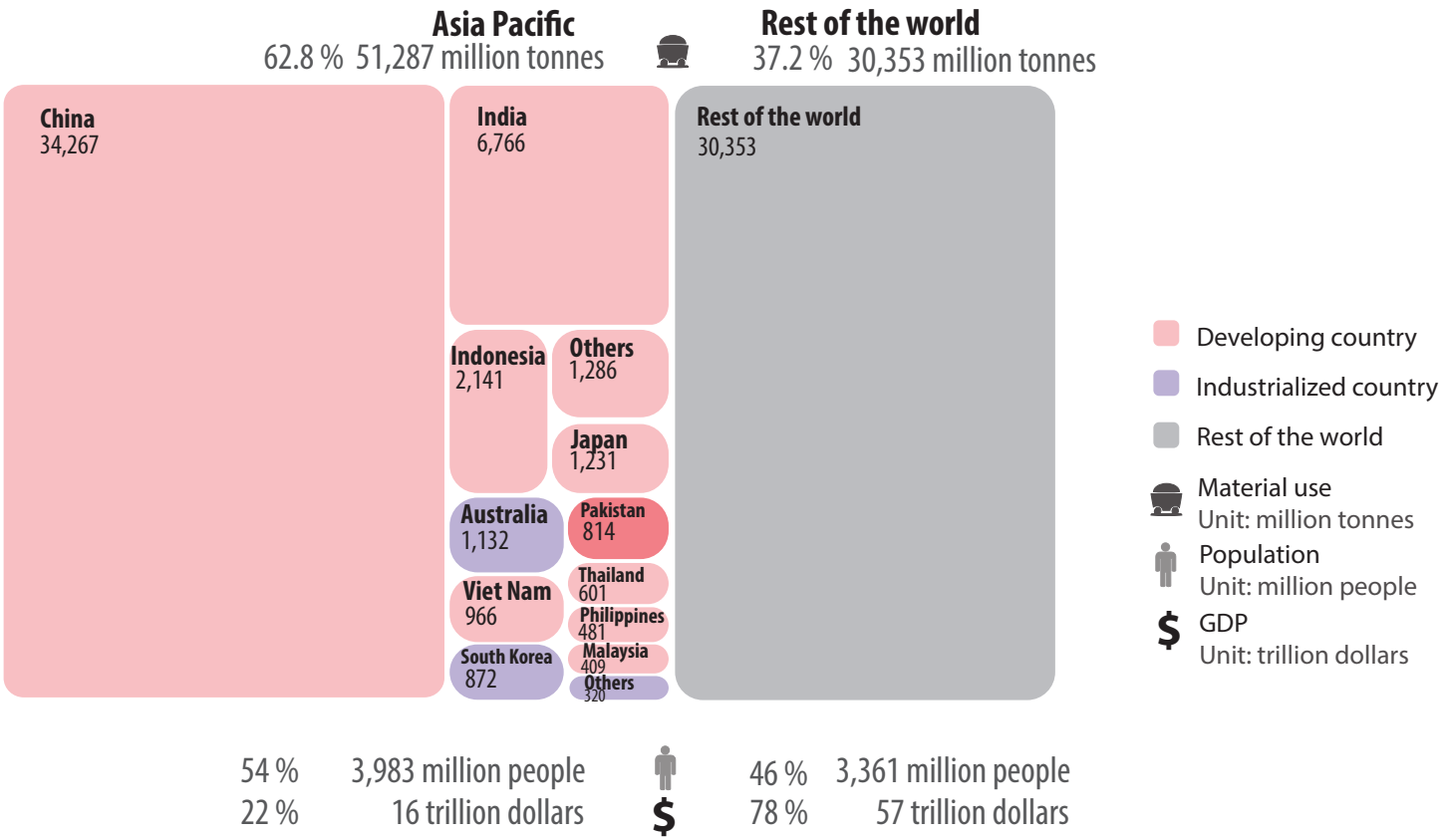
These materials underpin human nutrition and health, fuel energy systems and provide the structural base for buildings, transport networks, vehicles and all consumer goods.

The SDGs relevant to materials are:

SDG Target	IAEG Indicator	Pakistan 2010	Pakistan 2015	Asia-Pacific Developing 2010	Asia-Pacific Developing 2015
8.4 – Resource efficiency and decouple economic growth from environmental degradation	**8.4.1** and **12.2.1** – **Material Footprint**				
	Total *(million tonnes)*	469	577	28,833	40,729
	Per capita *(tonnes)*	2.7	3.1	7.9	10.8
	Per dollar *(Kilograms per dollar)*	3.4	3.4	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 *(million tonnes)*	661	814	33,885	47,813
	Per capita *(tonnes)*	3.8	4.3	9.3	12.7
	Per dollar *(Kilograms per dollar)*	4.7	4.7	5.2	5.3

IAEG indicator 12.2.2:

Pakistan has a domestic material consumption of 814 million tonnes of materials per year. It grew by 23% between 2010 and 2015.



IAEG indicator 12.2.1:

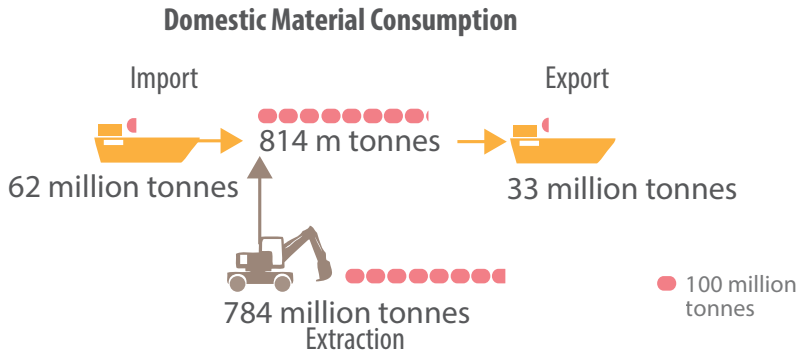
Pakistan's Domestic Material Consumption is 813 million tonnes. This consists of 784 million tonnes of extraction from its environment, and 62 million tonnes of imports. From that we subtract the 33 tonnes of materials that were exported.

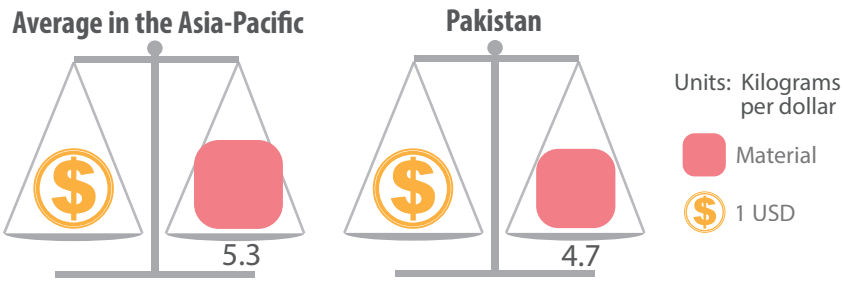
IAEG indicator 12.2.2:

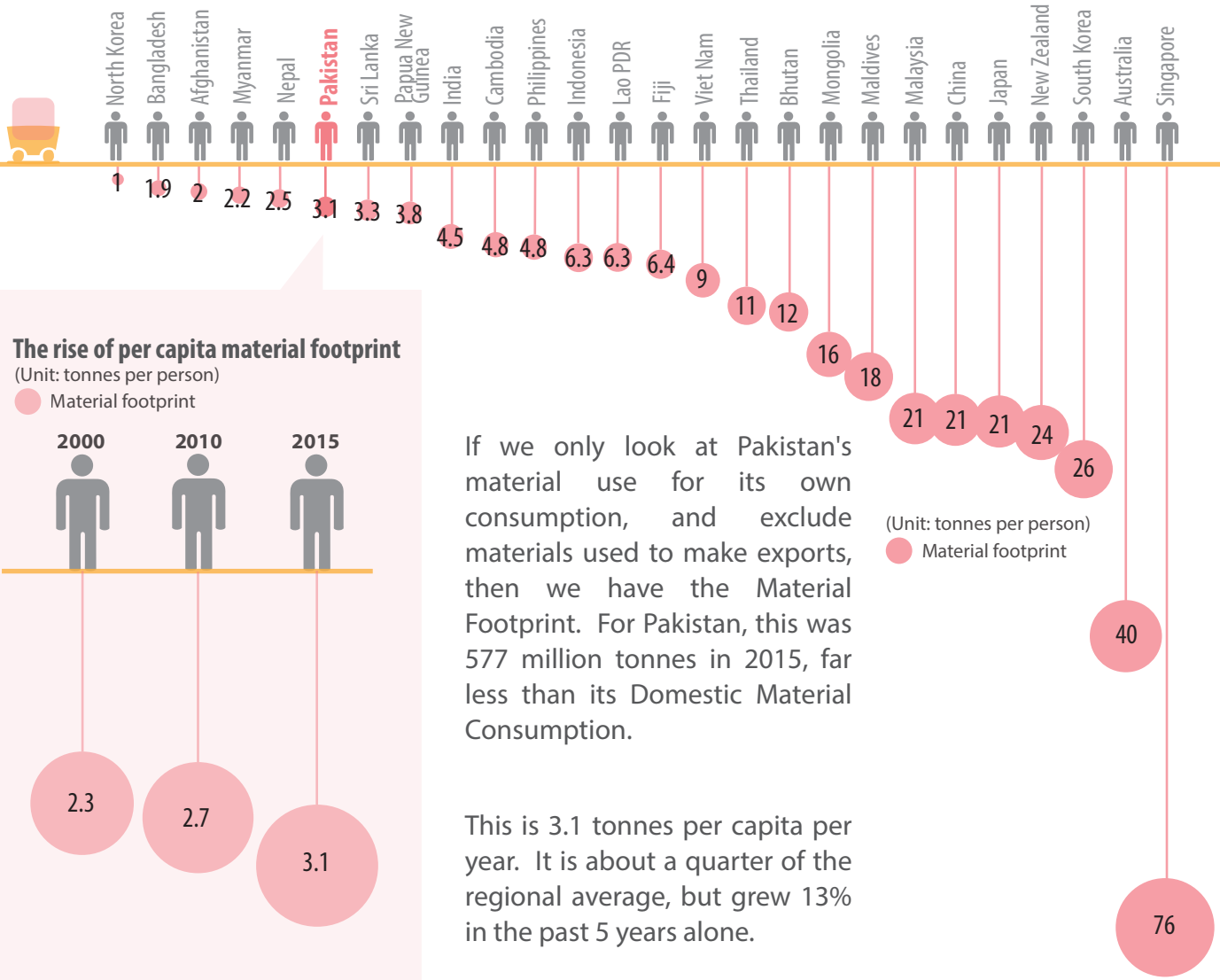
Pakistan uses 4.7 kilograms per dollar – this is called material intensity. It is higher than the average for other Asia-Pacific developing countries (5.3 kilograms per dollar).

IAEG indicator 12.2.1

What about material footprint per capita in 2015?







If we only look at Pakistan's material use for its own consumption, and exclude materials used to make exports, then we have the Material Footprint. For Pakistan, this was 577 million tonnes in 2015, far less than its Domestic Material Consumption.

This is 3.1 tonnes per capita per year. It is about a quarter of the regional average, but grew 13% in the past 5 years alone.

7 AFFORDABLE AND CLEAN ENERGY

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 domesticallyproduced 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.

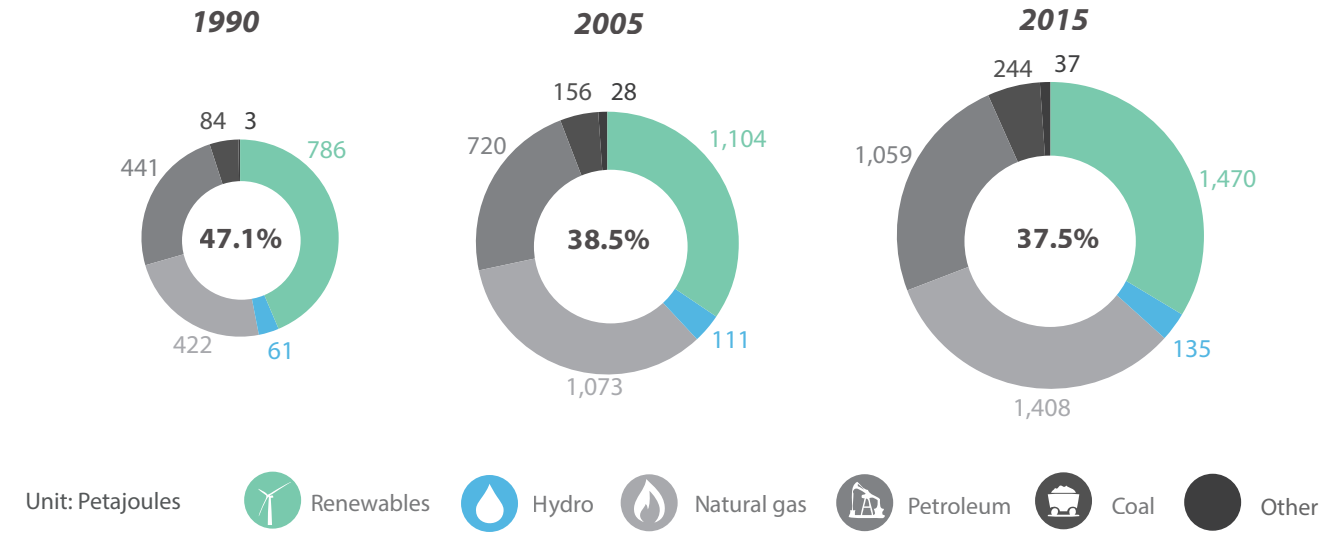
The SDGs relevant to materials are:

SDG Target	IAEG Indicator	Pakistan		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)*	37.5%	36.9%	17.7%	18.32%
7.3 – Improve energy efficiency	**7.3.1** – **Energy Intensity** *(Megajoules per dollar)*	25.4	25.4	25.0	25.1

IAEG indicator 7.2.1:

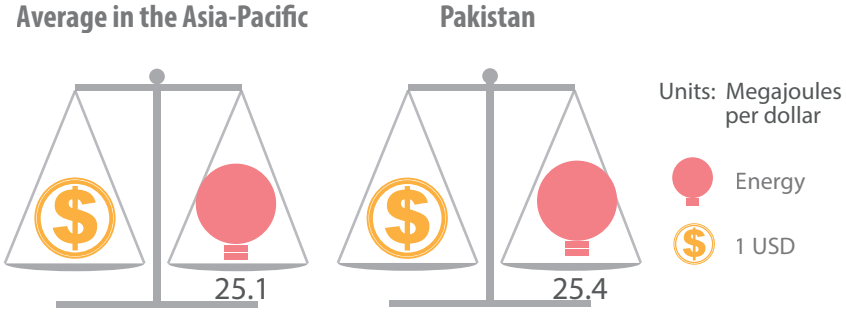
Pakistan used 4,353 petajoules of energy in 2015. Of this, 37% was renewable.

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:

Pakistan's energy intensity is 25.4 megajoules per dollar GDP. Pakistan's energy intensity is comparable with the average for Asia-Pacific developing countries.



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

Trade

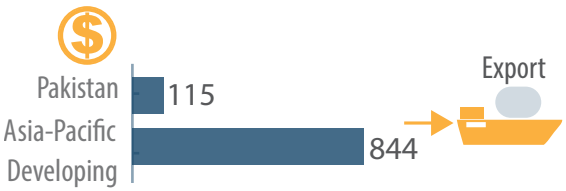
No country is 100% self sufficient in its resource use. Each country imports products that complement domestic supplies, and exports products to generate export earnings. SDG target 17.11 calls on developing countries to increase their share of global exports, measured in economic value. Countries may 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	Pakistan		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 *(million dollars)*	20,401	21,573	2,299,614	3,189,657
	Exports (*million tonnes*)	27	33	1,706	2,305
	Unit price of exports *(dollars per kilogram)*	0.8	0.7	1.3	1.4

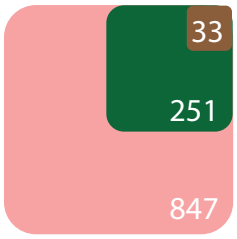
Pakistan exported 33 million tonnes of materials in 2015. On a per capita basis, this is 175 kilograms per year.

In 2015 the value of exports was 22 billion dollars in total, or 115 dollars per capita. Pakistan's exports per capita are much less than the average for Asia-Pacific developing countries (844 dollars per capita).



The unit price for exports was $0.66 per kg, which is lower than the regional average of $1.33kg.

The footprint of the exports was 251 million tonnes in 2015, which was 30% of materials entering into Pakistan's economy.



Materials exported: 33 million tonnes
Materials needed to produce exports: 251 million tonnes
Materials entering Pakistan's economy: 847 million tonnes

Water

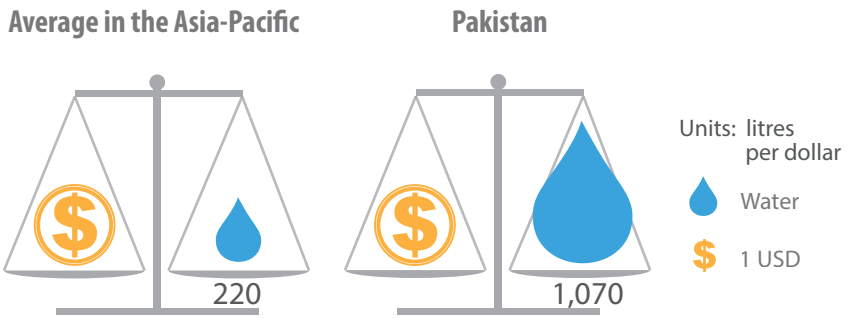
Unlike other natural resources, water is often reused multiple times in the same year. Furthermore, the great majority of it is extracted from sources which will replenish themselves naturally, via the hydrological cycle, so issues of its usage are really those of managing a renewable resource flow rather 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	Pakistan		Asia-Pacific Developing	
		2010	*2015*	*2010*	*2015*
6.4 – Increase water-use efficiency	**6.4.1** – **Water Intensity** *(litres per US dollar)*	1,318	1,070	304	220

IAEG indicator 6.4.1:

Pakistan used 1,070 liters of water per dollar in 2015. This is more than four times the average for Asia-Pacific developing countries.



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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