



ANNEX 1: ASSESSING GLOBAL RESOURCE USE - TABLES AND FIGURES FOR MORE INFORMATION

Table A.1. Domestic extraction by 13 material sub-categories, 1970–2017, million tonnes

Table A2 Material flow indicators and targets in Japan’s 3rd Fundamental Plan for Establishing a Sound Material Cycle Society

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Figure A0.1. Material imports by (a) regions and (b) income groups, 1970-2017, million tonnes

Figure A.0.2. Material exports by (a) regions and (b) country income groups, 1970–2017, million tonnes

Table A1 Domestic extraction by 13 material sub-categories, 1970–2017, million tonnes

	1970	1980	1990	2000	2010	2017	CAGR ¹
Crops	3,325	4,036	5,206	6,197	7,843	9,472	2.3%
Crop residues	2,222	2,721	3,546	3,919	4,936	6,120	2.2%
Grazed biomass and fodder crops	1,561	1,954	2,545	3,219	4,266	4,482	2.3%
Wild catch and harvest	62	66	82	91	87	91	0.8%
Wood	1,545	1,703	1,918	2,137	2,198	2,345	0.9%
Ferrous ores	763	894	982	1,091	2,638	3,938	3.6%
Non-ferrous ores	1,792	2,029	2,869	3,681	4,496	5,176	2.3%
Non-metallic minerals – construction dominant	8,731	11,448	15,180	21,936	34,064	40,068	3.3%
Non-metallic minerals – industrial or agricultural dominant	470	781	874	927	1,258	1,610	2.7%
Coal	3,055	3,764	4,549	4,600	7,198	8,009	2.1%
Oil shale and tar sands	-	7	33	28	62	80	6.9% ²
Natural gas	716	1,036	1,411	1,729	2,274	2,601	2.8%
Petroleum	2,403	3,092	3,152	3,586	3,933	4,357	1.3%
Total	26,645	33,531	42,347	53,141	72,253	88,349	2.6%

1. Compounding Annual Growth Rate, taken over full period 1970 to 2017.

2. Period over which CAGR for "Oil shale and tar sands" is estimated is from 1980 to 2017.

Table A2 Material flow indicators and targets in Japan's 3rd Fundamental Plan for Establishing a Sound Material Cycle Society

Type of Indicator	Indicator	Target for FY2020
Indicators with targets	Inflow	Resource productivity
	Circulation	Cyclical use rate
	Outflow	Final disposal amount
		460,000yen/t
		17%
		17 million t
Supplementary indicators with target / Indicators for monitoring		
Inflow	Resource productivity based on raw material equivalent	
	Resource productivity excluding non-metallic minerals	680,000yen/t
	Resource productivity of fossil fuels	
	Biomass resource input	
	Resource productivity of manufacturing / Resource productivity by industry	
Circulation	Cyclical use rate measured at outflow	45%
	Exports and imports of cyclical resources	-
	Cyclical use rate of metal resources based on TMR, taking hidden flows into consideration	-
Others	Greenhouse gas emissions from waste sector	-

Table A3 Effort indicators and targets in Japan's 3rd Fundamental Plan for Establishing a Sound Material Cycle Society

Type of indicators	Indicator	Target for FY 2020	
Inflow	Domestic material consumption per capita		
	Amount of municipal solid waste	Household waste generation per capita per day	25% reduction from FY2000
		Business waste generation	35% reduction from FY2000
		Ratio of municipalities that adopted unit pricing for household waste	
	Average use years of durable consumer goods		
	2R efforts	Ratio of people that refrain from using plastic shopping bags (ratio of "my bag" users)	
		Ratio of shipments of products for refills/replacements	
		Ratio of bottles reuse	
		Market size of reuse and sharing	
		Recycling rate of municipal solid waste	
	Circulation	Number of municipalities that collect small sized WEEE / Percentage of population covered by collection systems of small sized WEEE	
Power generation and heat utilization at waste incineration facilities		Number of power generation facilities	
		Capacity of power generation facilities	
		Total power generation	
		Number of heat utilization facilities	
		Total heat utilization	
		Outflow	Number of certified supreme businesses for industrial waste treatment
Diffusion rate of electronic manifests	50% (target for FY2016)		
Number / amount of illegal dumping			
Others	Indicators focusing on policy areas		
	Efforts toward the establishment of a sound material-cycle society in local areas		



		Number of fundamental plans developed by municipalities	
		Number of efforts made toward the establishment of local circular zones	
		Number of municipalities cooperating with cities in other countries for the establishment of a sound material-cycle society.	
	Indicators focusing on efforts by related entities		
	Citizens		
		Awareness and actions related to a sound material-cycle society	
		Awareness for reduction of waste generation, cyclical use, and green purchase	Approximately 90%
		Implementation rate of specific 3R actions	Approx. 20% increase over FY2012 Census
	Businesses		
		Implementation ratio of environmental management, etc.	
		Market size of a sound material cycle society business	66 trillion yen (Approximately double from FY 2000)
	Government		
	Indicators in individual recycling laws	(individual)	

Figure A1. Material imports by (a) regions and (b) income groups, 1970-2017, million tonnes

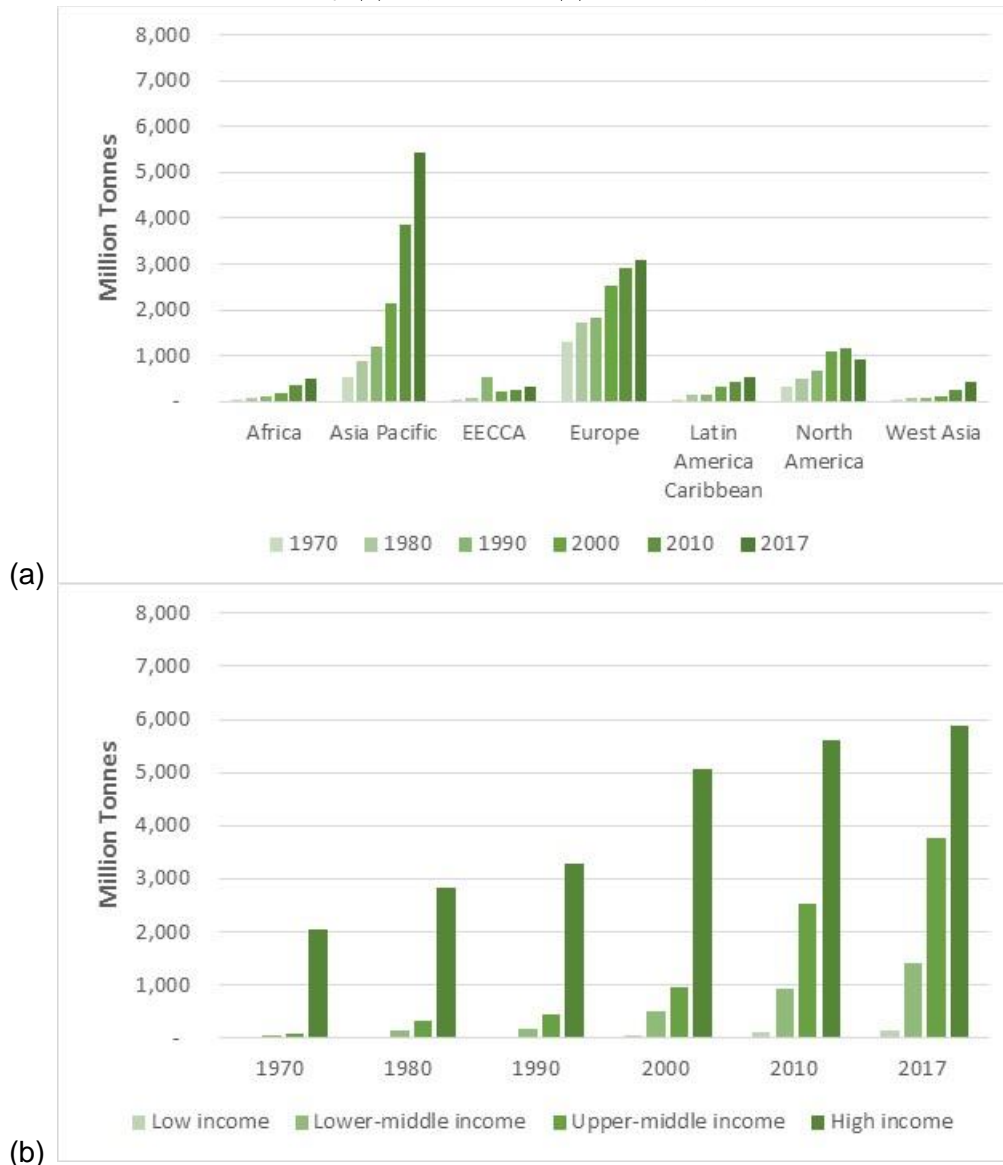
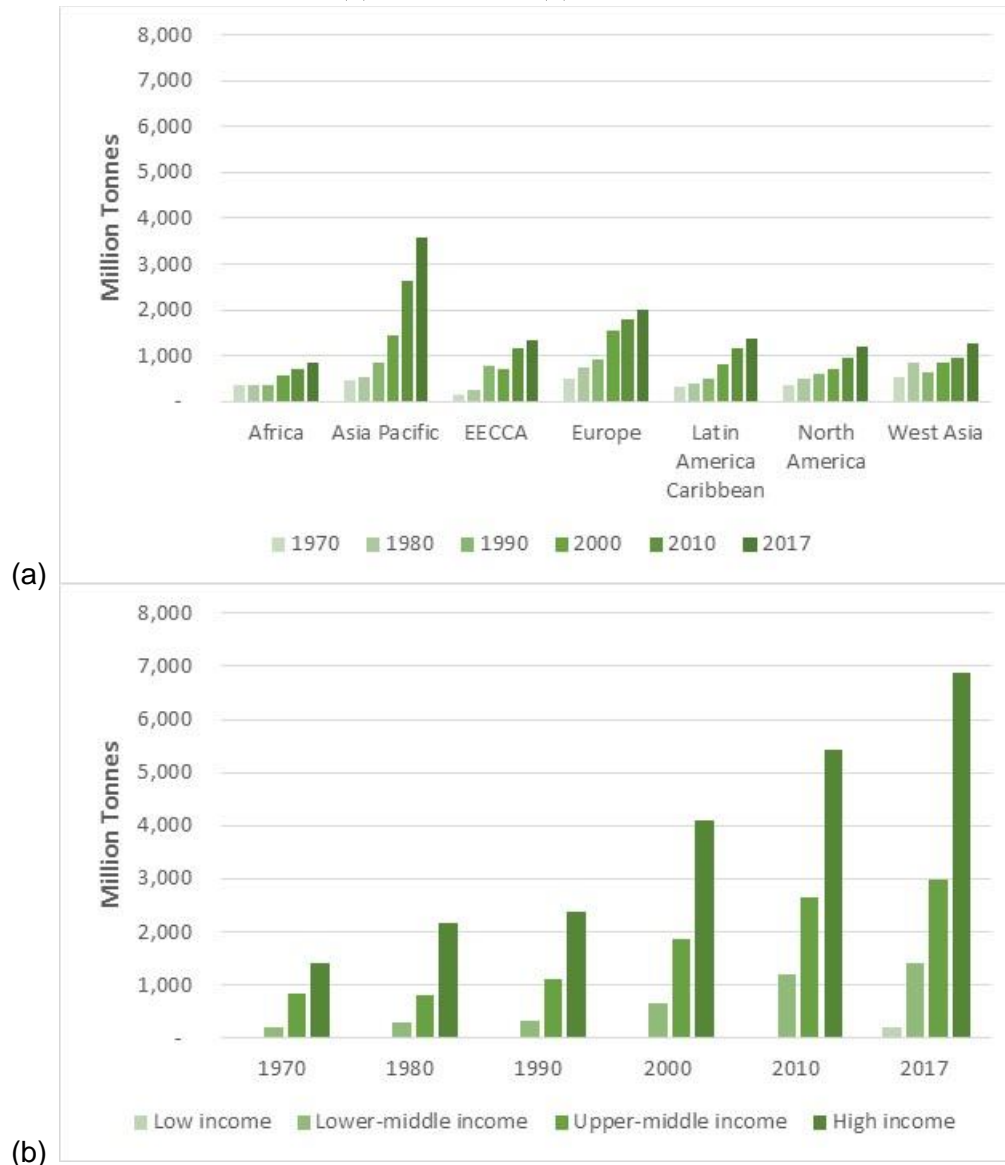


Figure A2Material exports by (a) regions and (b) country income groups, 1970–2017, million tonnes





International
Resource
Panel

