

Exports of Australian waste-derived products and wastes in March 2020

2 June 2020 Joe Pickin and Sally Donovan

Blue Environment is commissioned by the Department of Agriculture, Water and the Environment to analyse and report on monthly exports of waste-derived products (e.g. recycled plastic chip) and materials that are still wastes. The data is provided by the Australian Bureau of Statistics¹, and comprises monthly data covering the previous six months, including any updates to previously reported data. On a tonnage basis nearly all these exports are materials recovered from waste streams for recycling or energy recovery², but a small portion is hazardous waste sent for treatment.

Summary

In March 2020, Australia exported about 450,000 tonnes of waste-derived products and wastes with a value of \$343 million³. This represents an increase of 34% in tonnage and a corresponding increase of 49% in value compared to the previous month. The exported quantity of scrap metals increased strongly from 169,000 tonnes in February to 289,000 tonnes in March. Exports of scrap paper and cardboard also increased but the glass, plastics, tyres, hazardous and other categories declined.

About 136,000 tonnes was exported in March in codes that could be affected by the COAG export bans. This is 30% of the total exports of waste-derived products and waste.

Comparison by destination

The top 10 recipients of Australian waste-derived products and wastes between July 2018 and March 2020 were Indonesia, India, Vietnam, China (including Hong Kong and Macau), Bangladesh, Malaysia, Thailand, the Republic of Korea, Taiwan and Pakistan. Pakistan appears in the top 10 for the first time in these monthly reports, replacing New Zealand. In March 2020, 88% by weight of Australia's exported waste-derived products and wastes were sent to these countries.

Table 1 (overleaf) compares exports of waste-derived products and wastes to these top 10 countries in February and March 2020 and includes each country's 2018-19 monthly average. March 2020 exports to Indonesia, India, Bangladesh, Malaysia, Taiwan and Pakistan were higher than their 2018-19 monthly averages, and those to Thailand were the same. Exports to the other countries were lower. Exports to Bangladesh continued to increase from 16,000 tonnes in January to 42,000 tonnes in February, and to 72,000 tonnes in March 2020. Exports to India also increased significantly from 65,000 tonnes in February to 92,000 tonnes in March.

March 2020 exports of waste-derived products and wastes to Bangladesh and Taiwan were dominated by scrap metals (100% and 91% respectively). Metals also made up the majority of exports received by Vietnam (84%), Pakistan (82%), Republic of Korea (74%) and India (64%). The remainder to the Republic of Korea was mainly hazardous waste (12%), while paper and cardboard was the next largest export to India (26%), Vietnam (15%) and Pakistan (11%). Exports to Indonesia and Thailand were split between metals (51% and 49% respectively) and paper and cardboard (47% and 44%). Exports to China were mainly paper and cardboard (72%) with some metals (22%). Exports to Malaysia were more varied, with 37% paper and cardboard, 27% metals, 14% other and 13% plastics.

¹ Data in these summaries is sourced from the Australian Bureau of Statistics and is originally entered by exporters or their agents. It cannot be guaranteed that exporters use the correct codes or values for their exports, so this data should be used with caution. Data may be revised for up to six months after initial publication as customs declarations are amended by individual traders. Due to these revisions, there may be discrepancies between this and preceding reports.

² Some of these recovered materials contain a proportion of contamination (or 'off-spec' content) that needs to be extracted before the material can be used.

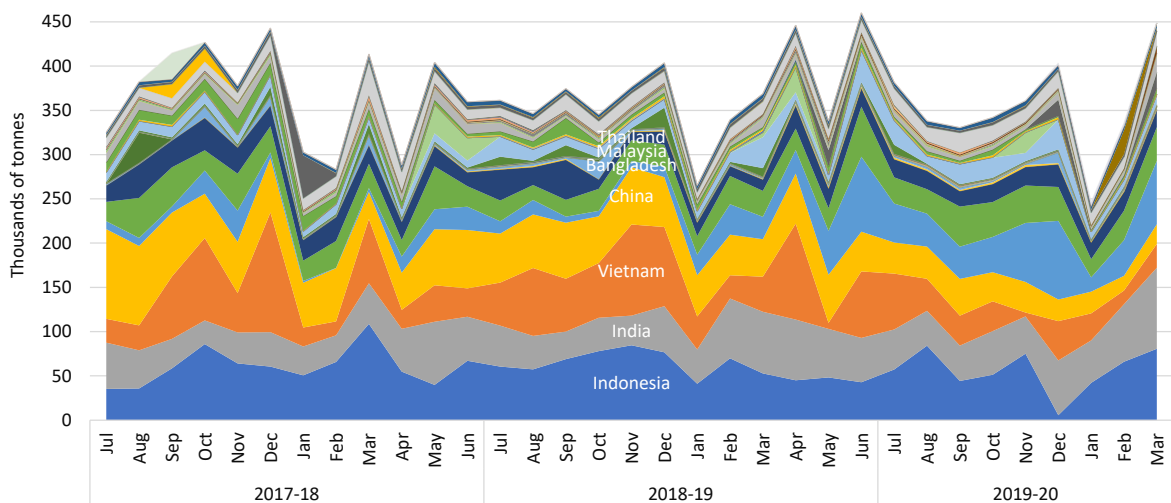
³ Dollar values refer to Australian dollars.

Table 1 Comparison of month-to-month exports of waste-derived products and wastes by destination

Export destination (ranked by tonnes since July 2018)	Tonnes					2018-19 monthly avg	Value			2018-19 monthly avg
	Mar-20		Feb-20		Mar-20		Feb-20	change		
	Tonnes	% of total	Tonnes	% change	\$ mil		\$ mil			
1 Indonesia	81,000	18%	66,000	22%	60,000	\$24.3	\$17.3	41%	\$23.7	
2 India	92,000	20%	65,000	41%	49,000	\$54.4	\$38.1	43%	\$33.5	
3 Vietnam	27,000	6%	15,000	74%	61,000	\$12.0	\$5.2	133%	\$29.8	
4 China	22,000	5%	17,000	34%	54,000	\$33.6	\$21.7	54%	\$41.6	
5 Bangladesh	72,000	16%	40,000	78%	25,000	\$35.8	\$19.0	88%	\$11.2	
6 Malaysia	38,000	8%	33,000	15%	27,000	\$16.7	\$14.0	19%	\$10.4	
7 Thailand	20,000	4%	21,000	-8%	20,000	\$8.7	\$6.1	43%	\$7.9	
8 Korea, Republic of	9,000	2%	8,000	14%	15,000	\$19.7	\$24.3	-19%	\$32.6	
9 Taiwan	17,000	4%	13,000	32%	13,000	\$9.6	\$6.8	42%	\$8.3	
10 Pakistan	19,000	4%	4,000	363%	5,000	\$10.4	\$3.2	229%	\$3.3	
Top 10 total	395,000	88%	282,000	40%	329,000	\$225.2	\$155.7	45%	\$202.1	
Monthly total	450,000	-	336,000	34%	369,000	\$343.2	\$229.8	49%	\$258.8	

Figure 1 presents the monthly trend in tonnes of exports of waste-derived products and waste from Australia by destination between July 2017 and March 2020. Exports to Indonesia plummeted in the second half of 2019, reaching a low of 5,600 tonnes in December 2019. Since then they have climbed back to mid-2019 levels. Exports to India reached 92,000 tonnes in March 2020, their highest level over the 33 months of data analysed. Exports to Vietnam were back up to 27,000 tonnes after dropping to 15,000 tonnes in February 2020, but remain far below levels in late 2018. Exports to China increased to 22,000 tonnes after reaching a low of 17,000 tonnes in February. They also remain much lower than previous months. Exports to Bangladesh climbed markedly from 40,000 tonnes in February to 72,000 tonnes. Overall, no clear trend is apparent in the overall quantity of waste exports over the 30-month timeframe.

Figure 1 Monthly exports of waste-derived products and waste from Australia by destination, ranked by total quantity received, July 2018 to March 2020



The reported value of exports for March 2020 was \$343 million, increasing from \$230 million in February. This is a new high for waste export value over the 33-month data period, the previous being \$321 million in December 2019 and well above the 2018-19 monthly average of \$258 million. This can be attributed to the large share of high value metals in March 2020 exports.

Comparison by material

Table 2 presents a comparison of export tonnage and value by material type between February and March 2020 and the 2018-19 monthly average.

Table 2 Comparison of export tonnage and value by material

	Mar-20		Feb-20		2018-19 monthly avg		Mar-20		Feb-20		2018-19 monthly avg	
	tonnes	% of total	tonnes	change	tonnes	%	\$ mil	% of total	\$ mil	change	\$ mil	%
Glass	4,600	1%	5,300	-12%	1,300		\$0.28	<1%	\$0.33	-17%	\$0.06	
Paper & cardboard	116,000	26%	100,000	16%	93,000		\$23.1	7%	\$14.9	55%	\$19.5	
Plastics	10,000	2%	8,700	15%	16,000		\$2.9	<1%	\$2.3	25%	\$3.6	
Tyres	5,600	1%	7,300	-23%	10,000		\$1.6	<1%	\$1.4	15%	\$1.8	
Metals	289,000	64%	169,000	71%	220,000		\$248	72%	\$144	72%	\$180.3	
Hazardous (excl. tyres)	4,200	1%	4,500	-7%	5,600		\$42.5	12%	\$42.0	1%	\$33.2	
Other	20,000	4%	41,000	-50%	24,000		\$25.0	7%	\$25.0	0%	\$20.3	
Total	450,000	-	336,000	34%	369,000		\$343.2	-	\$229.8	49%	\$258.8	

Comparison with the previous month –

- **Glass** exports fell to 4,600 tonnes but remain at historically high levels. Exports were mainly to India (93%) with a small portion to Bangladesh (7%).
- **Paper and cardboard** exports increased to 116,000 tonnes, their highest level since December 2018. Exports went mainly to Indonesia (41%), Malaysia (17%), India (13%) and China (13%). Unbleached kraft comprised 52% and unsorted scrap 41%. The export value of \$23.1 million represented 7% of the total value, despite paper and cardboard accounting for 26% of the tonnage.
- Exports of waste **plastics** increased 15% compared to February 2020. The largest recipients were Malaysia (53%) and China (11%) with small amounts going to 17 other countries. Exported scrap plastics comprised mixed plastics (68%) and ethylenes (31%). Exports were valued at \$2.9 million, 25% more than February 2020.
- Exports of waste **tyres** fell 23% to 5,600 tonnes. The main recipients were India (28%), Malaysia (39%) and the U.S. (14%). Despite the reduction in tonnage, the reported value of waste tyres increased from \$1.4 to \$1.6 million.
- Monthly **metal** exports rose sharply from 169,000 to 289,000 tonnes, 71% higher than February, and remain the largest portion of all export waste and waste-derived products at 64%. The total value was \$248 million, 72% of the total value of waste exports. The main recipients were Bangladesh (25%), India (24%) and Indonesia (11%).
- Exports of **hazardous waste** (excluding tyres) decreased from 4,500 to 4,200 tonnes between February and March 2020. The largest fraction was lead waste and scrap (57%), followed by slag from the manufacture of iron and steel (12%), and lead-containing slag, ash and residues (10%). Exports were valued at \$42.5 million, 12% of the total March value. The reported value per tonne of some common hazardous waste categories remains anomalously high, as has been noted since the November 2019 version of this analysis.
- Exports in the **other wastes** category declined from 41,000 tonnes in February to 20,000 tonnes in March 2020. The value remained stable due to an increase in the value of materials in this category. The largest sub-categories were cereal residues (23%), sawdust and wood waste (22%), worn clothes and textiles (19%) and animal products (17%).

Comparison with the 2018-19 monthly average – March 2020 exports in the glass, paper and cardboard, and metal waste categories were higher than their 2018-19 monthly average; all others were lower. Overall, exports of waste in March 2020 were higher than the monthly average for 2018-19 due to the large amount of metals exports. The value of all categories except plastic and

tyres were higher than the monthly average for 2018-19, leading to a significantly higher overall value of \$343 million compared to the 2018-19 average of \$259 million.

Figure 2 presents the monthly trend in exports of waste from Australia in tonnes by material type between July 2017 and March 2020. Scrap metal exports remain volatile. Exports of scrap paper and cardboard have been much more stable but have now climbed to a 15-month high. Scrap tyre exports have halved this financial year. Exports of recovered plastics fell in early 2017-18, recovered to peak in early 2019, then fell to a low in August. In February and March 2020 they increased steadily but remain below the 2018-19 monthly average.

Figure 3 presents monthly trends in the average unit prices of key waste exports between July 2017 and March 2020. Over this timeframe prices for:

- metals have been volatile but remained stable so far in 2020
- paper and cardboard have been fairly stable, but declined in late 2019 then recovered in early 2020 to \$199/tonne in March 2020
- glass have oscillated, but were stable for much of 2019 before dropping in December and rising again in January 2020
- plastics have been driven by low-grade mixed materials that comprise most of the exported tonnes – prices for this grade fell from an average of \$263/t over 2017-18 to a low of \$137/t in February 2019 then climbed back, standing at \$285/t in March 2020.

Figure 2 Monthly exports of waste-derived products and wastes from Australia by material type, July 2017 – March 2020

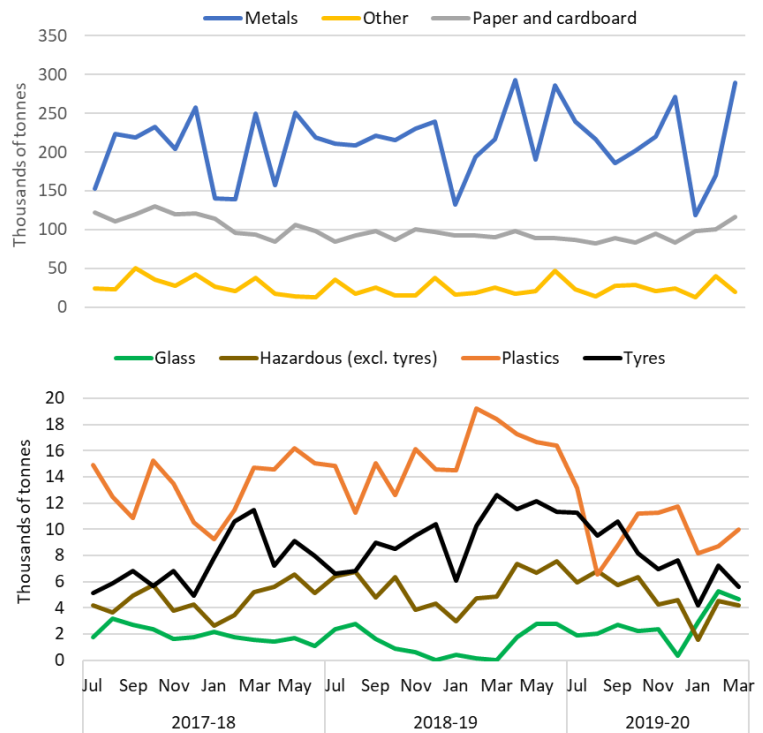
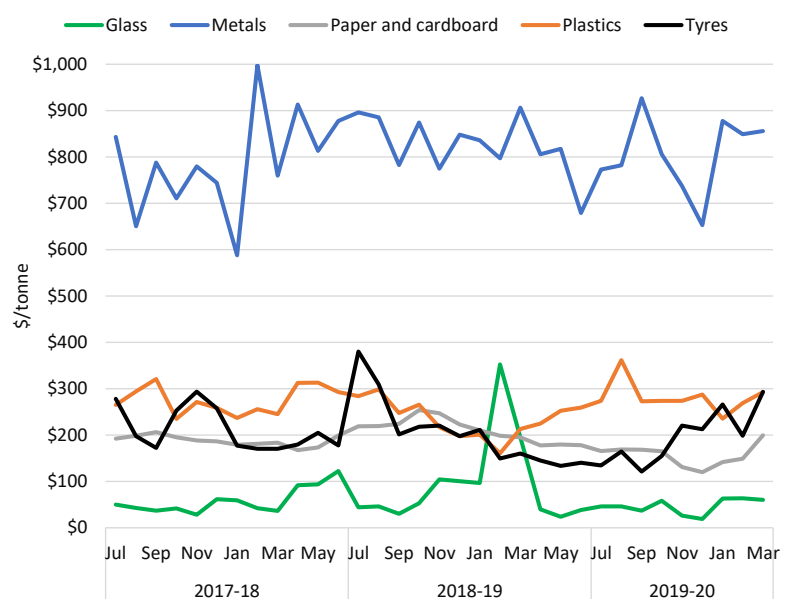


Figure 3 Comparison of unit prices by material (in \$/t), July 2017 – March 2020



COAG waste export ban

A March 2020 meeting of the Council of Australian Governments agreed to a response strategy for implementing bans on exporting waste glass, paper, plastics and tyres not processed into a value-added material. The relevant materials, dates and main export codes are shown in Table 3.

Table 3 Material types facing export bans

Material	Ban date	AHECC code	AHECC description	Mar-20 exports in this code (tonnes)	Estimated % of tonnes to be banned ⁴
Glass	Jul 2020	70010000	Cullet and other waste and scrap of glass; glass in the mass	4,600	100% ⁵
Paper and cardboard	Jul 2022	47071000	Recovered (waste and scrap), unbleached, kraft paper or paperboard or corrugated paper or paperboard	57,000	32% ⁶
		47072000	Recovered (waste and scrap) paper or paperboard, made mainly of bleached chemical pulp, not coloured in the mass	60	
		47073000	Recovered (waste and scrap) paper or paperboard, made mainly of mechanical pulp (e.g. newspapers, journals and similar)	7,900	
		47079000	Waste and scrap paper or paperboard (incl. unsorted waste & scrap) (excl. unbleached kraft or corrugated (470710); that made mainly from bleached chemical pulp, not coloured in the mass; or made mainly of mechanical pulp)	51,000	
Plastics	Jul 2022	39151000	Waste, parings and scrap, of polymers of ethylene	4,000	100% ⁷
		39152000	Waste, parings and scrap, of polymers of styrene	0	
		39153000	Waste, parings and scrap, of polymers of vinyl chloride	0	
	Jul 2021	39159092	Waste, parings and scrap, of plastics (excl. those of polymers of ethylene, styrene or vinyl chloride)	6,000	83%
Whole tyres	Dec 2021	40040000	Waste, parings and scrap of rubber (excl. of hard rubber) and powders and granules obtained therefrom	3,500	44% ⁸
		40122000	Used pneumatic rubber tyres, whether or not subject to recutting or regrooving	1,200	100% ⁸
		40129000	Solid or cushion rubber tyres, rubber tyre treads (incl. interchangeable tyre treads) and rubber tyre flaps	890	6% ⁸

Tonnes have been rounded

In March 2020, about 136,000 tonnes of waste-derived products and wastes were exported within the codes listed above, up from 126,000 in February. This represents about 30% of the total waste exported for the month.

⁴ Based on the 2018-19 characteristics of these materials.

⁵ It is believed that most or all of this product is derived from municipal recycling collections.

⁶ Comprises the proportion of material in AHECC code 47079000. However, significant miscoding is apparent in the data.

⁷ Assumes no material was sorted and processed to the extent that will be required for future export.

⁸ The Australian Border Force data on tyres exports differed from the ABS data, and neither were consistent with industry-reported export quantities.

The current status of waste import restrictions

Following China's lead, other Asian countries have flagged or implemented restrictions on the import of waste-derived products and wastes. These are described in Table 4. The information presented has been compiled based on publicly available sources, sometimes translated from languages other than English.

Table 4 Status of waste import restrictions

Country	Scope of restrictions	Announced & implemented	Associated exports (tonnes) Types	2018-19		Impact and uncertainties
				2018-19	Mar 20	
China	Declared restrictions and then, in April 2018, a ban on 32 types of waste-derived products ⁹ . From 1 July 2019, import restrictions were placed on eight solid waste codes pertaining to metals ¹⁰ . China is now reported to have enshrined in law its intention to stop all imports of waste, with the aim of full implementation by the end of 2020 ¹¹ . In the meantime, it continues to issue permits for imports of waste fibre and will allow 4.5 million tonnes to be imported this year. Quotas are also still being issued for metals ^{12 13 14} .	Ann.: Jul & Nov-17, Apr-18, Jul-19, Dec-19, Jan-20 Imp.: Jan & Mar-18, Dec-18, Dec-19	Plastic, paper, metals, other	643,000 (53,600/month)	22,000	Impact evident (2016-17 exports averaged 105,300/month and averaged 62,000/month in 2017-18).
India	Import of scrap plastics banned from August 2019 ¹⁵ . Also covers areas previously exempt under the 2016 ban such as special economic zones (SEZ) and export-oriented units (EOU) ¹⁶ . Excludes electrical/electronic assemblies or components that are defective which can be imported within a year of export. A six-month extension has been granted to three SEZs which allows plastic scrap to be imported until May 31 2020 ¹⁷ . India set a contamination limit of 1% for recovered paper years ago. It now intends to enforce this by randomly inspecting 5 mixed paper bales per container ¹⁸ . India's Central Pollution Control Board has been reviewing the pyrolysis industry and has ordered the closure of 270 plants that were not compliant with environmental regulations ¹⁹ . It is expected this will lead to a subsequent restriction on the import of waste tyres in the near future ²⁰ .	Ann.: Mar-19 Imp.: Mar-19, Aug-19 for importers currently exempt under SEZs and EOUs.	Plastic	700 (60/month)	41	Impact uncertain.

⁹ Ministry of Commerce, State Development & Reform Commission (incl. former State Development Planning Commission), General Administration of Customs (2018) *Announcement No. 6 [2018] of the Ministry of Ecology and Environment, the Ministry of Commerce, the National Development and Reform Commission and the General Administration of Customs*

¹⁰ Ministry of Ecology and Environment of the People's Republic of China (2018) [Announcement on adjusting the catalogue of imported waste management](#)

¹¹ Resource Recycling (5 May 2020) [China moves closer to complete import ban](#)

¹² Bureau of International Recycling (24 December 2019) [Chinese quotas for waste & scrap imports: full list of 1st batch 2020](#)

¹³ Bureau of International Recycling (8 January 2020) [Chinese quotas for waste & scrap imports: full list of 2nd batch 2020](#)

¹⁴ Recycling Today (10 January 2020) [China issues second batch of scrap import quotas](#)

¹⁵ Business Today, (24 June 2019) [India bans import of plastic waste from August this year to curb pollution](#)

¹⁶ Ministry of Environment, Forest and Climate Change (2019) [Amendment in Hazardous Waste \(Management & Transboundary Movement Rules, 2016\)](#)

¹⁷ Business Standard, (2 December 2019) [Govt grants six month extension to plastic scrap imports in three SEZs](#)

¹⁸ Waste Dive, (15 January 2020), [India to enforce 1% contamination rate on paper imports, conduct random inspections](#)

¹⁹ India legal, (6 January 2020), [NGT calls for review of CPCB's report on pyrolysis units.](#)

²⁰ Tyre and Rubber recycling, (22 September 2019), [Near total ban on waste tyre imports imminent in India](#)

Country	Scope of restrictions	Announced & implemented	Associated exports (tonnes)			Impact and uncertainties
			Types	2018-19	Mar 20	
Indonesia	Temporary moratorium on all waste scrap imports commenced 23 November 2019 as the new Ministerial Regulation No. 84/2019 on the <i>Provisions on the import of non-hazardous and non-toxic waste for industrial purposes</i> is implemented ²¹ . All shipments subject to inspection dates after 22 November 2019 have been stopped. Under the new regulation, transshipments are banned. Only direct shipments from exporters that have obtained a permit (which would be subject to occasional verification) and have inspected containers prior to shipment would be allowed. Scrap imports to be restricted to arrive at eight ports only in Jakarta, Semarang, Surabaya (2), Makassar, Medan, Batam and Cilegon. The set contamination thresholds are unclear with industry interpretation suggesting it could be 0% which contradicts the previous suggestion of 2% with a two-year transition to 0.5%. Illegally imported plastic waste to be returned back to exporters ²² . Reportedly rejected eight containers of 'contaminated' paper and plastic material in July 2019. Announced in September 2019 that another 100 containers of contaminated plastic material to be sent back to Australia ²³ . Determined in February 2020 to ease the rules on metal scrap imports due to mill supply shortages ²⁴ .	Ann.: Apr-19 Imp.: Nov-19	Plastics, Paper and cardboard, metals, glass, hazardous waste, tyres, other.	725,700 (60,500/month)	81,000	Impact uncertain.
Korea, Republic of	Announced on 17 February 2020 that it plans to reduce wastepaper imports. Details are not yet available.	Ann.: Feb-20	Paper and cardboard	13,200 (1,100/mth)	127	
Malaysia	Import permits revoked from 114 factories that process imported plastic waste ^{25,26} . Import of non-recyclable plastic waste to be banned by 2021 ²⁷ . Contaminated, mislabelled or illegally imported plastic waste loads to be sent back to source ^{28, 29} . Malaysia has continued returning contaminated containers of plastic waste to countries of origin with 150 returned and another 110 to be sent back by midyear. Enforcement at ports has improved and over 200 illegal plastic recycling facilities closed down in a bid to crackdown on illegal waste imports ³⁰ .	Jul-18.	Plastic	55,200 (4,600/month)	5,300	No impact apparent.
Philippines	To issue a 3-month moratorium on recyclable waste imports including scrap metals, plastics, electronic waste, used oil and fly ash ³¹ .	Ann.: Aug 19	Plastic, metals	18,800 (1600/mth)	360	Impact uncertain.

²¹ Argus (21 November 2019), [Indonesia suspends scrap imports amid new policy](#)

²² VOA news (2019) [Indonesia vows to send back illegal plastic waste](#)

²³ Sydney Morning Herald (18 September 2019), [Indonesia to ship 100 containers of contaminated waste to Australia](#)

²⁴ Indonesia will ease rules on scrap metal imports, <https://www.wastetodaymagazine.com/article/indonesia-will-ease-rules-on-import-of-scrap-metal/>

²⁵ FMT News (2018) [Permits to import plastic waste for 114 factories revoked](#)

²⁶ Waste Management Review (2018) [Malaysia, Thailand and Vietnam waste imports crackdown](#)

²⁷ The Star Online (2018) [Govt to ban import of all non-recyclable waste](#)

²⁸ The Australian (2019) [Australia would vet any waste returns, says Ley](#)

²⁹ Malaymail (2019) [Yeo Bee Yin moots RM1,500 charge per shipping container to cut illegal imported plastic waste](#)

³⁰ EcoWatch (21 January 2020) [Malaysia sends plastic waste back to 13 wealthy countries, says it won't be 'the rubbish dump of the world'](#).

³¹ ABS-CBN News (11 August 2019) ['Pirma na lang kulang': DENR all set to implement ban on waste imports](#)

Country	Scope of restrictions	Announced & implemented	Associated exports (tonnes)			Impact and uncertainties
			Types	2018-19	Mar 20	
Taiwan	Import of plastic waste is banned. Exceptions are made to licensed local firms that import plastic waste originating from their own overseas production processes or are a single material, but not from original production processes ³² . Paper imports restricted to only deinked paper, kraft paper, corrugated paper or cardboard that is not bleached. Import of waste newspapers and magazines banned.	Ann.: Aug-18 Imp.: Oct-18	Plastic, paper	17,700 (1,500/month)	1,700	No impact apparent.
Thailand	Revoked a broad plastic scrap import allowance, meaning plastic waste and scrap is banned from import by 2021 ^{33,34,35} . Looking to ban e-waste imports within 2 years ²⁶ . In January 2020, a new subcommittee was set up to ensure the proposed bans can be achieved, and will not be prevented by loopholes ³⁶ .	Ann. Aug-18, plastic imp. Aug-18, e-waste <2 yrs.	Plastic	11,200 (900/month)	500	No impact apparent Announcement available in Thai only.
Vietnam	Tighter controls over imports of plastic, paper and metals. Accepted only if importers prove their shipment meets specified environmental standards and there is capacity to process the materials ³⁷ . No new licences issued for waste imports ²⁶ . Plastic scrap imports to be banned by 2025 ³⁸ . Under new national standard QCVN 32: 2019/BTNMT, import of e-waste plastics (e.g. cases of TVs and computers) would be forbidden ³⁹ . From 22 February 2019, all imports through road and railway border gates to be banned ⁴⁰ . Import of mixed metal waste (containing any plastic, paper, other non-metallic metals) now understood to be restricted. Composition of metal waste needs to be 99% metal to be allowed in ⁴¹ .	Ann. in Aug-18 apparently implemented. Mixed metal waste restricted from Oct 2018.	Plastic, paper, metals	732,600 (61,100/month)	27,000	Has apparently affected imports of scrap plastic and metal from Australia. Environmental reference standards are unavailable in English.

³² Taipei Times (2018) [New waste plastic, paper import rules to take effect](#)

³³ The Nation (2018) [Import of plastic waste banned](#)

³⁴ CIWM (2018) [Thailand set to ban plastic waste imports by 2021](#)

³⁵ [Government Gazette Thailand](#) (2018)

³⁶ Bangkok Post (2020) [Waste plastic imports 'to be banned'](#)

³⁷ Vietnam Briefing (2018) [Vietnam to Restrict Surging Scrap Imports](#)

³⁸ VN Express International (2019) [Vietnam to end plastic scrap imports from 2025](#)

³⁹ Ministry of Natural Resources and Environment of the Socialist Republic of Vietnam (2018) [Vietnam to ban imports of plastic from used electronics](#)

⁴⁰ VietnamPlus (2019) [Scrap imports through road, railway border gates to be banned](#), Ministry of Information and Communications

⁴¹ S&P Global Platts (2019) [Vietnam's Jan scrap imports plunge amid stricter government rules](#)