

## Exports of Australian waste-derived products and wastes in July 2019

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Blue Environment is commissioned by the Department of the Environment and Energy to analyse and report on monthly exports of waste-derived products (e.g. recycled plastic chip) and materials that are still wastes<sup>1</sup>. The data is provided by the Australian Bureau of Statistics<sup>2</sup>, 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<sup>3</sup> or energy recovery, but a small portion is hazardous waste sent for treatment.

### Summary

In July 2019, Australia exported about 395,000 tonnes of waste-derived products and wastes with a value of \$A267 million. This represents a 14% reduction in the quantity and a 3% increase in the value of these exports compared with June 2019. The tonnage decrease is attributable to a fall in scrap metals exports, reversing a significant increase in the previous month. Exports of glass, plastic scraps and hazardous waste declined compared to June, while scrap paper and cardboard increased. Exports of waste tyres were similar to the previous month.

About 122,000 tonnes of waste-derived products and waste exported in July could be affected by the COAG export ban. This is 31% of the total waste exported in July.

### Comparison by destination

The top 10 recipients of Australian derived products and wastes between July 2018 and July 2019 were Vietnam, Indonesia, China (including Hong Kong and Macau), India, Malaysia, Bangladesh, Thailand, Korea, Taiwan and New Zealand. In July 2019, 90% by weight of Australia's waste-derived products and wastes were exported to these countries.

Table 1 (overleaf) compares exports of waste-derived products and wastes to these top 10 countries in July and June 2019 and includes each country's 2018-19 monthly average. Exports to most countries were higher than their 2018-19 monthly averages in July, except for China and New Zealand which were lower.

July 2019 exports of waste-derived products and wastes to Bangladesh, Korea, Taiwan and Vietnam were dominated by scrap metals (>70%). Those to India, Indonesia and Thailand were about half metals with most of the remainder recovered paper and cardboard. China received mostly recovered paper and cardboard (77%) and New Zealand mostly organic materials.

<sup>1</sup> This report, the first for 2018-19, revises some export categories previously reported. The revisions are: inclusion of 40129000 *Solid or cushion rubber tyres, rubber tyre treads (incl. interchangeable tyre treads) and rubber tyre flaps* now considered likely to be primarily waste tyres and included in the context of the COAG ban; inclusion of a small proportion of 40122000 *Used pneumatic rubber tyres, whether or not subject to recutting or regrooving* previously assumed to be non-waste; inclusion of 40030000 *Reclaimed rubber, in primary forms or in plates, sheets or strip, whether or not mixed with virgin rubber or other added substances provided that the product has the essential character of reclaimed rubber* now considered likely to be primarily waste; exclusion of all re-exports of electronic goods from waste; exclusion of 6808000 *Panels, boards, tiles, blocks and similar articles of vegetable fibre, of straw or of shavings, chips, particles, sawdust or other waste, of wood, agglomerated with cement, plaster or other mineral binders*; and exclusion of 89080000 *Vessels and other floating structures for breaking up*.

<sup>2</sup> 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 for their exports, so this data should be used with caution.

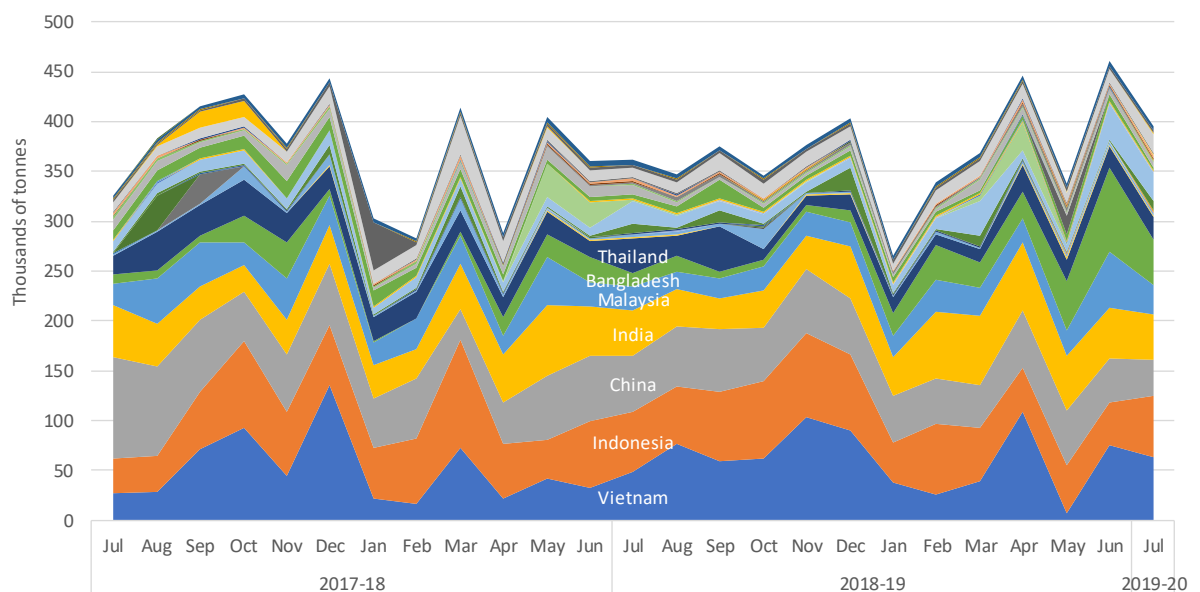
<sup>3</sup> Some of these recovered materials contain a proportion of contamination (or 'off-spec' content) that needs to be extracted before the material can be used.

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					Value			
	Jul-19		Jun-19		2018-19 monthly avg	Jul-19	Jun-19	% change	2018-19 monthly avg
	tonnes	% of total	tonnes	% change		\$ mil	\$ mil		
1 Vietnam	63,000	16%	75,000	-16%	61,000	\$28.5	\$33.9	-16%	\$29.8
2 Indonesia	61,000	15%	43,000	43%	60,000	\$19.8	\$16.2	22%	\$23.7
3 China	36,000	9%	45,000	-20%	54,000	\$30.6	\$28.6	7%	\$41.6
4 India	46,000	12%	50,000	-9%	49,000	\$30.2	\$29.9	1%	\$33.5
5 Malaysia	30,000	8%	57,000	-47%	27,000	\$15.5	\$11.6	34%	\$10.4
6 Bangladesh	45,000	11%	85,000	-47%	25,000	\$19.1	\$36.6	-48%	\$11.2
7 Thailand	23,000	6%	21,000	11%	20,000	\$7.9	\$7.8	2%	\$7.9
8 Korea	28,000	7%	36,000	-23%	15,000	\$48.5	\$23.1	110%	\$32.6
9 Taiwan	19,000	5%	13,000	41%	13,000	\$12.4	\$8.5	45%	\$8.3
10 New Zealand	3,000	1%	7,000	-56%	6,000	\$7.2	\$6.7	8%	\$5.7
<b>Top 10 total</b>	<b>354,000</b>	<b>90%</b>	<b>431,000</b>	<b>-18%</b>	<b>330,000</b>	<b>\$219.8</b>	<b>\$202.9</b>	<b>8%</b>	<b>\$204.5</b>
<b>Monthly total</b>	<b>395,000</b>	<b>-</b>	<b>460,000</b>	<b>-14%</b>	<b>369,000</b>	<b>\$267.2</b>	<b>\$260.4</b>	<b>3%</b>	<b>\$258.8</b>

Figure 1 presents the monthly trend in tonnes of exports of waste-derived materials from Australia by destination between July 2017 and July 2019. Exports to Vietnam have been highly variable over this timeframe, ranging between 7,000 and 135,000 tonnes per month. Exports to Indonesia also varied widely in 2017-18 but have since remained fairly stable. As recorded in previous reports, exports to China fell markedly during much of 2017-18, reaching a low of 31,000 tonnes in March 2018. They subsequently recovered to 66,000 tonnes in June 2018 but declined again over 2019, dropping to 36,000 tonnes in July. Overall, no clear trend is apparent in the overall quantity of waste exports between July 2017 and July 2019.

Figure 1 Monthly exports of waste-derived products and wastes from Australia by destination, ranked by total quantity received, July 2017 – July 2019



Over the same time period, the reported value of exports has ranged between \$A159 million and \$A321 million per month.

## Comparison by material

Table 2 presents a comparison of export tonnage and value by material type between July and June 2019, the monthly average from 2019-20 and 2018-19 and the year to date quantities.

*Table 2 Comparison of export tonnage and value by material*

Material	Tonnes					Value				
	Jul-19 tonnes	% of total	Jun-19 tonnes	% change	2018-19 monthly avg	Jul-19 \$ mil	% of total	Jun-19 \$ mil	% change	2018-19 monthly avg
Glass	1,900	0%	2,700	-30%	1,300	\$0.1	<1%	\$0.1	-16%	\$0.1
Paper and cardboard	94,000	24%	89,000	6%	93,000	\$15.5	6%	\$15.8	-2%	\$19.5
Plastics	14,000	4%	16,000	-11%	16,000	\$4.0	1%	\$4.3	-7%	\$3.6
Tyres	11,000	3%	11,000	-1%	10,000	\$1.5	<1%	\$1.6	-5%	\$1.8
Metals	243,000	62%	286,000	-15%	220,000	\$186.9	70%	\$194.2	-4%	\$180.3
Hazardous (excl. tyres)	6,000	2%	8,000	-21%	6,000	\$39.4	15%	\$23.8	65%	\$33.2
Other	24,000	6%	47,000	-50%	24,000	\$19.8	7%	\$20.6	-4%	\$20.3
<b>Total</b>	<b>395,000</b>	<b>-</b>	<b>460,000</b>	<b>-14%</b>	<b>369,000</b>	<b>\$267.2</b>	<b>-</b>	<b>\$260.4</b>	<b>3%</b>	<b>\$258.8</b>

### *Comparison with the previous month –*

- July 2019 saw a 30% reduction in the export of **glass** compared to the month of June. Malaysia received 85% of our glass exports. The reported value of glass exports in July fell by 16%.
- **Paper and cardboard** quantities increased by 6%. Exports of unbleached kraft (old corrugated containers) slightly declined by 4% but other grades increased. Unbleached kraft and mixed paper made up 94% of scrap paper and cardboard exports. China and Indonesia received 53% of paper and cardboard exports in July 2019. Paper and cardboard exports were valued at \$A15.5 million, slightly lower than the previous month and representing about 6% of the total value of waste exports in July.
- Exports of waste **plastics** declined by 11% in July. Indonesia and Malaysia received 65% of our plastic waste exports. These two countries have received most of Australia's waste plastics since China implemented its export restrictions. Mixed plastics represented 85% of the total. Plastics exports in July were valued at \$A4.0 million which was slightly lower than June.
- Exports of waste **tyres** in July were consistent with the previous month. About 11,000 tonnes were exported in July in the codes known to be dominated by waste tyres. India and Malaysia received 83% of these. Tyre exports were valued at \$A1.5 million in July which is slightly less than the previous month.
- Compared to the month of June, **metal** exports fell by 15% in July. This can mostly be attributed to a decline in 'ferrous waste and scrap' exports to Bangladesh. Exports of the aluminium and copper waste and scrap categories remained consistent. Metal exports contributed to 70% (\$A187 million) of the total value of waste exports for the month.
- Exports of **hazardous waste** (now excluding tyres) decreased in July by 21%. The largest fraction was lead waste and scrap (3,800 tonnes) followed by slag, dross, scalings and other waste from iron or steel manufacturing. Exports of hazardous waste were valued at \$A39 million which represented 15% of the total reported value of waste exports in July.
- Exports in the '**other wastes**' category (now excluding glass) fell sharply in July, mainly due to lower exports of organic materials. Exports of other wastes were valued at about \$A20 million in July.

*Comparison with the 2018-19 monthly average* – Exports of scrap plastics were lower in July than their monthly average for 2018-19, while exports of glass, paper and cardboard, tyres, metals and

hazardous waste excluding tyres were higher. Overall, exports of waste in July 2019 were 7% higher than the monthly average for 2018-19. The reported value of exports for waste glass, plastics, metals and hazardous waste were higher than their monthly average for 2018-19 while paper and cardboard, tyres and other wastes were lower.

Figure 2 presents the monthly trend in exports of waste from Australia in tonnes by material type between July 2017 and July 2019. Scrap metal exports remain volatile. Exports of scrap paper and cardboard and tyres have remained fairly stable since January 2018. Glass has remained stable over the 25-month timeframe. The rise in exports of recovered plastics over the same timeframe may have reached its peak, with falls in the last five months.

Figure 3 presents monthly trends in the unit prices of key waste exports between July 2017 and July 2019. Over this timeframe, average unit prices for metals and paper and cardboard have remained fairly stable. Average prices for waste plastics are driven mainly by the low-grade mixed materials grade, which represent most of the exported tonnes and includes process engineered fuel. Prices for this grade fell from an average of \$263/t over 2017-18 to a low of \$137/t in February 2019 but leaped to \$259 in July 2019.

Figure 2 Monthly exports of waste-derived products and wastes from Australia by material type, July 2017 – July 2019

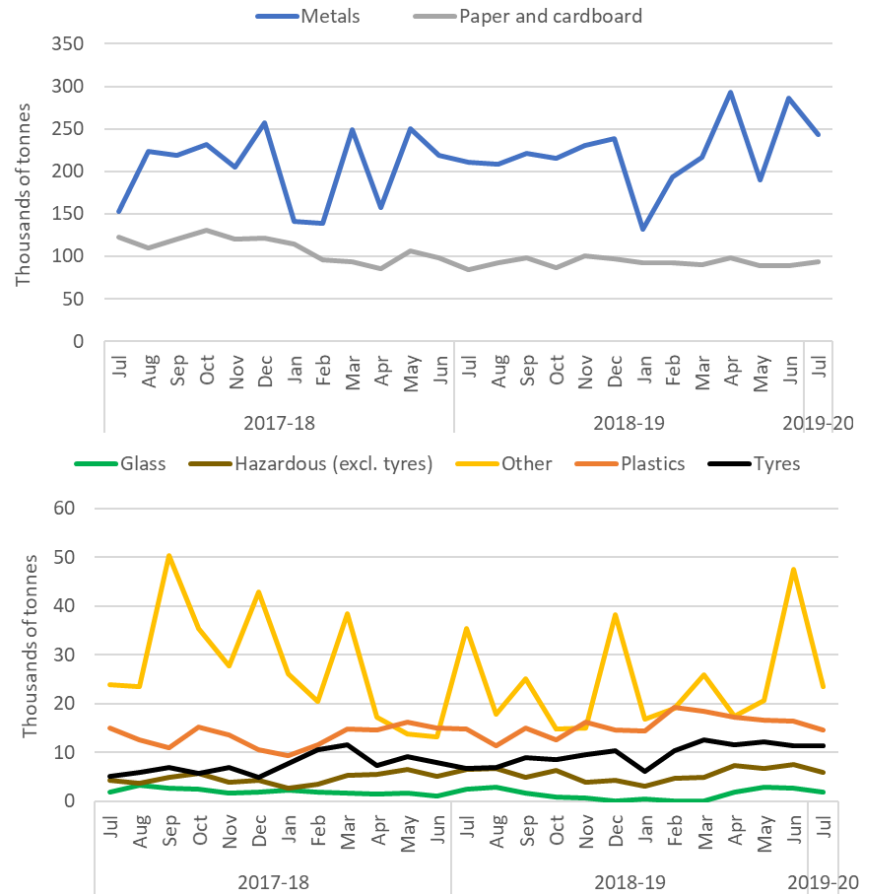
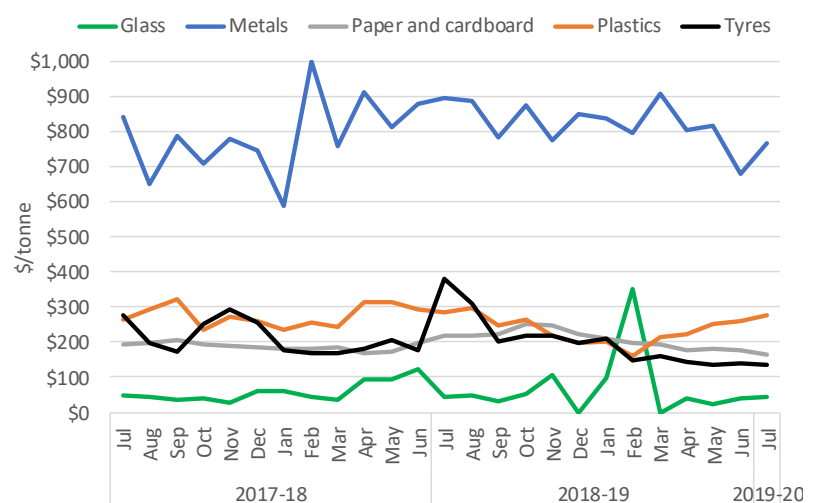


Figure 3 Comparison of unit prices by material (in \$/t), July 2017 – July 2019



## COAG waste export ban

The November 2019 Meeting of Environment Ministers agreed to proceed with bans in the export of waste glass, paper, plastics and tyres that have not been processed into a value-added material. The banned materials, ban dates and codes where they are known to be present are shown in Table 3. Note this may not reflect the final ban design.

*Table 3 Material types facing export bans*

Material	Ban date	AHECC code	AHECC description	Jul-19 exports in this code (tonnes)	Estimated % of tonnes to be banned
Glass	Jul 2020	70010000	Cullet and other waste and scrap of glass; glass in the mass	1,900	100%
Paper and cardboard	Jul 2022	47071000	Recovered (waste and scrap), unbleached, kraft paper or paperboard or corrugated paper or paperboard	51,000	100%
		47072000	Recovered (waste and scrap) paper or paperboard, made mainly of bleached chemical pulp, not coloured in the mass	900	
		47073000	Recovered (waste and scrap) paper or paperboard, made mainly of mechanical pulp (for example, newspapers, journals and similar printed matter)	4,300	
		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)	38,000	
Plastics	Jul 2022	39151000	Waste, parings and scrap, of polymers of ethylene	2,100	100%
		39152000	Waste, parings and scrap, of polymers of styrene	80	
		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)	12,300	
Whole tyres	Dec 2021	40040000	Waste, parings and scrap of rubber (excl. of hard rubber) and powders and granules obtained therefrom	9,300	44% <sup>4</sup>
		40122000	Used pneumatic rubber tyres, whether or not subject to recutting or regrooving	1,200	100% <sup>4</sup>
		40129000	Solid or cushion rubber tyres, rubber tyre treads (incl. interchangeable tyre treads) and rubber tyre flaps	800	6% <sup>4</sup>

In total, about 122,000 tonnes of waste-derived products and wastes were exported in codes likely to be affected by the COAG export ban. This represents 31% of the total waste exported for the month.

<sup>4</sup> Based on an analysis of Australian Border Force exports data for 2018-19. This data set contained differences from the ABS data analysed here, and neither are consistent with industry-reported export quantities. Further investigations are underway at the time of writing.

## The current status of waste import restrictions

Following the lead of China, several 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	Associated exports (tonnes)		Impact and uncertainties
				2018-19	Jul 19	
China	<p>Restricted the import of certain materials covering specific commodity codes, mainly by specifying a threshold contamination rate of 0.5%<sup>5</sup>.</p> <p>A ban (issued in April 2018) on the import of 32 varieties of solid waste codes which were previously restricted. 16 of these are banned from 31 December and the other 16 to take effect from 31 December 2019<sup>6</sup>.</p> <p>From 1 July 2019, import restrictions extended to eight solid waste codes pertaining to metals<sup>7</sup>. China are reviewing the revised Solid Waste Management and Pollution Prevention Law that covers waste imports, which reiterates the complete ban of solid waste import by 2020<sup>8</sup>. Possible import ban on old corrugated cardboard and other fibre grades by 2021<sup>9</sup>.</p>	<p>Ann.: Jul &amp; Nov-17, Apr-18.</p> <p>Imp.: Jan &amp; Mar-18, Dec-18, Dec-19</p>	Plastic, paper, metals, other	643,000 (53,600/month)	35,800	Impact evident (2016-17 exports averaged 105,300/month and averaged 62,000/month in 2017-18)
India	<p>Import of scrap plastics banned from August 2019<sup>10</sup>. Also covers areas that were previously exempt under the 2016 ban such as special economic zones (SEZ) and export-oriented units (EOU)<sup>11</sup>. 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<sup>12</sup>.</p>	<p>Ann.: Mar-19</p> <p>Imp.: Mar-19, Aug-19 for importers currently exempt under SEZs and EOUs.</p>	Plastic	700 (60/month)	0	Impact uncertain.

<sup>5</sup> Blue Environment (2018) [Data on exports of recyclables from Australia to China](#)

<sup>6</sup> 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*

<sup>7</sup> Ministry of Ecology and Environment of the People's Republic of China (2018) [Announcement on adjusting the catalogue of imported waste management](#)

<sup>8</sup> Closed Loop Partners (6 October 2019) [The latest insights and analysis from Chris Cui, Director of Asia Programs](#)

<sup>9</sup> Resource Recycling (3 December 2019) [Signals point to all-out recycled fiber ban in China](#)

<sup>10</sup> Business Today, (24 June 2019) [India bans import of plastic waste from August this year to curb pollution](#)

<sup>11</sup> Ministry of Environment, Forest and Climate Change (2019) [Amendment in Hazardous Waste \(Management & Transboundary Movement Rules, 2016\)](#)

<sup>12</sup> Business Standard, (2 December 2019) [Govt grants six month extension to plastic scrap imports in three SEZs](#)



Country	Scope of restrictions	Announced & implemented	Associated exports (tonnes) Types	2018-19	Jul 19	Impact and uncertainties
Indonesia	<p>A 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<sup>13</sup>. All shipments subject to inspection dates after 22 November 2019 have been stopped.</p> <p>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: Tanjung Priok in Jakarta, Tanjung Emas in Semarang, Tanjung Perak in Surabaya, Soekarno Hatta in Makassar, Belawan in Medan, Batu Ampar in Batam, Teluk Lamong in Surabaya and Peacock in Cilegon. The set contamination thresholds are uncertain but some in industry have interpreted it at 0%, exceeding the previous suggestion of 2% with a two-year transition to 0.5%. Illegally imported plastic waste to be returned back to exporters<sup>14</sup>. 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<sup>15</sup>.</p>	Ann.: Apr-19 Imp.: Nov-19	Paper, paper and cardboard, metals, glass, hazardous waste, tyres, other.	725,700 (60,500/month)	61,200	No impact apparent
Malaysia	Import permits revoked from 114 factories that process imported plastic waste <sup>16,17</sup> . Import of non-recyclable plastic waste to be banned by 2021 <sup>18</sup> . Contaminated, mislabelled or illegally imported plastic waste loads to be sent back to source <sup>19 20</sup> .	Jul-18.	Plastic	55,200 (4,600/month)	4,400	No impact apparent
Philippines	To issue a 3-month moratorium on recyclable waste imports including scrap metals, plastics, electronic waste, used oil and flay ash. <sup>21</sup>	Ann.: Aug 19	Plastic, metals	18,800 (1,600/month)	160	Impact uncertain.

<sup>13</sup> Argus (21 November 2019), [Indonesia suspends scrap imports amid new policy](#)

<sup>14</sup> VOA news (2019) [Indonesia vows to send back illegal plastic waste](#)

<sup>15</sup> Sydney Morning Herald (18 September 2019), [Indonesia to ship 100 containers of contaminated waste to Australia](#)

<sup>16</sup> FMT News (2018) [Permits to import plastic waste for 114 factories revoked](#)

<sup>17</sup> Waste Management Review (2018) [Malaysia, Thailand and Vietnam waste imports crackdown](#)

<sup>18</sup> The Star Online (2018) [Govt to ban import of all non-recyclable waste](#)

<sup>19</sup> The Australian (2019) [Australia would vet any waste returns, says Ley](#)

<sup>20</sup> Malaymail (2019) [Yeo Bee Yin moots RM1,500 charge per shipping container to cut illegal imported plastic waste](#)

<sup>21</sup> 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) Types	2018-19	Jul 19	Impact and uncertainties
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 <sup>22</sup> . 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)	1,900	No impact apparent
Thailand	Revoked a broad plastic scrap import allowance, meaning plastic waste and scrap is banned from import by 2021 <sup>23,24,25</sup> . Looking to ban e-waste imports within 2 yrs <sup>17</sup> .	Both ann. Aug-18, plastic imp. Aug-18, e-waste within 2 years.	Plastic	11,200 (900/month)	1,000	No impact apparent Government announcement available in Thai only.
Vietnam	Tighter controls over imports of plastic, paper and metals. Only accepted if importers can prove that their shipment meets the specified environmental standards and there is capacity in the country to process the materials <sup>26</sup> . No new licences issued for waste imports <sup>17</sup> . Plastic scrap imports to be banned by 2025 <sup>27</sup> . Under the new national standard QCVN 32: 2019/BTNMT, import of e-waste plastics (e.g. cases of TVs and computers) would be forbidden <sup>28</sup> . From 22 February 2019, all imports through road and railway border gates to be banned <sup>29</sup> . 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 <sup>30</sup> .	Ann. in Aug-18, appears to be implemented. Mixed metal waste restricted from October 2018.	Plastic, paper, metals	730,600 (60,900/month)	63,400	Apparent impact evident for plastic exports from Australia. Environmental standards used to determine when shipments are acceptable or when the ban on e-waste plastic imports would take effect unavailable in English.

<sup>22</sup> Taipei Times (2018) [New waste plastic, paper import rules to take effect](#)

<sup>23</sup> The Nation (2018) [Import of plastic waste banned](#)

<sup>24</sup> CIWM (2018) [Thailand set to ban plastic waste imports by 2021](#)

<sup>25</sup> [Government Gazette Thailand](#) (2018)

<sup>26</sup> Vietnam Briefing (2018) [Vietnam to Restrict Surging Scrap Imports](#)

<sup>27</sup> VN Express International (2019) [Vietnam to end plastic scrap imports from 2025](#)

<sup>28</sup> Ministry of Natural Resources and Environment of the Socialist Republic of Vietnam (2018) [Vietnam to ban imports of plastic from used electronics](#)

<sup>29</sup> VietnamPlus (2019) [Scrap imports through road, railway border gates to be banned](#), Ministry of Information and Communications

<sup>30</sup> S&P Global Platts (2019) [Vietnam's Jan scrap imports plunge amid stricter government rules](#)