

## Exports of Australian waste and recovered materials, July to September 2020

14 March 2021, Joe Pickin and Sally Donovan

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Blue Environment is commissioned by the Department of Agriculture, Water and the Environment to produce, analyse and report on monthly exports of waste and recovered materials<sup>1</sup>. The original data is provided by the Australian Bureau of Statistics<sup>2</sup> (ABS), and comprises monthly data and updates to previously reported data<sup>3</sup>. The ABS data is transformed to account for issues such as trade codes covering a mixture of wastes and non-wastes, and making it consistent with national waste data methods. On a tonnage basis nearly all these exports are materials recovered from waste streams for recycling<sup>4</sup> or energy recovery, but a small portion is hazardous waste sent for treatment. Monthly data is highly variable, and trends may be best perceived through the annual reports produced in this series.

### Summary

Between July and September 2020, Australia exported about 977,000 tonnes of waste and recovered materials with a value of \$649 million<sup>5</sup>. Compared to the previous three-month period this represents a decrease of 6% in tonnage and 1% in value. The exports included 929,000 tonnes (95%) within the current scope of national waste reporting ('core waste plus ash').

About 268,000 tonnes were exported between July and September in codes that could be affected by the COAG export bans. This is 27% of the total exports of waste and recovered materials.

No obvious effects of the COVID-19 pandemic are apparent in the data.

### Comparison by destination

The top 10 recipients of Australian waste and recovered materials between July 2019 and September 2020, in order, were Indonesia, India, Bangladesh, Vietnam, Malaysia, China (including Hong Kong and Macau), Thailand, Taiwan, Republic of Korea and Pakistan. Between July and September 2020, 89% by weight of Australia's exported waste and recovered materials were sent to these countries.

Table 1 (overleaf) compares exports of waste and recovered materials to these top 10 countries in July to September 2020 with those from the previous quarter (April to June 2020), and includes each country's 2019-20 monthly average. China dropped from 4<sup>th</sup> to 6<sup>th</sup> highest receiver of Australia's waste exports as the effects of their import restrictions started to show. The surge in exports to Bangladesh, mainly of metals, in 2019-20 saw it rise to third place, although the monthly exports so far in 2020-21 have been half the 2019-20 average. Exports to Vietnam were also lower in 2019-20 compared to 2018-19. As another high receiver of metals, it appears diversion may have occurred from Vietnam, where restrictions on metal imports are in place, to Bangladesh. Malaysia now appears higher in the list than China but its long-term exports have remained stable as China's have decreased.

The main exports of waste and recovered materials to Bangladesh (99%), Taiwan (98%) and Pakistan (93%) were metals. Metals also made up the majority of exports received by Vietnam (83%), India (80%), Republic of Korea (78%), Indonesia (65%), Thailand (58%) and Malaysia (45%). Paper and cardboard was the second most common export for Vietnam (14%), India (14%), Indonesia (32%) and Thailand (38%). The remaining exports to Malaysia consisted of paper and cardboard (20%), plastics (20%) and tyres (11%). The remaining

<sup>1</sup> The export codes mapped to waste and recovered materials in 2020-21 differ slightly from those in 2019-20. Details are given in the accompanying workbook (under 'Ref lists'). The historical data presented here has been updated.

<sup>2</sup> Data in these summaries 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.

<sup>3</sup> 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.

<sup>4</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.

<sup>5</sup> Dollar values refer to Australian dollars. Historical values are inflated based on the annualised consumer price index.

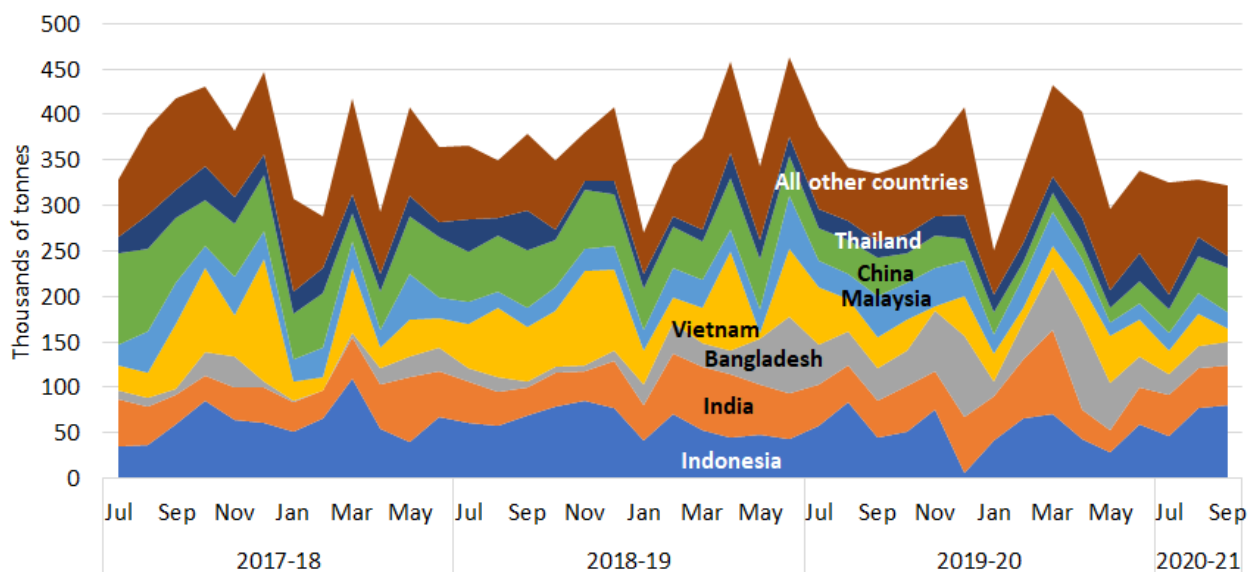
exports to the Republic of Korea were classified as other and split between agricultural organics and waste from the manufacture of iron or steel. Paper and cardboard was the main export to China (81%) followed by metals (14%).

**Table 1 Comparison of month-to-month exports of waste and recovered materials by destination**

Export destination (ranked by tonnes since July 2019)	Jul-Sep-20		Apr-Jun-20		2019-20 monthly avg tonnes	Jul- Sep-20 \$ mil	Apr- Jun-20 \$ mil	% change	2019-20 monthly avg \$ mil
	tonnes	% of total	tonnes	% change					
1 Indonesia	204,000	21%	130,000	-57%	52,000	\$67.6	\$35.5	90%	\$16.1
2 India	133,000	14%	98,000	36%	48,000	\$87.8	\$47.0	87%	\$27.4
3 Bangladesh	73,000	7%	183,000	-60%	52,000	\$24.1	\$69.7	-65%	\$20.6
4 Vietnam	77,000	8%	133,000	-42%	35,000	\$26.7	\$49.5	-46%	\$14.3
5 Malaysia	60,000	6%	60,000	-1%	32,000	\$43.5	\$27.9	56%	\$13.2
6 China	113,000	12%	61,000	85%	27,000	\$79.5	\$78.2	2%	\$28.3
7 Thailand	50,000	5%	75,000	-33%	22,000	\$19.9	\$26.9	-26%	\$7.62
8 Taiwan	53,000	5%	59,000	-11%	17,000	\$24.5	\$30.6	-20%	\$9.32
9 Korea, Republic of	56,000	6%	30,000	84%	15,000	\$65.1	\$119	-45%	\$39.4
10 Pakistan	49,000	5%	48,000	1%	9,100	\$22.4	\$21.5	4%	\$5.01
Top 10 total	868,000	89%	878,000	-1%	309,000	\$461	\$506	-9%	\$181
<b>Monthly total</b>	<b>977,000</b>	<b>-</b>	<b>1,038,000</b>	<b>-6%</b>	<b>354,000</b>	<b>\$649</b>	<b>\$654</b>	<b>-1%</b>	<b>\$238</b>

Figure 1 presents the trend in tonnes of exports of waste and recovered materials from Australia by destination between July 2017 and September 2020. Monthly exports are volatile and no overall trend is evident over the 39-month timeframe. Slight declining trends are apparent in exports to Indonesia and Vietnam, while those to Pakistan and Bangladesh have risen. In all these countries the largest share of exports is metals, and it may be that exports are shifting from other countries to Pakistan and Bangladesh, which have not implemented or announced any import restrictions on waste metals. Exports to Malaysia fell from April to September 2020. It tends to receive a large share of wastes in the ‘other’ category, for which export patterns are erratic. Paper and cardboard exports to Malaysia were also below the 2019-20 monthly average but they are similar to the totals for the same months last year, indicating this is a normal level of variation.

**Figure 1 Monthly exports of waste and recovered materials from Australia by destination**



The reported value of exports for July to September 2020 was \$649 million, down slightly from \$654 million in April to June 2020. The decrease in value was less significant than the decrease in tonnes, mostly due to a higher unit value of metals.

## Comparison by material

Table 2 compares July to September 2020 export tonnages and values with those in April to June, and with the 2019-20 monthly average, by material type. Around 95% falls within the current scope of national waste reporting (core waste plus ash).

Table 2 Comparison of export tonnage and value by material

	Jul-Sep-20		Apr-Jun-20		2019-20 monthly avg		Apr-Jun-20		2019-20 monthly avg	
	Tonnes	% of total	tonnes	% change	tonnes	\$ mil	% of total	\$ mil	% change	\$ mil
Glass	200	0%	1,900	-91%	2,200	\$0.04	<1%	\$0.13	-69%	\$0.11
Hazardous (excl. tyres)	10,500	1%	11,000	-6%	3,500	\$87.1	13%	\$117	-25%	\$37.1
Metals	629,000	64%	629,000	0%	212,000	\$454	70%	\$421	8%	\$163
Paper & cardboard	220,000	23%	239,000	-8%	88,000	\$37.0	6%	\$42.7	-13%	\$14.2
Plastics	27,000	3%	24,000	14%	9,400	\$7.77	1%	\$6.47	20%	\$2.59
Textiles	20,000	2%	15,000	33%	7,800	\$16.1	2%	\$13.1	22%	\$6.30
Tyres	21,000	2%	14,000	48%	7,100	\$4.38	<1%	\$4.82	-9%	\$1.47
Other	50,000	5%	104,000	-52%	24,000	\$42.1	6%	\$49.4	-15%	\$12.9
<b>Total</b>	<b>977,000</b>	<b>-</b>	<b>1,308,000</b>	<b>-6%</b>	<b>354,000</b>	<b>\$649</b>	<b>-</b>	<b>\$196</b>	<b>-1%</b>	<b>\$238</b>

### Comparison with the previous quarter –

- **Glass** waste exports dropped significantly from April to September 2020, the three-monthly totals falling well short of the 2019-20 monthly average. Industry appears to have been preparing for the ban on glass waste exports (which came into effect at the start of 2021).
- Exports of **hazardous waste** (excluding tyres) reduced slightly between the two three-monthly periods. The largest components were lead waste and scrap (78%), and lead-containing slag, ash and residues (18%). Copper containing slag, ash and residues accounted for 1% of the tonnes but 79% of the value of hazardous waste due to anomalously high reported value in an export flow from Townsville<sup>6</sup>.
- Monthly exports of scrap **metals** were consistent between the two analysis periods and remained the largest portion of exported waste and recovered materials at 64%. The total value was \$454 million, or 70% of the total value of waste exports. The main recipients were Indonesia (21%), India (17%), Bangladesh (12%) and Vietnam (10%).
- Exports of recovered **paper and cardboard** exports declined slightly between the two three-month periods. Monthly exports for 2020-21 were well below the 2019-20 monthly average, however, it is too early to tell if this is a trend. Exports went mainly to China (42%) and Indonesia (30%). Unbleached kraft comprised 58% and unsorted scrap 42%. Despite being 23% of tonnage, the value, \$37 million, represented only 6% of the total.
- Exports of scrap **plastics** rose from 24,000 to 27,000 tonnes but, as a monthly average, are below 2019-20. The largest recipients were Malaysia (43%), China (19%) and Indonesia (17%). Exported scrap plastics comprised mixed plastics (57%) and polyethylenes (42%). The rise in value of plastic exports was more significant than the tonnes as the composition of plastics waste had a higher portion of more valuable ethylenes and less mixed scrap.
- Exports of waste **textiles** increased from 15,000 to 20,000 tonnes between April to June and July to September 2020. The main receiving countries were United Arab Emirates (62%) and Malaysia (14%). Worn clothing and other worn textile articles accounted for more than 99% of exported scrap textiles.
- Exports of waste **tyres** rose from 14,000 to 21,000 tonnes<sup>7</sup>. The main recipients were India (37%), Malaysia (31%) and the Republic of Korea (10%). While the tonnage increased, the value actually decreased as the value per tonne of tyres had fallen in recent months. The average value of 'solid or cushion rubber tyres' in April to June was over \$1000/t but in July to September was \$500/t.

<sup>6</sup> The reported value of this copper slag and ash waste exceeded \$500/kg. The value of pure copper is under \$10/kg.

<sup>7</sup> Tyre export quantities are much lower than reported through industry sources. Significant miscoding is likely.

- Exports in the waste category **other** dropped from 104,000 tonnes between April and June to 50,000 tonnes between July and September. The decrease was mainly due to large shipments of sawdust pellets from Albany to the Netherlands in April and May. The value decreased from \$49.4 to \$42.1 million.

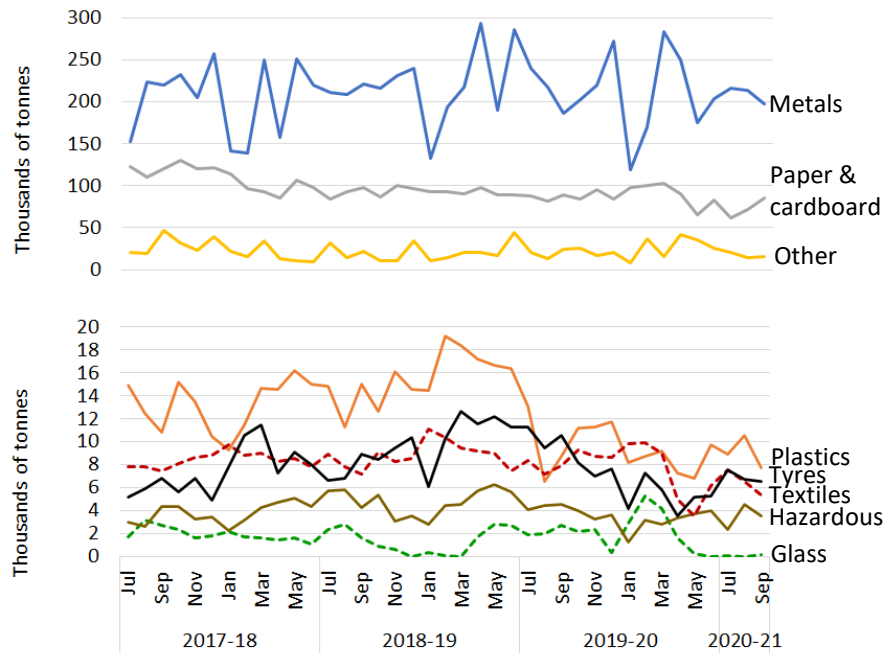
*Comparison with the 2019-20 monthly average* – Monthly average export tonnages between July and September 2020 were 8% lower than 2019-20 monthly average, and the value was 9% lower. Tonnes of waste were lower in all material categories, and value was lower in all categories except ‘other’ which was slightly higher. This category is made up of multiple waste types that varies from month to month.

Figure 2 presents the monthly trend in exports of waste from Australia in tonnes by material type between July 2017 and September 2020. Historically volatile scrap metal exports have been relatively stable since July 2020. Exports of scrap paper and cardboard were relatively stable from month to month but show a consistent decline. Monthly scrap tyre exports fell steadily over 2019-20 to reach their lowest level in April but subsequently increased<sup>7</sup>. Exports of recovered plastics fell in early 2017-18, recovered to peak in early 2019, then fell to a low in August. They have been consistent in 2020.

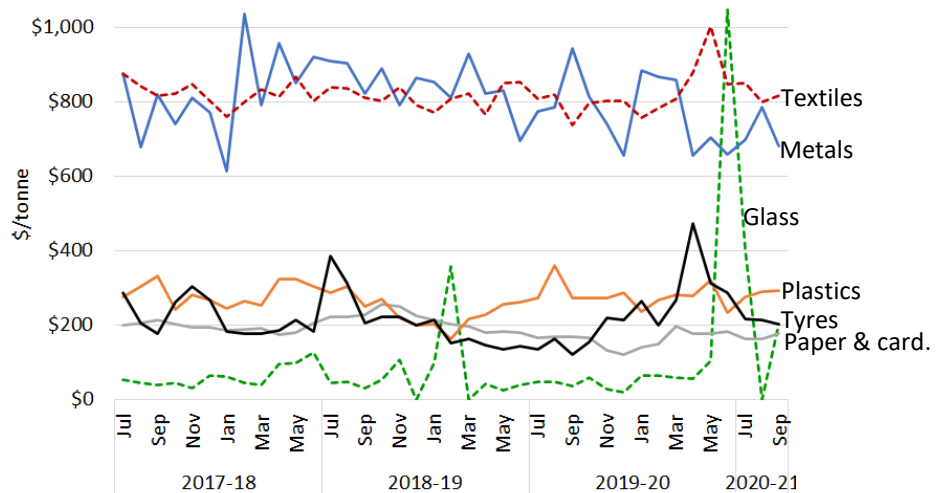
Figure 3 presents monthly trends in the average reported value per tonne of key waste exports between July 2017 and September 2020. Reported values for:

- glass exports have averaged about \$50/t but in recent months have been highly unstable as quantities fell<sup>8</sup>
- metals, while variable, appear to have been on a declining trajectory since early 2018
- paper and cardboard have been more stable, but also on a declining trend
- plastics dropped sharply during 2018 due to China’s restrictions, but have recovered as exports of low-grade mixed materials fell while higher value streams remained consistent

*Figure 2 Monthly exports of waste and recovered materials from Australia by material type, July 2017 to September 2020*



*Figure 3 Comparison of unit values by material (in \$/t), July 2017 to September 2020*



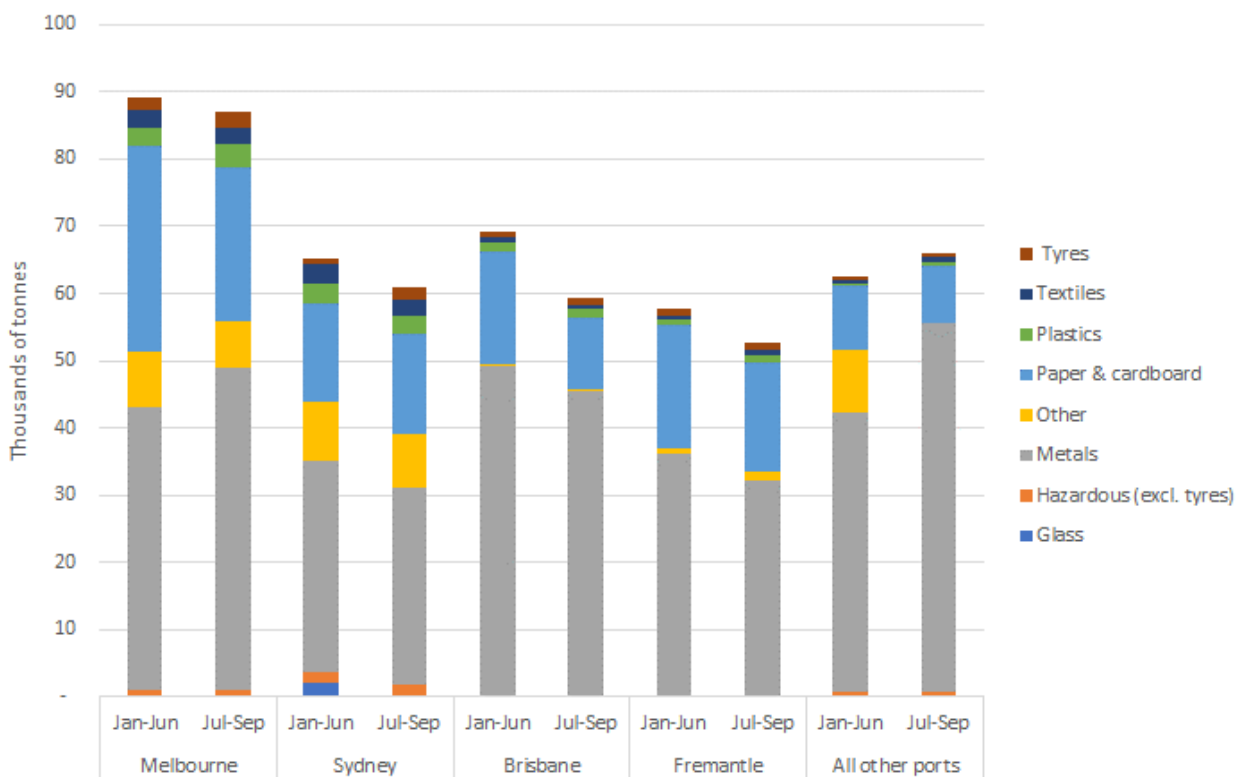
<sup>8</sup> The price spikes may be due to exports of high-value processed product (e.g. reflective paint additive, specialist filtration media).

- textile values have been consistently between \$740 and \$1,000/t but towards the low end of that range in 2020-21
- tyres dipped in 2019 then recovered, with higher unit prices apparently coinciding with low tonnages.

### Port of loading and state of origin

Between January and September 2020, 81% of Australia’s waste and recovered materials was exported from four of Australia’s 22 ports: Melbourne (26%); Sydney (19%); Brisbane (20%); and Fremantle (17%). Figure 4 shows the average monthly tonnes for January<sup>9</sup> to June and July to September 2020 by material group for each of the top four ports, and all other ports. Exports by material are fairly evenly spread across the four main ports and their July to September results are similar to the January to June average. Exports for January to July from ‘all other ports’ had a significant amount of ‘other’ wastes, which is missing from the July to September average. The monthly exports of ‘other’ waste from ‘all other ports’ varies significantly from month to month, so this variability is not unusual.

Figure 4 Tonnes of exports by trade group from port of loading



Most waste and recovered materials originating in a jurisdiction are exported from a port in that jurisdiction, but Tasmania exports most of its waste via Melbourne and it is understood that materials from the Australian Capital Territory are exported through Sydney.

### Australian waste export ban

A March 2020 meeting of the then Council of Australian Governments agreed to a timetable 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.

Between July and September 2020, about 268,000 tonnes of waste and recovered materials were exported within the codes listed. This represents about 27% of the total quantity of waste and recovered materials exported for the month, and 29% of those exports within the ‘core waste + ash’ current scope of the *National Waste Report 2020*.

<sup>9</sup> Earlier data were unavailable.



Table 3 Material types facing export bans

Material	Ban date	AHECC <sup>10</sup> code	AHECC description	Jul-Sep 20 exports in this code (rounded tonnes)	Estimated % of tonnes to be banned <sup>11</sup>
Glass	Jan 2021	70010000	Cullet and other waste and scrap of glass; glass in the mass	160	Ban effected from 1/1/21
Paper and cardboard	Jul 2024	47071000	Recovered (waste and scrap), unbleached, kraft paper or paperboard or corrugated paper or paperboard	127,000	47% <sup>12</sup>
		47072000	Recovered (waste and scrap) paper or paperboard, made mainly of bleached chemical pulp, not coloured in the mass	160	
		47073000	Recovered (waste and scrap) paper or paperboard, made mainly of mechanical pulp (e.g. newspapers, journals)	740	
		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)	92,000	
Plastics	Jul 2022	39151000	Waste, parings and scrap, of polymers of ethylene	11,000	100% <sup>13</sup>
		39152000	Waste, parings and scrap, of polymers of styrene	50	
		39153000	Waste, parings and scrap, of polymers of vinyl chloride	150	
	Jul 2021	39159092	Waste, parings and scrap, of plastics (excl. those of polymers of ethylene, styrene or vinyl chloride)	16,000	83% <sup>14</sup>
Whole tyres	Dec 2021	40040000	Waste, parings and scrap of rubber (excl. of hard rubber) and powders and granules obtained therefrom	12,000	44% <sup>7</sup>
		40122000	Used pneumatic rubber tyres, whether or not subject to recutting or regrooving	5,900	100% <sup>7</sup>
		40129000	Solid or cushion rubber tyres, rubber tyre treads (incl. interchangeable tyre treads) and rubber tyre flaps	3,000	6% <sup>7</sup>

### Restrictions on waste imports – latest news

The Republic of Korea recently announced its intention to phase out imports of 10 kinds of industrial waste by 2030. It plans to ban waste plastics, mixed wastepaper, and waste fibres in 2022, while coal ash and waste tyres will be banned in 2023<sup>15</sup>. Pakistan published an updated Import Policy Order 2020 on 25 September 2020, which includes a ban on imports of re-treaded tyres and used pneumatic tyres, plus some other waste materials are also subject to restrictions but none appear to impact Australia’s export trade with Pakistan. Malaysia’s Ministry of International Trade and Industry has announced a series of measures to protect local steel processing, which is likely to impact ferrous scrap imports<sup>16</sup>. Some of that country’s plastic waste processors have been lobbying for imports to maintain their supplies.

Some legislation came into force in January 2021 but had not been introduced in September 2020. This includes: Thailand’s ban on importing plastic and e-waste; China’s ban on imports of all solid waste; and amendments to the Basel Convention<sup>17</sup> that aim to enhance control of transboundary movements of plastic

<sup>10</sup> Australian Harmonized Export Commodity Classification.

<sup>11</sup> Based on the 2018-19 characteristics of these materials.

<sup>12</sup> Comprises the proportion of material in AHECC code 47079000, but significant miscoding is apparent in the data.

<sup>13</sup> Assumes no material was sorted and processed to the extent that will be required for future export.

<sup>14</sup> Excludes fuels.

<sup>15</sup> Yonhap News Agency (2021) [S. Korea to phase out industrial waste imports.](#)

<sup>16</sup> Recycling today (21 January 2021) [Malaysian ferrous scrap export tax looming.](#)

<sup>17</sup> Formally known as the *Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal.*

waste<sup>18</sup>. The new Basel rules stipulate that mixed plastic waste must be ‘almost free from’ contamination, but different countries have interpreted this to mean anywhere between 0.5% and 5%<sup>19</sup>. No new updates were found on restrictions in Australia’s other major waste destinations.

### Restrictions on waste imports – overview

The current status of import restrictions to Australia’s top 10 waste and recovered materials destinations is summarised in Table 4, while Table 5 provides details of the import restriction policies, their dates and amount of waste potentially impacted by the bans.

Table 4 Summary of import restrictions by material and top 10 country

	Glass	Haz. waste (excl. tyres)	Metals	Paper & cardboard	Plastics	Tyres	Textiles
Indonesia	Restricted	Restricted	Restricted	Restricted	Restricted	Restricted	
India					Restricted	Considering	
Bangladesh							
Vietnam			Restricted	Restricted	Restricted		
China			Restricted	Restricted	Restricted		
Malaysia					Restricted		
Thailand					Restricted		
Taiwan				Restricted	Restricted		
Republic of Korea				Restricted	Restricted	Announced	
Pakistan						Restricted	

#### Key

Restricted	Restrictions are in place
Announced	Restrictions announced but not yet implemented
Considering	Restrictions are under consideration

Table 5 Status of waste import restrictions

Country	Scope of restrictions	Announced & implemented	Associated exports (tonnes)		Impact and uncertainties	
			Types	2019-20 Jul-Sep 20		
Indonesia	On 27 May 2020 the Indonesian Government published a decree on the implementation of import of non-hazardous and toxic material waste <sup>20</sup> . This limits contamination of imported scrap plastic and paper to 2% and announces the formation of a task force to develop a road map to accelerate the availability of domestic raw materials. This will include a staged reduction of import quotas. On 15 October 2020, they announced exporters will need to complete a registration	Ann.: Apr-19 Imp.: Nov-19	Plastics, paper and cardboard, metals, glass, hazardous waste, tyres, other.	627,000 (52,000 per month)	68,000	Imports reduced from 61,000 per month in 2018-19 to 52,000 in 2019-20

<sup>18</sup> Basel Convention, [Plastic waste amendments](#).

<sup>19</sup> EScrap News (14 January 2021) [Basel plastic rules cause immediate e-plastics strife](#).

<sup>20</sup> Minister of Trade, Minister of Environment and Forestry, Minister of Trade Industry and Head of State Policy, Republic of Indonesia (May 2020), [Implementation of import of non hazardous and toxic material waste as raw material industry](#).

Country	Scope of restrictions	Announced & implemented	Associated exports (tonnes) Types	2019-20	Jul-Sep 20	Impact and uncertainties
	process, described as cumbersome and lengthy, to continue exporting to Indonesia, to come into force on 18 October, however this was pushed back to January 2021 <sup>21</sup> .					
India	Import of scrap plastics was banned from August 2019 <sup>22</sup> covering areas previously exempt under the 2016 ban such as special economic zones (SEZ) and export-oriented units (EOU) <sup>23</sup> . The ban excludes electrical/electronic assemblies or components that are defective, which can be imported within a year of export. 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 <sup>24</sup> .	Ann.: Mar-19 Imp.: Mar-19 to Aug-19	Plastics	60 (5 per month)	0	Plastics imports reduced from 60 to 5 tonnes per month from 2018-19 to 2019-20. No plastics imports so far in 2020-21
Bangladesh	No apparent waste import restrictions. Since July 2019, received mainly metals, hazardous wastes and a small amount of glass from Australia.				0	None
Vietnam	On 24 September 2020 Vietnam published a new document <sup>25</sup> , 'Promulgation of the list of waste permitted for import as production materials', overriding previous relevant regulations. Unsorted scrap paper imports and granulated slag from the manufacture of iron or steel are scheduled to be banned by the end of 2021. This builds on the 2018 announcement of 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. Under new national standard QCVN 32: 2019/BTNMT, import of e-waste plastics (e.g. cases of TVs and computers) would be forbidden <sup>26</sup> . Scrap metal waste needs to be 99% metal to be allowed in <sup>27</sup> .	Ann. in Sep-20. Mixed metal waste restricted from Oct 2018.	Plastic, paper, metals	420,300 (35,000 per month)	25,000	Imports reduced from 61,000 to 35,000 tonnes per month between 2018-19 and 2019-20.
Malaysia	During 2019, Malaysia cracked down on illegal plastics reprocessors, and customs officials began refusing waste imports unless they were from companies with approved permits <sup>28</sup> .	Jul-18.	Plastic, metals	49,000 (4,100 per month)	3,900	No impact apparent.

<sup>21</sup> EU-WID Pulp and paper (16 October 2020) [Indonesia postpones introduction of exporter registration to 1 January 2021](#).

<sup>22</sup> Business Today, (24 June 2019) [India bans import of plastic waste from August this year to curb pollution](#).

<sup>23</sup> Ministry of Environment, Forest and Climate Change (2019) [Amendment in Hazardous Waste \(Management & Transboundary Movement Rules, 2016\)](#).

<sup>24</sup> Waste Dive, (15 January 2020), [India to enforce 1% contamination rate on paper imports, conduct random inspections](#).

<sup>25</sup> Prime Minister of Vietnam (24 September 2020) [Promulgation of the list of waste permitted for import as production materials](#). Unofficial translation.

<sup>26</sup> Ministry of Natural Resources and Environment of the Socialist Republic of Vietnam (2018) [Vietnam to ban imports of plastic from used electronics](#).

<sup>27</sup> S&P Global Platts (2019) [Vietnam's Jan scrap imports plunge amid stricter government rules](#).

<sup>28</sup> The Sun Daily (2<sup>nd</sup> February 2021) [Waste not want not: Malaysia moves to become a leader in tackling plastic waste](#).



Country	Scope of restrictions	Announced & implemented	Associated exports (tonnes) Types	2019-20		Impact and uncertainties
				2019-20	Jul-Sep 20	
China	China initiated waste import restrictions known as ‘National sword policy’ in April 2018 <sup>29</sup> . Restrictions have continued to increase and from 1 January 2021 a ban on the import of all solid waste is set to be implemented <sup>30</sup> . The definition of solid waste may differ between Australia and China and certain waste-derived resources may continue to be imported as feedstocks.	Ann.: Jul & Nov-17, Apr-18, Jul-19, Dec-19, Jan-20 Imp.: Jan 1, 2021	All solid wastes	328,000 (27,300 per month)	38,000	Imports gradually reduced from over 100,000 tonnes per month in 2016-17 to 27,000 in 2018-19.
Thailand	Thailand has announced its intention to ban the import of all plastic wastes by 2022 <sup>31</sup> . This is still under debate as to whether locally generated plastic waste will satisfy feedstock requirements of the 157 plastic recycling facilities. A ban on 428 types of electronic waste has also been announced <sup>32</sup> .	Ann. Aug-18, plastic imp. Aug-18, e-waste <2 yrs.	Plastic	9,500 (800 per month)	500	Plastics imports reduced from 900 to 800 tonnes per month between 2018-19 and 2019-20
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 <sup>33</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	14,200 (1,200 per month)	340	Imports reduced from 1,500 to 1,200 per month between 2018-19 and 2019-20.
Korea, Republic of	On 6 January 2021, Ministry of Environment announced bans or restriction on their top 10 waste import materials <sup>34</sup> . Total imports to be reduced 35% by 2022 and 65% by 2025. Plastic, mixed waste paper and waste fibre bans will commence in 2022, while coal ash and tyre bans will commence in 2023. Corrugated cardboard, dust and sludge will be subject to restrictions in 2023 <sup>35</sup> . Previously announced (on 30 June 2020) a ban on imports of PET, PE, PP and PS with immediate effect. <sup>36</sup>	Ann.: Feb-20	Paper and cardboard Plastic	13,000 (1,100 per month)	330	Imports of both products have decreased significantly over 2020
Pakistan	On 25 September 2020 the Pakistan Government Ministry of Commerce published Import Policy Order 2020, which came into force immediately <sup>37</sup> . This bans the import of re-treaded tyres and used pneumatic tyres.	Sep-20	Tyres	0	0	No impact apparent.

<sup>29</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>30</sup> Ministry of Ecology and Environment, People’s Republic of China (25 November 2020) *MEE Announcement No. 53 2020* (unofficial translation by Institute of Scrap Recycling Industries).

<sup>31</sup> REB market intelligence (25 January 2021) *Thailand considering plastic import ban from 1 January 2022.*

<sup>32</sup> Saengmanee (2020) *The year nature bounced back.*

<sup>33</sup> Taipei Times (2018) *New waste plastic, paper import rules to take effect.*

<sup>34</sup> Business Korea (7 January 2021) *Waste import ban roadmaps to come out soon.*

<sup>35</sup> Inquirer.net (10 January 2021) *S. Korea to phase out industrial waste imports.*

<sup>36</sup> The Korea Times (2020) *Plastic waste imports banned in Korea amid mounting local trash.*

<sup>37</sup> Pakistan Government Ministry of Commerce (2020) *Import Policy Order 2020.*