

Exports of Australian waste and recovered materials in January 2021

14 June 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 materials¹. The original data is provided by the Australian Bureau of Statistics² (ABS), and comprises monthly data and updates to previously reported data³. 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 recycling⁴ 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

In January 2021, Australia exported about 266,000 tonnes of waste and recovered materials with a value of \$187 million⁵. This represents a decrease of 23% in tonnage and 19% in value compared to the previous month. The exports included 242,000 tonnes (91%) within the current scope of national waste reporting ('core waste plus ash'). As its ban came into force, China's monthly imports of waste and recovered materials from Australia plummeted to their lowest quantity on the available record (back to July 2017).

About 118,000 tonnes were exported in January in codes that could be affected by Australia's export bans. This is 44% of the total exports of waste and recovered materials. Exporting unprocessed waste glass from Australia was banned from 1 January 2021. The tonnes and value of this export stream fell to zero.

Comparison by destination

The top 10 recipients of Australian waste and recovered materials between July 2019 and January 2021, in order, were Indonesia, India, Bangladesh, Vietnam, Malaysia, China (including Hong Kong and Macau), Thailand, Taiwan, Republic of Korea and Pakistan. In January 2021, 89% by weight of Australia's exported waste and recovered materials were sent to these destinations.

Table 1 (overleaf) compares exports of waste and recovered materials to these top 10 destinations in December 2020 and January 2021 and includes each destination's 2019-20 monthly average. As its ban came into force, China's monthly imports of waste and recovered materials from Australia plummeted to their lowest quantity on the available record (back to July 2017). Most of the other top 10 destinations' exports fell in January. Exceptions were: the Republic of Korea, which received an unusually large amount of scrap paper and cardboard probably diverted from China; and Taiwan, for which exports climbed back up from a low in December.

Metals were the main export of waste and recovered materials to Bangladesh (100%), Taiwan (91%), Pakistan (83%), China (72%) and India (68%). For Pakistan the remainder was mainly textiles (14%), for China it was plastics (17%) and for India it was paper and cardboard (22%). Paper and cardboard was the main export to Indonesia (88%) and Thailand (56%), with the remainder for Thailand mainly metals (40%). Exports to Vietnam were split between paper and cardboard and organics (48% each). Exports to the

¹ 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.

² 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.

³ 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.

⁴ 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.

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



Republic of Korea included metals (40%), paper and cardboard (30%) and wastes in the 'other' category including agricultural organics and e-waste. Exports to Malaysia were also mixed, including paper and cardboard (43%), metals (22%), plastics (16%) and textiles (10%).

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

	ort destination	Jan-2	Jan-21		Dec-20		Jan-21	Dec-20		2019-20 monthly
	ked by tonnes since 2019)		% of		%	avg			%	avg
July	2019)	tonnes	total	tonnes	change	tonnes	\$ mil	\$ mil	change	\$ mil
1	Indonesia	68,000	26%	74,000	-8%	52,000	\$16.8	\$19.6	-14%	\$16.1
2	India	43,000	16%	62,000	-30%	48,000	\$27.0	\$41.3	-35%	\$27.4
3	Bangladesh	33,000	12%	34,000	-4%	52,000	\$13.8	\$11.6	19%	\$20.6
4	Vietnam	15,000	6%	63,000	-77%	35,000	\$3.35	\$22.9	-85%	\$14.3
5	Malaysia	22,000	8%	24,000	-10%	32,000	\$12.8	\$20.1	-36%	\$13.2
6	China	3,900	1%	6,200	-37%	27,000	\$16.9	\$24.1	-30%	\$28.3
7	Thailand	19,000	7%	21,000	-7%	22,000	\$8.45	\$9.33	-9%	\$7.62
8	Taiwan	13,000	5%	6,600	92%	17,000	\$7.71	\$5.56	39%	\$9.32
9	Korea, Republic of	14,000	5%	9,900	38%	15,000	\$32.1	\$13.4	139%	\$39.4
10	Pakistan	6,600	2%	9,100	-28%	9,100	\$4.02	\$5.27	-24%	\$5.01
Тор	10 total	236,000	89%	309,000	-24%	309,000	\$143.0	\$173.3	-18%	\$181.3
Mon	thly total	266,000	-	345,000	-23%	354,000	\$187.4	\$231.4	-19%	\$237.7

Figure 1 presents the trend in tonnes of exports of waste and recovered materials from Australia by destination between July 2017 and January 2021. Monthly exports are volatile and trends hard to discern, but a decline may be apparent in the later months of the 43-month timeframe. Exports to China have almost ceased as its blanket ban on imports of waste came into operation (see Table 5). Exports to Indonesia had been declining, mainly due to reduced metals exports, but rose again in more recent months due to a surge in paper and cardboard exports. Exports to Pakistan rose substantially in 2019-20 but have fallen during 2020-21. Exports to Malaysia appear to be declining, the monthly average so far in 2020-21 being around half that for 2019-20. Exports to Vietnam decreased from mid-2018, began rising again from early 2020, but in January dropped to their lowest value over the entire analysis period.

500 450 400 Thousands of tonnes 350 destinations 300 Thailand 250 China 200 Malaysia Vietnam 150 Bangladesh 100 India 50 Indonesia 0 Jul Sep Nov Jan Mar May Jul Sep Nov Jan Mar May Jul Sep Nov Jan Mar May Jul Sep Nov Jan 2017-18 2018-19 2019-20 2020-21

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

The reported value of exports for January 2021 was \$187 million, down from \$231 million in December 2020 and less than the 2019-20 monthly average of \$238 million. The drop in value from December 2020 to January 2021 was similar to the drop in tonnes.



Comparison by material

Table 2 compares January 2021 export tonnages and values with December 2020 and with the 2019-20 monthly average, by material type. Around 91% falls within the current scope of national waste reporting (core waste plus ash).

Table 2 Comparison of export tonnage and value by material

	Jan-21		an-21 Dec-20		2019-20 monthly avg	Ja	an-21	Dec-20		2019-20 monthly avg
	tonnes	% of total	tonnes	% change	tonnes	\$ mil	% of total	\$ mil	% change	\$ mil
Glass	0	0%	40	-100%	2,200	\$0.00	<1%	\$0.01	-100%	\$0.11
Hazardous (excl. tyres)	2,000	1%	4,700	-57%	3,500	\$22.0	12%	\$7.42	196%	\$37.1
Metals	111,000	42%	200,000	-45%	212,000	\$119	64%	\$179	-33%	\$163
Paper & cardboard	102,000	38%	87,000	17%	88,000	\$19.9	11%	\$14.7	35%	\$14.2
Plastics	10,000	4%	9,100	11%	9,400	\$2.88	2%	\$2.88	<1%	\$2.59
Textiles	10,000	4%	9,100	12%	7,800	\$7.87	4%	\$7.53	5%	\$6.30
Tyres	6,600	2%	7,900	-16%	7,100	\$1.38	<1%	\$1.63	-15%	\$1.47
Other	25,000	9%	28,000	-9%	24,000	\$14.2	8%	\$18.4	-22%	\$12.9
Total	266,000	-	345,000	-23%	354,000	\$187	-	\$231	-19%	\$238

Comparison with the previous month -

- Exporting unprocessed waste glass from Australia was banned from 1 January 2021. The tonnes and value of this export stream fell to zero.
- Exports of hazardous waste (excluding tyres) fell from 4,700 to 2,000 tonnes. The largest components were lead waste and scrap (51%), and lead-containing slag, ash and residues (41%). Despite the decrease in tonnes, the value increased substantially due to exports of anomalously high-value slag, ash and residues containing copper, which accounted for less than 2% of the tonnes but 89% of the value and were exported from Townsville to the Republic of Korea⁶.
- Monthly exports of scrap **metals** dropped markedly to 111,000 tonnes, which is the lowest tonnage over the 43-month analysis period but still the largest portion of exported waste and recovered materials at 42%. The total value was \$119 million, or 64% of the total value of waste exports. The main recipients were Bangladesh (30%), India (26%) and Taiwan (10%).
- Exports of recovered **paper and cardboard** in January 2021 were 17% higher than in December 2020 and exceeded the monthly average. Exports went mainly to Indonesia (59%) and Thailand (11%). Tonnages were almost evenly split between unbleached kraft 51% and unsorted scrap 48%. The value increased more than the tonnage as the per tonne value rose from \$169 to \$195.
- Exports of scrap **plastics** rose slightly. The largest recipients were Malaysia (34%) and Indonesia (20%). Exported scrap plastics comprised mixed plastics (63%) and polyethylenes (37%). Despite the tonnage increase, the value remained the same due to the higher portion of low-value mixed scrap. No effects of the forthcoming export ban (from July 2021) on mixed scrap plastic are apparent.
- Exports of waste **textiles** increased from 9,100 to 10,000 tonnes; 99% was worn clothing and other worn textile articles. The main recipients were the United Arab Emirates (56%) and Malaysia (22%).
- Exports of waste **tyres** dropped from 7,900 to 6,600 tonnes⁷. The main recipients were India (54%) Malaysia (21%) and the USA (12%). The change in value matched the change in tonnage.
- Exports in the waste category **other** decreased from 28,000 to 25,000 tonnes and were mainly agricultural organics (97%). The reduction in value was more significant due to a higher portion of low-value brewing or distilling dregs.

Comparison with the 2019-20 monthly average – January 2021 export tonnages were 25% lower than the 2019-20 monthly average, and the reported value was 21% lower. Tonnages and values were higher for paper and cardboard, plastics and textiles, and lower for other waste types.

⁶ The reported value of this copper slag and ash waste exceeded \$444/kg. The value of pure copper is under \$10/kg.

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



Figure 2 presents the monthly trend in exports of waste from Australia in tonnes by material type between July 2017 and January 2021. Historically volatile scrap metal exports had been relatively stable since July 2020 but dropped to their lowest over the analysis period this month. Exports of scrap paper and cardboard have been relatively stable with a gradual decline, but appear to be increasing in recent months. Monthly exports of scrap tyres fell steadily over 2019-20 to reach their lowest level in April but subsequently increased⁷. 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 2020-21.

Figure 3 presents monthly trends in the average reported value per tonne of key waste exports from July 2017 to January 2021. Reported values for:

- glass exports averaged about \$50/t but were unstable as quantities declined as the 1 January 2021 ban drew close⁸
- metals declined from July 2018 but rose substantially over the last four months of the data series
- paper and cardboard declined over 2019-20 but appear to be increasing so far in 2020-21

Figure 2 Monthly exports of waste and recovered materials from Australia by material type, July 2017 to January 2021

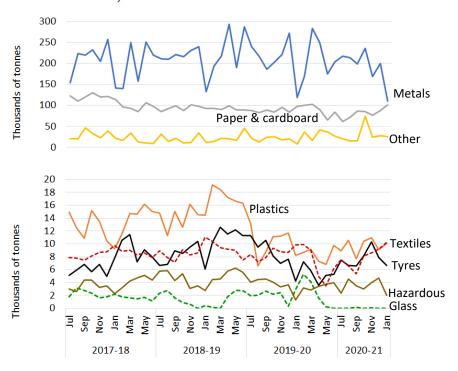
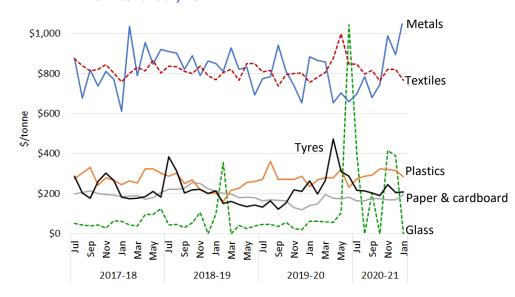


Figure 3 Comparison of unit values by material (in \$/t), July 2017 to January 2021



- plastics fell steadily during 2018 due to China's restrictions, but recovered as exports of low-grade mixed materials fell while higher value streams remained consistent
- textiles were consistently between \$740 and \$1,000/t but towards the low end of that range in 2020-21
- tyres dipped in 2019 then recovered to their average over the whole data period, with higher unit prices apparently coinciding with low tonnages.

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



Port of loading and state of origin

Since January 2020⁹ about 81% of Australia's waste and recovered materials have been exported from four of Australia's 22 ports: Melbourne (26%); Sydney (20%); Brisbane (19%); and Fremantle (17%). Figure 4 shows the average monthly tonnes exported by material group in 2020 and in January 2021 from each of the top four ports, and from all other ports combined. Scrap metal exports were below average in January 2021, especially from Fremantle, Brisbane and 'all other ports'. There were higher than average exports of paper and cardboard from Melbourne and Sydney and 'other' materials from Sydney, putting overall exports from those ports similar to the average. Exports from 'all other ports' were particularly low in January 2021.

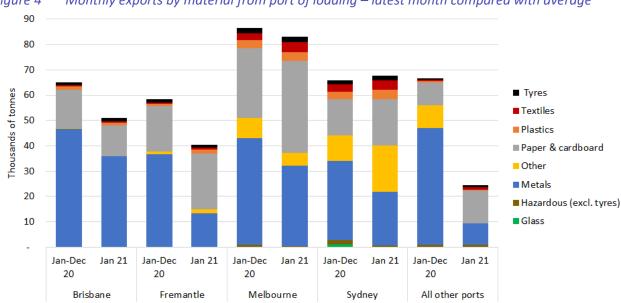


Figure 4 Monthly exports by material from port of loading – latest month compared with average

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 exports from the Australian Capital Territory go via 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.

In January 2021, about 118,000 tonnes of waste and recovered materials were exported within the codes listed, up from 104,000 tonnes¹⁰ in December 2020. This represents about 44% of the total quantity of waste and recovered materials exported for the month, and 49% of all exports within the 'core waste + ash' current scope of the *National Waste Report 2020*.

An impending key milestone is the ban on exports of mixed polymer scrap plastics, which is due to come into force on 1 July 2021. Government and industry are dealing with the challenge of ensuring that, over the next few months, sufficient local sorting capacity is available for mixed rigid packaging plastic from kerbside collections, which has previously been exported. About 6,400 tonnes of material were exported under the relevant code in January 2021

⁹ Earlier data were unavailable.

¹⁰ Value revised from 123,000 reported in the December version of this report due to amendments to the ABS data set.



Table 3 Material types facing export bans

			g export buris		
			Jan 21 ex	Estimated %	
	Ban	AHECC ¹¹	this code (r		of tonnes to
Material	date	code	AHECC description	tonnes)	be banned ¹²
Glass	Jan 2021	70010091 ¹³	Glass in the mass, cullet and other scrap of glass, nes	0	Ban in effect
		47071000	Recovered (waste and scrap), unbleached, kraft paper or paperboard or corrugated paper or paperboard	52,000	
Danarand		47072000	Recovered (waste and scrap) paper or paperboard, made mainly of bleached chemical pulp, not coloured in the mass	60	
Paper and cardboard	Jul 2024	47073000	Recovered (waste and scrap) paper or paperboard, made mainly of mechanical pulp (e.g. newspapers, journals)	1,400	47% ¹⁴
		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 mech. pulp)	48,000	
		39151000	Waste, parings and scrap, of polymers of ethylene	3,700	
	Jul 2022	39152000	Waste, parings and scrap, of polymers of styrene	0	100% ¹⁵
Plastics		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)	6,400	83% ¹⁶
		40040000	Waste, parings and scrap of rubber (excl. of hard rubber) and powders and granules obtained therefrom	4,700	44% ⁷
Whole tyres	Dec 2021	40122000	Used pneumatic rubber tyres, whether or not subject to recutting or regrooving	1,100	83% ¹⁶
		40129000	Solid or cushion rubber tyres, rubber tyre treads (incl. interchangeable tyre treads) and rubber tyre flaps	860	6% ⁷

Restrictions on waste imports – latest news

Reduced transport due to COVID lockdowns has seen a drop in the price of oil, a key component in the manufacture of virgin plastics. This has raised concerns over the ability of recycled plastics to compete with virgin materials¹⁷. The European Union has banned the export of plastic waste to non-OECD countries unless it is clean and suitable for recycling¹⁸, which could increase demand for material from Australia.

Malaysia appears to be preparing new legislation to enforce stricter controls on scrap metal imports¹⁹. This would ban the import of 'crushed' metals (the definition of this is unclear), restrict imports to ship only, and require pre-inspections by an accredited agency to ensure contamination is below threshold values. Foreign ports could become accredited so inspections can be conducted prior to shipping.

China's import ban was enforced in January 2021, but it still accepts high quality scrap metals, which it defines as a resource rather than a waste.²⁰ As part of its path towards zero net carbon emissions by 2060, China is committed to reducing emissions from metal production by 20% over the next five years. Increasing recycled content will be a key component of that strategy.²¹

¹¹ Australian Harmonized Export Commodity Classification.

¹² Based on the 2018-19 characteristics of these materials.

¹³ Previously 70010000

¹⁴ Comprises the proportion of material in AHECC code 47079000, but significant miscoding is apparent in the data.

 $^{^{15}}$ Assumes no material was sorted and processed to the extent that will be suitable for future export.

¹⁶ Excludes fuels.

¹⁷ Plastic Expert (2021) *How oil prices affect recycling*.

¹⁸ Recycling Magazine (2021) *Navigating the latest changes in waste legislation*.

¹⁹ Recycling Today (2021) *Malaysian agency warns of scrap metal import changes.*

²⁰ Recycling Today (2021) <u>Scrap policy reset in China part of 2021 metals pricing landscape.</u>

²¹ Daily Mail Australia (2021) Why China is set to stop buying Australia's biggest export iron ore.



No updates were found on restrictions in Australia's other major destinations for waste and recovered material exports.

Restrictions on waste import – overview

The 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 destination

	- / - /		/				
	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			Considering		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

		Announced &	Associated e	exports (tonnes)	
Destination	Scope of restrictions	implemented	Types	2019-20	Jan 21	Impact and uncertainties
Indonesia	On 27 May 2020 the Indonesian Government published a decree on the implementation of import of non-hazardous and toxic material waste as raw material industry ²² . This limits contamination of imported scrap plastic and paper to 2% and announces the formation of a task force to develop a road map accelerating the availability of domestic raw materials. This will include a staged reduction of import quotas. On 15 October 2020, they further announced exporters will need to complete a registration 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 ²³ .	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.

²² Minister of Trade, Minister of Environment and Forestry, Minister of Trade Industry and Head of State Policy, Republic of Indonesia (May 2020), <u>Implementation of import of non hazardous and toxic material waste as raw material industry.</u>

²³ EU-WID Pulp and paper (16 October 2020) <u>Indonesia postpones introduction of exporter registration to 1 January 2021.</u>



		Announced & Associated exports (tonnes)					
Destination	Scope of restrictions	implemented	Types	2019-20	Jan 21	Impact and uncertainties	
India	Import of scrap plastics was banned from August 2019^{24} covering areas previously exempt under the 2016 ban such as special economic zones (SEZ) and exportoriented units (EOU) 25 . 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 26 .	Ann.: Mar-19 Imp.: Mar-19 to Aug-19	Plastics	60 (5 per month)	22	Plastics imports reduced from 60 to 5 tonnes per month from 2018-19 to 2019-20.	
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 ²⁷ , '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 ²⁸ . Scrap metal waste needs to be 99% metal to be allowed in ²⁹ .	Ann. in Sep-20. Imp. Jan-21 Mixed metal waste restricted from Oct 2018.	Plastic, paper, metals	420,000 (35,000 per month)	7,600	Imports reduced from 61,000 to 35,000 tonnes per month between 2018-19 and 2019-20.	
Malaysia	Since 2019, Malaysia has cracked down on illegal plastics reprocessors, and customs officials began refusing waste imports unless they were from companies with approved permits ³⁰ .	Jul-18.	Plastic, metals	49,000 (4,100 per month)	3,500	No impact apparent.	
China	From 1 January 2021, China has implemented a ban on the import of all solid waste ³¹ . However, certain materials such as scrap metals are defined as resources rather than waste under the new legislation and can continue to be imported.	Ann.: Apr-20 Imp.: Jan 1, 2021	All solid wastes	328,000 (27,000 per month)	3,900	Imports gradually reduced from over 100,000 tonnes per month in 2016-17 to 27,000 in 2018-19.	

²⁴ Business Today, (24 June 2019) *India bans import of plastic waste from August this year to curb pollution.*

²⁵ Ministry of Environment, Forest and Climate Change (2019) <u>Amendment in Hazardous Waste (Management & Transboundary Movement Rules, 2016).</u>

²⁶ Waste Dive, (15 January 2020), <u>India to enforce 1% contamination rate on paper imports, conduct random inspections.</u>

²⁷ Prime Minister of Vietnam (24th September 2020) *Promulgation of the list of waste permitted for import as production materials.* Unofficial translation.

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

²⁹ S&P Global Platts (2019) <u>Vietnam's Jan scrap imports plunge amid stricter government rules</u>.

³⁰ The Sun Daily (2nd February 2021) <u>Waste not want not: Malaysia moves to become a leader in tackling plastic waste.</u>

³¹ 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.



		Announced &	Announced & Associated exports (tonnes)					
Destination	Scope of restrictions	implemented	Types	2019-20	Jan 21	Impact and uncertainties		
Thailand	Thailand has announced its intention to implement a ban on the import of all plastic wastes by 2022 ³² . However, this is still under debate as to whether locally generated plastic waste will satisfy feedstock requirements of 157 plastic recycling facilities. A ban on 428 types of electronic waste has also been announced ³³ .	Ann. Aug-18, plastic imp. Aug- 18, e-waste <2 yrs.	Plastic	9,500 (800 per month)	750	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 ³⁴ . Paper imports restricted to only de-inked 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)	640	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 restrictions on their top 10 waste import materials ³⁵ . 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 ³⁶ . Previously announced (on 30 June 2020) a ban on imports of PET, PE, PP and PS with immediate effect. ³⁷	Ann.: Feb-20	Paper and cardboard Plastic	13,000 (1,100 per month)	4,100	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 ³⁸ . This bans the import of re-treaded tyres and used pneumatic tyres.	Sep-20	Tyres		0	No impact apparent		

³² REB market intelligence (25th January 2021) <u>Thailand considering plastic import ban from 1st January 2022.</u>

³³ Saengmanee (2020) *The year nature bounced back.*

³⁴ Taipei Times (2018) *New waste plastic, paper import rules to take effect.*

³⁵ Business Korea (7th January 2021) <u>Waste import ban roadmaps to come out soon.</u>

³⁶ Inquirer.net (10th January 2021) <u>S. Korea to phase out industrial waste imports.</u>

³⁷ The Korea Times (2020) *Plastic waste imports banned in Korea amid mounting local trash.*

³⁸ Pakistan Government Ministry of Commerce (2020) *Import Policy Order 2020*.