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

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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 Statistics[[1]](#footnote-1), 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[[2]](#footnote-2) or energy recovery, but a small portion is hazardous waste sent for treatment.

Summary

In February 2020, Australia exported about 348,000 tonnes of waste-derived products and wastes with a value of $A234 million. This represents an increase of 41% in tonnage and a corresponding increase of 36% in value compared to the previous month. The export quantities of all material categories rose. The largest increase was an additional 57,000 tonnes of scrap metals.

About 126,000 tonnes of waste-derived products and waste exported in February could be affected by the COAG export ban. This is 36% of the total waste exported in February 2020.

Comparison by destination

The top 10 recipients of Australian waste-derived products and wastes between July 2018 and February 2020 were Indonesia, Vietnam, India, China (including Hong Kong and Macau), Bangladesh, Malaysia, Thailand, the Republic of Korea, Taiwan and New Zealand. In February 2020, 84% 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 January and February 2020 and includes each country’s 2018-19 monthly average. February 2020 exports to Indonesia, India, Bangladesh, Malaysia and Thailand were higher than their 2018-19 monthly averages, and those to Taiwan were the same. Exports to all other countries were lower. The proportional increase in exports to Bangladesh was the most significant in February 2020, rising to 42,000 tonnes from 16,000 in January 2020 but remaining much lower than the 89,000 tonnes they received in December 2019.

February 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 India (72%), the Republic of Korea (66%) and Vietnam (64%). The remainder to the Republic of Korea was mainly hazardous waste (17%), while for India and Vietnam it was mainly paper and cardboard (18% and 34%). Exports to Indonesia and China were predominantly paper and cardboard (64% and 69% respectively) with metals making up most of the remainder. Exports to Malaysia were more varied with 47% paper and cardboard, 28% metals and 15% plastics. Thailand received 48% metals, 35% paper and cardboard and 15% glass. Exports to New Zealand were 87% organics and 11% metals.

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

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  | **Tonnes** |  |  |  | **Value** |  |
| **Export destination (ranked by tonnes since July 2018)** | **Feb-20** | **Jan-20** |  |  | **Feb-20** | **Jan-20** |  |
| **Tonnes** | **% of total** | **Tonnes** | **% change** | **2018-19 monthly avg** | **$ mil** | **$ mil** | **% change** | **2018-19 monthly avg** |
| 1 | Indonesia | 69,000 | 20% | 42,000 | 65% | 60,000 | $18.1 | $9.0 | 101% | $23.7 |
| 2 | Vietnam | 16,000 | 5% | 31,000 | -48% | 61,000 | $5.2 | $11.2 | -53% | $29.8 |
| 3 | India | 68,000 | 20% | 48,000 | 42% | 49,000 | $39.3 | $22.3 | 76% | $33.5 |
| 4 | China | 17,000 | 5% | 25,000 | -30% | 54,000 | $22.3 | $23.8 | -6% | $41.6 |
| 5 | Bangladesh | 42,000 | 12% | 16,000 | 159% | 25,000 | $19.7 | $6.1 | 223% | $11.2 |
| 6 | Malaysia | 34,000 | 10% | 21,000 | 66% | 27,000 | $14.5 | $9.1 | 59% | $10.4 |
| 7 | Thailand | 23,000 | 7% | 19,000 | 21% | 20,000 | $6.4 | $6.6 | -3% | $7.9 |
| 8 | Korea, Republic of | 8,000 | 2% | 8,000 | -7% | 15,000 | $24.3 | $42.7 | -43% | $32.6 |
| 9 | Taiwan | 13,000 | 4% | 14,000 | -8% | 13,000 | $6.9 | $5.2 | 33% | $8.3 |
| 10 | New Zealand | 2,000 | 1% | 2,000 | 61% | 6,000 | $5.6 | $4.8 | 17% | $5.7 |
| Top 10 total | 292,000 | **84%** | 224,000 | 30% | 330,000 | $162.2 | $140.8 | 15% | $204.5 |
| **Monthly total** | **348,000** | **-** | **246,000** | **41%** | 369,000 | $234.1 | $172.3 | 36% | $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 February 2020. Since falling to a low of 5,600 tonnes in December 2019, monthly exports to Indonesia increased steadily to closer to the long-term average value of 69,000 tonnes in February. Vietnam saw the largest decrease in exports from 31,000 tonnes in January to 16,000 tonnes in February 2020, but remains higher than the 4,400 tonnes in November. Exports to India climbed to 68,000 tonnes in February, exceeding the previous peak of 63,000 tonnes in December 2019. 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 have declined since then, reaching a new low of 17,000 tonnes in February 2020. Overall, no clear trend is apparent in the overall quantity of waste exports over the 30-month timeframe.

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



The reported value of exports for February 2020 was $A234 million, increasing from $A172 million in January. This is within the range over the considered time period, which was between $A159 million to $A321 million per month, and close to the monthly average for 2018-19 of $A258 million.

Comparison by material

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

Table 2 Comparison of export tonnage and value by material

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  | **2018-19 monthly avg** |  |  |  |  | **2018-19 monthly avg** |
|  | **Feb-20** | **Jan-19** |  | **Feb-20** | **Jan-20** |  |
|  | **tonnes** | **% of total** | **tonnes** | **% change** | **tonnes** | **$ mil** | **% of total** | **$ mil** | **% change** | **$ mil** |
| Glass | 5,900 | 2% | 2,900 | 102% | 1,300 | $0.38 | <1% | $0.19 | 104% | $0.06 |
| Paper & cardboard | 104,000 | 30% | 98,000 | 6% | 93,000 | $15.8 | 7% | $13.9 | 14% | $19.5 |
| Plastics | 9,100 | 3% | 8,200 | 11% | 16,000 | $2.4 | 1% | $1.9 | 26% | $3.6 |
| Tyres | 7,400 | 2% | 4,200 | 76% | 10,000 | $1.4 | <1% | $1.1 | 30% | $1.8 |
| Metals | 176,000 | 51% | 119,000 | 48% | 220,000 | $147 | 63% | $104 | 41% | $180.3 |
| Hazardous (excl. tyres) | 4,600 | 1% | 1,600 | 194% | 5,600 | $42.1 | 18% | $34.2 | 23% | $33.2 |
| Other | 41,000 | 12% | 13,000 | 224% | 24,000 | $25.1 | 11% | $16.5 | 52% | $20.3 |
| **Total** | **348,000** | - | **246,000** | **41%** | **369,000** | $234.1 | - | $172.3 | 36% | **$258.8** |

*Comparison with the previous month –*

* **Glass** exports continued to increase, reaching 5,900 tonnes after dipping to just 360 tonnes in December 2019. Exports were split between India (41%) and Thailand (59%).
* **Paper and cardboard** exports increased by 6%. Exports went mainly to Indonesia (43%), Malaysia (15%), India (12%) and China (11%). The category consisted of an almost even split between unsorted waste scrap and unbleached kraft. Paper and cardboard accounted for 30% of February’s export tonnages but only 7% of their reported value ($A15.8 million).
* Exports of scrap **plastics** increased 11% compared to January 2020. Malaysia remained the largest recipient (57%). The remainder went to more than 10 countries, each receiving less than 10%. Export plastics comprised mixed plastics (60%) and ethylenes (40%). Exports of waste plastics were valued at $2.4 million, 26% more than January 2020.
* Exports of waste **tyres** grew by 76% to 7,400 tonnes. India and Malaysia continued to receive the most at 56% and 26% respectively, and 6% went to the US. Exports of waste tyres were valued at $A1.4 million, a 30% increase compared to January 2020.
* Monthly **metal** exports were back up to 176,000 tonnes, a 48% increase over January 2020, and remained the largest portion of exported waste and waste-derived products at 51%. The total value of metal exports was $147 million, a rise of 41%. India received the largest share of metal exports (28%), followed by Bangladesh (24%) and Indonesia (14%).
* Exports of **hazardous waste** (excluding tyres) climbed from 1,600 tonnes to 4,600 tonnes in February 2020. The largest fraction was lead waste and scrap, which accounted for 57%, followed by iron and steel manufacturing slag (11%), and lead-containing slag, ash and residues. Exports were valued at $A42.1 million, representing 18% of the total February 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 waste** category showed the largest proportional increase in tonnage, from 13,000 to 41,000 tonnes. The proportional increase in value was a much smaller 52%. The largest components of this category were cereal residues (26%), sawdust and wood waste (20%), worn clothes and textiles (19%) and inedible animal products (18%).

*Comparison with the 2018-19 monthly average –* February 2020 exports of the glass, paper and cardboard, and ‘other’ waste categories were higher than their 2018-19 monthly average; all others were lower. Overall, exports in February 2020 were lower than the monthly average for 2018-19. Glass, hazardous and other were the only categories with value above the 2018-19 average, the rest were lower, leading to an overall value lower than the 2018-19 average.

|  |  |
| --- | --- |
| Figure 2 presents the monthly trend in exports of waste from Australia in tonnes by material type between July 2017 and February 2020. Scrap metal exports remain volatile. Exports of scrap paper and cardboard have increased over the last two months to reach their highest since November 2018. Tyres have remained fairly stable since January 2018. Exports of recovered plastics fell in early 2017-18 then recovered to peak in early 2019, before falling to a low in August. Monthly exports have remained below the 2018-19 monthly average since then. Figure 3 presents monthly trends in the average unit prices of key waste exports between July 2017 and February 2020. Over this timeframe prices for:* metals have been volatile but without clear trend
* paper and cardboard have been fairly stable but declined in late 2019, before recovering in January and February 2020
* glass have oscillated, stabilising for much of 2019, dropping in December, and rising sharply in January 2020
* plastics have been driven mainly by the 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 $252/t in February 2020.
 | Figure Monthly exports of waste-derived products and wastes from Australia by material type, July 2017 – February 2020  |
| Figure Comparison of unit prices by material (in $/t), July 2017 – February 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 Material types facing export bans

| Material | Ban date | AHECC code | AHECC description | Feb-20 exports in this code (tonnes) | Estimated % of tonnes to be banned[[3]](#footnote-3) |
| --- | --- | --- | --- | --- | --- |
| Glass | Jul 2020 | 70010000 | Cullet and other waste and scrap of glass; glass in the mass | 5,900 | 100% [[4]](#footnote-4) |
| Paper and cardboard | Jul 2024 | 47071000 | Recovered (waste and scrap), unbleached, kraft paper or paperboard or corrugated paper or paperboard | 51,000 | 32% [[5]](#footnote-5) |
| 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 and similar) | 3,100 |
| 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) | 50,000 |
| Plastics | Jul 2022 | 39151000 | Waste, parings and scrap, of polymers of ethylene | 3,600 | 100% [[6]](#footnote-6) |
| 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) | 5,400 | 83% |
| Whole tyres  | Dec 2021 | 40040000 | Waste, parings and scrap of rubber (excl. of hard rubber) and powders and granules obtained therefrom | 5,300 | 44% [[7]](#footnote-7) |
| 40122000 | Used pneumatic rubber tyres, whether or not subject to recutting or regrooving | 1,500 | 100% 7 |
| 40129000 | Solid or cushion rubber tyres, rubber tyre treads (incl. Interchangeable tyre treads) and rubber tyre flaps | 610 | 6% 7 |

Tonnes have been rounded

In February 2020, about 126,000 tonnes of waste-derived products and wastes were exported within the codes listed above, up from 122,000 in December. This represented about 36% of the total waste exported for the month.

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 Status of waste import restrictions

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Country | Scope of restrictions | Announced & implemented | Associated exports (tonnes) | Impact and uncertainties |
| **Types** | **2018-19** | **Feb 20** |
| China | Restricted the import of certain materials covering specific commodity codes, mainly by specifying a threshold contamination rate of 0.5%[[8]](#footnote-8). 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[[9]](#footnote-9). From 1 July 2019, import restrictions extended to eight solid waste codes pertaining to metals[[10]](#footnote-10). 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[[11]](#footnote-11). Possible import ban on old corrugated cardboard and other fibre grades by 2021[[12]](#footnote-12). The Ministry of Ecology and Environment’s Solid Waste and Chemicals Management Centre announced the first 2020 batch of quotas on 24 December 2019 which allows 270,885 tonnes of copper scrap and 275,465 tonnes of aluminium scrap to be imported[[13]](#footnote-13). The second batch of quotas announced on 8 January 2020 allows 26,566 tonnes of copper scrap, 7,544 tonnes of aluminium scrap and 3,180 tonnes of steel scrap to be imported[[14]](#footnote-14)[[15]](#footnote-15).  | Ann.: Jul & Nov-17, Apr-18, Jul-19, Dec-19, Jan-20Imp.: Jan & Mar-18, Dec-18, Dec-19 | Plastic, paper, metals, other | 643,000 (53,600/month) | 17,000 | 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[[16]](#footnote-16). Also covers areas previously exempt under the 2016 ban such as special economic zones (SEZ) and export-oriented units (EOU)[[17]](#footnote-17). 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[[18]](#footnote-18). 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.[[19]](#footnote-19)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.[[20]](#footnote-20) It is expected this will lead to a subsequent restriction on the import of waste tyres in the near future.[[21]](#footnote-21)  | Ann.: Mar-19Imp.: Mar-19, Aug-19 for importers currently exempt under SEZs and EOUs. | Plastic | 700 (60/month) | 19 | Impact uncertain.  |
| Indonesia | Temporary moratorium on all waste scrap imports commenced 23 November 2019 as the new Ministerial Regulation No. 84/2019 on the P*rovisions on the import of non-hazardous and non-toxic waste for industrial purposes* is implemented[[22]](#footnote-22). All shipments subject to inspection dates after 22 November 2019 have been stopped. Under the new regulation, transhipments 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[[23]](#footnote-23). 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[[24]](#footnote-24). Determined in February 2020 to ease the rules on metal scrap imports due to mill supply shortages[[25]](#footnote-25). | Ann.: Apr-19Imp.: Nov-19 | Plastics, Paper and cardboard, metals, glass, hazardous waste, tyres, other.  | 725,700 (60,500/month) | 69,400 | 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 (1100/mth) | 570 |  |
| Malaysia | Import permits revoked from 114 factories that process imported plastic waste[[26]](#footnote-26),[[27]](#footnote-27). Import of non-recyclable plastic waste to be banned by 2021[[28]](#footnote-28). Contaminated, mislabelled or illegally imported plastic waste loads to be sent back to source[[29]](#footnote-29) [[30]](#footnote-30). 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.[[31]](#footnote-31) | Jul-18. | Plastic | 55,200 (4,600/month) | 5,100 | 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.[[32]](#footnote-32) | Ann.: Aug 19 | Plastic, metals | 18,800 (1600/mth) | 630 | Impact uncertain. |
| 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[[33]](#footnote-33). 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-18Imp.: Oct-18 | Plastic, paper | 17,700 (1,500/month) | 460 | No impact apparent. |
| Thailand | Revoked a broad plastic scrap import allowance, meaning plastic waste and scrap is banned from import by 2021[[34]](#footnote-34),[[35]](#footnote-35),[[36]](#footnote-36). Looking to ban e‑waste imports within 2 years27. In January 2020, a new subcommittee was set up to ensure the proposed bans can be achieved, and will not be prevented by loopholes[[37]](#footnote-37) | Ann. Aug-18, plastic imp. Aug-18, e-waste <2 yrs. | Plastic | 11,200 (900/month) | 550 | 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[[38]](#footnote-38). No new licences issued for waste imports27. Plastic scrap imports to be banned by 2025[[39]](#footnote-39). Under new national standard QCVN 32: 2019/BTNMT, import of e-waste plastics (e.g. cases of TVs and computers) would be forbidden[[40]](#footnote-40). From 22 February 2019, all imports through road and railway border gates to be banned[[41]](#footnote-41). 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[[42]](#footnote-42). | Ann. in Aug-18 apparently implemented.Mixed metal waste restricted from Oct 2018. | Plastic, paper, metals | 732,600 (61,100/month) | 15,900 | Has apparently affected imports of scrap plastic and metal from Australia. Environmental reference standards are unavailable in English. |

1. The ABS 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. 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. [↑](#footnote-ref-1)
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. [↑](#footnote-ref-2)
3. Based on the 2018-19 characteristics of these materials. [↑](#footnote-ref-3)
4. It is believed that most or all or this product is derived from municipal recycling collections. [↑](#footnote-ref-4)
5. Comprises the proportion of material in AHECC code 47079000. However, significant miscoding is apparent in the data. [↑](#footnote-ref-5)
6. Assumes no material was sorted and processed to the extent that will be required for future export. [↑](#footnote-ref-6)
7. The Australian Border Force data on tyres exports differed from the ABS data, and neither were consistent with industry-reported export quantities. [↑](#footnote-ref-7)
8. Blue Environment (2018) [Data on exports of recyclables from Australia to China](https://blueenvironment.com.au/wp-content/uploads/2018/05/Exports-of-recyclables-from-Aust-to-China-v2.pdf) [↑](#footnote-ref-8)
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* [↑](#footnote-ref-9)
10. Ministry of Ecology and Environment of the People’s Republic of China (2018) [Announcement on adjusting the catalogue of imported waste management](http://www.mee.gov.cn/xxgk2018/xxgk/xxgk01/201812/t20181227_687488.html) [↑](#footnote-ref-10)
11. Closed Loop Partners (6 October 2019) [The latest insights and analysis from Chris Cui, Director of Asia Programs](https://www.closedlooppartners.com/the-latest-insights-and-analysis-from-chris-cui-director-of-asia-programs/) [↑](#footnote-ref-11)
12. Resource Recycling (3 December 2019) [Signals point to all-out recycled fiber ban in China](https://resource-recycling.com/recycling/2019/12/03/signals-point-to-all-out-recycled-fiber-ban-in-china/) [↑](#footnote-ref-12)
13. Bureau of International Recycling (24 December 2019) [Chinese quotas for waste & scrap imports: full list of 1st batch 2020](https://www.bir.org/news-press/news/item/1000000054-chinese-quotas-for-waste-scrap-imports-full-list-of-1st-batch-2020) [↑](#footnote-ref-13)
14. Bureau of International Recycling (8 January 2020) [Chinese quotas for waste & scrap imports: full list of 2nd batch 2020](https://www.bir.org/news-press/news/item/1000000055-chinese-quotas-for-waste-scrap-imports-full-list-of-2nd-batch-2020) [↑](#footnote-ref-14)
15. Recycling Today (10 January 2020) [China issues second batch of scrap import quotas](https://www.recyclingtoday.com/article/sennebogen-scrap-recycling-lake-pleasant-michigan/) [↑](#footnote-ref-15)
16. Business Today, (24 June 2019) [India bans import of plastic waste from August this year to curb pollution](https://www.businesstoday.in/current/policy/india-bans-import-of-plastic-waste-from-august-this-year-to-curb-pollution/story/358778.html) [↑](#footnote-ref-16)
17. Ministry of Environment, Forest and Climate Change (2019)[Amendment in Hazardous Waste (Management & Transboundary Movement Rules, 2016)](http://pib.nic.in/PressReleseDetail.aspx?PRID=1567682) [↑](#footnote-ref-17)
18. Business Standard, (2 December 2019) [Govt grants six month extension to plastic scrap imports in three SEZs](https://www.business-standard.com/article/economy-policy/govt-grants-six-month-extension-to-plastic-scrap-imports-in-three-sezs-119112900554_1.html) [↑](#footnote-ref-18)
19. Waste Dive, (15 January 2020), [India to enforce 1% contamination rate on paper imports, conduct random inspections](https://www.wastedive.com/news/india-enforce-contamination-rate-inspections-paper-imports/570427/) [↑](#footnote-ref-19)
20. India legal, (6 January 2020), [NGT calls for review of CPCB’s report on pyrolysis units](https://www.indialegallive.com/national-green-tribunal/ngt-calls-for-review-of-cpcbs-report-on-pyrolysis-units-81315). [↑](#footnote-ref-20)
21. Tyre and Rubber recycling, (22 September 2019), [Near total ban on waste tyre imports imminent in India](https://www.tyreandrubberrecycling.com/latest-news/posts/2019/september/indian-ban-imminent/) [↑](#footnote-ref-21)
22. Argus (21 November 2019), [Indonesia suspends scrap imports amid new policy](https://www.argusmedia.com/en/news/2020587-indonesia-suspends-scrap-imports-amid-new-policy) [↑](#footnote-ref-22)
23. VOA news (2019) [Indonesia vows to send back illegal plastic waste](https://www.voanews.com/east-asia/indonesia-vows-send-back-illegal-plastic-waste) [↑](#footnote-ref-23)
24. Sydney Morning Herald (18 September 2019), [Indonesia to ship 100 containers of contaminated waste to Australia](https://www.smh.com.au/world/asia/indonesia-to-ship-100-containers-of-contaminated-waste-to-australia-20190918-p52so8.html) [↑](#footnote-ref-24)
25. Indonesia will ease rules on scrap metal imports, <https://www.wastetodaymagazine.com/article/indonesia-will-ease-rules-on-import-of-scrap-metal/> [↑](#footnote-ref-25)
26. FMT News (2018) [Permits to import plastic waste for 114 factories revoked](https://www.freemalaysiatoday.com/category/nation/2018/07/24/permits-to-import-plastic-waste-for-114-factories-revoked/) [↑](#footnote-ref-26)
27. Waste Management Review (2018) [Malaysia, Thailand and Vietnam waste imports crackdown](http://wastemanagementreview.com.au/battling-sovereign-risk/) [↑](#footnote-ref-27)
28. The Star Online (2018) [*Govt to ban import of all non-recyclable waste*](https://www.thestar.com.my/news/nation/2018/10/17/govt-to-ban-import-of-all-nonrecyclable-waste/) [↑](#footnote-ref-28)
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