

# 2024 National Clothing Benchmark for Australia



In the spirit of reconciliation, we acknowledge the Traditional Custodians of Country throughout Australia and their connections to land, sea and community. We pay our respect to their elders past and present and extend that respect to all Aboriginal and Torres Strait Islander peoples.

In Australia, we have the privilege of learning from incredible First Nations design traditions. First Nations people have been creating clothing for millennia with a focus on circular principles. As we move forward on this journey towards circularity in our industry, we are committed to learning from the way things have always been done by First Nations creators in this Country.

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Our thanks to Sustainable Resource Use for collating and processing the data which supported the baseline for 2024 material flows in Australia.

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### **Foreword**

### Ainsley Simpson, Seamless CEO

What we wear reflects and shapes the world we share. In Australia, we're buying more new clothes than ever before, wearing them less, and discarding them in significant volumes. Yet at the same time, we're shopping for more second hand clothes and recycling textiles at higher levels.



This report offers quantitative insights into how clothing moves through the Australian economy. It traces pathways from clothing production, purchase and use, through to recirculation and disposal. Incorporating data from across the value chain, it establishes the 2024 national clothing benchmark for Australia and is a baseline that enables us to measure our collective progress to clothing circularity.

This report embraces progress over perfection and identifies gaps in the available data. We've been transparent about our estimates and assumptions, and moving forward, our data will become more robust.

The benchmark emphasises the scale of our collective challenge, and the significant opportunities to drive meaningful change. The transition to a circular economy is a shared responsibility. We all have an important role to play - from clothing brands, retailers, reuse operators and recyclers, to governments, researchers, and every Australian. A positive clothing future will be built on reliable data, enabled by coordinated action and forward thinking policy, and driven by a culture of continuous improvement.

We call on all stakeholders across the Australian clothing sector to collaborate with us to fill the data gaps, support alignment with globally recognised reporting standards, and unlock regulatory and policy settings that will drive investment in the infrastructure needed to support an integrated circular clothing system.

By targeting the areas of greatest opportunity, the clothing industry can embrace a future that designs for circularity from the outset, rewards sustainable business models, and supports the national recirculation of valuable clothing textiles through responsible citizenship.

Clothing connects us all; no one stands outside the clothing system. It is fair that we all contribute proportionally and build a culture of shared accountability. We must create a level playing field where all clothing brands participate equitably - large or small, local or international.

Here's to our future beyond the baseline. Seamless is for everyone.

Ainsley Simpson, Seamless CEO

### **Executive summary**

### 2024 national clothing benchmark for Australia

The Seamless national clothing benchmarking data tells the story of what happened to our clothes in 2024. It's the baseline for measuring our progress towards a circular clothing economy.



In 2024, Australians added more clothing to their wardrobes than ever before. We bought 6% more new clothing compared to 2023, while there was also a 10% increase in the sale or sharing of second hand clothing. While our wardrobes are filling fast, so is Australian landfill. In 2024, we sent 220,000 tonnes of clothing to Australian landfill – an amount which has barely changed since last year.

While many organisations are making progress and Australians are increasingly buying second hand clothing, systemic change is urgently needed to transform to a circular clothing sector and significantly reduce the amount of clothing in landfill. This change can only happen when government, clothing brands, retailers and the industry collaborate and join forces.

#### Australians bought more new clothing in 2024

In 2024, 1.51 billion items of clothing were sold in Australia, which equates to 55 items of clothing for every Australian. This is a 6% increase from 2023, when 1.42 billion items were sold. Compared to 2018, before the impact of the COVID pandemic on retail trade, this is a 6% decrease on the 1.6 billion items sold that year.

#### More and more clothing is remaining unsold

1.55 billion items of clothing were imported into Australia in 2024, which is a 7% increase from 2023. 47 million of these items were not sold, which is a 17% increase from 2023. This presents an opportunity for clothing brands and retailers to reduce costs and increase efficiency through streamlined processes which better match supply to demand.

#### More than ever, Australians are selling, swapping and sharing clothing

In 2024, the amount of clothes being reused, that is donated, sold, swapped, shared and therefore worn by another person, increased by 10% compared to 2023, to 650 million items. In Australia, local clothing reuse increased by 10% to 308 million garments in 2024. That equates to 11 second hand items of clothing for every Australian.

#### Australians are adding more to their wardrobes

The increase in new and second hand clothing being acquired by Australians, means we're adding more to our wardrobes than ever before. In 2024, 5.27 billion items of clothing, or 1.32 million tonnes were held in our wardrobes, which equates to 193 items for every Australian.

#### More clothes are being recycled

When clothing does leave our wardrobes, it is increasingly being recycled. In 2024, 7% more clothing was recycled compared to 2023, either within Australia or internationally. This equates to approximately 150 million garments, or 37,500 tonnes. When we compare this to 2018, it's a 15% increase.

#### We're still sending over 200,000 tonnes of clothing to Australian landfill annually

Despite the progress we're making in recycling and reusing our clothes, we still sent 220,000 tonnes to landfill in Australia in 2024, which is 880 million items of clothing. This is equivalent to over half (59%) of all of the clothes imported. In addition, it is estimated that 9,000 tonnes was sent to landfill outside Australia. Overall, the amount of clothing ending up in landfill decreased by just 1% compared to 2023.

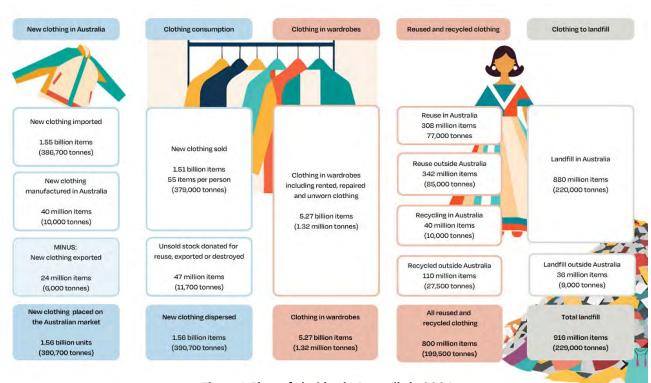


Figure 1: Flow of clothing in Australia in 2024

#### The baseline for advancing Australia's circular clothing economy

The Seamless national clothing benchmark for Australia is the baseline to measure our progress towards a circular clothing sector. Sharing transparent data about what happens to our clothes also means we can work together to fill the remaining data gaps.

It's clear that while clothing reuse and recycling is growing, both policy and investment strategies need to change to rapidly scale collection, sorting, and recycling infrastructure to the level required. A national system for collecting, sorting, reusing and recycling clothing is critical for Australia's transition to a circular clothing economy by 2030 and the diversion of 220,000 tonnes of clothing from Australian landfill annually.

Importantly, equitable participation in product stewardship is essential for enabling the system-level change we need. All clothing brands, whether they are large or small, Australian or international, must contribute fairly and meaningfully to address Australia's clothing waste.

### Methodology

This report provides the national baseline and material flow analysis of clothing in Australia, capturing how clothing is produced, consumed, circulated, and disposed of. It leverages a range of data sources and provides transparency on the gaps where data is currently unavailable.



#### The approach

This methodology follows a material flow analysis framework to quantify how clothing enters, is used, reused, and leaves the Australian economy. This approach has been used in similar studies globally and ensures that our data can be compared and monitored over time to measure our collective progress. The analysis combines robust datasets including Australian Customs records, with estimates that are based on surveys, audits, and industry consultation to build a baseline of clothing flows. Where estimates are used, they are corroborated with multiple sources to increase accuracy and have been fully disclosed.

#### Drawing on a range of data sources

The data in this report is drawn from a range of sources:

#### 1. Australian Customs data

Australia's International Merchandise Trade data set, managed by the Australian Bureau of Statistics (ABS), provides detailed import and export data for over 200 product categories defined by garment type and fibre composition. Clothing imports are captured by volume (units), weight, value, garment, fibre type and country of origin, while exports of worn clothing are tracked by weight, value, and destination country.

The limitations observed with the clothing import data are that fibre type categories do not account adequately for blends; Low Value Good (LVG) thresholds exempt many shipments from customs declarations and clothing volume can be recorded incompletely. Similarly, the limitations to the clothing export data are that export destinations do not account for countries that garments may be re-exported to, and garments are not categorised by type or fibre.

<sup>&</sup>lt;sup>1</sup> Millward-Hopkins J, Purnell P and Baurley S (2023) '<u>A material flow analysis of the UK clothing economy'</u>, Journal of cleaner production, 407:137158; and Maldini, I, et al. 2017. '<u>Measuring the Dutch Clothing Mountain'</u>.

#### 2. Australian survey data

In 2024, Seamless supporter, RMIT University's School of Fashion and Textiles conducted the first nationally representative survey of Australian clothing acquisition, use and disposal behaviour.<sup>2</sup> Data from this survey has been used to estimate figures for unworn clothing, local clothing reuse via donation, informal clothing reuse, and peer-to-peer clothing resale. While this survey provides robust data on how Australians enjoy and recirculate their clothing, some limitations should be noted. The survey relies on self-reported responses which may be affected by memory or social desirability bias. Additionally, the survey collected percentage-based responses, which have been extrapolated in this report using population data to arrive at the figures used. While this approach enables broad quantification, it introduces a level of approximation.

#### 3. Local government audits

Local government audits provide estimates of the volume and composition of clothing in household waste and recycling streams, at single points in time. These audits typically involve physical sampling of kerbside bins and are conducted across selected local government areas to inform waste management practices and planning. In this report, two audits inform our clothing landfill data: the NSW kerbside audit conducted by Anne Prince & Associates for local government in 2024<sup>3</sup> and the Victoria kerbside audit conducted by Reground for local government in 2024<sup>4</sup>.

These audits provide insights into post-consumer clothing disposal behaviours and textiles volumes found in recycling systems. Limitations of this data include the variability in audit scope, methods, personnel, and frequency between different local government areas. Seasonal fluctuations may also influence the reliability of point-in-time data. There is limited national coordination or standardisation across audits, and small sample sizes may not be representative of broader population behaviours. In addition, clothing is often grouped under broad categories (for example, textiles, clothing and footwear), which reduces the amount of data available about specific garments or fibre compositions. Additionally, not all local government areas have identified clothing and textiles as a priority waste stream or are auditing textiles volumes.

#### 4. Industry consultation

Where available, data and estimates provided by Australian reuse operators, clothing charities, commercial clothing collectors, recycling and waste facility operators and fashion and textiles academics were included to strengthen clothing reuse and recycling volumes. This data provides practical, industry insights that complement formal datasets and help fill gaps in national reporting. Limitations include inconsistent national taxonomy and reporting standards across organisations, commercial sensitivities that limit data sharing, and the absence of centralised or regularly updated national reporting. Estimates may also be based on internal tracking systems or anecdotal evidence, which can vary in precision and comparability.

<sup>&</sup>lt;sup>2</sup> Payne, A., Jiang, X., Street, P., Leenders, M., Nguyen, N., Pervan, S., Tan, C. (2024). '<u>Keeping Clothes Out of Landfill: A landscape study of Australian consumer practices</u>'. RMIT University.

<sup>&</sup>lt;sup>3</sup> APC Waste Consultants. (2024, April). 'SSROC Kerbside Waste Audit Regional Report'.

<sup>&</sup>lt;sup>4</sup> Internal consultation with Reground.

#### 5. Comparative international studies

Where Australian data was absent or uncertain, international studies from countries with similar economic or cultural profiles were used to inform estimates or benchmark assumptions. These studies include, 'Measuring the Dutch clothing mountain' (2017), which provides detailed insights into clothing material flows in The Netherlands<sup>5</sup> as well as aggregate international statistics from Statista, that provide estimates on the number of clothing items held in wardrobes.<sup>6</sup>

These data sources provide a useful reference point for estimating Australian material flows in the absence of local data. Limitations include differences in methodological approaches, policy contexts, and consumption patterns between countries. In some cases, datasets rely on modelling assumptions or aggregated commercial data, which can obscure detail and limit transparency. As such, international data has been used cautiously and with consideration of contextual differences.

#### **Summary of data sources**

Table 2 below summarises the data sources used for this report.

| Data type   | Actual vs<br>estimate | Source   |
|---|-----------------------|--|
| Sea import of new clothing (2024) no. units                 | Actual                | Australian Bureau of Statistics<br>(Australian Customs)  |
| Sea import of new clothing (2024) total weight in tonnes    | Actual                | Australian Bureau of Statistics<br>(Australian Customs)/ Conversion<br>on 250 gram assumption per unit |
| Sea import of new clothing (2024) \$ value FOB              | Actual                | Australian Bureau of Statistics<br>(Australian Customs)  |
| Air import of new clothing (2024) no. units                 | Actual                | Australian Bureau of Statistics<br>(Australian Customs)  |
| Air import of new clothing (2023-24) total weight in tonnes | Actual                | Australian Bureau of Statistics<br>(Australian Customs)/ Conversion<br>on 250 gram assumption per unit |
| Air import of new clothing (2024) \$ value FOB              | Actual                | Australian Bureau of Statistics<br>(Australian Customs)  |
| Local production of new clothing (2024) no. units           | Estimate              | Australian Customs as fabric import  |

<sup>&</sup>lt;sup>5</sup> Maldini, I, et al. 2017. 'Measuring the Dutch Clothing Mountain'. The Netherlands is justified as a comparable country to Australia as it imports high volumes of clothing and has limited production occurring domestically.

Statista. 2019. Average number of apparel items owned by consumers worldwide from 2017 to 2019.

| Data type   | Actual vs<br>estimate | Source  |
|---|-----------------------|---|
| Local production of new clothing (2024) tonnes                  | Estimate              | Australian Customs as fabric import / Conversion of 250 grams per unit has been applied   |
| Total consumption of new clothing (2024) units                  | Estimate              | Equation based on industry<br>consultation and Australian<br>Customs data   |
| Total consumption of new clothing (2024) tonnes                 | Estimate              | Equation based on industry<br>consultation and Australian<br>Customs data/ Conversion of 250<br>grams per unit has been applied   |
| No. units per person on average                                 | Estimate              | Equation based on population figures reported by Australian Bureau of Statistics  |
| New clothing exported in 2024 stated in units and tonnes        | Actual                | Australian Bureau of Statistics<br>(Australian Customs)   |
| Clothing sold via retailers including online sales in 2024      | Estimate              | Equation based on industry consultation   |
| Clothing unsold in 2024   | Estimate              | Equation based on industry consultation   |
| Total clothing in wardrobes - no. units                         | Estimate              | Estimate based on comparative international study   |
| Total clothing in wardrobes - tonnes                            | Estimate              | Estimate based on comparative international study   |
| % clothing in wardrobes that has been worn in the past year     | Estimate              | Estimate based on local survey -<br>RMIT, 2024  |
| % clothing in wardrobes unworn in the past year                 | Estimate              | Estimate based on local survey -<br>RMIT, 2024  |
| Annual clothing donations and other reuse in Australia - units  | Estimate              | Estimate based on local survey -<br>RMIT, 2024 and industry<br>consultation   |
| Annual clothing donations and other reuse in Australia - tonnes | Estimate              | Estimate based on local survey -<br>RMIT, 2024 and industry<br>consultation. Conversion of 250<br>grams per unit has been applied |
| Informal clothing reuse in Australia in 2024                    | Estimate              | Estimate based on local survey -<br>RMIT, 2024 and industry<br>consultation   |
| Peer to peer clothing resold in Australian in 2024              | Estimate              | Estimate based on local survey -<br>RMIT, 2024  |

| Data type  | Actual vs<br>estimate | Source  |
|--|-----------------------|---|
| Clothing reused within Australian in 2024 – units and weight                               | Estimate              | Estimate based on local survey -<br>RMIT, 2024                              |
| Clothing recycled within Australian in 2024 – units and weight                             | Estimate              | Estimate based on local survey -<br>RMIT, 2024 and industry<br>consultation |
| Worn clothing exported from Australian in 2024 – units and weight                          | Estimate              | Estimate based on local survey -<br>RMIT, 2024 and industry<br>consultation |
| Clothing exported from Australia 2024 and reused outside<br>Australia – units and weight   | Estimate              | Estimate based on industry consultation                                     |
| Clothing exported from Australia 2024 and recycled outside<br>Australia – units and weight | Estimate              | Estimate based on industry consultation                                     |
| Australian household and commercial waste in 2024  | Estimate              | Estimate based on industry consultation and audit data                      |
| Clothing donated in Australia in 2024 that is unfit for resale                             | Estimate              | Estimate based on industry consultation                                     |
| Clothing sent to Australian landfill in 2024   | Estimate              | Estimate based on industry consultation and audit data                      |
| Clothing sent to landfill outside Australia in 2024  | Estimate              | Estimate based on industry consultation and audit data                      |

Table 2: Summary of data sources

#### Gaps in the data

All reported figures are best estimates based on data available at the time of writing. While ABS customs data offers strong coverage of market inflows and outflows, there are still limitations in quantifying air freight inflows due to the low value goods threshold. This means that imports with a value at or below AUD \$1,000 do not require a full import declaration and therefore are not captured in the ABS international merchandise trade statistics.

Seamless is actively seeking new data sources, both locally and internationally, to address these gaps and improve the quality of future material flow analyses.

Table 3 outlines the data gaps identified in this report as well as mitigation strategies to strengthen the national clothing data benchmark. These strategies draw on a combination of industry partnerships, research collaboration, and evolving data reporting requirements.

| Data gap                            | Mitigation strategy   | Timing         |
|-------------------------------------|---|----------------|
| Local production                    | Seamless to work with Seamless members and supporters to better estimate this figure.   | From 2025      |
| Fibre composition including blends  | Updating data reporting standards for Seamless members to include fibre breakdowns  | From July 2025 |
| Direct to consumer sales            | This data gap has been acknowledged by the Product Stewardship Centre of Excellence across multiple products. Seamless is working with its members, supporters and the broader industry to mitigate and advocate for improved reporting on low-value goods identified as problematic products.  | From 2026      |
| Unsold clothing                     | The Seamless aged inventory working group established in April 2025 is addressing this data gap, as well as mitigation strategies to reduce the volume of aged inventory and overproduction.  | Continuing     |
| Clothing in wardrobes               | Seamless is exploring collaborative options to better estimate this figure. This may include a Seamless wardrobe audit template for local councils as a citizen education initiative.   | From 2027      |
| Clothing donations                  | Seamless to work with Seamless members and supporters to better estimate this figure.   | From 2025      |
| Informal reuse                      | Seamless to work with Seamless members and supporters to better estimate this figure.   | From 2025      |
| Re-commerce and peer-to-peer resale | Future citizen surveys may provide this data and Seamless will also work with Seamless members and supporters.  | From 2025      |
| Local recycling                     | In April 2025, the Seamless taxonomy working group was established to develop a shared set of terms to support consistent language across the clothing industry. This is a foundational step toward closing the data gap on the volume of clothing recycled locally. Currently, inconsistent definitions and reporting practices limit the ability to estimate local recycling activity with confidence. Seamless will work with its members and supporters, and the wider industry, to apply this taxonomy and strengthen estimates of local clothing recycling volumes. | From 2025      |
| Clothing to landfill                | Seamless is exploring options to better estimate this figure, including through collaboration with local councils and the Seamless State and Territory Government Roundtable.   | From 2026      |
| Uniforms                            | The Seamless uniforms working group established in 2025 will help to inform future data, as too will a formal research collaboration with RMIT University.  | From 2025      |

Table 3: Data gaps and mitigation strategies

### **New clothing in Australia**

In 2024, 1.56 billion new garments, or 390,700 tonnes, were placed on the market in Australia. This is a 7% increase from 2023, when 1.46 billion units were placed on the market. The vast majority of these clothing items – 1.55 billion items - were imported into Australia, and 40 million garments, or 10,000 tonnes, were manufactured in Australia.



In Australia, the amount of new clothing entering the market has not only increased year on year - it has now returned to around the same level as 2018, before the impact of the COVID pandemic on retail trade. 1.56 billion new garments were placed on the Australian market in 2024, which is a 7% increase from 2023 and just a 1% decrease from 2018, when 1.58 billion new items were placed on the market.

Virtually all new clothing was imported into Australia, with less than 3% manufactured locally. Specifically, 1.55 billion garments were imported into Australia in 2024, while 40 million new garments were manufactured onshore.

Table 4 below summarises the new clothing imported into Australia and manufactured onshore, as well as the new clothing exported.

| Metric                                  | Number of garments | Weight         | Percentage change since 2023 |
|---|--------------------|----------------|------------------------------|
| New clothing place on the Australian ma | arket in 2024      |                |                              |
| New clothing imported by air            | 135 million        | 33,700 tonnes  | 16% increase                 |
| New clothing imported by sea            | 1.41 billion       | 353,000 tonnes | 6% increase                  |
| Total new clothing imported             | 1.55 billion       | 386,700 tonnes | 7% increase                  |
| Clothing manufactured in Australia      | 40 million         | 10,000 tonnes  | No change                    |
| (Minus: new clothing exported)          | (24 million)       | (6,000 tonnes) | No change                    |
| Total new clothing in Australia         | 1.56 billion       | 390,700 tonnes | 7% increase                  |

Table 4: Summary of new clothing placed on the Australian market in 2024

#### **New clothing imported into Australia**

Imports by sea make up the largest component of Australia's new clothing. In 2024, 1.41 billion items of clothing were imported by sea, which is 353,000 tonnes.<sup>7</sup> This is a 6% increase compared to 2023 when 1.3 billion items of new clothing were imported by sea, and a significant 158% increase from just over 20 years ago in 2003 when 548 million items of clothing were imported by sea.

Additionally, in 2024, 135 million garments (33,700 tonnes) were imported by air. This is a 16% increase compared to 2023 when 116 million garments (29,000 tonnes) were imported by this method.

#### Types of clothing imported

A wide range of new clothing types are imported into Australia. Figure 2 below shows the types of new clothing imported into Australia in 2024, stated as units.8

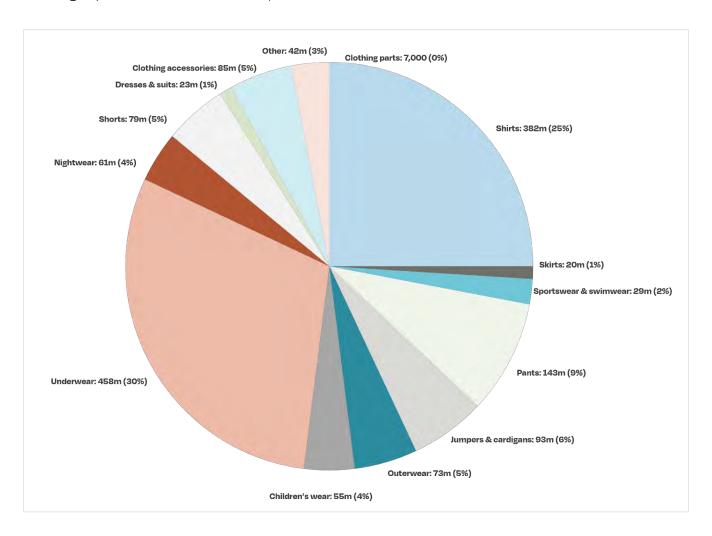


Figure 2: Types of clothing imported into Australia in 2024 (measured by units)

<sup>&</sup>lt;sup>7</sup> Australian Bureau of Statistics (ABS). (2024). International Merchandise Trade: Harmonised Tariff Item Statistical Classification - Codes 61 & 62.

<sup>&</sup>lt;sup>8</sup> At times, unit or weight data was incomplete in the data set. These graphs show the best available data.

Figure 3 below shows the types of new clothing imported into Australia in 2024, when measured by weight. This reveals the extent to which clothing types vary as a percentage of imports when measured by units compared to weight. For example, underwear was 30% of all clothing imported into Australia in 2024 when measured by units, but 10% when measured by weight.

As stated earlier in this report, an average weight of 250 grams per clothing unit has been applied across this report.

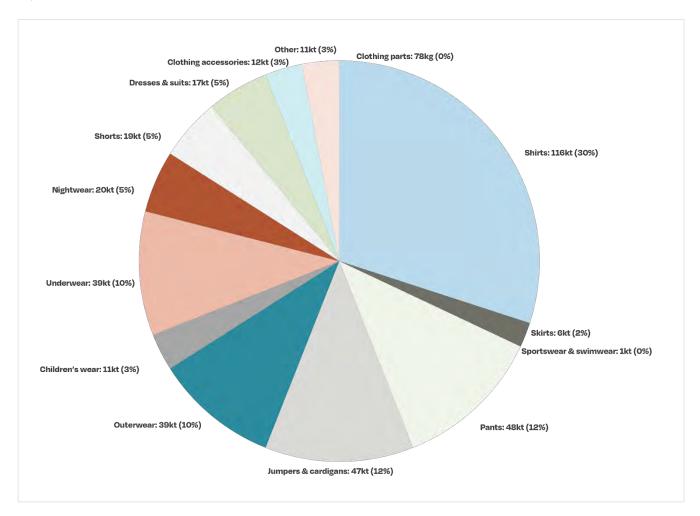


Figure 3: Types of clothing imported into Australia in 2024 (measured by weight)

#### **Clothing imports by fibre**

Australian Customs data<sup>9</sup>, categorises new clothing imported into Australia according to the following fibres: cotton, man-made fibres, synthetic, wool, silk and 'other'. It's important to note that this data is sourced from customs declarations. This means it is reported by individual organisations, so there is variability in how fibres are defined and categorised.

<sup>9</sup> Australian Bureau of Statistics (ABS). (2024). International Merchandise Trade: Harmonised Tariff Item Statistical Classification - Codes 61 & 62.

Figure 4 below shows the fibre type of new clothing imported into Australia in 2024 measured in weight.

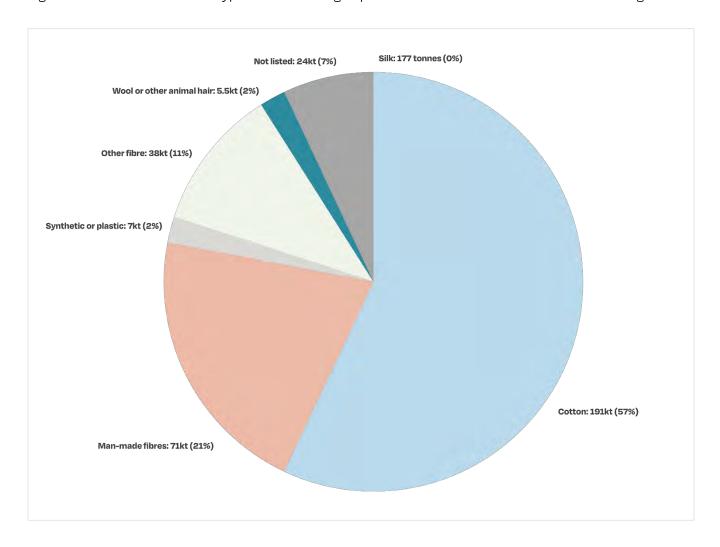


Figure 4: Fibre type of new clothing imported into Australia in 2024 (measured by weight)

As fibre composition influences the recyclability, biodegradability, and environmental impact of clothing, this data is a starting point to help determine the potential impact of circular clothing initiatives including textiles recycling. However, the value of this data is limited as it doesn't include detail on blended fibres. Relying on this simple clothing fibre data means we are not considering the complexities of clothing textiles and their potential for high value recycling.

Addressing this data gap will require greater transparency in customs reporting and investment in technologies capable of identifying, sorting and reprocessing fibre blends. Seamless is also collaborating with the clothing value chain, as well as responsible clothing brands who have joined as Seamless members to obtain increased visibility of this data through existing reporting processes.

#### Where we're importing new clothing from

In 2024, Australia imported new clothing and textiles from 149 different countries. 85% of imports came from five countries - China, Bangladesh, Vietnam, India, and Indonesia.

Table 4 below lists the country of origin, quantity, weight and reported value of new clothing and textiles imports into Australia in 2024. Note that this data includes imports of textile fabric, ready-made garments, and parts of garments, so the figures shown below when measured in weight, are higher than the figures in table 4 of this report, which covers new clothing only.

| Country of origin | Weight (tonnes) | Reported quantity | Reported value (AUD) | % of total value |
|-------------------|-----------------|-------------------|----------------------|------------------|
| China             | 225,000         | 873,400,00        | \$6,914,372,000      | 58%              |
| Bangladesh        | 72,000          | 260,100,000       | \$1,378,317,000      | 12%              |
| Vietnam           | 28,000          | 146,300,000       | \$1,020,427,000      | 8%               |
| India             | 25,000          | 93,800,000        | \$582,480,000        | 5%               |
| Indonesia         | 13,000          | 48,500,000        | \$429,934,000        | 4%               |
| Other             | 36,000          | 114,800,000       | \$1,555,232,000      | 13%              |
| Total             | 399,000         | 1.537 billion     | \$11.88 billion      |                  |

Table 5: Country of origin of new clothing and textiles imported into Australia in 2024

#### Clothing imported directly by Australian consumers

As noted previously in this report, 135 million garments (33,700 tonnes) were imported into Australia by air freight in 2024. This was 9.6% of all new clothing imported. Importing clothing by air costs significantly more than sea freight and therefore represents a much smaller share of Australia's total clothing imports.

Importantly however, this excludes new clothing imported in a single shipment valued below AUD\$1,000. That's because these shipments do not need to be declared to customs. This will mean that smaller urgent restocking shipments and the vast majority of new clothing sent directly to consumers are not included.

Clothing shipments directly to consumers in Australia are increasing in line with overall online spending. According to research from Australia Post<sup>10</sup>, Australians spent AUD\$69 billion online in 2024 – a new record, and a 12% increase from 2023. Online spending makes up between 17.7% and 22.3% of all retail spending in Australia. Fashion accounts for 13.9% of all online spend by Australians, which is a 4.1% increase from 2023.

<sup>&</sup>lt;sup>10</sup> Australia Post. 2025. eCommerce Report 2025.

Additionally, research from Roy Morgan<sup>11</sup> reports that cost of living pressures are driving Australians to seek low cost online alternatives. Online retailers Temu and Shein together generated nearly AUD\$3 billion in annual sales in Australia in the 12 months to June 2024 – with Temu generating AUD\$1.7 billion and Shein generating AUD\$1.1 billion. In the quarter ending June 2024, 1.66 million Australians shopped on Temu, which is an increase of 32% from the quarter ending December 2023. Similarly, the number of Australians shopping with Shein increased by 34%, from 830,000 in the quarter ending December 2023, to 1.11 million in the quarter ending June 2024.

While clothing imported into Australia by air freight in 2024 was less than 10% of all new clothing imported, the associated carbon footprint is significantly higher compared to clothing shipped by sea. This means that even small increases in air freight volumes will have a significant environmental impact, so it's important to carefully monitor this data.

#### **Clothing manufactured in Australia**

It is estimated that 40 million units of clothing, which is 10,000 tonnes, was manufactured in Australia in 2024. This is unchanged from 2023 levels and is less than 3% of all new clothing placed on the Australian market.

The types of clothing manufactured in Australia are diverse – from workwear and military uniforms to everyday clothing and luxury fashion. The sector relies heavily on imported fabric, as Australia's textile manufacturing capabilities including milling, spinning and weaving have decreased significantly over the past 40 years. In 2024, 11,200 tonnes of fabric were imported into Australia<sup>12</sup>, which was used in a wide range of products including home textiles, soft furnishings, and clothing.

#### **New clothing exported from Australia**

In 2024, Australia exported 24 million items of clothing, which equates to 6,000 tonnes. This includes clothing which has been manufactured in Australia for sale internationally, as well as clothing which has been imported into Australia for immediate re-export internationally.

<sup>&</sup>lt;sup>11</sup> Roy Morgan. (2024, August). Temu & Shein's Australian customer base keeps growing – as more Australians continue to trade down in the first half of 2024 in response to the cost-of-living crisis.

<sup>&</sup>lt;sup>12</sup> ABS (2024). International Merchandise Trade: Harmonised Tariff Item Statistical Classification – Code 60.

### **Clothing consumption**

In 2024, 1.51 billion items of new clothing, or 379,000 tonnes, were sold in Australia. This equates to 55 items of clothing for every Australian and is an increase of 6% from 2023, when Australians bought an average of 53 new items of clothing. 47 million garments were unsold in Australia in 2024, which is an increase of 17% from 2023.



We bought more new clothing in 2024 at a rate which equates to 55 new items of clothing for every Australian. This is up from 53 items per Australian in 2023 and is close to the figure of 56 items per Australian which was recorded in 2018, before the impact of the COVID pandemic on retail trade.

The amount of unsold clothing in Australia is currently estimated to be 3% of total imports. 13 For 2024, this means that 47 million units or 11,700 tonnes of imported clothing remained unsold.

| Metric                 | Number of garments                    | Weight         | Percentage change since 2023 |
|------------------------|---------------------------------------|----------------|------------------------------|
| Clothing consumption   |                                       |                |                              |
| New clothing sold      | 1.51 billion<br>(55 items per person) | 379,000 tonnes | 6% increase                  |
| Unsold clothing        | 47 million                            | 11,700 tonnes  | 17% increase                 |
| New clothing dispersed | 1.56 billion                          | 390,700 tonnes | 7% increase                  |

Table 4: Summary of new clothing dispersed in Australia in 2024

The amount of new clothing sold in Australia is informed by the amount of clothing imported into Australia. As noted earlier in this report, this excludes new clothing imported in a single shipment valued below AUD\$1,000. That's because these shipments do not need to be declared to customs. This will mean that smaller urgent restocking shipments and the vast majority of new clothing sent directly to consumers are not included in this figure.

Not including clothing purchased directly by Australians through online shopping means that the amount of new clothing sold in 2024 will be understated.

<sup>&</sup>lt;sup>13</sup> Wide consultation with Australian clothing industry stakeholders in 2024.

#### **Unsold clothing in Australia**

Not all clothing manufactured or imported for the Australian market ends up being sold to consumers. A proportion remains unsold due to a range of factors, including over-ordering, changing consumer preferences, seasonal variation, and businesses ceasing to trade. Currently, there is no consistent approach in how retailers record or report volumes of unsold stock, creating a notable gap in available data. This limits the visibility of pre-consumer clothing flows and their ultimate destination.

The amount of unsold clothing in Australia is currently estimated to be 3% of total imports. 14 This means that 47 million units or 11,700 tonnes of imported clothing remained unsold in 2024. Ongoing consultation with industry will help to continually improve the accuracy of this data.

In Australia, there are four main pathways for unsold clothing:

- 1. Secondary markets through donation to charitable reuse operators, discount outlets and commercial re-commerce platforms.
- 2. Export to international charity partners or back to manufacturers.
- 3. **Storage** for future resale (for example, seasonal stock held over).
- 4. **Destruction** this pathway is more likely to be used for premium branded clothing, or sensitive items such as uniforms, and branded merchandise.

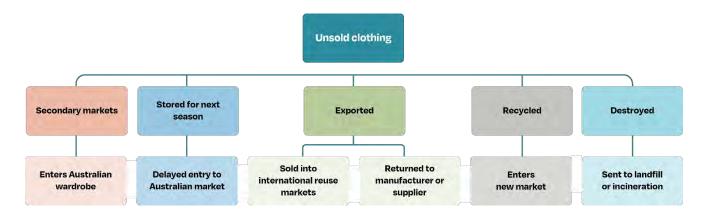


Figure 5: Pathways for unsold clothing in Australia

<sup>&</sup>lt;sup>14</sup> Industry consultation with relevant stakeholders, 2024.

# **Clothing in wardrobes**

Clothing held in wardrobes refers to the number of garments that Australians own, regardless of whether they were worn in a particular year. In 2024, it is estimated that Australians owned 5.27 billion items of clothing, or 1.32 million tonnes. This equates to 193 items in the wardrobe of every Australian.



Our wardrobes includes clothing that we wear regularly, as well as items that are kept for specific occasions, temporarily unworn, awaiting repair, out of season, or passed between friends and family. It may also include garments held for sentimental reasons or stored at the back of the wardrobe.

According to an online survey from Statistica of 2,000 people from around the world in 2019<sup>15</sup>, consumers owned an average of 136 clothing items each. It is reasonable to estimate that the Australian average will be higher than the global figure. This is because Australia is a high-income country with widespread availability of relatively low-cost clothing, significant reliance on imports, and a consumer culture that encourages wardrobe renewal driven by seasonal trends. Additionally, available data shows that Australians purchase, use and discard clothing at higher rates than many other nations.

Additionally, the report, 'Measuring the Dutch Clothing Mountain' found that clothing in wardrobes is roughly 3.5 times that which is purchased annually (3.5:1).16 Leveraging this data, and the statistic that every Australian bought 55 items of new clothing in 2024, we can estimate that every Australian has 193 items in their wardrobe on average. Given the Australian population<sup>17</sup>, this means that Australians own 5.27 billion items of clothing which equates to 1.32 million tonnes.

<sup>&</sup>lt;sup>15</sup> Statista. 2019. Average number of apparel items owned by consumers worldwide from 2017 to 2019

<sup>&</sup>lt;sup>16</sup> This figure was found by extrapolating the consumption and in-wardrobe figures presented for Dutch consumers. The exact ratio is 1:3.76, however in the absence of comparative data, a rounded figure of 3.5 is being used for this calculation. Maldini, I, et al. 2017. Measuring the Dutch Clothing Mountain

<sup>&</sup>lt;sup>17</sup> According to the Australian Bureau of Statistics the Australian population as of September 2024 was 27,309,396

#### **Unworn clothing**

Survey data from a nationally representative sample of 3,000 Australians provides insight into the number of clothing items stored in our wardrobes which are not worn.<sup>18</sup>

In the study from RMIT University, 18% of Australians reported wearing all the clothing in their wardrobes in the past year. The remaining 82% reported that they had not worn garments in the past twelve months in varying amounts:

- 42% of respondents reported that they had not worn between 1 and 10 items
- 23% of respondents reported that they had not worn between 11 and 20 items
- 12% of respondents reported that they had not worn between 21 and 50 items
- 5% of respondents reported that they had not worn more than 51 items.

This data is useful for understanding the amount of clothing Australians are storing in their wardrobes but not wearing. A robust benchmark is critical for shaping effective consumer behaviour campaigns to encourage increased responsible recirculation and to address increased clothing consumption, as well as to inform government policy responses to increasing levels of textile waste.

<sup>&</sup>lt;sup>18</sup> Payne, A., Jiang, X., Street, P., Leenders, M., Nguyen, N., Pervan, S., Tan, C. (2024). Keeping Clothes Out of Landfill: A landscape study of Australian consumer practices. RMIT University.

## Reused and recycled clothing

More than ever, Australians are selling, swapping, sharing and recycling their clothes. In 2024, 650 million items of clothing were reused, which increased by 10% from 2023. Also, 150 million garments were recycled, an increase of 7% from 2023.



This section of the 2024 national clothing benchmark tells the story of how our clothes were kept in use through resale, sharing, or recycling, rather than being discarded. It includes formal and informal systems that extend the life of clothing, including charitable donations, recommerce, informal exchanges such as hand-me-downs, and fibre recovery or material recycling.

How successful Australians are at reusing and recycling their clothing depends heavily on our clothing collection, sorting and recycling infrastructure, technology and skills. This includes charitable and commercial collectors, kerbside and in-building collection points, donation bins, resale platforms, recycling operators and more.

Table 5 below summarises how Australian clothing was reused and recycled in 2024.

| Metric                              | Number of garments                   | Weight         | Percentage change since 2023 |
|-------------------------------------|--------------------------------------|----------------|------------------------------|
| Reused and recycled clothing        |                                      |                |                              |
| Clothing reuse in Australia         | 308 million<br>(11 items per person) | 77,000 tonnes  | 10% increase                 |
| Clothing reuse outside Australia    | 342 million                          | 85,000 tonnes  | 10% increase                 |
| Total clothing reuse                | 650 million                          | 162,000 tonnes | 10% increase                 |
| Clothing recycled in Australia      | 40 million                           | 10,000 tonnes  | No change                    |
| Clothing recycled outside Australia | 110 million                          | 27,500 tonnes  | 10% increase                 |
| Total clothing recycled             | 150 million                          | 37,500 tonnes  | 7% increase                  |
| All reused and recycled clothing    | 800 million                          | 199,500 tonnes | 9% increase                  |

Table 5: Summary of reused and recycled clothing from Australia in 2024.

#### **Donating, sharing and selling clothing in Australia**

In 2024, the amount of clothes being reused, that is donated, sold, swapped, shared and therefore worn by another person in Australia, increased by 10% compared to 2023, to 308 million items, which is 77,000 tonnes. That equates to 11 second hand items of clothing for every Australian.

#### **Clothing donations in Australia**

Clothing donation is widely practised in Australia. It allows clothing to retain its original function and circulate within the community, supporting environmental and socio-economic outcomes. Australians report a strong willingness to donate clothing that is still wearable. According to a study from RMIT University<sup>19</sup>, 87% of consumers indicate they would choose to donate garments to a charity, making it one of the most popular channels for clothing reuse.

After being sorted for quality in Australia, approximately 17% of donations are resold locally and 1% is provided to local Australian welfare agencies.<sup>20</sup> Overall, Australian clothing collectors indicated that approximately 268 million items of clothing were reused locally in 2024, which equates to 67,000 tonnes of clothing.

#### Swapping and sharing clothing in Australia

Clothing reuse does not rely solely on formal systems. Informal reuse, such as handing down or passing on garments to family, friends, and neighbours, is common in Australia. These exchanges typically occur outside of any organised collection or retail system and play an important role in extending the lifespan of clothing and reducing the amount of clothing that is sent to landfill.

While precise data on the volume of clothing shared and swapped informally is limited, a study from RMIT University<sup>21</sup> reported that just under half of consumers in Australia say they give clothing to family, friends, or neighbours at least half the time.

Using a conservative estimate that one in four Australians informally pass on an average of five garments annually, it is estimated that approximately 8,000 tonnes or 32 million units of clothing are reused in this way. This figure highlights the significance of informal channels in supporting circular clothing flows alongside formal donation and resale systems.

<sup>&</sup>lt;sup>19</sup> Payne, A., Jiang, X., Street, P., Leenders, M., Nguyen, N., Pervan, S., Tan, C. (2024). Keeping Clothes Out of Landfill: A landscape study of Australian consumer practices. RMIT University.

<sup>&</sup>lt;sup>20</sup> Charitable Reuse Australia (2021). Measuring the Impact of the Charitable Reuse and Recycling Sector: A comparative study using clothing donated to charitable enterprises. MRA Consulting.

<sup>&</sup>lt;sup>21</sup> Payne, A., Jiang, X., Street, P., Leenders, M., Nguyen, N., Pervan, S., Tan, C. (2024). Keeping Clothes Out of Landfill: A landscape study of Australian consumer practices. RMIT University.

#### Clothing resale in Australia

More and more Australians are reselling their clothes in Australia. Enabled by digital platforms, online marketplaces, and social media groups, reselling clothes allows Australians to generate revenue from unwanted garments. According to ThredUp's 2025 Resale Report<sup>22</sup>, the global second hand apparel market grew by 15% growth in 2024, reaching US\$227 billion and accounting for 9% of global fashion sales.

Findings from RMIT University's national survey suggest that 15% of Australians are reselling their clothing. Amongst this group, resale behaviour tends to vary dramatically – with some people selling hundreds of items per year and others selling one item of clothing. For this calculation, a conservative estimate of two items per person will be used. If 15% of individuals aged 18–65 years each sold two garments per year, this would result in approximately 2,000 tonnes or 8 million units of clothing remaining in circulation through resale.

These estimates require further investigation in the future due to the variations in consumer behaviour and market dynamics. They rely on assumptions which can vary with demographics, individual habits, and external factors such as seasonality. Additionally, clothing resale is influenced by shifting social norms, economic incentives, and the increasing availability of online resale platforms. Therefore, while the current estimate is a useful starting point, there is a significant data gap in this area.

#### **Clothing reuse in Australia**

Table 6 below shows that when we combine the figures for clothing donations, informal reuse (swapping and sharing clothing), and clothing resale, total clothing reuse in Australia was 308 million garments, which equates to 77,000 tonnes. This is equivalent to 11 items for every Australian.

| Metric                        | Number of garments                   | Weight        | Percentage change since 2023 |
|-------------------------------|--------------------------------------|---------------|------------------------------|
| Clothing reuse in Australia   |                                      |               |                              |
| Clothing donations            | 268 million                          | 67,000 tonnes | -                            |
| Swapping and sharing clothing | 32 million                           | 8,000 tonnes  | -                            |
| Clothing resale               | 8 million                            | 2,000 tonnes  | -                            |
| Clothing reuse in Australia   | 308 million<br>(11 items per person) | 77,000 tonnes | 10% increase                 |

Table 6: Summary of clothing reuse in Australia in 2024

<sup>&</sup>lt;sup>22</sup> ThredUp, Resale Report 2025

#### **Clothing reuse outside Australia**

A large proportion of the clothing that Australians donate is exported for reuse and recycling in international markets. Most charities and commercial collectors undertake a pre-sort of collected items in Australia to remove any clothing unsuitable for export and non-clothing items. From there, clothing is baled and exported under the Harmonised System Code '6309 Worn Clothing' or '6310 Used or New Rags'.<sup>23</sup>

Figure 6 below shows the export value of clothing by destination country. The top three countries shown, the United Arab Emirates, Pakistan and Malaysia, are key global sorting hubs that import worn clothing from all over the world and then sort and grade items before re-export to other countries. This means that once worn clothing leaves Australia and enters these hubs, it is very difficult to trace.

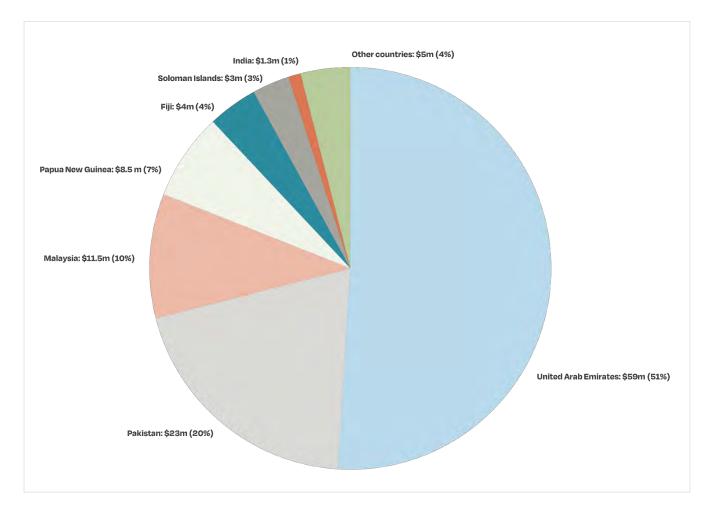


Figure 6: Destination for worn clothing and rags from Australia in 2024, represented as export value (AUD)

Once sorted, it is estimated that approximately 342 million items, or 85,000 tonnes, are reused outside Australia, according to the Australian consultancy, Sustainable Resource Use.

<sup>&</sup>lt;sup>23</sup> Australian Bureau of Statistics (ABS). (2024). International Merchandise Trade: Harmonised Tariff Item Statistical Classification - Codes 6309 + 6310.

#### **Clothing recycled in Australia**

In 2024, it is estimated that 40 million items of clothing, which is 10,000 tonnes, were recycled in Australia. While this figure has not changed since 2023, it is a 43% increase on the amount of clothing recycled in Australia in 2018.

There are innovative operators processing pre-consumer and post-consumer textiles in Australia. Some operations separate clothing and textiles by fibre types, while others process mixed-fibre streams. These operators have the potential and desire to scale to help reduce the amount of clothing going to landfill, however supportive policy, standards, investment, and infrastructure development is required to enable this.

Recycling facilities often process clothing alongside other textiles, such as sheets and towels, which can make it difficult to estimate the exact volume of clothing recycled. Seamless will work more closely with Australian operators to increase the accuracy of the data reported in future clothing benchmark reports.

#### **Clothing recycled outside Australia**

In 2024, it is estimated that 110 million items of clothing, which is 27,500 tonnes, was exported for recycling outside Australia. This means that 73% of Australian clothing was recycled outside Australia. This is a 10% increase compared to 2023 when 100 million units were recycled outside Australia, and a 20% increase compared to 2018.

Recycled clothing has several uses. It can become a textile input into other material streams, downcycled into rags or used in insulation or other stuffing applications.

To enable accurate and transparent data flow in the global circular clothing system, it is important to trace the journey of Australian clothing once it is exported. This is currently extremely challenging, as once our clothing reaches a large sorting hub, it is combined with textiles from other regions, then sorted, graded and often re-exported.

The large sorting hubs play a critical role in this system, however there is currently a lack of consistent, traceable reporting standards for clothing. Strengthening data-sharing protocols, verification methods, and cross-border collaboration with our key clothing export destination countries will be essential to track next life outcomes and the impacts of Australian clothing.

### **Clothing to landfill**

Despite the progress we're making in recycling and reusing our clothes, we still sent 880 million items of clothing, which is 220,000 tonnes, to landfill in Australia in 2024. Additionally, 9,000 tonnes was sent to landfill outside Australia. Overall, the total amount of clothing ending up in landfill decreased by just 1% in 2024 compared to 2023.



In 2024, 880 million items of clothing ended up in landfill in Australia. This is equivalent to 59% of all of the new clothes imported into Australia in 2024. When combined with the 36 million items of clothing that was sent to landfill outside Australia, a total of 916 million or 229,000 tonnes of clothing was sent to landfill in 2024. This is a 1% decrease compared to 2023, and a 4.5% decrease compared to 2018.

| Metric                     | Number of garments | Weight         | Percentage change since 2023 |
|----------------------------|--------------------|----------------|------------------------------|
| Clothing to landfill       |                    |                |                              |
| Landfill in Australia      | 880 million        | 220,000 tonnes | 1% decrease                  |
| Landfill outside Australia | 36 million         | 9,000 tonnes   | No change                    |
| Total landfill             | 916 million        | 229,000 tonnes | 1% decrease                  |

Table 7: Summary of Australian clothing in landfill in 2024

#### Landfill in Australia

Kerbside collection data, representing household and commercial waste has been used to inform the estimate of the amount of clothing going to landfill in Australia. Two kerbside waste audits, one conducted in New South Wales and another in Victoria, assessed clothing found in kerbside garbage and recycling bins, as well as in household bulky waste and commercial waste streams.<sup>24</sup>

<sup>&</sup>lt;sup>24</sup> APC Waste Consultants. (April 2024), SSROC Kerbside Waste Audit Regional Report

Based on these audits, around 150,000 tonnes of clothing are discarded through kerbside bins. When combined with bulky and commercial waste, the total volume is estimated to be between 180,000 and 200,000 tonnes annually. Given that nearly all household waste in Australia ends up in landfill, only a very small portion of this clothing is likely to be diverted for waste-to-energy processing. An exception may be military and service-issued uniforms, however, data is currently unavailable for these clothing types. The audit data also provide useful insights into the condition of discarded garments, whether they are wearable or unwearable, and their fibre composition.

It is also estimated that 30,000 tonnes or 120 million units of clothing are discarded by charities and other collection and sorting organisations.<sup>25</sup> This includes items that are either severely damaged, unwearable, or have minimal potential for reuse, such as socks and underwear.

#### **Landfill outside Australia**

Australian consultancy, Sustainable Resource Use, estimates that 36 million units, which equates to 9,000 tonnes of Australian textile are discarded in international landfills each year. As noted earlier in this report, obtaining accurate data is very challenging, as once our clothing reaches a large sorting hub, it is combined with textiles from other regions, then sorted, graded and often re-exported, making it difficult to trace.

<sup>25</sup> Consultation with charity reuse operators.

# 2024 clothing data summary

This table summarises key data from the Seamless 2024 national clothing data benchmark.

| Metric                              | Number of garments                     | Weight              | Percentage change since 2023 |
|-------------------------------------|--|---------------------|------------------------------|
| New clothing in Australia           |  |                     |                              |
| New clothing imported               | 1.55 billion                           | 386,700 tonnes      | 7% increase                  |
| Clothing manufactured in Australia  | 40 million                             | 10,000 tonnes       | No change                    |
| (Minus: new clothing exported)      | (24 million)                           | (6,000 tonnes)      | No change                    |
| Total new clothing in Australia     | 1.56 billion                           | 390,700 tonnes      | 7% increase                  |
| Clothing consumption                |  |                     |                              |
| New clothing sold                   | 1.51 billion<br>(55 items per person)  | 379,000 tonnes      | 6% increase                  |
| Unsold clothing                     | 47 million                             | 11,700 tonnes       | 17% increase                 |
| Clothing in wardrobes               |  |                     |                              |
| Total clothing held in wardrobes    | 5.27 billion<br>(193 items per person) | 1.32 million tonnes | 25% increase                 |
| Recycled and reused clothing        |  |                     |                              |
| Clothing reuse in Australia         | 308 million<br>(11 items per person)   | 77,000 tonnes       | 10% increase                 |
| Clothing reuse outside Australia    | 342 million                            | 85,000 tonnes       | 10% increase                 |
| Total clothing reuse                | 650 million                            | 162,000 tonnes      | 10% increase                 |
| Clothing recycled in Australia      | 40 million                             | 10,000 tonnes       | No change                    |
| Clothing recycled outside Australia | 110 million                            | 27,500 tonnes       | 10% increase                 |
| Total clothing recycled             | 150 million                            | 37,500 tonnes       | 7% increase                  |
| All recycled and reused clothing    | 800 million                            | 199,500 tonnes      | 9% increase                  |
| Clothing to landfill                |  |                     |                              |
| Landfill in Australia               | 880 million                            | 220,000 tonnes      | 1% decrease                  |
| Landfill outside Australia          | 36 million                             | 9,000 tonnes        | No change                    |
| Total landfill                      | 916 million                            | 229,000 tonnes      | 1% decrease                  |

Table 8: Data summary for flow of clothing in Australia in 2024



