

Geography Level 10

Chapter 2 — Geographies of interconnection

This work is licensed under the Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License. To view a copy of this license, visit <http://creativecommons.org/licenses/by-nc-nd/4.0/> or send a letter to Creative Commons, PO Box 1866, Mountain View, CA 94042, USA.

Attribution: Classbasics Pty Ltd, vwx.au

Curriculum codes refer to the *Victorian Curriculum F–10 Version 2.0*, published by the Victorian Curriculum and Assessment Authority (VCAA). Classbasics is not affiliated with the VCAA; the VCAA does not endorse this resource and makes no warranties regarding it.

Distribution note: this document may be distributed, and whole pages may be removed from it, provided only WHOLE pages are removed (never part of a page). This allows teachers to remove tests, exams and subtopics they do not want to issue.

Aboriginal and Torres Strait Islander content has been excluded as accuracy cannot be guaranteed, and it is better to be respectful than cover the entire curriculum inaccurately.

Significant effort has been made to ensure this content is legal. Please send any areas of concern to admin@vwx.au with appropriate document/legal references so errors can be verified and changes be made.

Contents

Section	Page
Faster movement, faster messages: how changing transport and digital tools reshape lives and places	2
Trade in manufactured goods: what it does to economies and populations, in Australia and Asia	14
Connected by trade: embodied carbon and what trade means for a country's sustainability	30
Tourism, travel and cultural choices: their effects on places, and managing them well	42
How fashions, pandemics and financial shocks spread across a connected world	56

Faster movement, faster messages: how changing transport and digital tools reshape lives and places

Content description: VC2HG10K05

Theory

Every place is connected to other places by two kinds of network: **transport networks** (roads, rail lines, shipping routes and flight paths) that move people and goods, and **information networks** (the internet and phone systems) that move data, services and ideas. When either network changes, the lives of the people in a place change with it: what they can buy, the care they can receive, the work they can do, and the people they can stay close to. This section follows those changes from one regional Victorian town out to the whole world.

Transport access changes what a place can reach (VC2HG10K05 . E01). *Access* means being able to get to a service or opportunity — a hospital, a university, a job, a major airport — without unreasonable cost or time. Consider Mildura, in far north-west Victoria. The road from Mildura to Melbourne is 529.8 km and takes about 6.7 hours to drive; a straight line between the two airports is only about 456 km, but roads must follow the land, so the driven route is longer and slower. A regional flight covers the straight-line distance in about an hour. For a Mildura resident with a specialist appointment, a job interview or a university lecture in Melbourne, the flight turns a whole day of driving into a morning — the service feels close. If the flight is cut, the same service suddenly feels a day away, even though the town has not moved one metre. **Distance is fixed; the time to cross it is not**, and it is that time that shapes how far away a place feels.

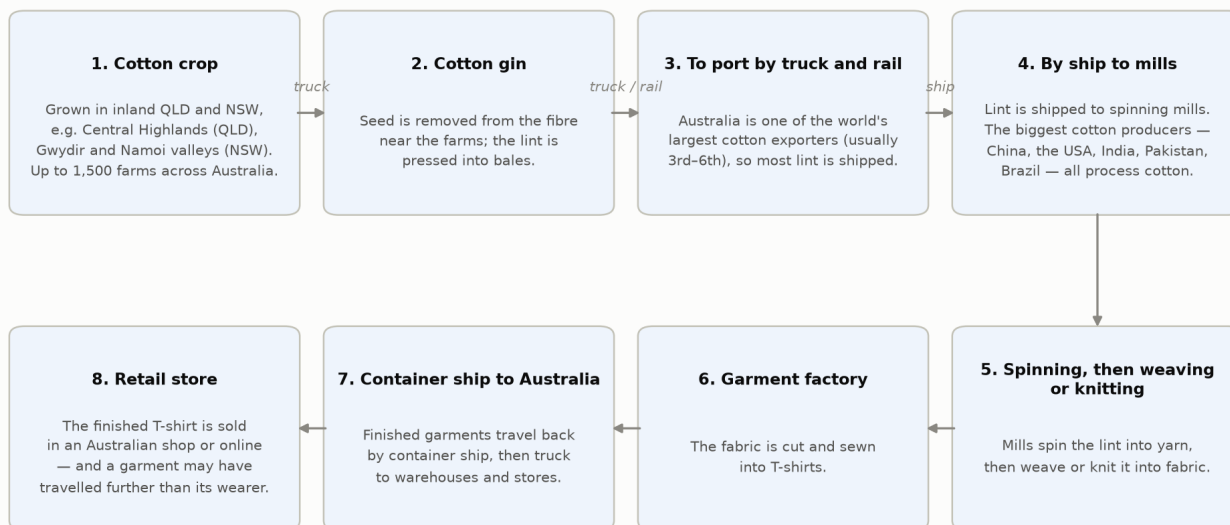


Two panels comparing Mildura to Melbourne: the road route is 529.8 km and about 6.7 hours of driving, while the straight-line distance is about 456 km and a regional flight takes about an hour.

For some Australians, air transport is not a convenience but the only practical way to reach medical care. The Royal Flying Doctor Service (RFDS) makes more than 900 patient contacts a day and flew 27,475,543 km in its latest reported year, and it now pairs its aircraft with **telehealth** — health care delivered over a video link — so that a patient far from any hospital can still see a specialist. Where transport access is poor and telehealth is strong, the video link partly does the job the road cannot.

Transport and information networks connect people to goods (VC2HG10K05 . E02). The path a product follows from producer to buyer is its **supply chain**, and the planning that keeps each step moving — choosing the mode, the route, the storage, the timing — is called **supply-chain logistics**. Follow a cotton T-shirt. The cotton is grown on farms in inland Queensland and New South Wales — in regions such as the Central Highlands (QLD) and the Gwydir and Namoi valleys (NSW) — ginned near the farms so the fibre is pressed into bales, and trucked and railed to a port. Australia is one of the world's largest cotton exporters (usually ranked third to sixth), so most of that lint is shipped to spinning mills, woven or knitted into fabric, cut and sewn into garments, and container-shipped back to Australian stores. A single T-shirt can cross an ocean twice before it is worn.

From cotton crop to T-shirt: one global supply chain

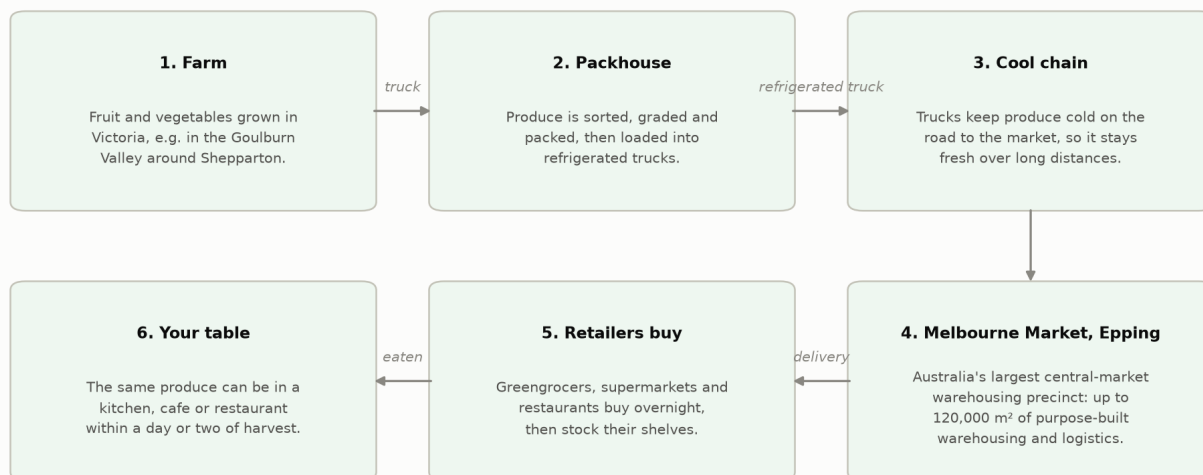


Stages and places: Cotton Australia, 'Where is cotton grown?' (retrieved 25 Aug 2026); export rank as stated there. Process steps are the standard cotton supply chain.

Flow diagram of eight stages from cotton crop to retail T-shirt: farm regions in Queensland and New South Wales, gin, port by truck and rail, ship to mills, spinning and weaving, garment factory, container ship back to Australia, and retail store.

Fresh food runs the same logic against a clock. Fruit and vegetables grown in Victoria — in regions such as the Goulburn Valley around Shepparton — are packed, loaded into refrigerated trucks (the **cool chain**), and delivered to the Melbourne Market at Epping, a purpose-built central market with up to 120,000 m² of warehousing, the largest warehousing precinct of any central market in Australia. Retailers buy overnight and the produce reaches shelves, cafes and kitchens within a day or two of harvest. If one link fails — a truck breaks down, a cool room loses power — the chain delivers waste instead of food.

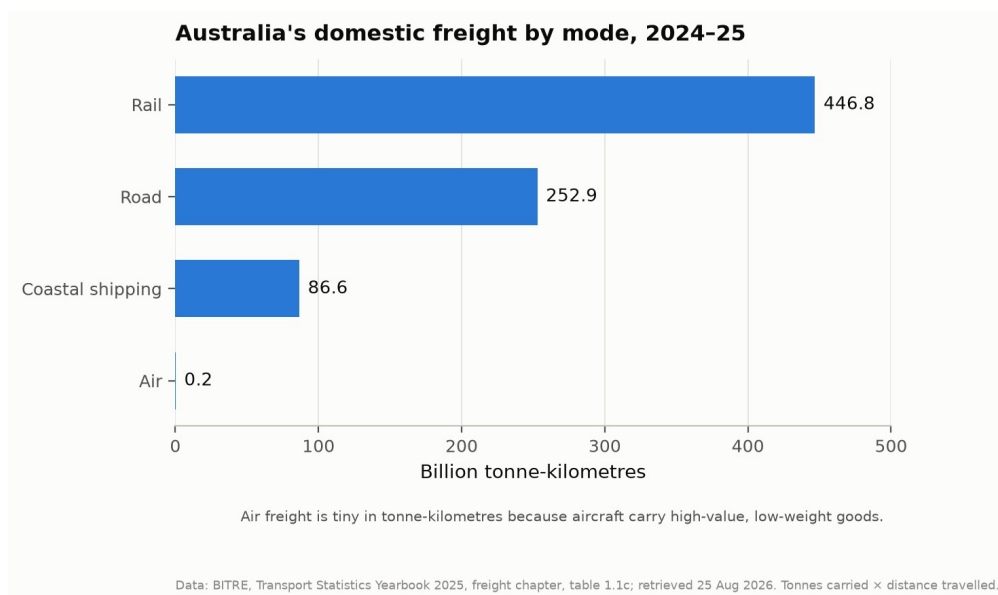
From farm to table: fresh food through Melbourne's supply chain



Melbourne Market facts: melbournemarket.com.au, 'About & overview' (retrieved 25 Aug 2026). Other stages are the standard fresh-food supply chain.

Flow diagram of six stages from farm to table: Victorian farm, packhouse, refrigerated truck in the cool chain, the Melbourne Market at Epping, retailers buying overnight, and the meal table.

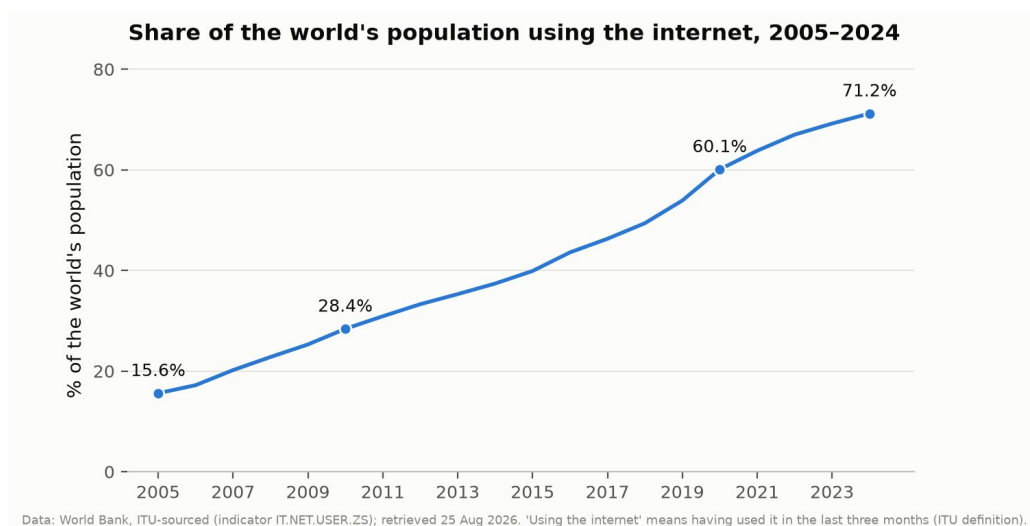
Which mode carries the freight? In 2024–25 Australia's domestic freight task was 786.5 billion **tonne-kilometres** — one tonne-kilometre is one tonne carried one kilometre — split as the next figure shows.



Bar chart of Australian domestic freight in 2024–25 in billion tonne-kilometres: rail 446.8, road 252.9, coastal shipping 86.6 and air 0.2.

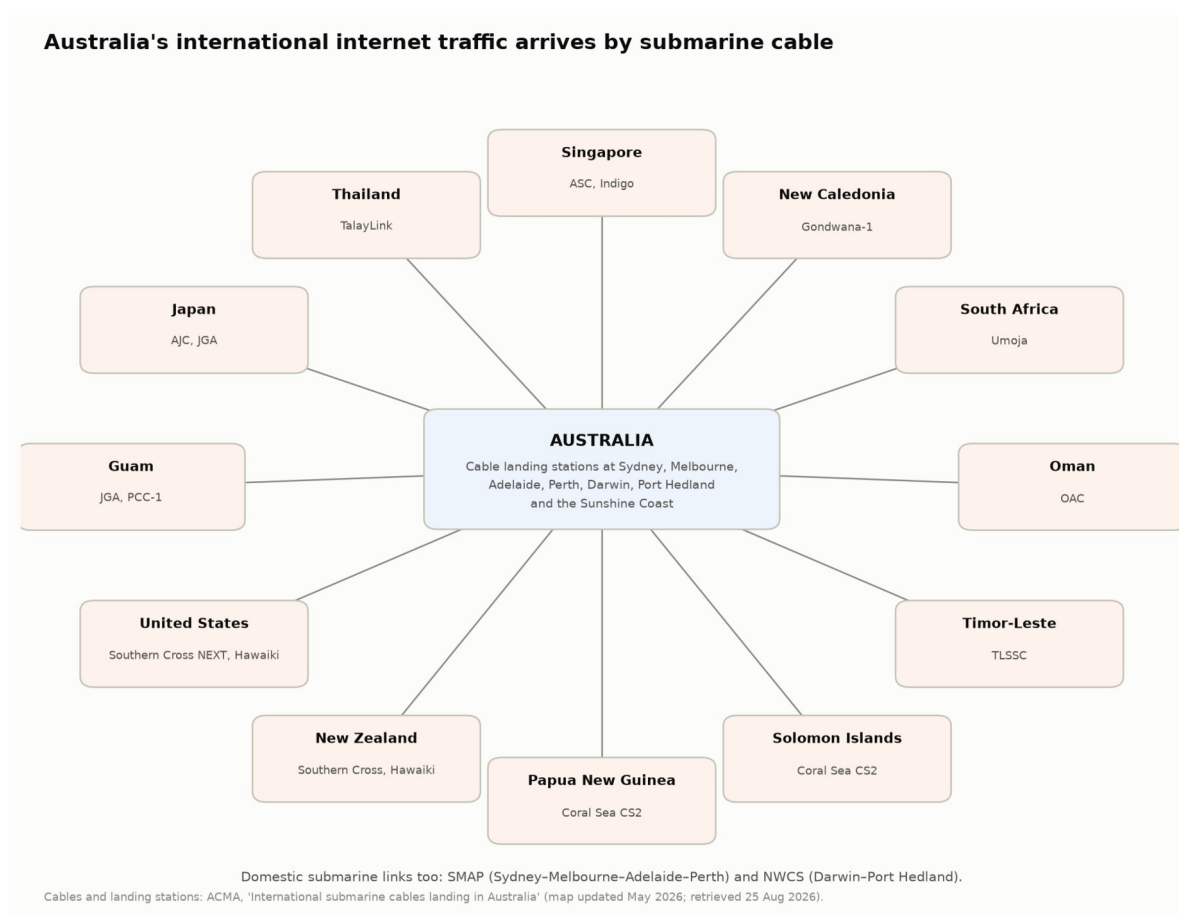
Rail leads because Australia's heaviest freight — iron ore, coal and grain — is bulk, and one train can haul thousands of tonnes over long distances cheaply. Road wins the part rail cannot do: the last stretch to the shop door. Air carries almost nothing by weight (0.2 billion tonne-kilometres) because aircraft earn their keep on goods that are valuable, light and urgent, not on ore. Choosing the right mode for each leg is exactly the logistics work that supply chains are made of.

Digital tools change who people are connected to (VC2HG10K05 . E03). The share of the world's people using the internet rose from 15.6% in 2005 to 71.2% in 2024 — about 6.0 billion people by 2025. In Australia about 97% of people use the internet.



Line graph of the share of the world population using the internet each year from 2005 (15.6%) to 2024 (71.2%), rising steadily with a jump in 2020.

That connection is physical. Most of Australia's international internet traffic arrives through submarine cables that land at a handful of cities — Sydney, Melbourne, Adelaide, Perth, Darwin, Port Hedland and the Sunshine Coast — and run out to Singapore, Japan, the United States, New Zealand and neighbours such as Papua New Guinea, the Solomon Islands and Timor-Leste. The “cloud” is, at the bottom, a set of cables in the sea.



Hub-and-spoke diagram with Australia at the centre, listing the cable landing stations, joined to twelve destinations (Singapore, Thailand, Japan, Guam, the United States, New Zealand, Papua New Guinea, Solomon Islands, Timor-Leste, Oman, South Africa, New Caledonia) by named submarine cables.

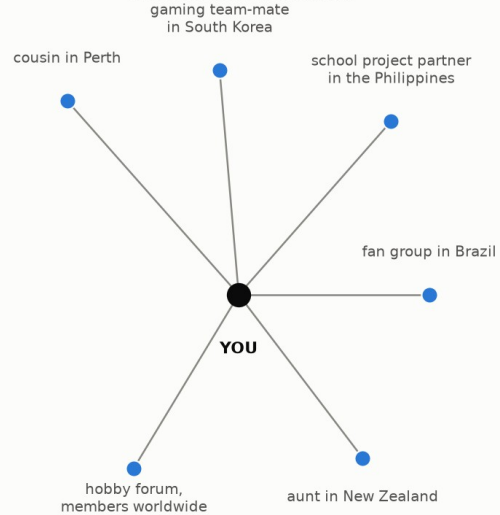
Who do those cables connect you to? Your face-to-face connections — family, school, sport, a part-time job — mostly live in your own city or region. Your online connections can be anywhere: a cousin in Perth, a gaming team in South Korea, a fan group in Brazil. The next figure is only a model; the inquiry task at the end of this section asks you to map your own two networks and compare them.

A model of where connections live: face-to-face versus online

Face-to-face connections



Online connections



A model only — the inquiry task asks you to map and compare your own connections.

Two-panel model: face-to-face connections cluster inside a ring labelled your city or region, while online connections reach scattered points across the world such as a cousin in Perth and a gaming team-mate in South Korea.

Does this mean distance is dead? Writers since the 1990s have claimed a “**death of distance**” — the idea that communication technology has ended distance as a constraint on human interaction. The Victorian Curriculum does not define the phrase, and it is a **contested term**: serious people defend both sides. So this section treats the claim as a debate to be weighed, not a fact to be swallowed, and states each side in its strongest form.

Is the 'death of distance' real? The strongest case on each side

Distance no longer constrains us ...

- Families and friends on other continents keep in touch by video call and chat.
- Telehealth reaches far-outback patients: the RFDS makes over 900 patient contacts a day.
- Online stores deliver goods to almost any address — purchases no longer need a nearby shop.
- India and the Philippines now supply global business services; their services exports grew steadily from 2015 to 2024.
- Courses, entertainment and ideas reach anyone with a connection, wherever they live.

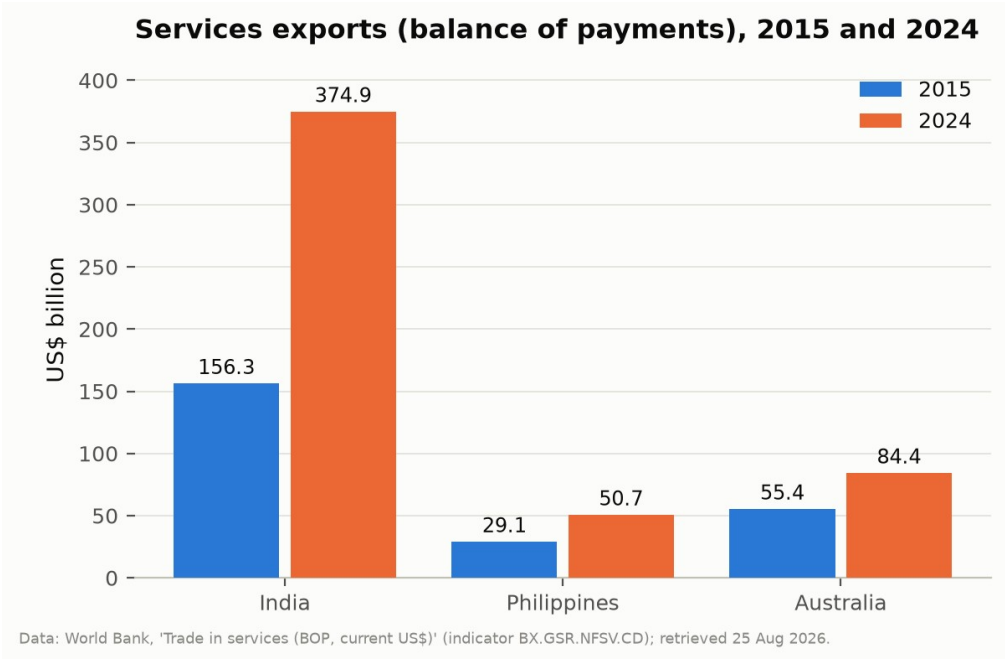
... distance still constrains us

- Freight time and cost still grow with distance: Mildura's road link to Melbourne is about 530 km.
- Access is uneven: 85% of urban people but only 58% of rural people worldwide are online, and 2.2 billion people are still offline.
- Time zones limit live contact — a 3 pm lesson in Melbourne is 3 am somewhere else.
- Big services stay in cities: major hospitals, courts and international airports.
- Cables land at a few cities (Sydney, Perth, Darwin ...) — not at every coastline.

Both sides are stated in their strongest form (steelmanned); every example is drawn from data in this section. Whether distance is 'dead' depends on which constraint — travel, cost or access — you weigh.

Two-column steelmanned debate: for, video calls, telehealth such as the RFDS, online stores, and India and the Philippines supplying global business services; against, freight cost growing with distance, uneven internet access, time zones, services concentrating in cities, and cables landing at only a few cities.

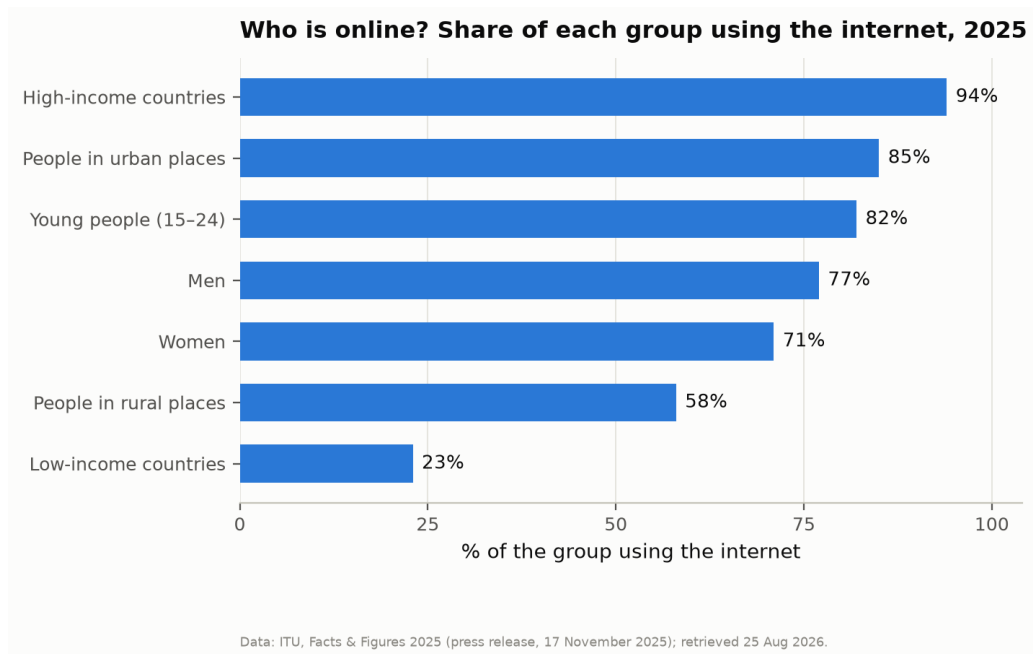
Global business services in Asia (VC2HG10K05 .E04). Some work never touches a ship: answering a customer’s account query, writing software, processing a bank’s records, reading medical scans. These are **global business services** — services sold across borders over information networks. Because the work travels as data, the office can sit wherever skilled people and good connections are. India and the Philippines have become two of the world’s major suppliers of such services, and the trade has grown sharply.



Grouped bar chart of services exports in US\$ billions for 2015 and 2024: India 156.3 to 374.9, Philippines 29.1 to 50.7, Australia 55.4 to 84.4.

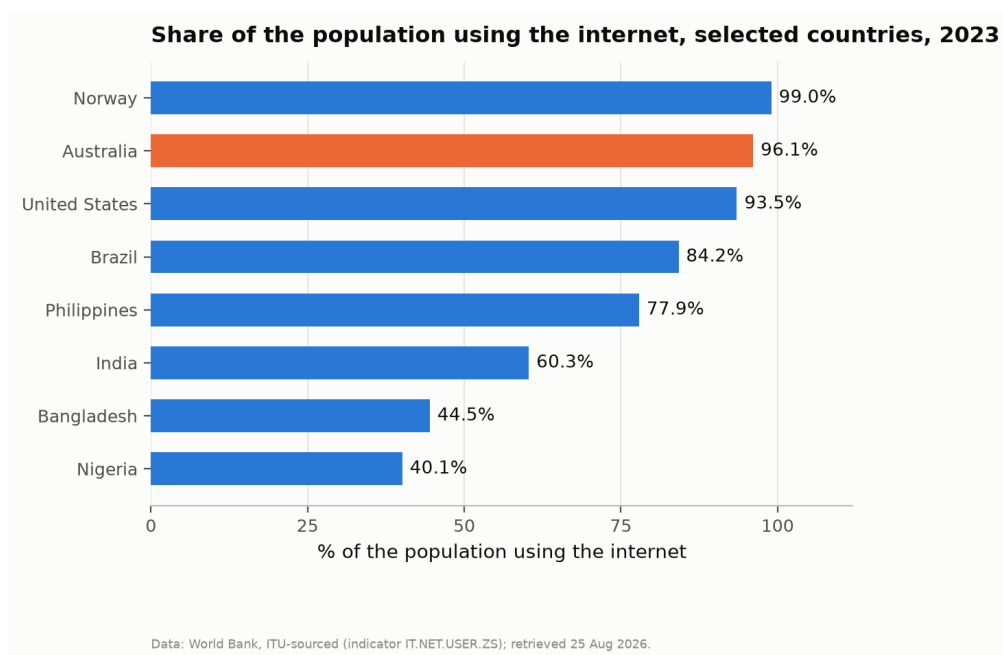
India’s services exports rose from US\$156.3 billion in 2015 to US\$374.9 billion in 2024 — about 2.4 times larger in nine years. A business in London or Sydney now routinely buys services from Bengaluru or Manila, so for that kind of work distance is no longer the constraint it was for factories, which had to sit near ports and mines. Notice the catch, though: services trade rides on the internet, so a place with weak access is still left out. And the connection is two-way — Australia sells education, finance and professional services into Asia too, which is one reason Australia’s engagement with Asia is part of this story.

The digital divide (VC2HG10K05 .E05). The **digital divide** is used in this section in the sense given by the International Telecommunication Union (ITU): the gap between people who can access and use information and communication technologies and people who cannot, whether for coverage, cost or skills. Other definitions exist and are not interchangeable with this one. The divide runs **between** countries and **within** them.



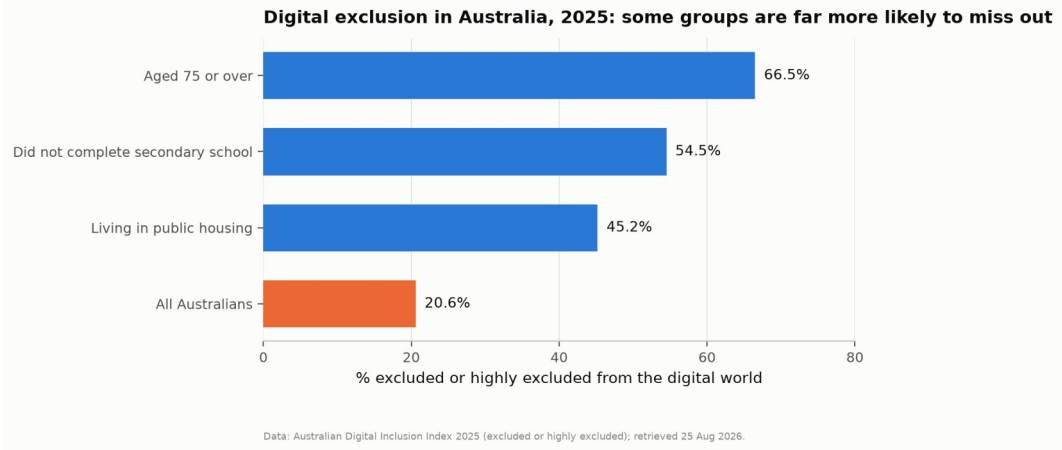
Bar chart of internet use in 2025 by group: high-income countries 94%, urban places 85%, young people 82%, men 77%, women 71%, rural places 58%, low-income countries 23%.

In 2025 about 2.2 billion people remained offline, and about 96% of them lived in low- and middle-income countries. A person in a high-income country was about four times as likely to be online as a person in a low-income country (94% against 23%).



Bar chart of the share of each country's population using the internet in 2023: Norway 99.0%, Australia 96.1%, United States 93.5%, Brazil 84.2%, Philippines 77.9%, India 60.3%, Bangladesh 44.5%, Nigeria 40.1%.

Within Australia the divide is smaller but real. The Australian Digital Inclusion Index (ADII) for 2025 found 20.6% of Australians excluded or highly excluded from the digital world, and exclusion is not spread evenly.



Bar chart of digital exclusion in Australia in 2025: aged 75 or over 66.5%, people who did not complete secondary school 54.5%, people in public housing 45.2%, compared with 20.6% for all Australians.

Older Australians, people who left school early and people on low incomes are the most likely to miss out, and the ADII also finds capital cities ahead of regional Australia on digital ability and affordability. The consequences land where services move online first: banking, job applications, school resources, telehealth and government forms. When a service goes online-only, someone on the excluded side of the divide has not chosen to opt out — they have been opted out.

Pulling it together. Transport networks and information networks layer on top of each other. A T-shirt and a banana travel by truck, rail and ship; a bank record, a telehealth visit and a game travel by cable. When a network changes — a flight route cut, a cable landed, a price dropped — the connections of the people in a place change with it, and so does the place itself. That is the interconnection this content description asks you to trace.

Worked examples

Example 1 — scaffolded

Use the “Who is online?” chart (ITU, 2025) to compare internet access between groups.

Working	Comment
Urban places: 85%; rural places: 58%. \$85 - 58 = 27\$ percentage points.	Read both values from the chart. The gap between two percentages is measured in percentage points.
High-income countries: 94%; low-income countries: 23%; \$94 - 23 = 71\$ percentage points.	Repeat the same method for the income pair.
\$71 > 27\$: the income gap is far larger than the urban–rural gap, so the deepest divide in 2025 is between high- and low-income countries.	Interpret: compare the two gaps and say what the bigger one means for who can reach services and information online.

Example 2 — unscaffolded

Using the services-exports chart (World Bank), decide how far the data support the claim that distance no longer limits where business services are located.

India’s services exports grew from US\$156.3 billion (2015) to US\$374.9 billion (2024): \$374.9, a 2.4 – fold rise. The Philippines grew \$50.7 ÷ 29.1 ≈ 1.7-fold and Australia \$84.4 \$-fold. All three grew, and India — the furthest of the three from the old business centres of Europe and North America — grew fastest. Because these services cross borders as data rather than as cargo, their growth is evidence that distance no longer pins business services to one location the way it pins a steel mill to its ore. The same data carry a caution: this trade rides on the internet, and India’s own internet use was 60.3% in 2023, so the people who can join the trade are the connected ones. Conclusion: distance has stopped fixing *where* business services are done, but access to the network now decides *who* can do them.

Practice questions

Scaffolded

- Q1.** Use the Mildura–Melbourne figure. (a) State the road distance and driving time. (b) State the straight-line distance. (c) Suggest one reason the road route is longer than the straight line. (d) Explain in two sentences how a regional flight changes a Mildura resident’s connection to Melbourne’s services.
- Q2.** Use the freight-mode chart. (a) State which mode carried the most tonne-kilometres in 2024–25 and its value. (b) Calculate how many more billion tonne-kilometres rail carried than road. (c) Explain why rail carries the largest share even though most goods you see on roads travel by truck. (d) Explain why air’s share is tiny.
- Q3.** Use the cotton-to-T-shirt diagram. (a) List the four stages that happen outside Australia. (b) Name two transport modes used inside Australia before the lint leaves the country. (c) Name one cotton-growing region in Queensland and one in New South Wales from the diagram.
- Q4.** Use the “Who is online?” chart. (a) State the 2025 value for young people (15–24) and for women. (b) Calculate the gap between men and women. (c) Calculate the gap between urban and rural places. (d) Give one consequence of the urban–rural gap for access to services.
- Q5.** Use the services-exports chart. (a) State Australia’s services exports in 2015 and 2024. (b) Show that Australia’s 2024 figure is about 1.5 times its 2015 figure. (c) State which of India, the Philippines and Australia grew by the largest multiple. (d) State what kind of goods do **not** need a ship or plane to be exported.
- Q6.** Use the connections model. (a) Describe one difference between the two panels. (b) State where most face-to-face connections are located. (c) Give one reason an online connection can reach further than a face-to-face one.

Unscaffolded

- Q7.** “Access to transport and access to the internet both decide what a place can reach.” Support this claim with one piece of evidence from the Mildura–Melbourne figure and one from the digital-exclusion chart.
- Q8.** Trace a box of pears from a Goulburn Valley farm to a Melbourne dinner table using the farm-to-table diagram. Explain the job of the cool chain and of the warehousing at the Melbourne Market, and describe one way the chain could break and what the result would be.
- Q9.** Using the internet-trend chart and the “Who is online?” chart, write two or three sentences for the claim that distance is dead, then two or three for the claim that distance still matters, and finish with your own one-sentence, reasoned conclusion.
- Q10.** A classmate says the services-exports chart proves that every country can now sell business services anywhere. Test that claim against the country internet-use chart, naming two countries whose internet access would limit their part in the trade.

Inquiry task

Survey or debate — how digital tools shape your connections (VC2HG10K05 .E06). Choose one:

- **Survey.** Design a short survey of your class (or family or community) asking what digital tools people use and what those tools changed — purchases, entertainment, activities, ideas, keeping in touch. Collect and tabulate the responses, and add one mapping question: roughly where in the world are the people each respondent talks to online, compared with where their face-to-face contacts are? Compare your class pattern with the model in the connections figure. When you write your questions and process your data, use the methods taught in sections 5A (building good questions to drive a geographical inquiry) and 5B (gathering and comparing data).
- **Debate.** Motion: “*That the internet has made distance irrelevant to our lives.*” Prepare one side, but list the strongest two points of the other side before you argue (steelmanning). Ground at least two points on each side in data from this section.

Assessment is on the quality of your reasoning — terms defined, evidence cited, the other side stated fairly — not on which conclusion you reach.

Answers

Q1. (a) 529.8 km; about 6.7 hours. (b) About 456 km. (c) Roads must follow the land and existing towns — rivers, hills and settlements bend the route. (d) The flight cuts the trip from most of a day to about an hour, so Melbourne's hospitals, airports and jobs feel close; if the flight is cut, the same services feel a day away.

Q2. (a) Rail, 446.8 billion tonne-kilometres. (b) $\$446.8 - 252.9 = 193.9\$$ billion tonne-kilometres. (c) Rail hauls heavy bulk loads (iron ore, coal, grain) over long distances; trucks do the smaller, shorter last leg to the door, so they are more visible but carry fewer tonne-kilometres. (d) Aircraft carry light, valuable, urgent goods, so by weight their task is tiny.

Q3. (a) Ship to mills; spinning and weaving or knitting; garment factory; container ship back to Australia (stages 4–7). (b) Truck and rail. (c) Any of: Central Highlands (QLD); Gwydir or Namoi valleys (NSW).

Q4. (a) 82%; 71%. (b) $\$77 - 71 = 6\$$ percentage points. (c) $\$85 - 58 = 27\$$ percentage points. (d) Example: rural residents are less able to use telehealth or online government services, so distance to those services stays larger for them.

Q5. (a) US\$55.4 billion; US\$84.4 billion. (b) \$84.4 \$. (c) India (about 2.4-fold). (d) Services — such as software, finance and business support — sold over information networks.

Q6. (a) Any correct contrast, e.g. face-to-face contacts cluster near home while online contacts are spread across countries. (b) In the person's own city or region. (c) An online connection needs only a network link, not travel, so it costs almost nothing to cross distance.

Q7. Mildura: the 6.7-hour drive shows road access limits how quickly residents reach Melbourne's services; the flight and telehealth shorten that reach. Exclusion chart: 66.5% of Australians aged 75+ are digitally excluded, so even where the network exists, cost, skills and access decide who can reach online services. Both accesses — transport and internet — gate the same thing: what a person can reach.

Q8. Farm → packhouse (sorting, grading, packing) → refrigerated truck (the cool chain slows ripening and spoilage on the road) → Melbourne Market at Epping (its warehousing gathers and stores produce so retailers can buy in one place overnight) → retailer → table. Break example: a refrigeration failure lets the pears ripen and rot before sale — the distance that the chain had shrunk returns as waste.

Q9. For: use rose from 15.6% (2005) to 71.2% (2024), and online connections reach any country at almost no cost. Against: 2.2 billion people are still offline and rural use (58%) lags urban (85%), so distance-shaped access still decides who joins. Conclusion example: distance no longer limits a *connected* person's interactions, but access to the connection is itself unevenly spread across distance.

Q10. The claim fails where few people are connected: Nigeria (40.1% online in 2023) and Bangladesh (44.5%) lack the widespread access a large services trade needs, while highly connected countries such as Australia (96.1%) and Norway (99.0%) can take part fully. The services chart shows who *does* sell; the access chart shows who *can*.

Fully-worked solutions

Q1. (a) The figure gives 529.8 km by road and a driving time of about 6.7 hours. (b) The straight-line distance is about 456 km. (c) A straight line crosses anything; a road must bend around rivers and hills and pass through towns that supply fuel and rest, so the driven route is longer. (d) A regional flight covers the straight-line distance in about an hour, so a Melbourne appointment costs a morning instead of a day — the service feels near. Remove the flight and the same service sits a 6.7-hour drive away, so the place feels remote although it has not moved.

Q2. (a) Rail, at 446.8 billion tonne-kilometres. (b) $\$446.8 - 252.9 = 193.9\$$ billion tonne-kilometres more by rail. (c) Tonnes × distance: a single train can move thousands of tonnes of ore or grain hundreds of kilometres, which stacks up tonne-kilometres fast; trucks carry lighter loads over shorter last legs, so although they make most of the trips we see, their tonne-kilometre total is smaller. (d) Air freight suits goods that are valuable, light and urgent; bulk is too heavy for aircraft, so air's share (0.2) is tiny.

Q3. (a) The stages outside Australia are: shipping the lint to mills; spinning, then weaving or knitting; the garment factory; and the container ship back to Australia. (b) Inside Australia the bales move by truck and by rail to the port. (c) Queensland: the Central Highlands; New South Wales: the Gwydir or the Namoi valleys.

Q4. (a) Young people (15–24): 82%; women: 71%. (b) Men 77% minus women 71% = 6 percentage points. (c) Urban 85% minus rural 58% = 27 percentage points. (d) With fewer rural people online, telehealth, online schooling and online government services reach fewer of them, so the distance to those services stays effectively longer in rural places.

Q5. (a) 2015: US\$55.4 billion; 2024: US\$84.4 billion. (b) $\$84.4 \div 55.4 = 1.52$, *about 1.5 times*. (c) *India*: $\$374.9 \div 156.3 \approx 2.4$, larger than the Philippines' 1.7 and Australia's 1.5. (d) Services — software, finance, customer and business support — exported over information networks without a ship or plane.

Q6. (a) In the left panel every connection lies close to “you”, inside one city or region; in the right panel connections are scattered across several countries. (b) Most face-to-face connections sit in the person's own city or region. (c) Online contact needs only a network link, so it crosses distance at almost no cost of time or money, while face-to-face contact needs travel.

Q7. The Mildura figure shows transport access at work: 529.8 km and 6.7 hours by road make Melbourne's services a long haul, while the about-one-hour flight (and RFDS telehealth for remote patients) shortens the reach. The exclusion chart shows internet access at work: 66.5% of Australians aged 75 or over, and 45.2% of public-housing residents, are digitally excluded, so online services do not reach them even where the network does. In both cases it is access — to a road or flight, to a connection and the skills to use it — that decides what a person and a place can reach.

Q8. The pears are picked and taken to a packhouse to be sorted, graded and packed; a refrigerated truck then keeps them cold — the cool chain — slowing ripening so the road distance does not spoil them; at the Melbourne Market, Epping, the market's warehousing (up to 120,000 m²) gathers produce so retailers buy in one place overnight; a retailer stocks them and they reach a dinner table within a day or two of harvest. If the cool chain breaks — a failed refrigeration unit, a long delay — the pears ripen and rot in transit: the chain's whole job, keeping distance from damaging the product, fails and the load becomes waste.

Q9. *For the death of distance*: internet use climbed from 15.6% of the world's people in 2005 to 71.2% in 2024, and an online message, call or purchase reaches another continent at almost no extra cost, so for a connected person, distance almost no longer limits who they can talk to or trade with. *Against*: 2.2 billion people remain offline, rural use (58%) trails urban use (85%) by 27 percentage points, and low-income countries sit at 23% — the access needed for those interactions is itself unevenly spread across the map. *Reasoned conclusion*: distance has largely stopped limiting the interactions of the connected, but because connection itself is uneven, distance now works through access instead.

Q10. Testing the claim means checking who has the access a services trade needs. India (60.3% online in 2023) already sells services at scale, but Nigeria (40.1%) and Bangladesh (44.5%) have fewer than half their people online, so a mass business-services trade is out of reach for most of their workforces today — the claim fails for them. Norway (99.0%) and Australia (96.1%) sit at the other extreme: near-universal access is exactly the platform their services exports use. So the services chart shows who *does* trade in services and the access chart shows who *can*; the two together replace “every country can” with “connected places can.”

Trade in manufactured goods: what it does to economies and populations, in Australia and Asia

Curriculum — Geography 10 · Chapter 2: Geographies of interconnection (VC2HG10K06). Content description: VC2HG10K06. Draws on VC2HG10K06.E01, VC2HG10K06.E02, VC2HG10K06.E03, VC2HG10K06.E04 (linkage keys for the question bank and coverage audit, not a teaching order). No First Nations disposition — Asia-engagement content, fully in scope. Cross-curriculum priorities carried by this section's elaborations: *Asia and Australia's Engagement with Asia* (.E01, .E04) and *Sustainability* (.E04). Concepts woven through: place, interconnection, scale, change, sustainability. Related sections in this book: 2A (transport networks), 2C (trade and embodied carbon), 5C (graphs and maps).

Teaching sequence (for teachers)

This block is teacher-facing guidance, not student text. Allow about 6–7 lessons.

1. **Hook — where do my things come from?** Students check the labels on 5 manufactured items they own or use (phone, shoes, jumper, chair, water bottle) and call out the countries. Collate on the board. Introduce the section's question: *what does this trade do to the places it connects?* Lead into **Key ideas 1**; define *manufactured products*, *interconnection* and *supply chain* at first use.
2. **Manufacturing centres in Asia and elsewhere (.E01).** Use Figure 1 (Shenzhen), Figure 2 (world manufacturing shares) and Figure 3 (container ports). Key idea: places that supply a world market grow fast — economically and demographically. Worked example 1.
3. **More Asian manufacturing centres (.E01 continued).** Use Figure 4 (Bangladesh garments) and the migrant-worker data. Stress that growth brings benefits (jobs, incomes) and costs (housing pressure, pollution) — the section evaluates, it does not cheerlead.
4. **Imports and Australian places (.E02).** Use Figure 5 (import partners) and Figure 6 (manufacturing's falling share of employment). Worked example 2 (Geelong). Include the Ford/Holden/Toyota closures and the point that Geelong still grew.
5. **The upstream side (.E03).** Mining, farming and forestry feed manufacturing: the smart-phone worked table, the lithium figure (Figure 7). Impacts on people, places and environments — benefits and costs.
6. **The global oil supply chain (.E04).** Use Figure 8 (chain diagram), Figure 9 (Australia's fuel imports) and Figure 10 (impacts table). Students evaluate stage by stage — environmental, economic, social — then management in Australia and West Asia. Practise the substitution test: does an impact stay in one place, or is it moved along the chain?
7. **Inquiry task and consolidation.** The household goods survey is the section's inquiry task (primary data, representation, evaluation of reliability). Practice questions may be set through the sequence; the unscaffolded set suits lesson 6–7.

Assessment notes: the steelman question (Q9) marks reasoning, not the position reached (CONTESTED_TERMS Rule 5) — make this explicit to students. No item may draw on material excluded by TOC §2A; this section carries no such material.

Key ideas

1. Manufactured products, trade and interconnection

Manufactured products are goods made or assembled in factories from raw or partly processed materials — cars, phones, clothing, steel, furniture, medicines and computers. Australia makes some of these, but it buys most of them from overseas and pays for much of that spending by selling raw materials such as iron ore, coal, gas, wool and food.

International trade is the buying and selling of goods and services between countries. An **interconnection** is a link between people, places and environments created by flows of people, goods, money and information. Trade is one of the strongest interconnections the world has: about four-fifths of the world's goods trade, by volume, moves by sea (UNCTAD, *Review of Maritime Transport*, 2023). Every container on a ship joins at least two places into a single story.

A **supply chain** is the series of steps a product passes through from raw material to the buyer's hands: extraction, processing, manufacturing, shipping, distribution and sale. For a smart phone, that chain crosses many countries before the phone ever reaches a shop.

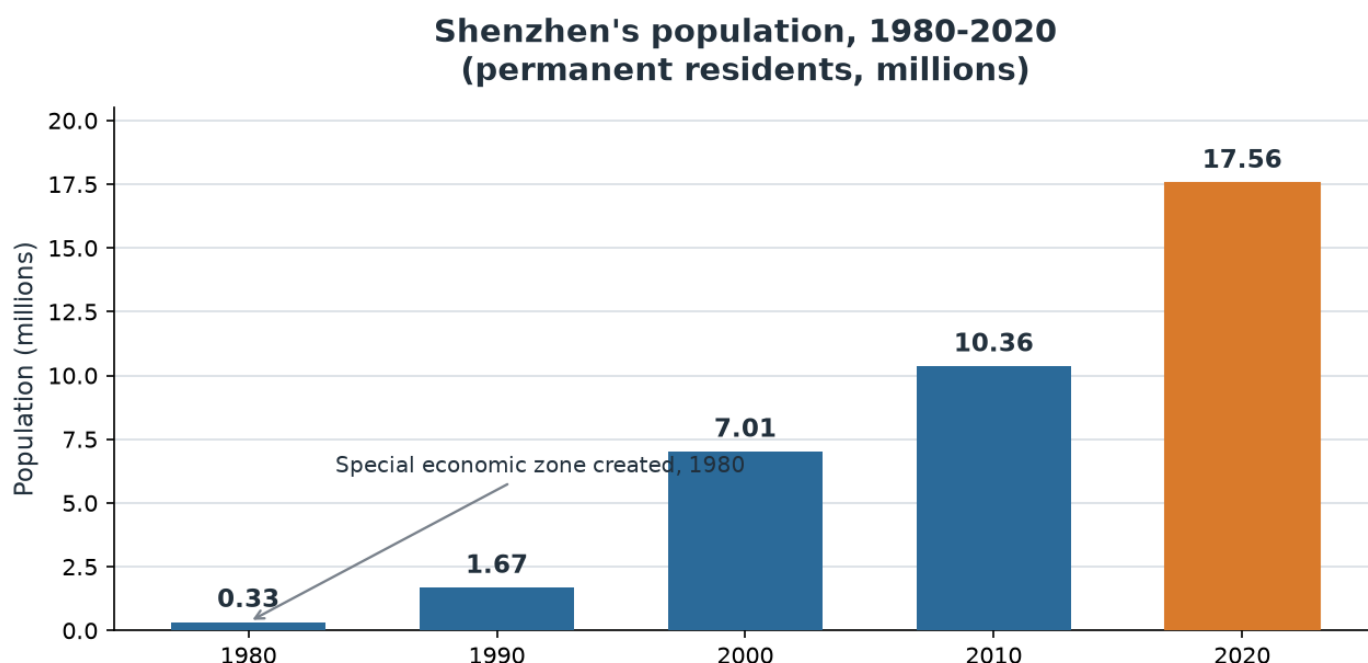
Trade in manufactured products affects places in two main ways:

- **economic impacts** — changes to jobs, incomes, prices, business investment and government revenue;
- **demographic impacts** — changes to the size, growth, distribution and age mix of populations, and to the movement of people. *Demographic* simply means “to do with the characteristics of a population”.

Both kinds of impact can be positive or negative, and they rarely stay in one place: a decision made in one country changes lives in another. That is what makes trade a geographical question, not just an economic one.

2. Fast-growing manufacturing centres (E01)

Some places have been transformed by supplying a world market. The clearest example is **Shenzhen**, in southern China beside Hong Kong. In 1980 the Chinese government made Shenzhen one of its first *special economic zones* — areas set aside to attract foreign investment and export factories. The change since then has had no equal in human history.



Source: Shenzhen Municipal Bureau of Statistics; national census returns.

Population growth of Shenzhen, China, from 1980 to 2020, shown in millions of permanent residents, rising from about 0.3 million to about 17.6 million.

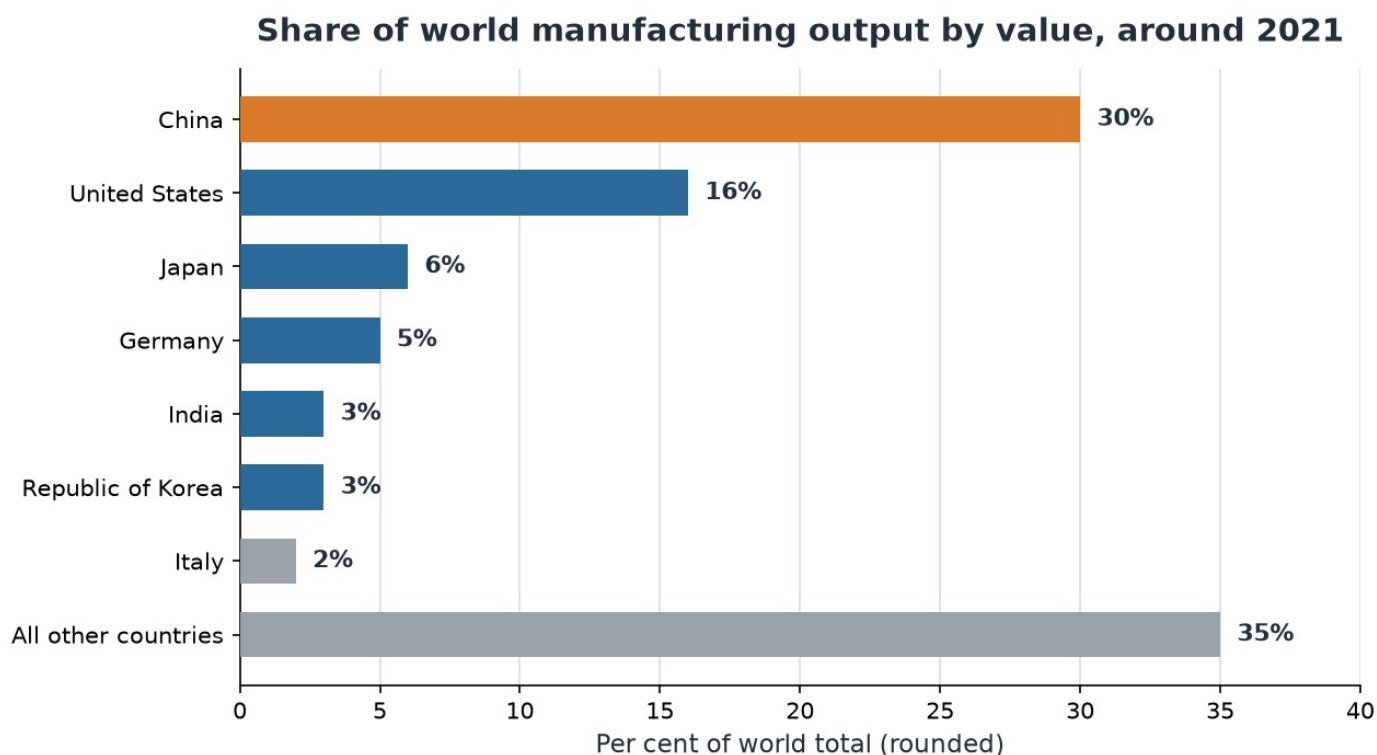
Figure 1 — Shenzhen's population, 1980–2020. Source: Shenzhen Municipal Bureau of Statistics; national population census returns for 1990, 2000, 2010 and 2020. Retrieved 25 August 2026. Values for 1990–2020 are census counts; the 1980 figure is the official estimate for the year the zone was created.

Shenzhen grew because factories there make electronics, phones, clothing and toys for the whole world. The growth is economic (jobs, incomes, new firms, ports and railways) and demographic at the same time: most of Shenzhen's new residents arrived as young adults from rural China. Nationwide, China's National Bureau of Statistics counted about 297 million *migrant workers* in 2023 — people registered as rural residents who work in cities and towns, many of them in the factory provinces of the south and east coast.

Shenzhen is not the only case:

- Across China, whole cities grew around export factories — Dongguan (electronics), Foshan (furniture), Ningbo (port and factory city).
- **Dhaka**, the capital of Bangladesh, has become one of the world's fastest-growing cities as garment work drew people in from the countryside.
- Parts of Vietnam, India, Indonesia and Malaysia have grown as newer centres of factory work, especially electronics.

Together, these places have shifted where the world's goods are made. Around 2021, China alone produced roughly **30 per cent** of the world's manufacturing output by value; add Japan, the Republic of Korea, India and South-East Asia and Asia's share is close to half (UNIDO, *Yearbook of Industrial Statistics*, 2023).



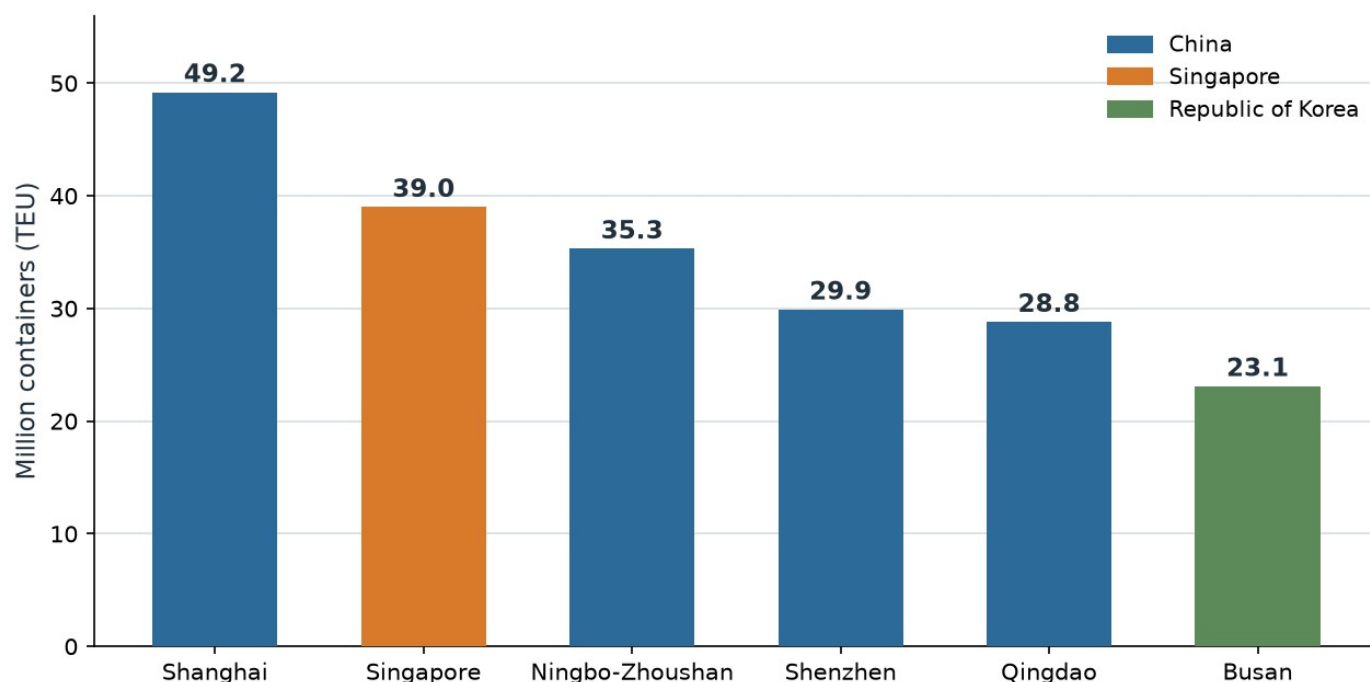
Source: UNIDO, *Yearbook of Industrial Statistics* 2023 (values rounded).

Share of world manufacturing output by country around 2021, shown as horizontal bars. China about 30 per cent, United States about 16, Japan about 6, Germany about 5, India about 3, Republic of Korea about 3, Italy about 2, all other countries about 35.

Figure 2 — Who makes the world's goods? Share of world manufacturing value added, around 2021. Source: UNIDO industrial statistics; values are rounded. Retrieved 25 August 2026.

The goods leave through Asia's giant ports. Seven of the world's ten busiest container ports are in Asia, and five of the six busiest are in China or Singapore.

Container traffic at six of the world's busiest ports, 2023



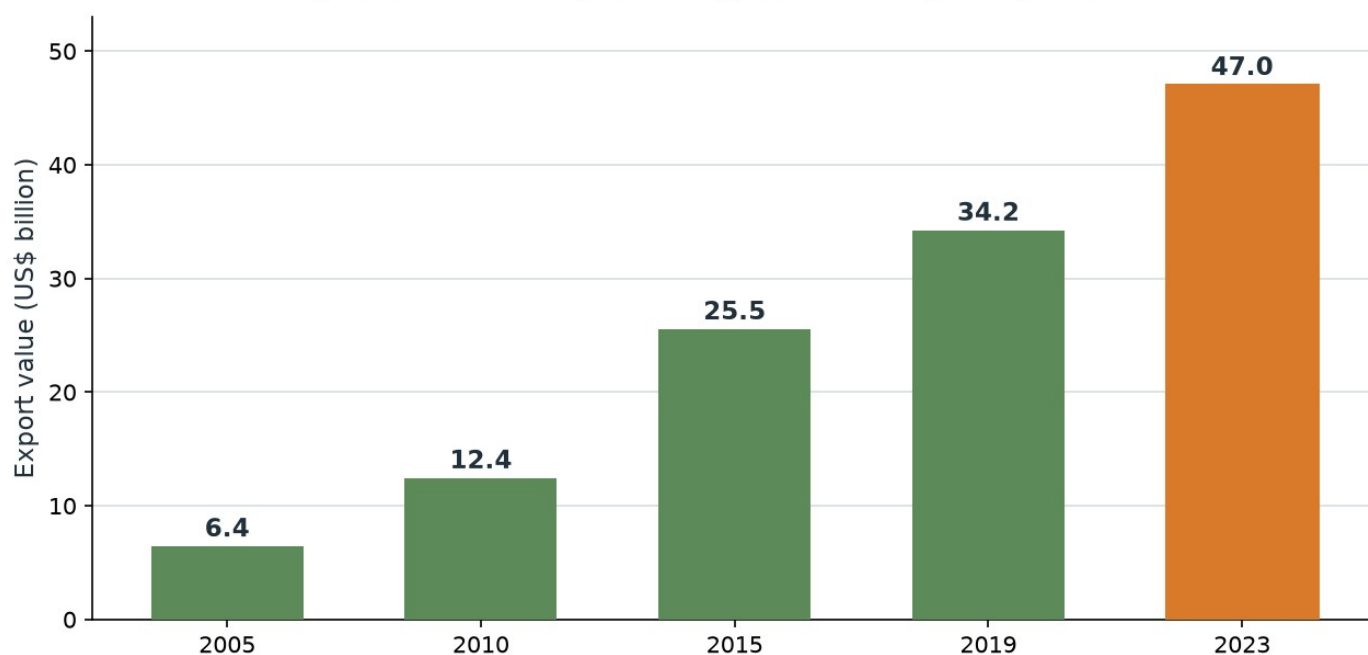
Source: port authority returns compiled by the World Shipping Council (2023).

Container port traffic in 2023 for six of the world's busiest ports, in millions of containers: Shanghai 49.2, Singapore 39.0, Ningbo-Zhoushan 35.3, Shenzhen 29.9, Qingdao 28.8 and Busan 23.1.

Figure 3 — Container traffic at six of the world's busiest ports, 2023. One standard container is a 6.1-metre steel box (a “twenty-foot equivalent unit”, TEU). The largest container ships now carry more than 20,000 of them. Source: port authority returns compiled by the World Shipping Council, 2023; values are rounded. Retrieved 25 August 2026.

Bangladesh shows the demographic side clearly. Ready-made garments (clothing made in factories) now account for more than four-fifths of Bangladesh's goods exports. The industry employs around 4 million workers, most of them women who moved from rural areas — paid work that changed their lives and their families' incomes. Exports grew from about US\$6 billion in 2005 to about US\$47 billion in 2023.

Bangladesh's ready-made garment exports, 2005-2023



Source: Bangladesh Garment Manufacturers and Exporters Association (values rounded).

Growth of Bangladesh's ready-made garment exports, in billions of US dollars, from about 6.4 in 2005 to about 47.0 in 2023.

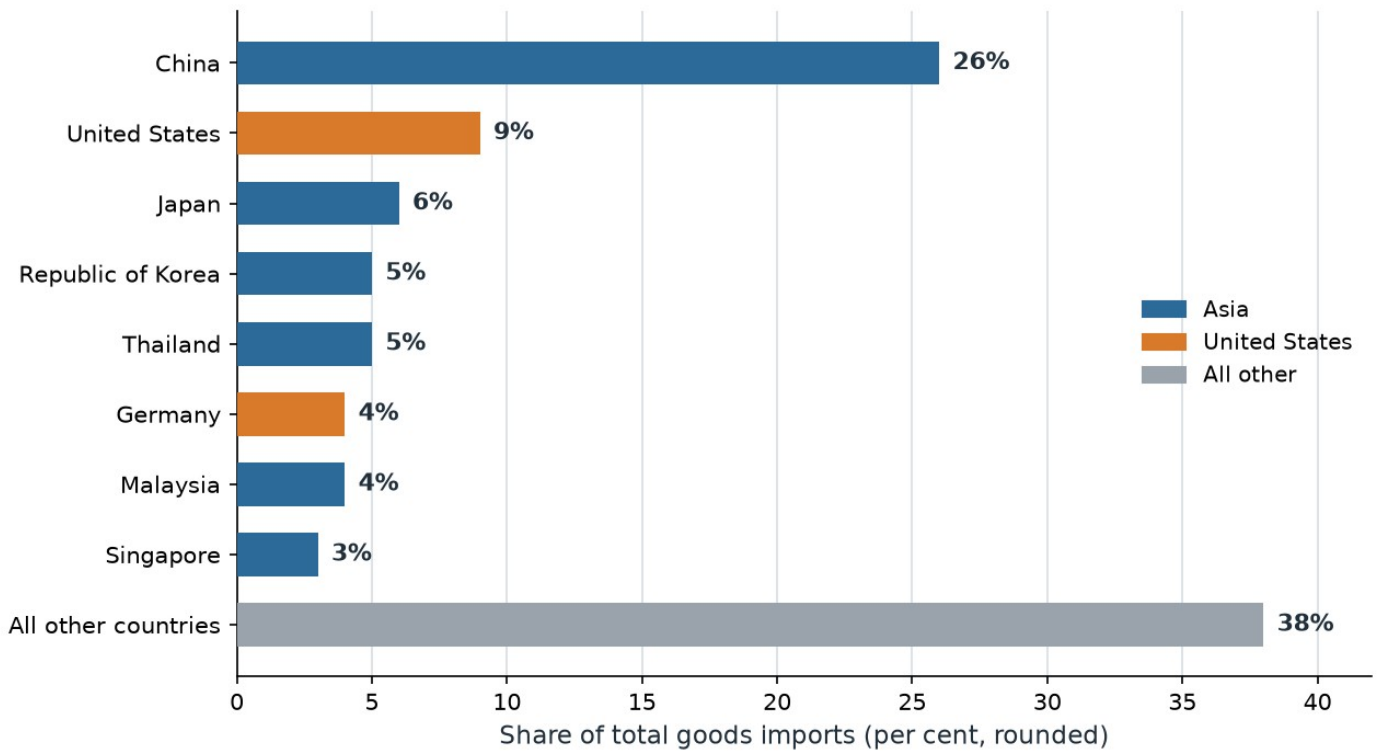
Figure 4 — Bangladesh's garment exports, 2005–2023. Source: Bangladesh Garment Manufacturers and Exporters Association export data; values are rounded. Retrieved 25 August 2026.

Weigh it up. Rapid growth is not only good news. Factory cities gain jobs and incomes, but they also face crowded housing, traffic, air and water pollution, and low-paid work with weak protections. A factory fire in 2012 killed 117 workers, and the Rana Plaza building collapse in 2013 led to national and international safety reforms — an example of how the social costs of a supply chain eventually force change. When you study a manufacturing centre, list benefits and costs on both sides before you judge.

3. The impacts of imports on Australian places (E02)

Australia is a wealthy country with a small population, so it imports a huge range of manufactured goods — and most of them come from Asia and across the Pacific.

Where Australia's goods imports come from, 2022-23



Source: Department of Foreign Affairs and Trade, *Composition of Australian Trade*.

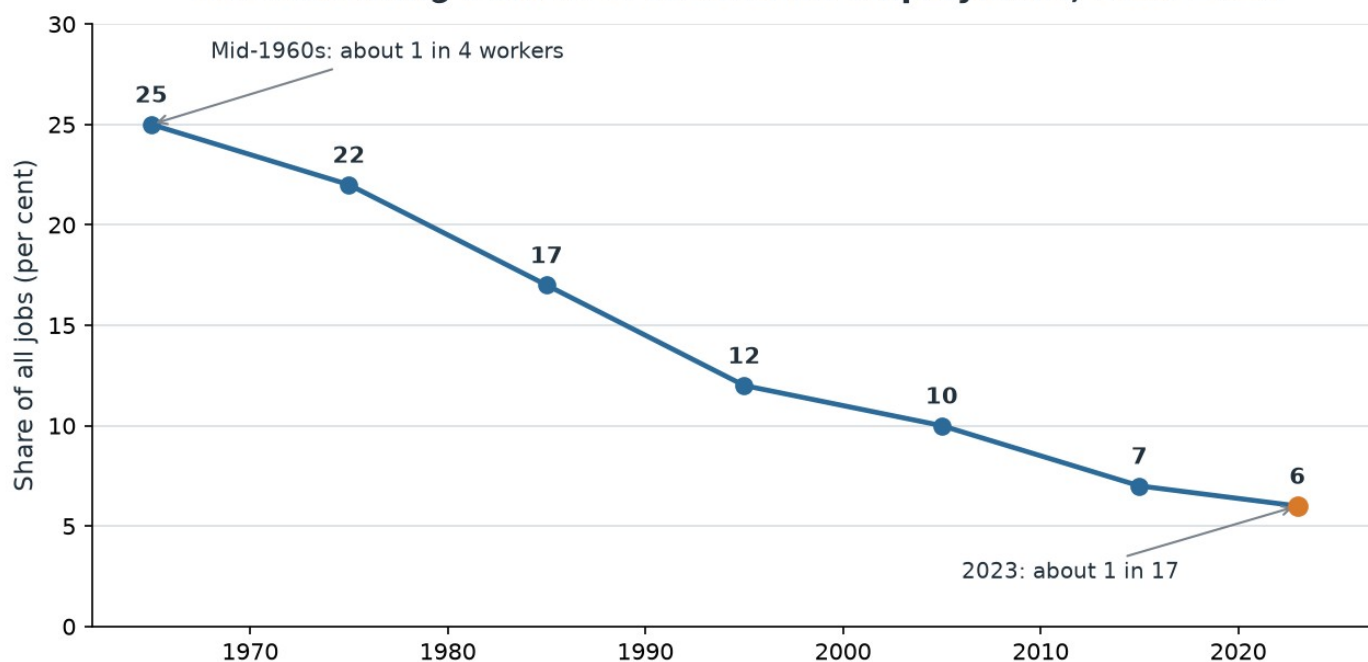
Australia's goods imports by partner country, financial year 2022 to 2023, as shares of total imports: China about 26 per cent, United States about 9, Japan about 6, Republic of Korea about 5, Thailand about 5, Germany about 4, Malaysia about 4, Singapore about 3, all others about 38.

Figure 5 — Where Australia's goods imports come from, 2022–23. Source: Australian Government Department of Foreign Affairs and Trade, *Composition of Australian Trade*; shares are rounded. Retrieved 25 August 2026.

Imports affect Australian places in several ways:

- **Lower prices and more choice.** Cheap imports raise living standards: households buy affordable cars, phones, clothes and furniture that Australia does not make (or no longer makes) in quantity.
- **Jobs in ports, warehouses and shops.** Importing is itself a big industry. The Port of Melbourne is Australia's largest container port, and logistics precincts in Melbourne's west, such as Truganina, have grown fast as goods move from ship to shelf. These places gain jobs and population.
- **Pressure on local makers.** When imported goods are cheaper than locally made ones, local factories can close. Australia stopped making cars in October 2017, when the last Ford, Holden and Toyota plants shut. Mass production of Australian-designed cars had begun in 1948 with the first Holden, and the industry once employed more than 100,000 Australians at its peak.
- **A changing economy.** Manufacturing's share of Australian employment has fallen for generations — from about one in four workers in the mid-1960s to about one in seventeen today. Some of that change reflects imports; some reflects machines doing work that people once did.

Manufacturing's share of Australian employment, 1965-2023



Source: Australian Bureau of Statistics; Productivity Commission (approximate).

Share of Australia's workforce employed in manufacturing, falling from about 25 per cent in 1965 to about 6 per cent in 2023.

Figure 6 — Manufacturing's share of Australian employment, 1965–2023. Source: Australian Bureau of Statistics labour force data; Productivity Commission. Values are approximate. Retrieved 25 August 2026.

Worked example 2 studies Geelong, Victoria's largest regional city, where several of these impacts landed in the one place.

Two-way thinking. Australia's trade runs both ways. The same Asian economies that sell us cars and phones buy our iron ore, gas, wheat and education services. China is Australia's largest two-way trading partner: it is our biggest source of imports and our biggest export customer. Trade is an interconnection, not a one-way flow.

4. Upstream: mining, farming, forestry and manufacturing (E03)

Manufacturing does not start in the factory. It starts in the mine, the forest and the farm. The impacts of manufacturing trade therefore reach into places that never make a finished product — they supply the materials for one.

A smart phone in your pocket carries the world in it:

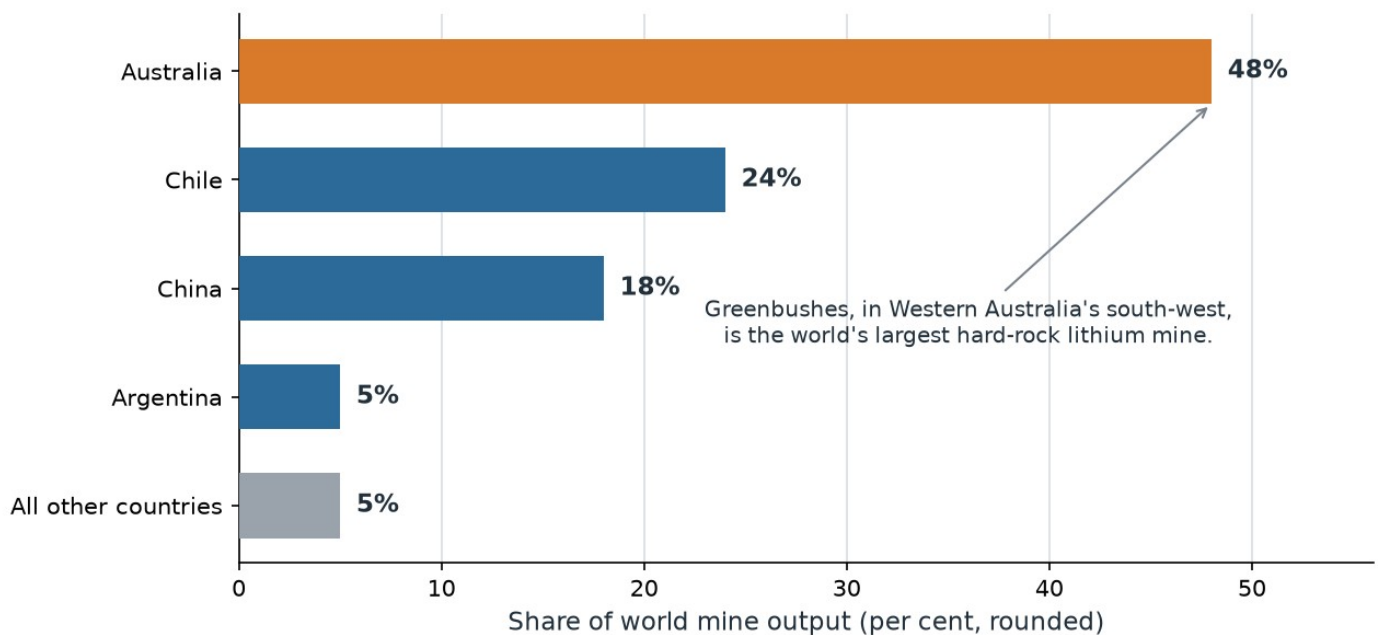
Step	What happens	Where (examples)
Mining	Lithium, cobalt, copper and rare earths are dug from the ground	Greenbushes, Western Australia (lithium); the Democratic Republic of the Congo supplies about 70 per cent of the world's mined cobalt
Processing	Ores are refined into pure metals and chemicals	China refines most of the world's rare earths; much Australian lithium ore is refined overseas
Component making	Metals become batteries, screens, chips and wiring	Japan, the Republic of Korea, China
Assembly	Parts are assembled into phones	China, Vietnam, India
Sale and use	Phones are sold worldwide, used for a few years, then stored, recycled or	Everywhere, including Australia

Step	What happens	Where (examples)
	dumped	

Australia sits at the upstream end of many of these chains:

- **Lithium.** Australia is the world’s largest lithium producer — around half of world mine output in 2022–23. The Greenbushes mine, in Western Australia’s south-west, is the world’s largest hard-rock lithium mine. Lithium feeds the batteries in phones, laptops and electric vehicles.
- **Iron ore.** Pilbara mines in Western Australia ship iron ore mainly to China, where it becomes steel for buildings, cars and machines.

World lithium mine production by country, 2023



Source: US Geological Survey, Mineral Commodity Summaries 2024.

Share of world lithium mine production in 2023 by country: Australia about 48 per cent, Chile about 24, China about 18, Argentina about 5, all others about 5.

Figure 7 — World lithium mine production by country, 2023. Source: United States Geological Survey, *Mineral Commodity Summaries* 2024; shares are rounded. Retrieved 25 August 2026.

The impacts cut both ways, and they land on people, places and environments:

- **People:** mining and farming regions gain jobs and high wages; but work can be fly-in, fly-out, which splits families for weeks at a time.
- **Places:** boom towns grow quickly (housing pressure, new services), and some shrink when a mine or mill closes.
- **Environments:** extraction disturbs land, uses and can pollute water, and creates waste rock. Forestry clears native forest. Shipping adds emissions. These costs sit in the places where materials are taken from and goods are made — often far from where the goods are bought. Section 2C returns to this idea as *embodied carbon*: the pollution built into the things we import.

5. Case study: the global oil supply chain (E04)

Oil is the raw material behind much of modern manufacturing — as fuel for ships, trucks and factories, and as a feedstock for plastics and chemicals. Its supply chain is one of the longest and most important in the world, and it runs straight through the Australia–Asia connection.

A note on place names. This section uses *West Asia* for the region where Asia, Africa and Europe meet — the Arabian Peninsula, Iraq and their neighbours. The curriculum uses this term; many people know the same region as “the Middle East”. Both names cover roughly the same places, and which one is used is partly a matter of convention.

The oil supply chain: West Asia to Australia

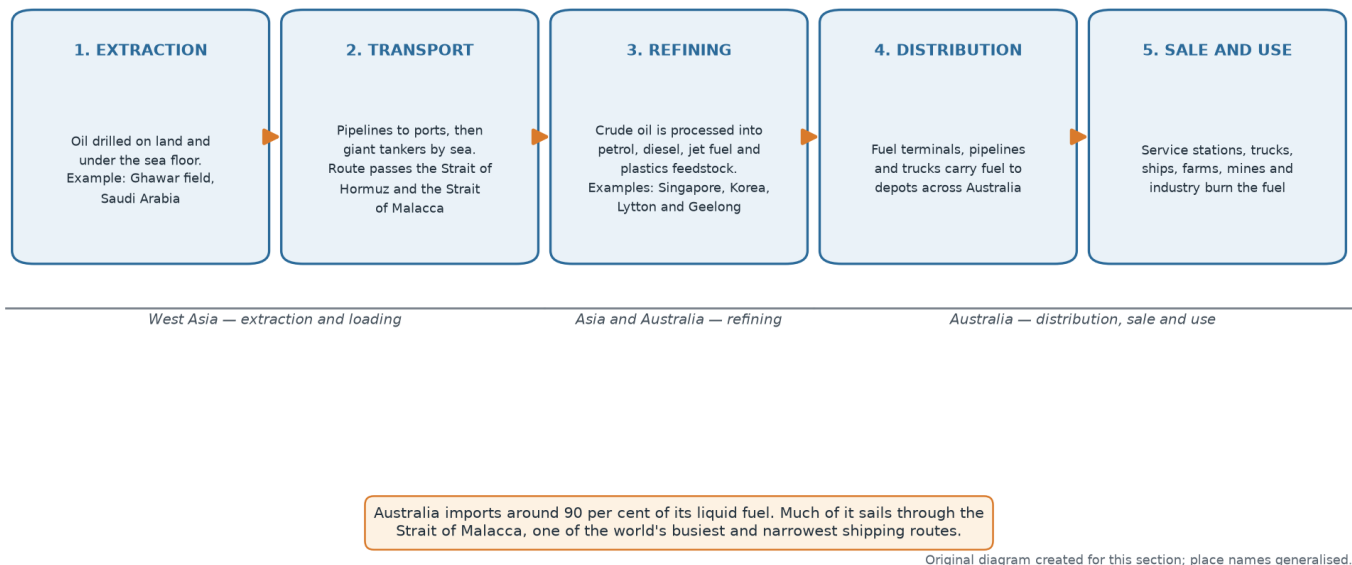


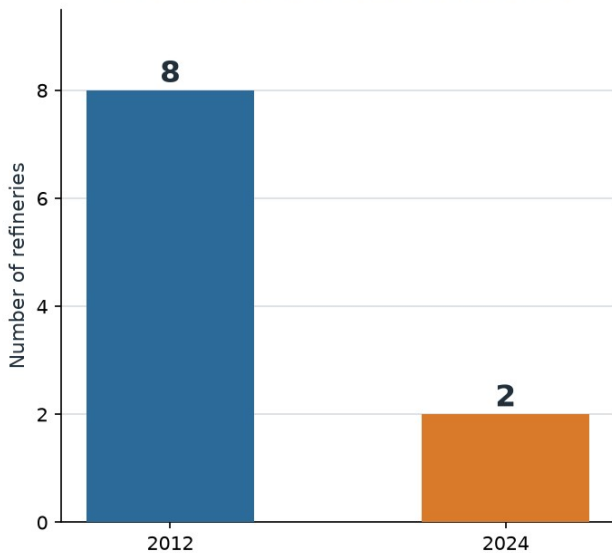
Diagram of the oil supply chain in five stages: extraction in West Asia, transport by pipeline and tanker through the Strait of Hormuz and Strait of Malacca, refining in Asia and Australia, distribution by terminal, truck and pipeline, and sale and use at service stations and industry.

Figure 8 — The global oil supply chain, West Asia to Australia. Source: original diagram created for this section; place names and route are generalised. Retrieved 25 August 2026.

Stage by stage.

- Extraction.** West Asia holds about half of the world’s proven oil reserves (Energy Institute, *Statistical Review of World Energy*, 2023). Saudi Arabia’s Ghawar field is the largest conventional oil field on Earth. Extraction brings export income and jobs, but also land disturbance, gas flaring and spill risks.
- Transport.** Most oil moves by sea in giant tankers. About one-fifth of the world’s petroleum passes the **Strait of Hormuz** at the mouth of the Persian Gulf (US Energy Information Administration, 2023), and much of Australia’s fuel arrives through the **Strait of Malacca** in South-East Asia. Narrow sea routes are *choke points*: when the container ship *Ever Given* blocked the Suez Canal for six days in March 2021, hundreds of ships were delayed and delivery times around the world slipped.
- Refining.** Crude oil is refined into petrol, diesel, jet fuel and plastics feedstock. Singapore, the Republic of Korea, China, India and Japan are major refining centres in our region. Australia once had eight refineries in 2012; it has only two today — Ampol at Lytton in Brisbane and Viva Energy at Geelong. Around **90 per cent of Australia’s liquid fuel is imported**, mostly as refined product from Asian refineries.
- Distribution.** Fuel moves from terminals by ship, pipeline and truck to storage depots around the country.
- Sale and use.** Fuel is sold at service stations, to trucks, ships, farms and mines. When it burns, it releases carbon dioxide, which makes the burning of fuels among Australia’s largest sources of greenhouse gas emissions.

Oil refineries operating in Australia



Source: Australian Government Department of Industry, Science and Resources, Oil Information Australia.

The two still operating: Ampol Lytton (Brisbane) and Viva Energy (Geelong).

Australia's fuel import reliance



Panel chart showing that Australia's number of oil refineries fell from eight in 2012 to two in 2024, and that Australia imports around 90 per cent of its liquid fuel.

Figure 9 — Australia's shrinking refining capacity and heavy reliance on imported fuel. Source: Australian Government Department of Industry, Science and Resources, *Oil Information Australia*; company announcements for refinery closures. Retrieved 25 August 2026.

Evaluating impacts means judging them against three criteria the curriculum names: environmental, economic and social. This table sets out the chain's main impacts so you can practise the evaluation. Notice that some impacts sit in one place (extraction impacts sit in producer countries) while benefits sit in another (fuel users in Australia) — a pattern geographers call an impact being *displaced*.

Impacts of the oil supply chain, stage by stage

Stage of the chain	Environmental impacts	Economic impacts	Social impacts
Extraction (West Asia)	Land disturbance, oil spills, gas flaring	Export income and jobs for producer countries	Boom towns grow quickly; work camps split families
Transport (tankers and pipelines)	Spill risk at sea; ship exhaust emissions	Shipping costs are built into the price of fuel	Crews work months at sea, far from home
Refining (Asia and Australia)	Refinery emissions and waste water	Refining adds value to crude oil; skilled industry	Skilled jobs in port cities such as Geelong
Sale and use (Australia)	Carbon dioxide released when fuel burns	Fuel powers trucks, farms, mines and factories	High fuel prices squeeze household budgets

Original table created for this section.

Table of the oil supply chain's impacts at four stages (extraction, transport, refining, and sale and use), set against three criteria: environmental, economic and social.

Figure 10 — Impacts of the oil supply chain, stage by stage. Source: original table created for this section. Retrieved 25 August 2026.

How could impacts be sustainably managed? Here **sustainable** is used in the sense of the United Nations’ definition of sustainable development — meeting today’s needs without making it harder for future generations to meet theirs (United Nations, 1987) — judged across the environmental, economic and social dimensions together. Real measures include:

In Australia:

- **Fuel security.** The *Liquid Fuel Emergency Act 1984* gives the government powers to manage a serious fuel shortage. Since 2020, Australia has spent about \$94 million building up fuel reserves, including leasing space in the United States’ Strategic Petroleum Reserve, and it keeps working to raise onshore storage.
- **Cleaner shipping and vehicles.** Australia applies the International Maritime Organization’s 2020 rule that cut the sulphur limit in ship fuel from 3.5 per cent to 0.5 per cent, cutting air pollution from shipping. Fuel-efficiency rules and the shift to electric vehicles cut fuel demand over time.

In West Asia:

- **Capturing carbon.** The Al Reyadah plant near Abu Dhabi, operating since 2016, captures up to 800,000 tonnes of carbon dioxide a year from steel production and stores it underground — one of the first large plants of its kind in the region.
- **Managing price shocks.** The OPEC group of oil producers, led by Saudi Arabia, coordinates production levels to steady prices — which helps producer incomes but can raise prices for importing countries like Australia.
- **Planning beyond oil.** The United Arab Emirates invests oil earnings in trade, tourism and finance (Dubai’s economy is now built mainly on these), so its future does not rest on one resource.

Evaluating the chain is not a verdict for or against oil. The strongest evaluations name a stage, weigh its impacts on the three criteria, and judge whether a management measure actually reduces the harm — or merely moves it somewhere else along the chain.

Worked examples

Example 1 — scaffolded

Task: Use Figure 1 (Shenzhen’s population) and the key ideas to explain how international trade in manufactured products produced both economic and demographic impacts in Shenzhen.

Step	Working	Comment
1. Read the data	Population rose from about 0.3 million (1980) to about 17.6 million (2020) — growth of about 17 million people in 40 years.	Name the trend and the numbers.
2. Explain the cause	Shenzhen became a special economic zone in 1980; factories there make electronics, toys and clothing for a world market.	Link the growth to trade.
3. Economic impacts	Factory jobs, rising incomes, new firms, port and rail building.	Economic = jobs, money, investment.
4. Demographic impacts	Most growth came from young adults moving in from rural China, so Shenzhen’s population is heavily working-age. China counted about 297 million migrant workers nationally in 2023.	Demographic = size, age mix, movement.

Step	Working	Comment
5. Weigh it up	Benefits: incomes lifted for millions. Costs: housing pressure, pollution, crowded services.	Evaluation needs both sides.

Model answer (2–3 sentences): International trade made Shenzhen a world manufacturing centre after 1980. Economically, export factories created jobs and incomes and paid for ports and railways. Demographically, the city grew from about 0.3 million to about 17.6 million people, mostly young adults who moved from rural China, which made Shenzhen one of the fastest-growing cities in human history — with crowded housing and pollution as costs.

Example 2 — scaffolded

Task: Use Figure 11 (Geelong timeline) to examine how imports of manufactured products have affected one Australian place: Geelong, Victoria.

Step	Working	Comment
1. Establish the place	Geelong is Victoria's largest regional city, on Corio Bay. Ford made engines there from 1926; Alcoa smelted aluminium at Point Henry; Shell refined oil at Corio.	Real places, dated facts.
2. Name the change	February 2014: Alcoa Point Henry closed. April 2014: Shell announced its refinery would become an import terminal (done in 2015). October 2016: Ford closed its Australian plants, including Geelong's engine factory.	Imports and global competition reduced local making.
3. Economic impacts	Thousands of jobs lost in making; work shifted toward health care, construction, education, tourism and logistics; the refinery's conversion kept some fuel jobs but as import and storage work.	Follow the jobs.
4. Demographic impacts	Despite the closures, Greater Geelong's population kept growing — from about 233,000 in 2016 to about 268,000 in 2021 — as Melbourne families moved for housing and sea-change.	Population can grow even as industry changes.
5. Evaluate	The closures hurt workers and skills in making, but the city adapted; new growth brings its own pressures on housing and services.	Change brings costs and benefits.

Manufacturing change in Geelong, Victoria, 1926-2021



Sources: company announcements; Australian Bureau of Statistics census counts.

Timeline of manufacturing change in Geelong, Victoria, from Ford opening in 1926 to Alcoa Point Henry closing in February 2014, the Shell refinery converting to an import terminal announced in April 2014 and completed in 2015, Ford ending Australian manufacturing in October 2016, and the city's population reaching about 268,000 by the 2021 census.

Figure 11 — Manufacturing change in Geelong, 1926–2021. Source: company announcements; Australian Bureau of Statistics census counts. Retrieved 25 August 2026.

Model answer: Imports of manufactured products put pressure on Geelong's factories, because goods made more cheaply overseas undercut local production. Between 2014 and 2016 the city lost its aluminium smelter, its oil refinery was converted into an import terminal, and Ford ended 90 years of engine making. Economically this cost thousands of making jobs; demographically, though, Geelong kept growing — reaching about 268,000 people by 2021 — as its economy shifted toward services and as people moved from Melbourne. Geelong shows that an Australian place can lose manufacturing and still grow, but the workers who lose making jobs are not always the ones who gain the new ones.

Practice questions

Scaffolded

Q1. Using Figure 1, state Shenzhen's population in 1990 and in 2020, and describe the trend across the whole period shown.

Q2. (a) Define *supply chain*. (b) List the five stages of the oil supply chain shown in Figure 8, in order.

Q3. Using Figure 5, identify Australia's three largest sources of goods imports and give their approximate shares. What does the figure tell you about Australia's trade connections with Asia?

Q4. From the key ideas, give **one economic** and **one demographic** impact of factory growth on a manufacturing centre such as Shenzhen or Dhaka.

Q5. Using Figure 6, describe how manufacturing's share of Australian employment changed between 1965 and 2023. Give one reason from the key ideas for this change.

Q6. Using Figure 10, choose **one stage** of the oil supply chain and state one impact for each of the three criteria: environmental, economic and social.

Un scaffolded

Q7. “Australia’s reliance on imported fuel is a geographical issue, not just an economic one.” Using Figure 9 and the oil supply chain (Figure 8), justify this statement. Refer to at least two places by name.

Q8. A friend says: “Bangladesh’s garment industry is only good news for that country.” Using the key ideas and Figure 4, write a response of about five sentences that presents benefits **and** costs, and reaches a judgement.

Q9. Steelman both sides (give each position its strongest form, then evaluate): Position A — the Australian Government should do more to protect local manufacturing from imports (for example, by helping local factories compete). Position B — open trade does more good than harm overall, and governments should not try to keep out imports. Define any terms you need, give at least one real example to each side, and state which position you find better supported — and why. You will be marked on the quality of your reasoning, not on which side you choose.

Q10. Choose a manufactured product you use (a shoe, a phone, a bicycle). Outline its supply chain from raw material to sale, naming at least four places, and predict one economic and one demographic impact the chain has on one of those places.

Inquiry task — where do my goods come from? (data, map and source task)

You will collect primary data, represent it, and judge its reliability.

1. **Collect.** Choose 15 manufactured items in your home (clothing, electronics, furniture, appliances, stationery, sports gear). For each, record the country marked on the label (“Made in ...”) in a table.
 2. **Process.** Tally your items by country and by world region (Asia, Europe, the Americas, Africa, Oceania, Australia).
 3. **Represent.** Draw a column graph of your country tallies (use the conventions you know: title, labelled axes, even scale). Sketch a map of the world marking your main source countries and drawing arrows from them to Australia.
 4. **Analyse.** What share of your items came from Asia? Which country topped your tally? Compare your result with Figure 5.
 5. **Evaluate.** Answer honestly: (a) Does “Made in X” tell the whole story of where a product comes from? (b) Identify one source of bias in your sample. (c) Would a class-wide tally be more reliable than yours? Why?
 6. **Conclude.** Write three sentences on what your data shows about Australia’s trade interconnections, using the words *interconnection* and *supply chain* correctly.
-

Answers

Q1. About 1.7 million (1990) and about 17.6 million (2020); rapid, continuous growth across the period — more than 50-fold from 1980. **Q2.** (a) See Key ideas 1: the series of steps a product passes through from raw material to buyer. (b) Extraction → transport → refining → distribution → sale and use. **Q3.** China (about 26%), the United States (about 9%) and Japan (about 6%); most of Australia's imports come from Asian economies. **Q4.** Economic: jobs and higher incomes. Demographic: rapid population growth from in-migration of working-age adults. **Q5.** Fell from about 25% to about 6%; cheap imports and machines replacing workers are both causes. **Q6.** Example — transport: spills and emissions (environmental); cost of shipping adds to fuel prices (economic); jobs on ships and at ports (social). **Q7–Q10.** See fully-worked solutions.

Fully-worked solutions

Q7. Geography studies where things happen and why place matters. Australia imports around 90 per cent of its liquid fuel, and it has only two refineries (Lytton in Brisbane and Geelong). Much of that fuel travels through narrow sea routes such as the Strait of Hormuz and the Strait of Malacca, so a blockade, war or accident in a place thousands of kilometres away could raise prices or empty bowzers in Australia within weeks. Because the risk depends on *places and the distances between them*, fuel reliance is a geographical issue, not merely a matter of price.

Q8. The garment industry has brought clear benefits: about 4 million jobs, most held by women who moved from rural areas, paid work that raises family incomes, and export earnings that grew from about US\$6 billion in 2005 to about US\$47 billion in 2023. But the costs are real too: low wages, long hours, crowded housing in Dhaka, and unsafe buildings — the 2012 factory fire that killed 117 workers, and the 2013 Rana Plaza collapse, forced national and international safety reforms. On balance the industry has done more good than harm, but the judgement depends on working conditions continuing to improve; growth alone is not the whole story.

Q9. Strongest form of Position A: making is more than jobs — it carries skills, technology and defence capability; once a making industry leaves, the skills leave with it (as happened with Australian car making in 2016–17), and whole towns can be hurt; governments can help makers compete through training, energy costs and support for new industries such as battery making. Strongest form of Position B: Australia is wealthy partly because trade lets it sell what it does best (iron ore, gas, food, education) and buy what others make more cheaply; protecting weak factories raises prices for every household, invites other countries to block Australian exports in return, and delays the shift of workers into growing industries. Evaluation: the evidence in this section supports both — Geelong lost making jobs yet still grew (supporting B), while the loss of car making scattered skills that took a generation to build (supporting A). A strong answer defines “protect”, names examples on both sides, and judges on evidence rather than feeling. Either conclusion can earn full marks.

Q10. Example — a phone: lithium mined at Greenbushes (Western Australia) → refined into battery chemicals (China) → components made in Japan and the Republic of Korea → assembled in China or Vietnam → sold in Australia. Economic impact on Greenbushes region: high-paying mine jobs and income for local businesses. Demographic impact: mine work is often fly-in, fly-out, so nearby towns may not gain much permanent population, while workers spend weeks away from their families. Any product with four named places and one predicted impact of each type earns the mark.

Sources

All figures in this section are original, generated from the values shown and listed below. Retrieval date for all cited datasets: 25 August 2026.

- Shenzhen Municipal Bureau of Statistics — Shenzhen population, 1980–2020 (national census returns 1990, 2000, 2010, 2020). Figure 1.
- UNIDO, *Yearbook of Industrial Statistics 2023* — shares of world manufacturing value added. Figure 2.
- World Shipping Council, from port authority returns — container traffic, 2023. Figure 3.
- Bangladesh Garment Manufacturers and Exporters Association — ready-made garment export values. Figure 4.

- Australian Government Department of Foreign Affairs and Trade, *Composition of Australian Trade* — merchandise imports by partner, 2022–23. Figure 5.
- Australian Bureau of Statistics, labour force series; Productivity Commission — manufacturing share of employment, 1965–2023 (approximate). Figure 6.
- United States Geological Survey, *Mineral Commodity Summaries* 2024 — lithium mine production shares, 2023. Figure 7.
- Original diagram — global oil supply chain; place names generalised. Figure 8.
- Australian Government Department of Industry, Science and Resources, *Oil Information Australia*; refinery closure announcements (Alcoa Point Henry, February 2014; Shell Geelong conversion, announced April 2014; BP Kwinana refining ended March 2021) — refinery counts and import reliance. Figure 9.
- Original table — oil supply chain impacts by stage. Figure 10.
- Company and union announcements; Australian Bureau of Statistics census counts — Geelong timeline, 1926–2021. Figure 11.

Named in text: UNCTAD *Review of Maritime Transport* 2023; China National Bureau of Statistics migrant worker survey 2023; Energy Institute *Statistical Review of World Energy* 2023; US Energy Information Administration Strait of Hormuz assessment 2023; International Maritime Organization 2020 sulphur rule; *Liquid Fuel Emergency Act 1984* (Australia); United Nations definition of sustainable development, 1987.

Connected by trade: embodied carbon and what trade means for a country's sustainability

Curriculum focus

Victorian Curriculum 2.0 — Geography, Levels 9 and 10 (strand: Geographical Knowledge and Understanding; sub-strand: Geographies of interconnection).

VC2HG10K07

The elaborations this section draws on (as illustrations, not a checklist):

- **VC2HG10K07.E01** — how and why trade links places, at national, regional and global scales
- **VC2HG10K07.E02** — how the trade links between places and people change over time, at every scale
- **VC2HG10K07.E03** — what imported goods do to the environment in the places that supply the materials, make the product and take the waste
- **VC2HG10K07.E04** — judging how the food trade affects biodiversity in the regions that produce it
- **VC2HG10K07.E05** — can moving resource use and production offshore count as improved sustainability?
This is the embodied carbon debate (Sustainability cross-curriculum priority, VC2CCPSIS3)

Key terms appear in bold with a short meaning where they first appear.

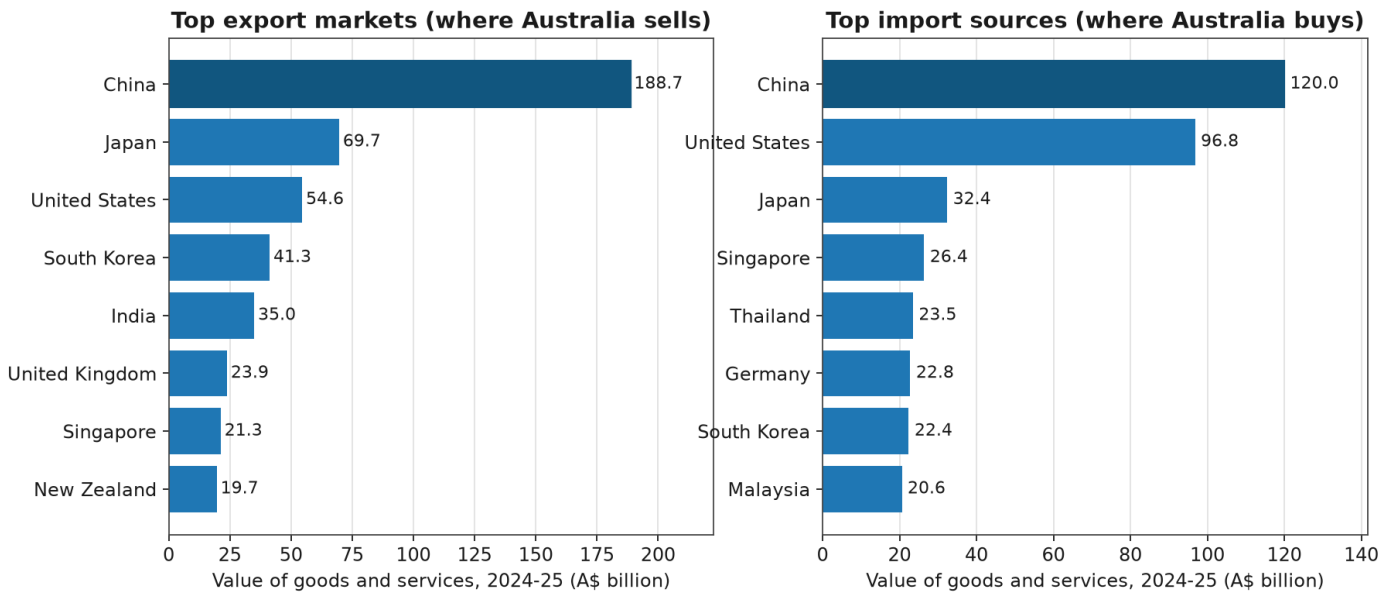
Theory

Trade connects places

An **interconnection** is a link between two places or two groups of people in which what happens in one affects the other. **Trade** — the buying and selling of goods and services between countries — builds some of the strongest interconnections on Earth. An **export** is a good or service sold to another country; an **import** is one bought from another country. **Goods** are physical things — iron ore, beef, cars — while **services** are things done for others, such as teaching an overseas student, hosting a holiday-maker or giving expert advice.

In 2024-25 Australia exported A\$646.6 billion of goods and services and imported A\$629.9 billion (DFAT). Figure 1 shows where that trade went and where it came from.

Where Australia's trade goes and comes from, 2024-25

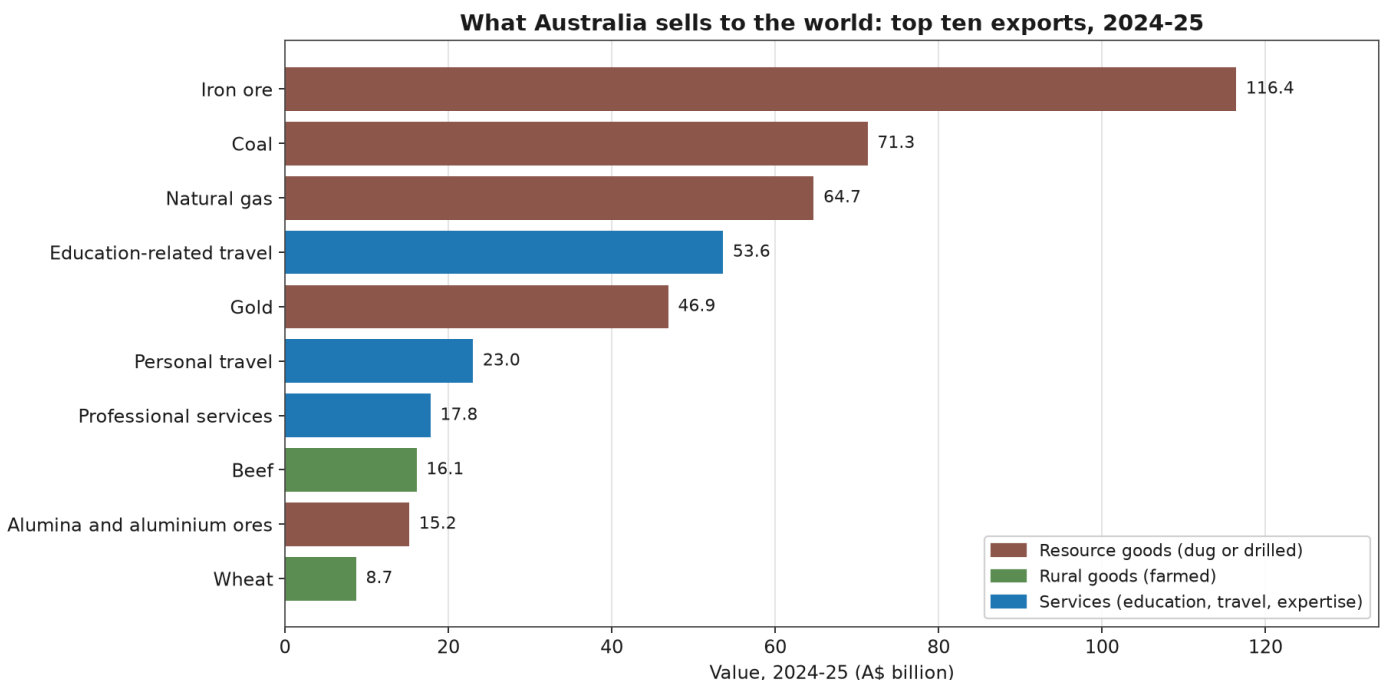


Source: DFAT, Australia's top goods and services exports and imports 2024-25 (accessed 25 August 2026).

Two bar charts showing Australia's top eight export markets and top eight import sources in 2024-25, with China the largest partner in both directions

Two things stand out. First, the ties are two-way: China is by far the biggest market for what Australia sells and the biggest source of what Australia buys. China buys Australian iron ore to make steel, and Australia buys Chinese-made phones, computers and cars. Second, most of Australia's trade is with the Asia-Pacific region, with the United States and Europe as the other big partners — so the interconnections run from the regional scale (Asia) to the global scale.

What Australia sells tells us what the country has plenty of. Four of the top five exports in Figure 2 are dug or drilled from the ground, and education is the biggest service export, linking Australian classrooms to students across Asia.



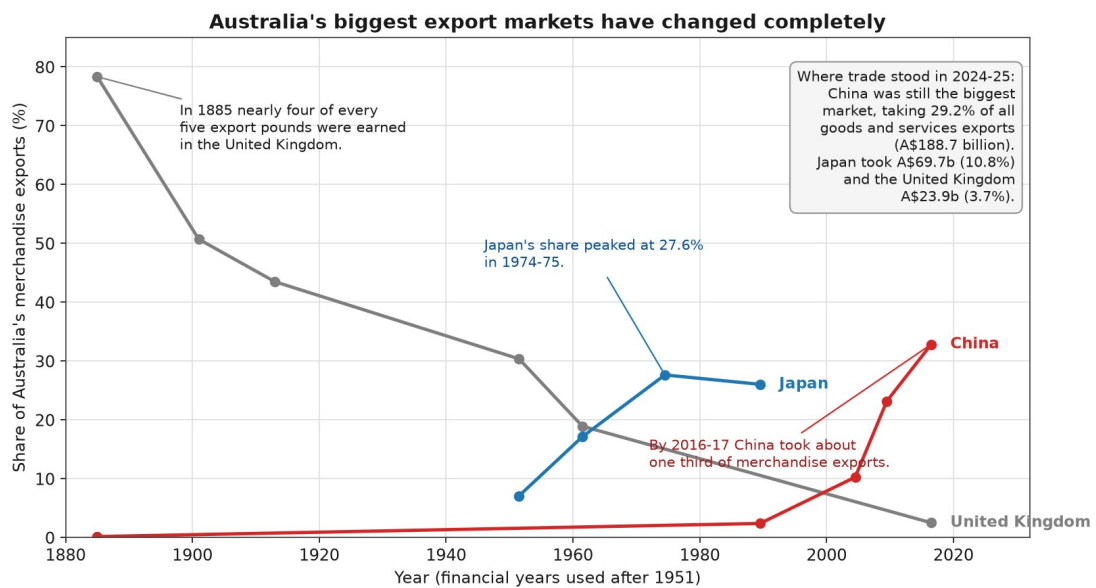
Source: DFAT, Australia's top goods and services exports 2024-25 (accessed 25 August 2026).

Horizontal bar chart of Australia's top ten exports in 2024-25, coloured by category: resource goods, rural goods and services

These interconnections work at more than one scale at once. A beef property in Queensland, the national trade in iron ore, and the global flow of students into Australian universities are all part of the same web of trade.

Connections change over time

Trade links are not fixed: they change over time as countries grow, industries move and governments make rules. Figure 3 shows 130 years of that change.



Source: DFAT historical merchandise trade series (shares computed from the published time series; 2024-25 figures from DFAT top-25 tables, accessed 25 August 2026). Merchandise (goods) exports only.

Line graph of the share of Australia's merchandise exports going to the United Kingdom, Japan and China from 1885 to 2016-17, showing the UK share falling from 78% as Japan then China rise

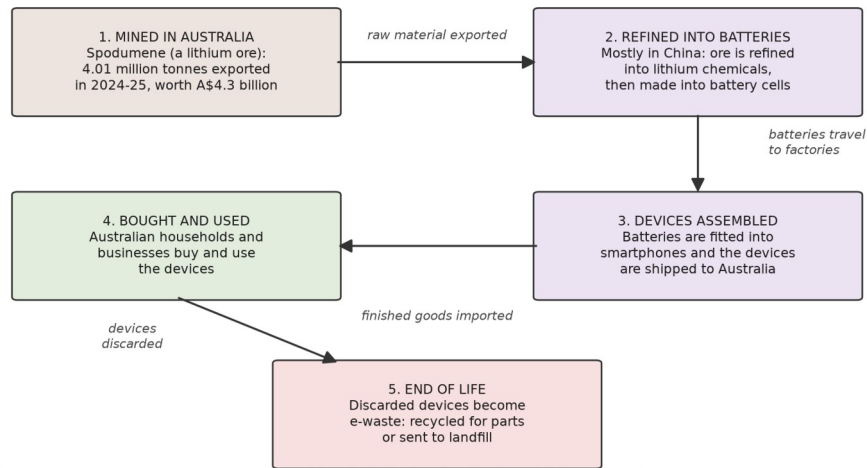
In 1885 nearly four of every five export pounds were earned in the United Kingdom — Australia's economy was tied to the far side of the world. Wool was the biggest export from the 1900s to the 1960s, then iron ore and coal took the lead as Asia's factories and cities grew. Japan was the biggest market by the 1970s, and by 2016-17 China took about a third of all merchandise exports (DFAT historical series). In 2024-25 China was still the biggest market, taking 29.2% of goods and services exports (DFAT).

Change also happens at the local scale, and Victoria shows it well. Australia made cars for 88 years: Ford's engine plant at Geelong and its assembly plant at Broadmeadows closed in 2016, and Toyota's plant at Altona, in Melbourne's west, closed in 2017. Australia once exported cars to the Middle East; since 2017 every new car sold in Australia has been made overseas, and passenger motor vehicles were one of the biggest goods imports in 2024-25 at A\$34.5 billion (DFAT). One local decision — a factory closing — rewired interconnections at the local, national and global scale.

Supply chains: the hidden geography of everyday things

A **supply chain** is the full chain of places and businesses a product moves through, from raw material to finished good to disposal. Most products travel through several countries before reaching you, so a single purchase can connect you to places you will never see.

One product's journey through a global supply chain



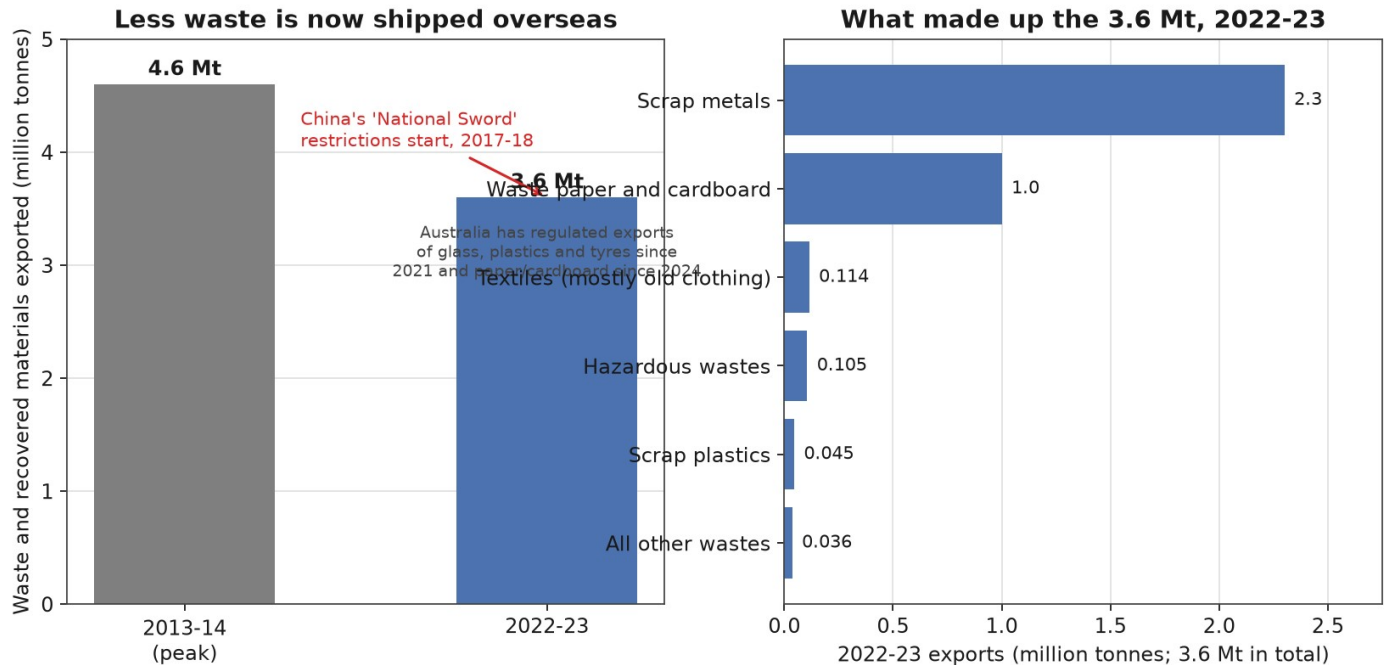
A supply chain is the full chain of places and businesses a product moves through, from raw materials to the finished good and its disposal. Lithium figures: DISER, Resources and Energy Quarterly, December 2025 (accessed 25 August 2026).

Flow diagram of a smartphone supply chain: lithium ore mined in Australia, refined into batteries mostly in China, devices assembled and shipped back to Australia, bought and used, then discarded as e-waste

The smartphone loop in the figure is real trade, not a thought experiment: Australia exported 4.01 million tonnes of spodumene (a lithium ore used in batteries) in 2024-25, worth A\$4.3 billion (DISER). Most of that ore is **refined** — processed into a purer, more useful form — in China, where battery cells and devices are also built, before the finished phones are shipped back to Australia. At the end of the chain, old devices become **e-waste** (electronic waste): recycled for their metals, or dumped.

Australia has long shipped some of its other waste overseas too, and Figure 5 shows how that trade has changed.

Australia's waste exports, 2013-14 to 2022-23



Source: DCCEEW, National Waste and Resource Recovery Report 2024 (updated 17 December 2025; accessed 25 August 2026).

Two bar charts: Australia's waste exports fell from a 4.6 million tonne peak in 2013-14 to 3.6 million tonnes in 2022-23, and the 2022-23 mix is mostly scrap metals and waste paper

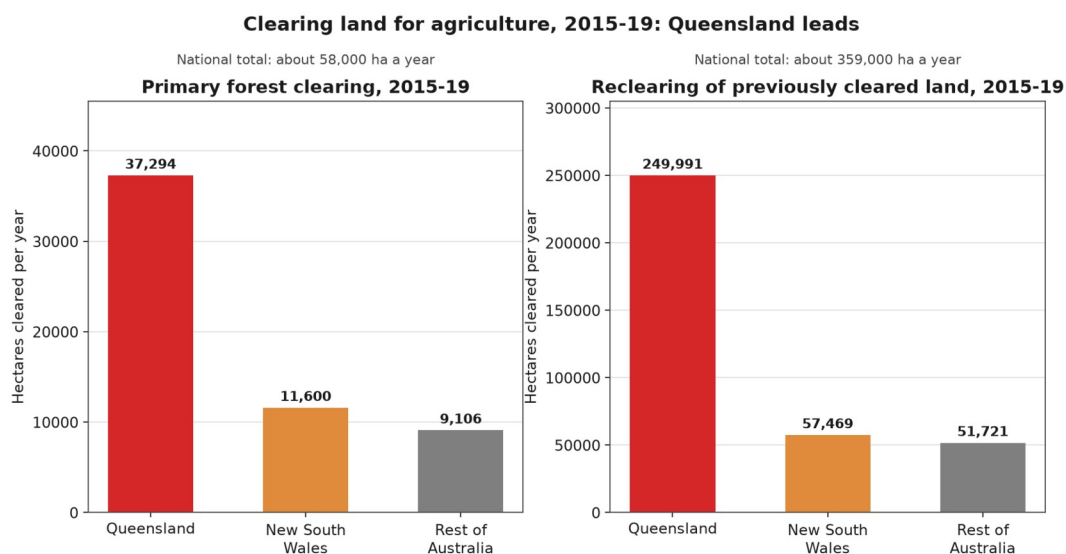
Waste exports peaked at 4.6 million tonnes in 2013-14, much of it to China. When China's "National Sword" rules of 2017-18 stopped accepting most foreign waste, the trade shifted to South-East Asia and Australia put its own limits on waste exports (glass, plastics and tyres from 2021; paper and cardboard from 2024). By 2022-23 exports were 3.6 million tonnes, mostly scrap metal and waste paper to countries such as Bangladesh, Indonesia, India, Vietnam,

Thailand and Malaysia (DCCEE National Waste Report). So one product can touch three kinds of place: where its raw material is dug, where it is made, and where its waste lands at the end of its life.

Food trade and biodiversity

Biodiversity is the variety of living things in a place. Trade in food connects shoppers in one country to biodiversity in the places that grow the food — in both directions.

Start with what Australia sells. Beef was Australia's eighth-biggest export in 2024-25 at A\$16.1 billion (DFAT). But pasture for cattle is also the main reason native vegetation is **cleared** — cut down and removed — in Australia, and clearing is linked to the listing of 60% of Australia's **threatened species** (species that are likely to die out) under the EPBC Act (State of the Environment 2021).



Clearing is implicated in the listing of 60% of Australia's EPBC-listed threatened species, and is driven mainly by agricultural expansion. In 2024-25 beef was Australia's 8th-biggest export at A\$16.1 billion (DFAT). Source: State of the Environment 2021 (soe.dcceew.gov.au); DFAT top-25 exports 2024-25 (both accessed 25 August 2026).

Two bar charts of land cleared for agriculture in 2015-19: Queensland leads both primary forest clearing (about 37,300 hectares a year) and reclearing (about 250,000 hectares a year)

In 2015-19 about 58,000 hectares of primary (old-growth) forest were cleared each year, plus about 359,000 hectares of previously cleared land recleared — most of it in Queensland's Brigalow Belt and Mulga Lands, and mostly for agriculture and grazing (State of the Environment 2021). Selling beef to the world is therefore an interconnection with a real environmental cost in the producing place: Australia.

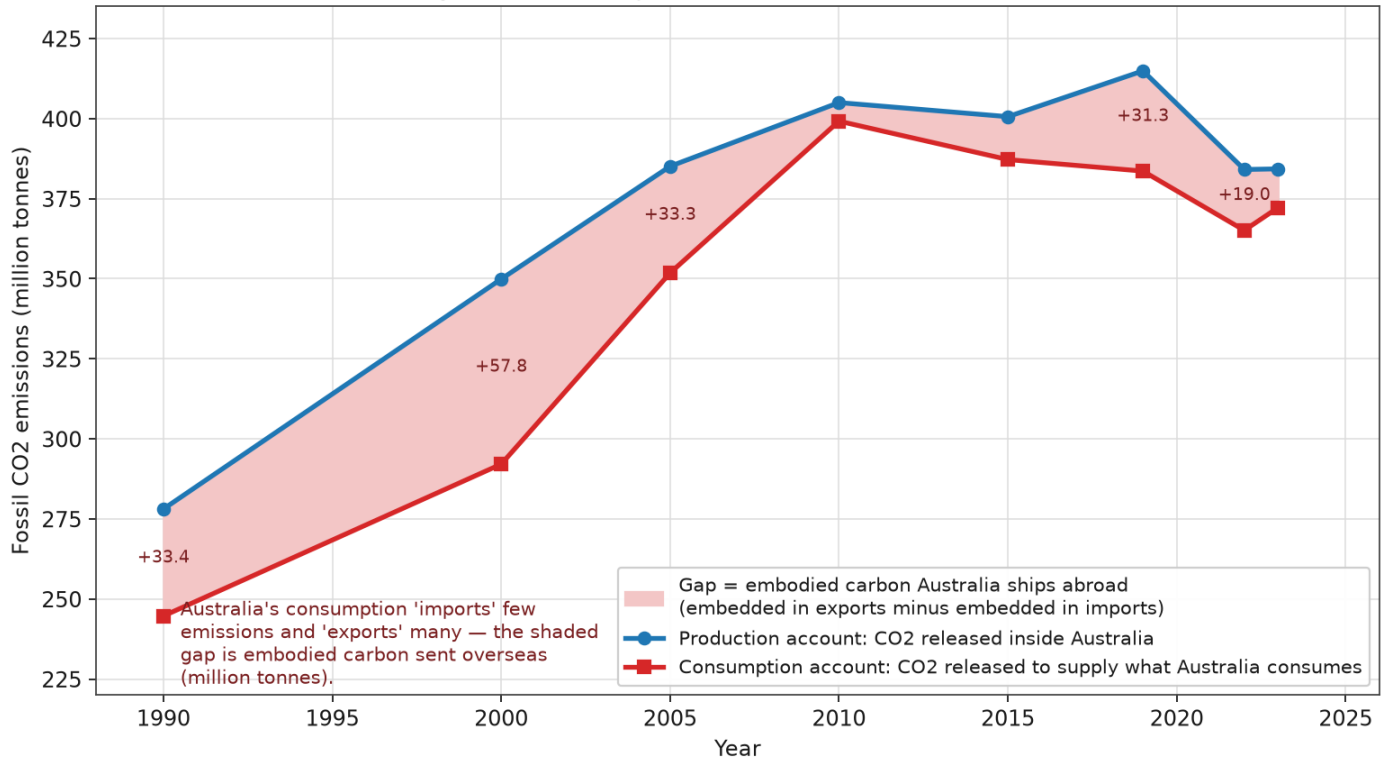
The same story runs the other way, in what Australia buys. In 2023 Australia imported about 80,300 tonnes of palm oil — 97% of it from Malaysia (UN Comtrade). Palm oil goes into many packaged foods. Growing it has a cost in the producing place too: in South-East Asia most **deforestation** (the clearing of forests) is driven by palm oil, paper and pulp, and worldwide beef, soy and palm oil production drive about 60% of deforestation in the tropics (Curtis et al. 2018, via Our World in Data). When forests go, the plants and animals that lived in them go with them. Trade in food therefore ties Australian shoppers to biodiversity in far-away producing places just as it ties Malaysian growers to Australian demand.

Embodied carbon: two ways of counting

Emissions are the greenhouse gases released by burning fuels and by industry and farming. Every product carries **embodied carbon** — the emissions released to make it, move it, or (for fuels) burn it. Because goods are traded, embodied carbon is traded too.

There are two ways to count a country's emissions. The **production account** counts emissions released inside the country's borders — this is the account countries report under the UNFCCC climate agreement. The **consumption account** counts emissions released anywhere in the world to supply what the country consumes. Figure 7 shows both for Australia.

Two ways of counting Australia's fossil CO₂, 1990-2023

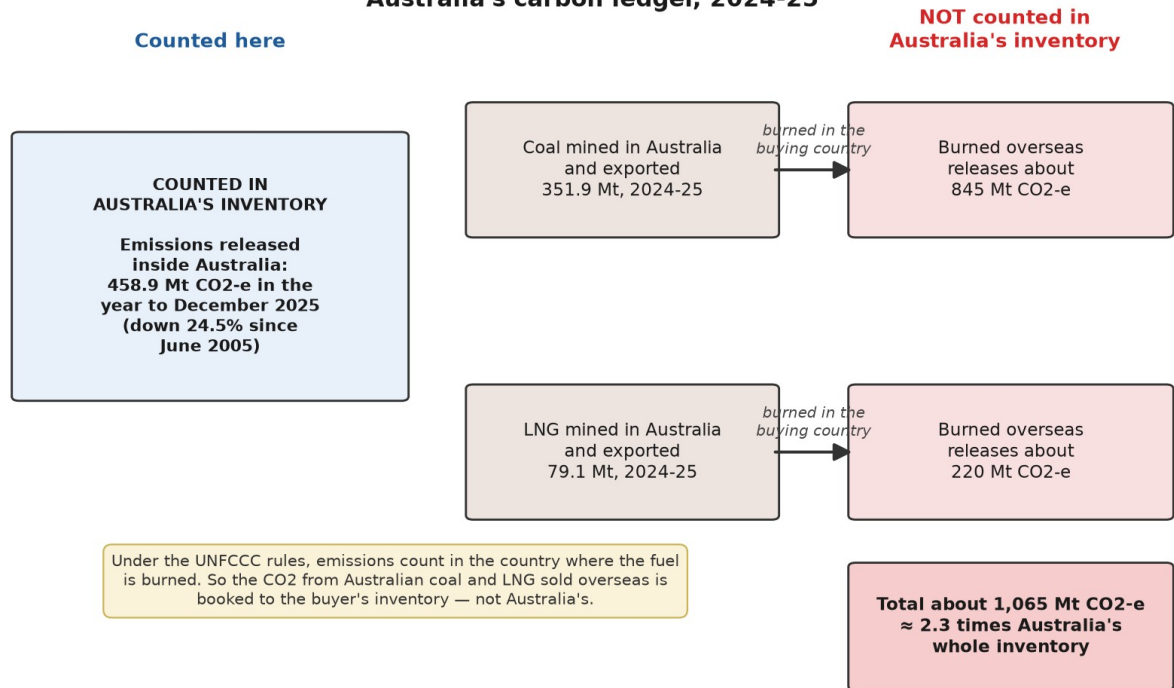


Source: Our World in Data, Global Carbon Budget — Australia (fossil CO₂, production and consumption accounts; accessed 25 August 2026).

Line graph comparing Australia's production-based and consumption-based fossil CO₂ emissions from 1990 to 2023, with the production line above the consumption line in every year

In every year shown, Australia's consumption account sits below its production account. The gap is embodied carbon: the emissions embedded in what Australia exports minus those embedded in what it imports. Australia is a **net exporter** of embodied carbon — it sells more embodied carbon abroad (in ore, coal, gas and food) than it buys back in finished goods (Our World in Data, Global Carbon Budget).

Australia's carbon ledger, 2024-25



Sources: DCCEEW quarterly emissions update December 2025; DISER Resources and Energy Quarterly December 2025; IPCC 2006 default carbon factors (accessed 25 August 2026).

Flow diagram contrasting Australia's counted inventory of 458.9 Mt CO₂-e with the about 1,065 Mt of CO₂ released overseas when Australia's exported coal and LNG are burned

The biggest flow of traded embodied carbon is in the fuels Australia digs up and sells. Under UNFCCC rules, emissions count in the country where the fuel is burned, not where it was dug. So the coal and LNG Australia exported in 2024-25 will release about 1,065 million tonnes of CO₂ when burned overseas — about 2.3 times Australia's whole territorial **inventory** (its official count) of 458.9 Mt CO₂-e for the year to December 2025 (DCCEEW; DISER; worked estimate in the next figure).

Worked estimate: embodied carbon in Australia's coal and LNG exports, 2024-25

Step	What we are working out	Figure	Where it comes from
1	Coal exported in 2024-25	351.9 Mt	DISER Resources and Energy Quarterly, Dec 2025
2	LNG exported in 2024-25	79.1 Mt	DISER Resources and Energy Quarterly, Dec 2025
3	CO ₂ released per tonne of coal burned	~2.4 t	IPCC 2006 default carbon content (hard coal 25.8 t)
4	CO ₂ released per tonne of LNG burned	~2.8 t	IPCC 2006 default carbon content (natural gas 15.3 t)
5	Embodied CO ₂ in exported coal	≈ 845 Mt	Row 1 × row 3
6	Embodied CO ₂ in exported LNG	≈ 220 Mt	Row 2 × row 4
7	Total embodied in exported fossil fuels	≈ 1,065 Mt	Row 5 + row 6
8	Australia's own emissions inventory	458.9 Mt CO ₂ -e	DCCEEW quarterly update, Dec 2025
9	Comparison	≈ 2.3 times	Row 7 ÷ row 8

Figures are rounded estimates for classroom working, built only from the published sources listed. 'Mt' = million tonnes.

Table working through the estimate: exported coal and LNG volumes multiplied by IPCC default carbon factors give about 1,065 Mt of CO₂ released overseas, about 2.3 times Australia's own inventory

Is the gain real, or has it only moved?

Sustainability means using resources in a way that meets today's needs without cutting what future generations can meet. That definition comes from the World Commission on Environment and Development's 1987 report *Our Common Future* (the Brundtland report). Australia's territorial inventory fell 24.5% below June 2005 levels by December 2025 (DCCEEW) — on the production account, real progress. But is a country more sustainable if its footprint has simply moved to another country? This is a genuine debate, and both sides have a real case.

“Yes — the gain is real.” Trade lets each place make what it makes best, so the same goods can be produced with less waste overall; when dirty work moves to a place that later cleans up, the world still wins. The wealth trade creates also pays for cleaner energy and stricter rules, which helps explain Australia's falling inventory. And because consumption accounts like Figure 7 exist, a shift offshore can be seen and checked — nothing is hidden, so a country that cuts emissions at home while trading freely is not cheating; it is specialising.

“No — the gain has only moved.” The territorial ledger leaves out the carbon Australia exports: the coal and LNG in the figures above release over twice the inventory's worth of CO₂ in other countries' ledgers. When a car plant closes, the car's emissions do not disappear — they appear in Thailand or Japan instead. If every country shifted its dirty work offshore and claimed the credit, the planet's total would not fall at all. Sustainability is about the Earth's living systems, not one country's report card, so a gain that is really a shift is not a gain.

Geographers keep both ledgers for exactly this reason. Whether a country's sustainability is real or relocated depends on which account you read — and trade in embodied carbon is the tool that lets you check.

Worked examples

Example 1 — scaffolded

Use Figure 1 (2024-25, A\$ million) to describe how concentrated Australia's trade is: find China's share of exports, the top three markets' share, and the share of imports coming from China and the United States.

Working	Comment
China's exports share: $188,702 \div 646,580 \times 100 \approx 29.2\%$	Matches DFAT's published share — one market buys under a third of all Australia sells.
Top three markets: $188,702 + 69,681 + 54,561 = 312,944$	China + Japan + United States.
$312,944 \div 646,580 \times 100 \approx 48.4\%$	Nearly half of everything Australia sells goes to just three countries.
Imports from China + US: $119,999 + 96,824 = 216,823$; $216,823 \div 629,886 \times 100 \approx 34.4\%$	A third of what Australia buys comes from two countries.
Conclusion: Australia's trade is concentrated in a few strong, two-way links, mostly in the Asia-Pacific.	Interpret the numbers in context: deep ties bring income and cheap goods, but also risk if one partner changes its rules or demand.

Example 2 — unscaffolded

Estimate the embodied carbon in Australia's coal and LNG exports, 2024-25.

Coal: $351.9 \text{ Mt} \times \text{about } 2.4 \text{ t CO}_2 \text{ per tonne} \approx 845 \text{ Mt CO}_2$. LNG: $79.1 \text{ Mt} \times \text{about } 2.8 \text{ t CO}_2 \text{ per tonne} \approx 220 \text{ Mt CO}_2$. Total $\approx 845 + 220 = 1,065 \text{ Mt CO}_2$ released when those fuels burn overseas. Compare with Australia's territorial inventory, $458.9 \text{ Mt CO}_2\text{-e}$: $1,065 \div 458.9 \approx 2.3$. So the embodied carbon in two exported fuels is about 2.3 times the whole inventory Australia counts at home (factors from IPCC 2006 defaults; volumes from DISER; inventory from DCCEEW).

Practice questions

Scaffolded

Q1. Use Figure 1. (a) Name Australia's biggest export market in 2024-25 and the value sold to it. (b) Name the biggest source of imports and the value bought from it. (c) In one sentence, explain why Figure 1 shows a two-way interconnection.

Q2. Use Figure 2. (a) Name two resource goods in the top five exports. (b) Name Australia's biggest service export. (c) Which broad category — resources, rural or services — earns the most in total?

Q3. Use Figure 3. (a) What share of Australia's merchandise exports went to the United Kingdom in 1885? (b) Which country was the biggest market by 2016-17, with about what share? (c) Give one reason why Australia's top export markets changed over those 130 years.

Q4. Use Figure 4. (a) What raw material does Australia export at step 1? (b) What do factories in China do with it at steps 2 and 3? (c) What do discarded devices become at step 5?

Q5. Use Figure 5. (a) In which year did waste exports peak, at how many million tonnes? (b) What was the volume in 2022-23? (c) Name the 2017-18 change in China that helped shrink the trade.

Q6. Use Figure 7. (a) Which account was higher in 2019? (b) Read the gap between the two accounts in 2019. (c) What does that gap say about Australia's trade in embodied carbon?

Unscaffolded

Q7. Using Figures 1 and 2, explain how and why Australia is interconnected with China through trade. Use two Australian exports and one import in your answer, and name the scales (national, regional, global) at which the interconnection works.

Q8. Car making ended in Victoria in 2016-17: Ford closed at Geelong and Broadmeadows in 2016 and Toyota at Altona in 2017, after 88 years of Australian car making. Explain how Australia's interconnections through trade changed at the local, national and global scale as a result.

Q9. Evaluate the impacts of the beef trade on biodiversity in the regions that produce the beef, using Figure 6 and the State of the Environment findings quoted in this section.

Q10. “Australia looks more sustainable than it really is.” Discuss this claim using embodied carbon (Figures 7-9). Give the strongest case you can for both sides.

Inquiry task

Q11. Choose one item you own that was made overseas (a phone, a shoe, a backpack). (a) Trace its supply chain: name the likely places for the raw material, the manufacture and the sale, and check at least one fact against a reliable source. (b) Find one environmental impact at one named place in the chain. (c) Present the chain as a flow diagram like Figure 4, with a source line under each fact. (d) In two or three sentences: is your item’s impact counted in Australia’s inventory, or in another country’s? Explain using the idea of embodied carbon.

Answers

Q1. (a) China, A\$188.7b | (b) China, A\$120.0b | (c) China is the biggest partner in both directions, so goods, money and jobs flow both ways. **Q2.** (a) any two of iron ore, coal, natural gas, gold, alumina | (b) education-related travel | (c) resources. **Q3.** (a) about 78% | (b) China, about 33% | (c) e.g. Asia's factories and cities grew and demanded Australian ore and coal. **Q4.** (a) spodumene, a lithium ore | (b) refine it into lithium chemicals and battery cells, then fit batteries into devices | (c) e-waste, recycled or dumped. **Q5.** (a) 2013-14, 4.6 Mt | (b) 3.6 Mt | (c) China's "National Sword" rules. **Q6.** (a) the production account | (b) about 31 Mt (414.9 – 383.6) | (c) Australia exports more embodied carbon than it imports. **Q7–Q11.** see fully-worked solutions.

Fully-worked solutions

Q7. Australia sells China iron ore and natural gas (two of its top five exports) and buys back phones, computers and cars (a top import). The interconnection is two-way and works at the national scale (country-to-country trade), the regional scale (most of Australia's trade is with the Asia-Pacific) and the global scale (Chinese-made goods reach Australia through world shipping networks). It exists because China needs raw materials for its factories and Australia needs manufactured goods — each supplying what the other lacks.

Q8. Local scale: Geelong, Broadmeadows and Altona lost thousands of manufacturing jobs and the plants that anchored them. National scale: Australia went from making and exporting cars (Toyota once exported Camrys to the Middle East) to importing every new car it sells — passenger motor vehicles became a A\$34.5b import in 2024-25. Global scale: Australia's car interconnections rewired from making-at-home to buying from Japan, Thailand and other countries. The emissions of making those cars also moved offshore — a shift in embodied carbon, not a removal.

Q9. Beef exports (A\$16.1b in 2024-25) bring income and jobs to producing places, but pasture expansion drives clearing: about 58,000 ha of primary forest and about 359,000 ha of reclearing a year in 2015-19, led by Queensland's Brigalow Belt and Mulga Lands, and clearing is linked to the listing of 60% of threatened species. Judgement: the trade delivers real economic benefits while its biodiversity cost is real and concentrated in the producing place — so managing clearing (protected areas, grazing rules) is what decides whether the trade is sustainable.

Q10. Case for "yes, it looks better than it is": the territorial inventory leaves out the about 1,065 Mt of CO₂ released overseas when exported coal and LNG burn (≈ 2.3 times the inventory), and closing factories (e.g. cars) removes emissions from Australia's ledger while they continue abroad — so on a consumption view, part of the "gain" is relocated. Case for "no, the gain is real": the inventory fell 24.5% below 2005 levels while living standards rose; trade lets production sit where it is done best; and consumption accounts (Figure 7) show the shift openly, so nothing is hidden. Conclusion: whether the claim holds depends on the account you read — sustainability judged only by the territorial ledger can be partly relocated, which is why geographers keep both accounts.

Q11. Answers will vary. A strong response names real places at each step (e.g. a phone: cobalt mined in the Democratic Republic of the Congo, assembled in China or Vietnam, sold in Australia), gives one sourced impact at one named place (e.g. mining waste polluting rivers near the mine), draws the chain as a labelled flow diagram with a source line per fact, and explains that the item's making emissions are counted in the producing country's inventory — the embodied carbon travels to Australia inside the product, but stays in the other ledger.

Sources

All sources accessed 25 August 2026 unless stated.

- DFAT, *Australia's top goods and services by top 25 exports / imports, 2024-25* (updated January 2026) — Figures 1, 2 and trade values.
- DFAT, historical merchandise trade series and *Trade through Time* — Figure 3, wool and market-change facts.
- DISER, *Resources and Energy Quarterly*, December 2025 (historical data) — coal 351.9 Mt, LNG 79.1 Mt, spodumene 4.01 Mt (A\$4.3b).

- DCCEEW, quarterly national greenhouse-gas update, December 2025 — 458.9 Mt CO₂-e inventory; 24.5% below June 2005.
- Our World in Data, *Global Carbon Budget* (Australia, fossil CO₂, production and consumption accounts) — Figure 7.
- Our World in Data, *Deforestation and Forests* (“Beef, soybeans and palm oil are the key drivers of deforestation”; driver data after Curtis et al. 2018) — palm oil and deforestation claims.
- DCCEEW, *National Waste and Resource Recovery Report 2024* (updated 17 December 2025) — Figure 5 and waste-trade facts.
- State of the Environment 2021, *Land: pressures from industry* (soe.dcceew.gov.au) — Figure 6, clearing and threatened-species facts.
- UN Comtrade (HS 1511, palm oil, Australia imports, 2023) — 80,266 t, 97% from Malaysia.
- Wikipedia, *Ford Australia* and *Toyota Australia* — 2016-17 closure dates.
- IPCC, *2006 Guidelines for National Greenhouse Gas Inventories*, Vol. 2, Table 1.2 — default carbon factors used in the embodied carbon estimate.
- World Commission on Environment and Development, *Our Common Future* (1987) — sustainability definition.

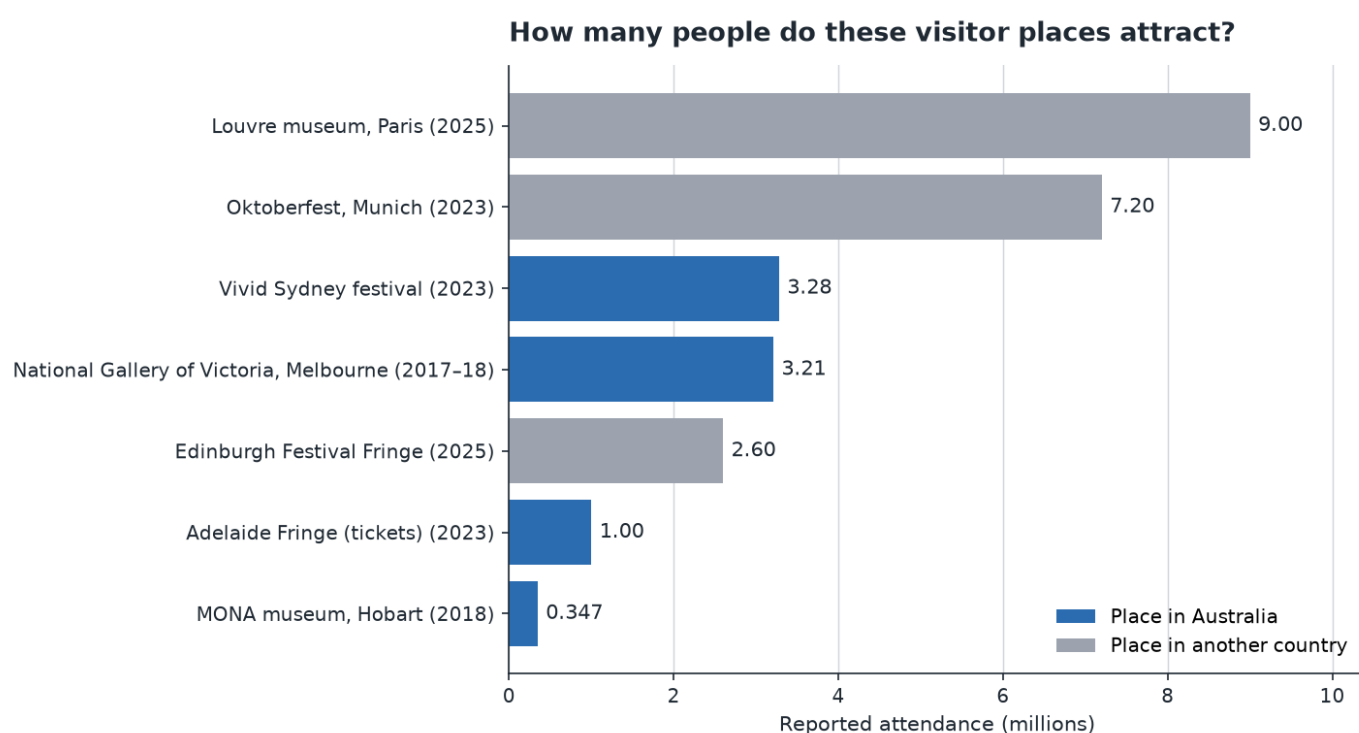
Tourism, travel and cultural choices: their effects on places, and managing them well

Curriculum map. This section owns VC2HG10K08 (the final clause of this content description is not covered in this book — see the notice at the front of the book). It draws on elaborations .E01–.E04; .E05 and .E06 are not covered (same notice).

Theory

2D.1 Places that attract visitors

When people choose where to go on a holiday, a day out, or a festival or museum visit, those choices send people and money to some places and not others. **Tourism** is the activities of people who travel to, and stay in, a place away from their usual home for a short time — for a holiday, for business, or for culture. **Recreation** is what people do for enjoyment and rest in their free time: a walk, a game, a festival. Places that attract visitors include festival cities, art galleries and museums, heritage towns and natural sights.



Data: each attraction's Wikipedia entry, retrieved 25 August 2026. Years differ between sources (shown in brackets); figures compare scale, not a shared year.

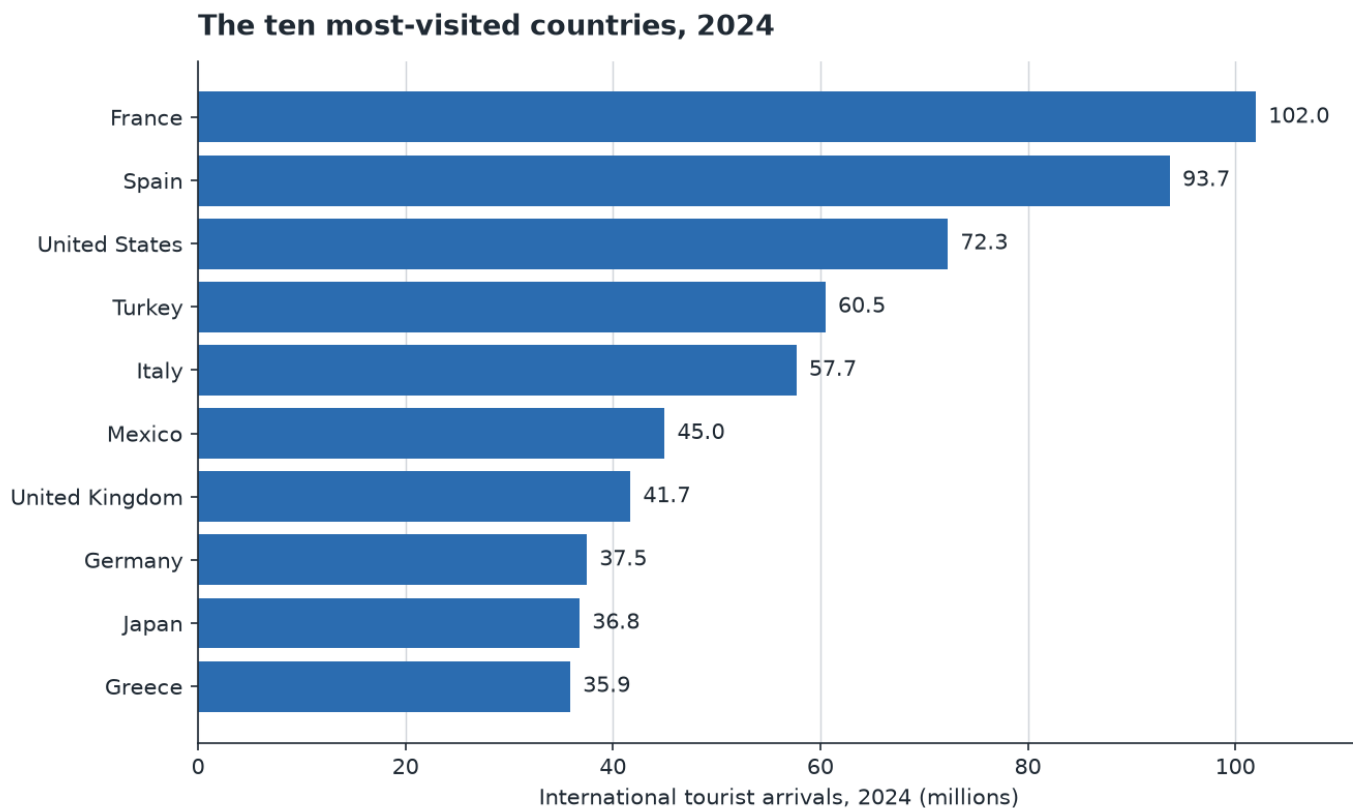
Bar chart comparing reported attendance at seven festivals, galleries and museums in Australia and in other countries, from the Louvre museum in Paris (9.00 million) to the MONA museum in Hobart (0.347 million); Australian places shown in blue, places in other countries shown in grey.

The figure mixes festivals, galleries and historical experiences of the kind named in the curriculum:

- **Festivals.** Oktoberfest in Munich — first held on 12 October 1810 and now about 16 days long — drew a record 7.2 million people in 2023. The Edinburgh Festival Fringe is the world's largest performing-arts festival (more than 2.6 million tickets in 2025, across 301 venues). Vivid Sydney, a festival of light and music, drew 3.28 million people in 2023. The Adelaide Fringe, the largest arts festival in the Southern Hemisphere, sold 1.00 million tickets in 2023.
- **Art galleries and museums.** The Louvre in Paris is the world's most-visited art museum (9.00 million visitors in 2025). The National Gallery of Victoria (NGV) in Melbourne — founded in 1861 and Australia's oldest and most-visited art museum — recorded 3.21 million visits in 2017–18. The Museum of Old and New Art (MONA) in Hobart, opened in January 2011, recorded 347,000 visits in 2018.
- **Cultural and historical experiences.** Sovereign Hill, an open-air museum recreating a gold-rush town at Ballarat, opened in November 1970 and rebuilt more than 60 buildings from the 1850s.

The years differ between sources (each bar is labelled), so the figure compares the *size* of these places' pull, not a shared year.

Now look at the whole world. In 2025 there were 1.52 billion international tourist trips, 4% more than in 2024 (UN Tourism, via Wikipedia; retrieved 25 August 2026 — every source in this section is listed in **Sources** at the end). The ten most-visited countries in 2024 were:

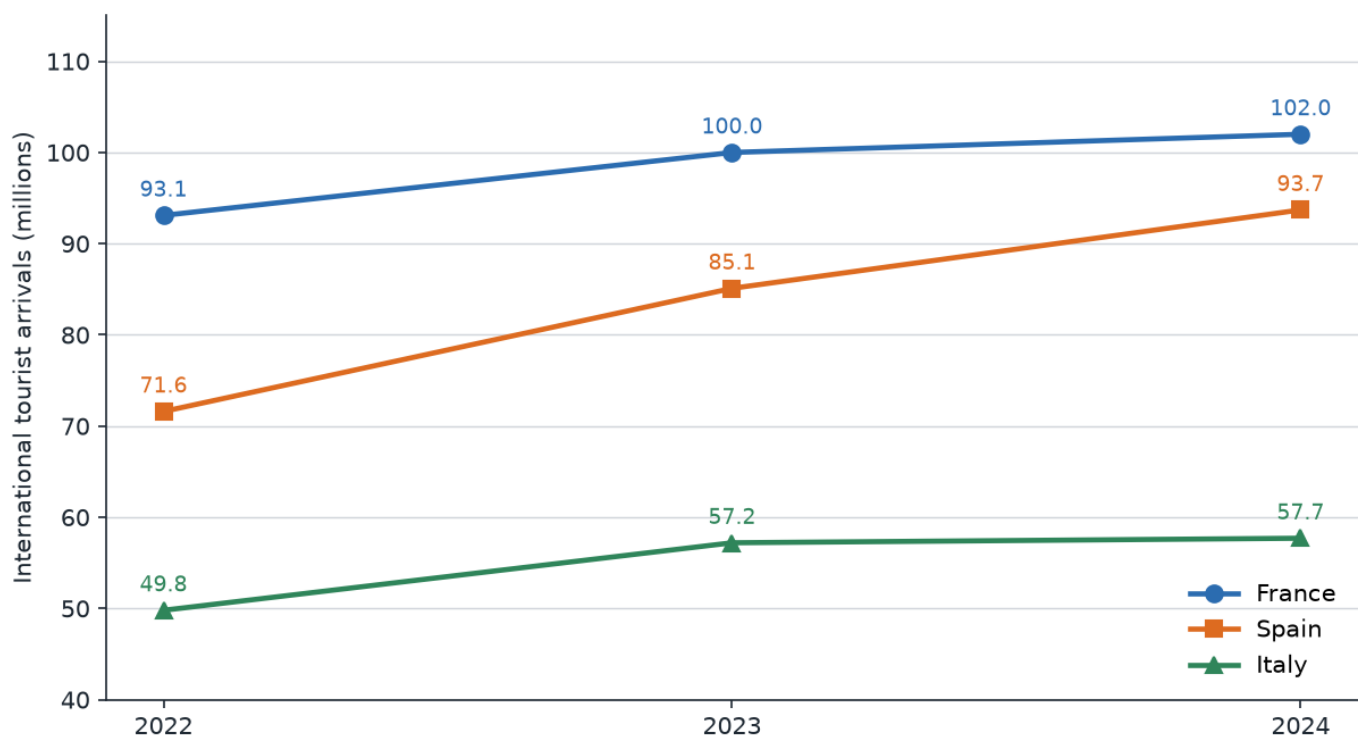


Data: UN Tourism, as republished in Wikipedia, "World Tourism rankings", retrieved 25 August 2026.

Bar chart of international tourist arrivals in 2024 for the ten most-visited countries: France 102.0 million, Spain 93.7, United States 72.3, Turkey 60.5, Italy 57.7, Mexico 45.0, United Kingdom 41.7, Germany 37.5, Japan 36.8, Greece 35.9.

Six of those ten — France, Spain, Italy, the United Kingdom, Germany and Greece — are in Europe, which is why Europe is a natural place to watch what heavy visitor numbers do to places. Arrivals in Europe's three most-visited countries climbed quickly over 2022–2024, after the travel shutdowns of 2020–21:

Arrivals recover quickly in Europe's three most-visited countries

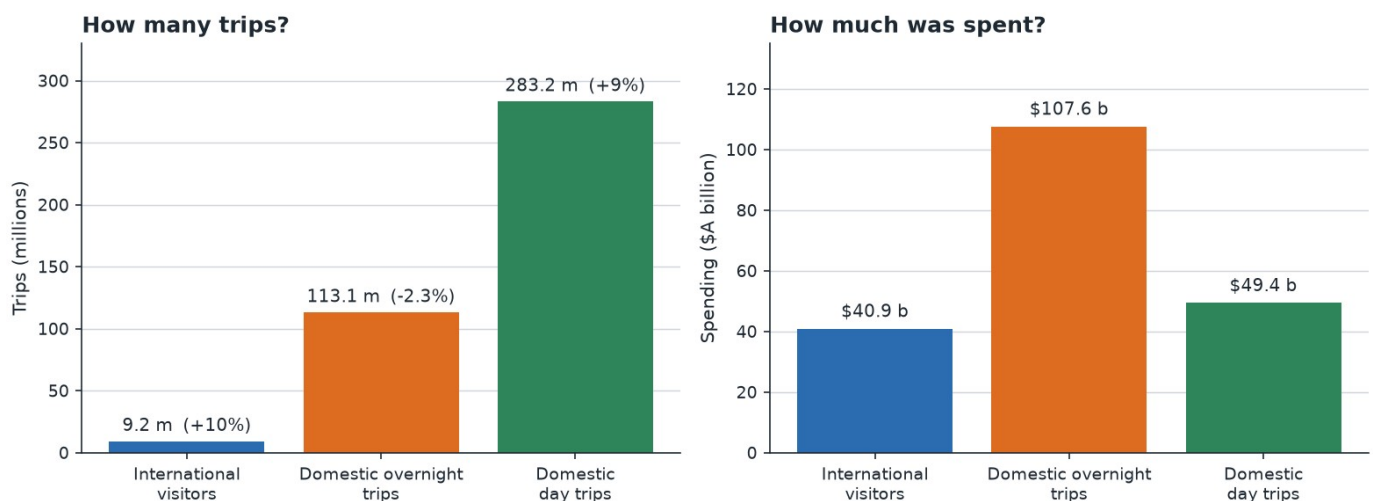


Data: UN Tourism, as republished in Wikipedia, "World Tourism rankings", retrieved 25 August 2026.

Line graph of international tourist arrivals, 2022 to 2024, for France (93.1 to 102.0 million), Spain (71.6 to 93.7 million) and Italy (49.8 to 57.7 million), all rising.

And closer to home, the visitor economy is large. For the year to March 2026 (Tourism Research Australia, Austrade):

Australia's visitor economy, year to March 2026



Data: Tourism Research Australia (Austrade), Australian tourism data dashboard, retrieved 25 August 2026. Trips % figures are year-on-year change.

Two bar charts of Australia's visitor economy for the year to March 2026: trips (international visitors 9.2 million, up 10%; Australians on overnight trips 113.1 million, down 2.3%; Australians on day trips 283.2 million, up 9%) and spending (40.9, 107.6 and 49.4 billion Australian dollars respectively).

Tourism also added \$81.1 billion to Australia's economy in 2024–25 (2.9% of GDP) and employed 727,000 people (4.5% of Australian jobs). So the choices people make about travel, recreation and culture are big business for the places that attract them — and that is exactly where impacts begin.

2D.2 A framework for impacts: economic, social, environmental

A **visitor** is anyone who travels to a place outside their usual home. A **day-tripper** is a visitor who does not stay overnight. Impacts are the changes visitors bring, and geographers sort them into three dimensions: **economic** (money and jobs), **social** (people and community) and **environmental** (the natural and built surroundings). The key idea is that *the same visitors can bring gains and problems at once* — the same dollar, the same crowd.

Tourism's impacts on a place: one model

The same visitors can bring gains and problems at once — the same dollar, the same crowd.

	Positive impacts	Negative impacts
Economic (money and jobs)	• jobs in hotels, cafes and tour companies • income for other local businesses • council revenue that can pay for services	• many jobs are part-time and seasonal • prices and rents rise for locals • the town relies on one industry
Social (people and community)	• reasons and funds to keep historic buildings • events and facilities locals can also enjoy • contact with people and ideas from other places	• crowding, noise and traffic • homes become holiday rentals, so residents leave • the place starts to feel like a theme park
Environmental (natural and built surroundings)	• entry fees can fund protection of parks and wildlife • tourism income can pay to repair heritage sites	• more waste, and more water and energy use • trampling and wear at fragile sites • emissions from travel, especially by air

Model created for this section. It sorts impacts; it does not measure any one place.

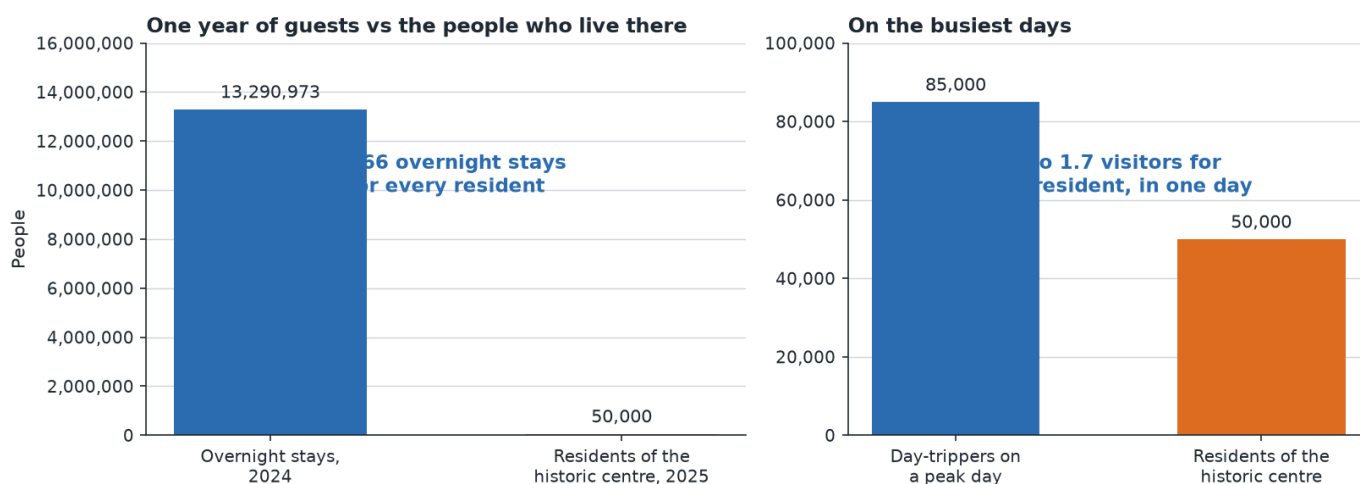
Table sorting tourism's impacts on a place into positive and negative columns and economic, social and environmental rows: for example, jobs and income for local businesses sit beside part-time seasonal work and rising prices and rents; funds to keep historic buildings sit beside crowding, noise and homes becoming holiday rentals; entry fees funding parks sit beside more waste, wear at fragile sites and emissions from travel.

Researchers, city governments and news media also use the word **overtourism**. The Victorian Curriculum does not define the term. This section treats it as: *more visitors than a place can host without harm to the people who live there or to the place itself*. The word is contested. Some say it is useful because it names a real problem — residents priced out, streets that feel like a theme park. Others say it blames visitors for problems that come from how a city is run, and hides the jobs and services tourism pays for. Both views get a fair hearing in 2D.3.

2D.3 Case study: Venice, Italy — pressure and management

Venice's historic centre is home to about 50,000 residents (2025). In 2024 the city recorded 13,290,973 overnight stays (ISTAT, Italy's statistics office). That is about **266 overnight stays for every resident, in one year**. On peak days, up to 85,000 day-trippers arrive — about **1.7 day-trippers for every resident, in one day**, on top of the people already staying overnight.

Venice (Italy): who is in the city?



Data: overnight stays 2024 — ISTAT, via Wikipedia "Tourism in Italy"; residents and day-trippers — Wikipedia "Venice" and "Tourism in Italy", retrieved 25 August 2026. Ratios computed from these values.

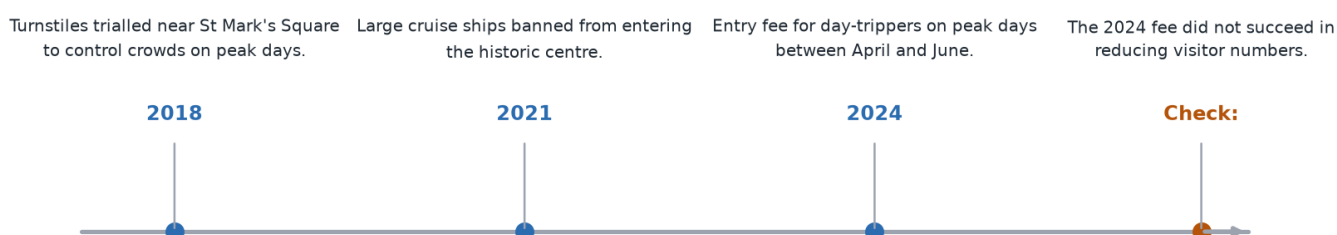
Two bar charts for Venice: one year of guests (13,290,973 overnight stays in 2024) against the 50,000 residents of the historic centre (about 266 overnight stays per resident), and the busiest days (85,000 day-trippers on a peak day) against the same 50,000 residents (about 1.7 visitors per resident in one day).

Read Venice through the 2D.2 table:

- **Economic.** Tourism pays for hotels, restaurants, boat services and guides — but many of these jobs are part-time and seasonal, and prices and rents rise for locals as homes become holiday rentals.
- **Social.** Visitor money gives Venice reasons and funds to keep its historic buildings, and residents meet the world on their doorstep — but crowding, noise and queues make daily life harder, and the resident population has kept falling as people leave. A place can start to feel like a theme park rather than a home.
- **Environmental.** Large numbers mean more waste and more water and energy use, wear on old and fragile buildings, and emissions from travel — including the large cruise ships that used to sail through the lagoon.

So what has Venice done about it?

Managing the impacts: what Venice has tried



Data: Wikipedia, "Overtourism" and "Tourism in Italy", retrieved 25 August 2026. Lesson: strategies are tested and judged on evidence — the work of managing never stops.

Timeline of Venice's management measures: 2018, turnstiles trialled near St Mark's Square to control crowds on peak days; 2021, large cruise ships banned from entering the historic centre; 2024, entry fee for day-trippers on peak days between April and June; check: the 2024 fee did not succeed in reducing visitor numbers.

Venice is not alone. **Amsterdam** introduced a daily tourist tax in 2019, stopped official tours of its red-light district in 2020, ran a "Stay Away" campaign aimed at visitors who come only to party, and moved to close its cruise-ship terminal. **Barcelona** capped entry to the Park Güell garden at 800 people an hour after visits reached 9 million a year by 2013; a 2017 survey found 60% of residents believed the city had reached or passed its tourism capacity; protests broke out in tourist-heavy neighbourhoods in 2017; and in April 2020 a public letter signed by 160 university

researchers and 300 architects called for cruise ships to be removed and for tourism to be shrunk on purpose (*degrowth*).

Two views on capping visitor numbers.

- **View 1 — caps protect the place.** A historic city has a fixed size: its streets, buildings and canals cannot be stretched. Without a cap, homes become rentals, residents leave, and the place loses the everyday life that made it worth visiting in the first place. Caps, fees and bans can protect what remains, keep services running for residents, and keep the place worth the trip.
- **View 2 — caps hurt people and often fail.** Tourism is frequently a city’s biggest employer, so caps and fees land first on the workers in its hotels, restaurants and shops. Fees also fall harder on visitors with less money, making travel something only the wealthy can do. And the numbers may not fall — Venice’s 2024 fee did not reduce visitor numbers — so the measure raises money and anger without easing crowding. Better, this view says, to spread visitors across the year and across the city, and to build enough housing for residents.

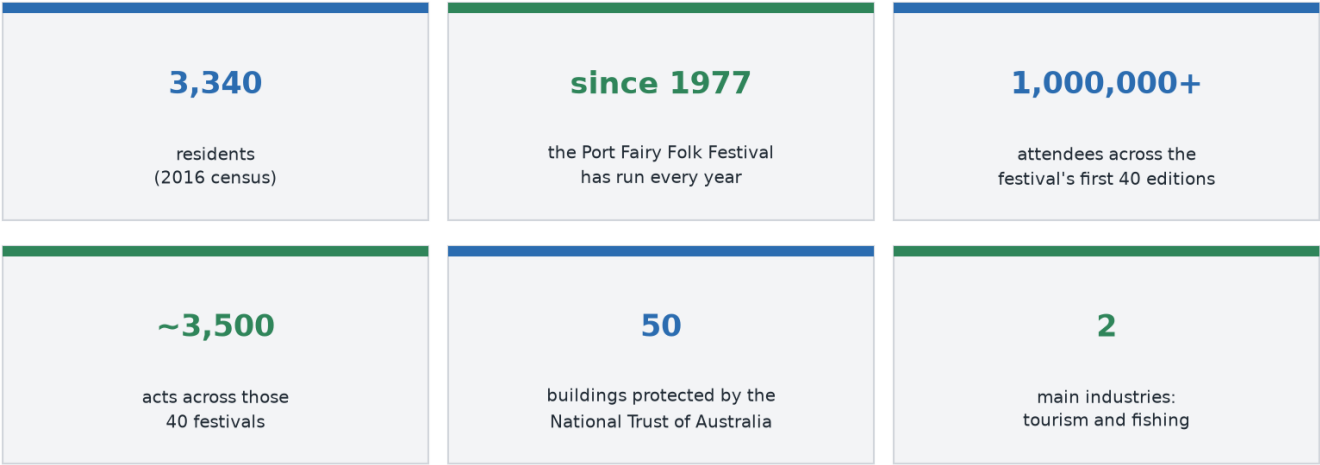
Both views agree on one point: doing nothing is not management. The disagreement is about *which* management works, and for *whom*. That disagreement is what makes this geography rather than opinion — the claims on each side can be checked against evidence like the figures above.

2D.4 Small Australian towns: Port Fairy

Now change the **scale** — the size of the place you are looking at. Venice is a world-famous city; Port Fairy is a small coastal town in western Victoria, not far from where the Great Ocean Road (a 240 km road from Torquay to Allansford, on the National Heritage List since 2011) ends at its western side. At small scale, the same visitor numbers that a city absorbs can transform a town.

Port Fairy, Victoria: a small town shaped by visitors

A small coastal town in western Victoria, not far from where the Great Ocean Road ends at Allansford.



Data: Wikipedia, "Port Fairy", retrieved 25 August 2026.

Fact tiles for Port Fairy, Victoria: 3,340 residents (2016 census); the Port Fairy Folk Festival has run every year since 1977; more than 1,000,000 attendees and about 3,500 acts across the festival’s first 40 editions; 50 buildings protected by the National Trust of Australia; two main industries, tourism and fishing.

Port Fairy’s two main industries are tourism and fishing (it has one of Victoria’s largest fishing fleets). Visitors come for the 50 National Trust buildings, for Moyneyana (a summer festival running from 24 December to 26 January), and above all for the Port Fairy Folk Festival, held every year since 1977. Across its first 40 editions the festival hosted around 3,500 acts and more than a million attendees — for a town of 3,340 people, that is hundreds of visitors per resident over a festival weekend, the small-town version of Venice’s ratio.

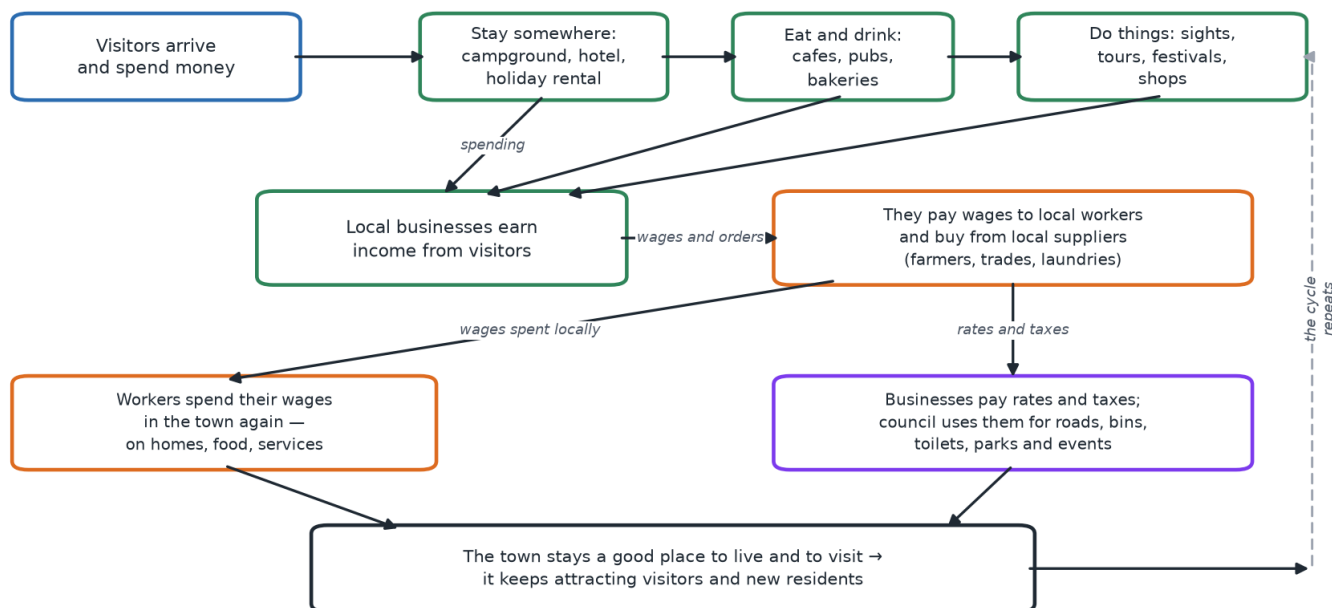
Apply the 2D.2 table to Port Fairy and both sides appear. Positive: jobs and income for the bakery, the cafes, the caravan park and the shops; rates and taxes that help the council pay for roads, bins and parks; a reason to keep the 50 heritage buildings standing; events that locals enjoy too. Negative: much of the work is seasonal; housing is tight

when visitors want it most; traffic, noise and rubbish peak at festival time; and the town leans heavily on one industry — if visitors stop coming, the town feels it at once.

How much does one visitor dollar actually do for a small town? Follow it:

Where does visitor money go in a small town?

A simplified model. Each arrow is money moving.



Original model created for this section. It explains a flow; it is not measured data.

Flow diagram modelling where visitor money goes in a small town: visitors spend on a place to stay, food and drink, and things to do; those businesses earn income, pay wages to local workers and buy from local suppliers; workers spend their wages in the town again; businesses pay rates and taxes that the council uses for roads, bins, toilets, parks and events; the town stays a good place to live and to visit, so the cycle repeats.

The diagram is a model, not measured data, but it shows the idea: one visitor dollar can pay a wage, be spent again in the town, and return to the council as rates that pay for services. At small scale, that cycle is why many Australian towns actively work to attract visitors — festivals, heritage trails, markets — while watching the costs in the right-hand column of the table.

2D.5 Changing choices, changing places

The choices people make about travel, recreation and culture do not stand still, and places feel the change. One well-documented shift began in Sweden in 2017, when the word *flygskam* (“flight shame”) entered public use and was spread worldwide by climate activist Greta Thunberg. The table below lists what was reported over the following years.

Signals of a change in travel choices

What happened after some people began to rethink flying?

Year	Where	What was reported
2017	Sweden	The word flygskam ("flight shame") is coined by a Swedish musician; climate activist Greta Thunberg helps make it well known.
2018	Sweden	National rail operator SJ sells 1.5 million more tickets than the year before.
2019	Sweden	Airport operator Swedavia reports domestic air travel down 9% on the year before.
2019	Germany	Rail operator Deutsche Bahn carries a record number of passengers; domestic flying is down 12% (November, year-on-year).
2019	Survey: US, France, UK, Germany	21% of the 6,000 people surveyed say they flew less in the past year (UBS survey).
May 2023	France	The French government bans short-haul domestic flights where a train trip of under 2.5 hours can replace them.

Data: Wikipedia, "Flight shame", retrieved 25 August 2026. Reports describe some people who travel, not all of them.

Table of signals of a change in travel choices: 2017, Sweden, the word flygskam (flight shame) enters public use; 2018, Sweden, national rail operator SJ sells 1.5 million more tickets than the year before; 2019, Sweden, airport operator Swedavia reports domestic air travel down 9%; 2019, Germany, rail operator Deutsche Bahn carries a record number of passengers while domestic flying is down 12% year-on-year in November; 2019, a survey of 6,000 people in the US, France, the UK and Germany finds 21% flew less in the past year; May 2023, France bans short domestic flights where a train trip of under 2.5 hours can replace them.

These reports describe *some* of the people who travel, not all — the point for geography is that a change in choices, even by a minority, sends fewer people and dollars to some places and more to others. Rail towns gain what airline towns lose; cities within train distance of each other gain what distant destinations lose.

A second shift is arriving now: winter recreation in a warming climate. Victoria has more ski resorts than any other Australian state — Mount Buller, Falls Creek, Mount Hotham (summit 1,862 m), Dinner Plain, Mount Baw Baw and Mount Buffalo — with a season that runs roughly from June to October. If the climate warms as scientists expect, natural snow will become less reliable over the coming decades. No single dataset is needed to see what that would mean through the 2D.2 table: fewer winter visitors would shrink alpine-town economies (economic), change who can work and live there (social), and at the same time take pressure off fragile alpine environments (environmental). Resorts and their towns are already responding — building mountain-bike tracks, walking trails and summer events so the town does not lean on snow alone.

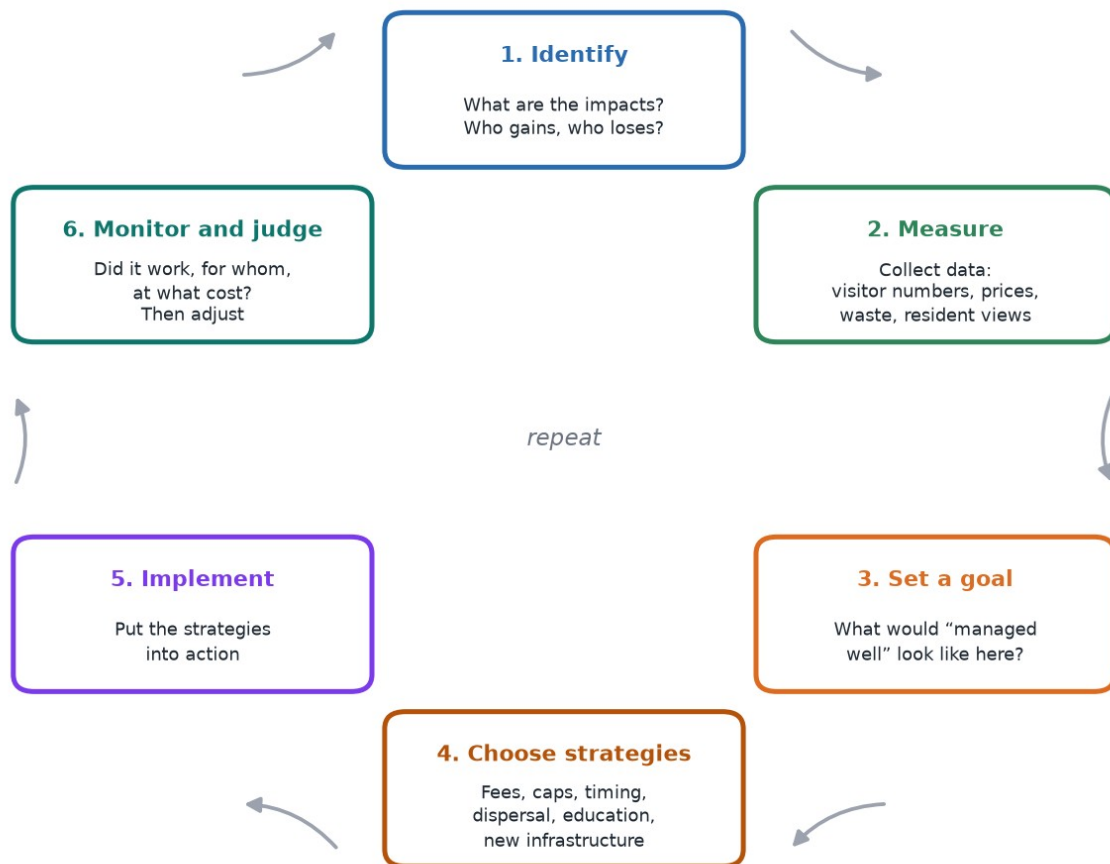
Put the two shifts together and geographers can make reasoned predictions about the future. If more Australians holiday closer to home, small coastal towns like Port Fairy may see *more* visitors, not fewer — and need the management ideas of 2D.6 sooner. If flying keeps growing in other places while some Europeans fly less, cities like Venice may see a change in *where* their visitors come from rather than a fall in total numbers. Predictions like these are the work of 2D.4's scale idea and 2D.2's table, pointed at the future: same tools, different tense.

2D.6 Managing impacts: a cycle

Places that manage visitor impacts well tend to work in a cycle, not with one-off fixes. A **strategy** is a plan of action chosen to reach a goal.

Managing impacts is a cycle, not a one-off fix

A model used by places that manage visitor impacts.



Original model created for this section.

Cycle diagram of six steps: 1 identify the impacts and who gains and who loses; 2 measure them with data such as visitor numbers, prices, waste and resident views; 3 set a goal for what managed well would look like; 4 choose strategies such as fees, caps, timing, spreading visitors out, education or new facilities; 5 implement them; 6 monitor and judge whether they worked, for whom and at what cost — then adjust and repeat.

Notice step 6. Venice's entry fee was a real strategy that reached step 6 and was judged: it raised money but did not reduce numbers, so the crowding it targeted went on. That is not a failure of the cycle — it *is* the cycle working: strategies are tested against evidence and adjusted. And notice what every judgement in this section has used: the three **criteria** — standards for judging — of *environmental*, *economic* and *social*. They are the same three dimensions as the 2D.2 table, and they are the three the curriculum's achievement standard names for evaluating strategies. You have now met them four times: sorting impacts (2D.2), reading Venice (2D.3), reading Port Fairy (2D.4), and judging strategies (here). That repetition is the point — by the end of this section, judging a strategy against environmental, economic and social criteria should be something you can simply *do*.

Worked examples

Example 1 — scaffolded

Use two sourced numbers to measure Venice's visitor pressure: overnight stays in 2024 (ISTAT) = 13,290,973; residents of the historic centre (2025) $\approx$ 50,000. Express the pressure as overnight stays per resident per year, and as day-trippers per resident on a peak day (up to 85,000).

Working	Comment
Overnight stays per resident = $13,290,973 \div 50,000$.	One number divided by the other compares visitors to the people who live there.
$13,290,973 \div 50,000 \approx 266$.	$\approx$ means “about”: the resident figure is rounded.
So about 266 overnight stays per resident per year.	A ratio makes pressure comparable between places of different sizes.
Day-trippers per resident on a peak day = $85,000 \div 50,000 = 1.7$.	Same method, different time window: one day instead of one year.
On a peak day, for every resident there are about 1.7 day-trippers — before counting anyone staying overnight.	Both ratios say the same thing in different units: on peak days, visitors heavily outnumber residents.

Example 2 — scaffolded

Evaluate one strategy — Venice’s 2024 entry fee for day-trippers on peak days — using environmental, economic and social criteria.

Working	Comment
Environmental: the fee did not reduce visitor numbers by late 2024, so wear, waste and crowding pressure went on much as before.	A strategy is judged on what it changed, not on what it intended.
Economic: the fee raised money the city could spend, and the cost to each visitor was small.	A gain — but money raised is not the same as pressure reduced.
Social: residents saw their city acting, which matters; but the crowding that makes daily life hard was not eased, and some visitors resent being charged to see a city.	Social criteria cover residents <i>and</i> visitors.
Judgement: partly successful. As a way to raise money and show action, it worked; as a way to reduce crowding and wear, it did not — so the cycle (2D.6) says adjust: try different fees, different days, or different strategies, and check again.	An evaluation names what worked <i>and</i> what did not, criterion by criterion, then says what follows.

Practice questions

Scaffolded

- Q1.** Using the 2024 top-ten figure: (a) which country was the most visited, and with how many arrivals? (b) name the countries in the top ten that are in Europe. (c) what does that pattern tell you about where international tourism is concentrated?
- Q2.** Using the Europe 2022–2024 figure: (a) read Spain’s arrivals for 2022 and 2024 and find the increase. (b) which of the three countries had the *smallest* increase over those years? (c) suggest one reason arrivals rose in all three.
- Q3.** Using the impacts table, place each impact in one of its six cells (economic/social/environmental $\times$ positive/negative): (a) a cafe takes on two extra staff for a festival weekend; (b) late-night festival noise keeps residents awake; (c) entry fees pay for repairs to a 1850s building; (d) rents rise as homes become holiday rentals.
- Q4.** Using the Port Fairy tiles: (a) state the town’s population at the 2016 census; (b) name its two main industries; (c) name one built feature of the town that visitors come to see, and one event.
- Q5.** Using the flight-change table: (a) name two reported signals that some people flew less in 2018–2019; (b) what did the French government do in May 2023? (c) the table’s footnote says the reports describe some of the people who travel, not all of them. Why does that matter when you use the table as evidence?

Q6. Using the management cycle: (a) put these steps in order: implement; identify; monitor and judge; measure; choose strategies; set a goal. (b) why does the arrow from “monitor and judge” run back to “identify”?

Un scaffolded

Q7. Evaluate Venice’s 2021 ban on large cruise ships entering the historic centre, using environmental, economic and social criteria. Reach an overall judgement.

Q8. Compare Venice and Port Fairy: give one similarity and one difference in tourism’s impacts on the two places, and use the idea of scale in your answer.

Q9. “Capping visitor numbers does more harm than good.” Discuss this claim from both sides, then give your own view with reasons.

Q10. Choose one place named in this section. Predict two effects that a change in travel or recreational choices (for example, flying less, or less reliable snow at alpine resorts) may have on that place by 2040, and suggest one strategy to respond to one of those effects.

Inquiry task

One visitor place, profiled and judged. Choose one place that attracts visitors — Port Fairy, Sovereign Hill (Ballarat), the National Gallery of Victoria, Vivid Sydney, or a visitor place near your own town — and build a one-page profile.

1. Write two inquiry questions: one about the *size* of the place’s pull (numbers of visitors, trips or spending), one about an *impact* of those visitors.
 2. Find at least two reliable sources. For each, record: who produced it, when, and one reason it is reliable (see the relevance–reliability–bias work in section 5B).
 3. Pull two dated numbers from your sources and represent them in one graph of your own, with a title, labelled axes and a source line (see the graphing conventions in section 5C).
 4. Identify one positive and one negative impact of visitors on your place, and place them in the 2D.2 table.
 5. Recommend one strategy for managing one of those impacts, and judge it against two of the three criteria (environmental, economic, social).
 6. List your sources with the date you retrieved them.
-

Answers

Q1. (a) France, 102.0 million. (b) France, Spain, Italy, the United Kingdom, Germany, Greece (six). (c) International tourism is concentrated in Europe (and in a small number of countries generally). **Q2.** (a) $93.7 - 71.6 = 22.1$ million. (b) Italy (+7.9 million). (c) e.g. travel recovering after the 2020–21 shutdowns. **Q3.** (a) economic, positive; (b) social, negative; (c) environmental or social, positive (accept either with a reason — repairs to a *building* are built-environment; heritage kept for the community is social); (d) economic or social, negative (higher rents are an economic cost to locals and a social cost to the community). **Q4.** (a) 3,340. (b) Tourism and fishing. (c) e.g. the 50 National Trust buildings; the Port Fairy Folk Festival (or Moyneyana). **Q5.** (a) Any two of: SJ sold 1.5 million more rail tickets (2018); Swedavia domestic air travel down 9% (2019); Deutsche Bahn record passengers with domestic flying down 12% (2019); 21% of the people surveyed flew less (2019). (b) Banned short domestic flights where a train trip of under 2.5 hours can replace them. (c) A change by some of the people who travel is not a change by most — the table shows a real shift but not its size in the whole population, so it is evidence of a trend, not proof that flying is falling overall. **Q6.** (a) Identify → measure → set a goal → choose strategies → implement → monitor and judge. (b) Because judging one round changes what you see next: managing is a cycle, not a one-off fix. **Q7–Q10.** See the fully-worked solutions below.

Fully-worked solutions

Q7. Environmental: removing large cruise ships cut a source of pollution, waves and wear near the old buildings — a clear gain. **Economic:** the port and some businesses lost the spending of cruise passengers, a cost to those jobs. **Social:** residents saw the lagoon protected, which most valued; some day visitors were unaffected (cruise passengers are a different stream to the 85,000 day-trippers). **Judgement:** a strategy with a strong environmental and social gain and a contained economic cost — on balance, successful, though it did little for total crowding because day-trippers kept coming. (Any judgement that weighs all three criteria with reasons is acceptable.)

Q8. Similarity: in both places tourism brings jobs and income *and* pressure on housing and daily life — the same table, two places. Difference: scale. Port Fairy's impacts pulse with festivals (thousands of visitors against 3,340 residents for a few weekends a year), while Venice's pressure is continuous (about 266 overnight stays per resident every year). A visitor number a small town absorbs in a weekend would reshape a city if repeated daily — and Port Fairy's entire population is smaller than one peak-day crowd in Venice. So the same impact can be manageable at one scale and overwhelming at another.

Q9. For the claim (caps do harm): tourism is often the biggest employer in a visitor place; caps and fees hit those workers first, fall harder on poorer visitors, and — as Venice's fee showed — may not even reduce numbers, raising anger without easing crowding. Against the claim (caps do good): a historic place has a fixed size; without caps, homes become rentals and residents leave until the place loses what made it worth visiting; caps and fees can protect that and fund services. Own view (example): caps are a blunt tool — better used on a fragile site (a small museum, a walking track, a festival weekend) than on a whole city, where spreading visitors across the year and across the streets, and housing for residents, does more. (Any discussed-both-sides answer with a stated own view and reasons is acceptable.)

Q10. Example, Mount Buller: effect 1 (economic/social) — less reliable snow shrinks the winter season, so fewer visitors and less work for the village and the towns below it; effect 2 (environmental) — less snow-making and fewer visitors would ease pressure on the alpine environment. Strategy: build the green-season economy — mountain-bike tracks, walking trails, events from spring to autumn — so the town does not lean on snow alone; judged economically it spreads income across the year, and socially it keeps jobs and the school roll more stable. (Any one named place, two reasoned predicted effects and one strategy judged against a criterion is acceptable.)

Teaching sequence

Teacher-facing. Not vocabulary-gated.

1. **Hook and definitions (2D.1).** Open on the attendance figure and ask which place surprises; define tourism, recreation, day-tripper; read the top-ten and Europe-trend figures; finish on the TRA dashboard to establish size and stakes.
2. **The matrix (2D.2).** Teach the three dimensions; run Q3 as a paired sorting activity; introduce *overtourism* as a contested term with the operational definition given, and park the two views for 2D.3.
3. **Venice (2D.3).** Compute the two ratios live (Example 1); read the management timeline; stage the two-views box as a structured debate (prep for Q9). Emphasise: both views are argued from evidence, not vibes.
4. **Scale shift to Port Fairy (2D.4).** Use the tiles and the flow model; have students recompute a festival-weekend ratio (attendees per resident) and compare with Venice; Example 2 models criterion-based evaluation.
5. **Changing choices (2D.5).** Read the flight-change table with the “some travellers, not all” caveat; discuss the alpine resorts in the author-voice register (prediction, not dataset); draft Q10 in pairs.
6. **The cycle and inquiry (2D.6).** Teach the six-step cycle; judge Venice’s fee against it (Example 2 revisited); launch the inquiry task, with the 5B/5C cross-references doing the sourcing and graphing assessment.

Assessment notes. Example 2, Q7 and Q9 exercise the standard’s strategy-evaluation skill — judging strategies against environmental, economic and social criteria; Q1–Q6 exercise data reading; Q10 and the inquiry task exercise interpretation, prediction and referenced communication. The inquiry task is the section’s data/source task per the volume calibration.

Scope note. Per the front-of-book notice and §2A of the series plan, the final clause of VC2HG10K08 and elaborations .E05/.E06 are not covered here; do not supplement with that material. There is no prior-knowledge assumption: the matrix and all terms are established in the section itself.

Fieldwork option. Where time and duty of care allow, a local visitor-place visit (counts, a field sketch, a short business or resident interview) exercises 5B methods on this section’s content; the inquiry task stands without it.

Sources

All sources retrieved **25 August 2026**. Figures are computed from the values they display.

- UN Tourism data, as republished in Wikipedia, “World Tourism rankings” — 2024 top-ten international arrivals; 2022–2024 series for France, Spain and Italy.
- Wikipedia, “Tourism” — 1.52 billion international tourists in 2025 (+4% on 2024).
- Tourism Research Australia (Austrade), Australian tourism data dashboard — trips and spending by international visitors and by Australians on overnight and day trips (year to March 2026); tourism GDP and jobs (2024–25; March 2026).
- Wikipedia, “Tourism in Italy” — Venice overnight stays 2024 (ISTAT): 13,290,973; day-trippers up to 85,000 per day; 2024 entry fee on peak days between April and June, not successful in reducing numbers by late 2024.
- Wikipedia, “Venice” — about 50,000 residents in the historic island city (2025); UNESCO listing under constant examination.
- Wikipedia, “Overtourism” — Venice turnstiles trial 2018; large cruise ships banned 2021; Amsterdam daily tourist tax 2019, red-light tours stopped 2020, “Stay Away” campaign, move to close cruise terminal; Barcelona Park Güell 9 million visits a year by 2013 and 800-per-hour cap, 2017 survey (60% at or past capacity), 2017 protests, April 2020 manifesto signed by 160 academics and 300 architects.
- Wikipedia, “Port Fairy” — population 3,340 (2016 census); main industries tourism and fishing; one of Victoria’s largest fishing fleets; 50 National Trust buildings; Folk Festival every year since 1977, about 3,500 acts and over one million attendees across its first 40 editions; Moyneyana 24 December–26 January.
- Wikipedia, “Great Ocean Road” — 240 km, Torquay to Allansford; National Heritage List 2011.
- Wikipedia, “Flight shame” — coined in Sweden 2017 and spread by Greta Thunberg; SJ +1.5 million tickets 2018; Swedavia domestic –9% 2019; Deutsche Bahn record with domestic flying –12% (November 2019); UBS 2019 survey (6,000 people; 21% flew less); France’s May 2023 short-haul flight ban.

- Wikipedia, “Skiing in Australia” — Victoria has the greatest number of ski resorts in Australia; Mount Buller, Falls Creek, Mount Hotham, Dinner Plain, Mount Baw Baw, Mount Buffalo named; season June/July to September/October. Wikipedia, “Mount Hotham” — summit 1,862 m.
- Wikipedia entries “National Gallery of Victoria” (founded 1861; 3.21 million visits 2017–18), “Vivid Sydney” (3.28 million, 2023), “Adelaide Fringe” (1 million tickets, 2023; largest arts festival in the Southern Hemisphere), “Edinburgh Festival Fringe” (over 2.6 million tickets, 301 venues, 2025), “Oktoberfest” (first held 12 October 1810; 7.2 million, 2023), “Louvre” (9.0 million, 2025), “Mona (museum)” (347,000 visits, 2018) and “Sovereign Hill” (opened November 1970; 60+ buildings).
- Ratios of 266 overnight stays per resident and 1.7 day-trippers per resident computed by the author from the ISTAT and resident values above.
- The impacts table (2d_impacts_matrix), the small-town flow model (2d_small_town_flow) and the management cycle (2d_management_cycle) are original models created for this section.

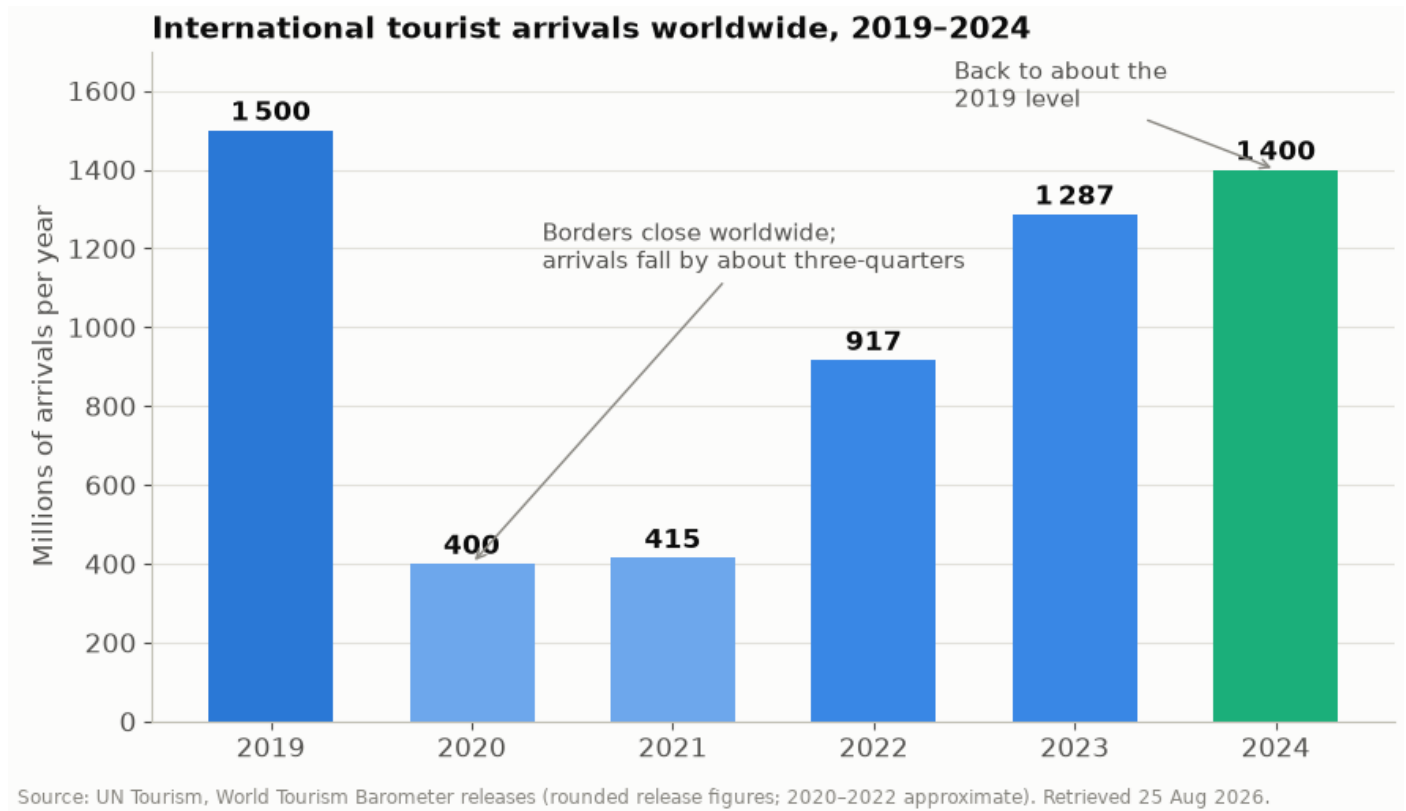
How fashions, pandemics and financial shocks spread across a connected world

Theory

Part 1 — A connected world

A T-shirt sold in Melbourne might be designed in Sydney, made in Vietnam and shipped through Singapore. A song released in Seoul can be heard here the same day. Money invested in New York moves to London in seconds. When places are joined like this by trade, travel, migration and digital networks, we say the world is **interconnected**, and the strength of those joins is its **interconnectedness** (the curriculum's word for it).

One good measure of interconnectedness is travel. Travel moves people, and people carry things: ideas, styles, money and, sometimes, germs. Figure 1 shows international tourist arrivals, 2019-2024.



Bar chart of international tourist arrivals, 2019 to 2024: 1,500 million in 2019 falling to about 400 million in 2020 and recovering to about 1,400 million by 2024

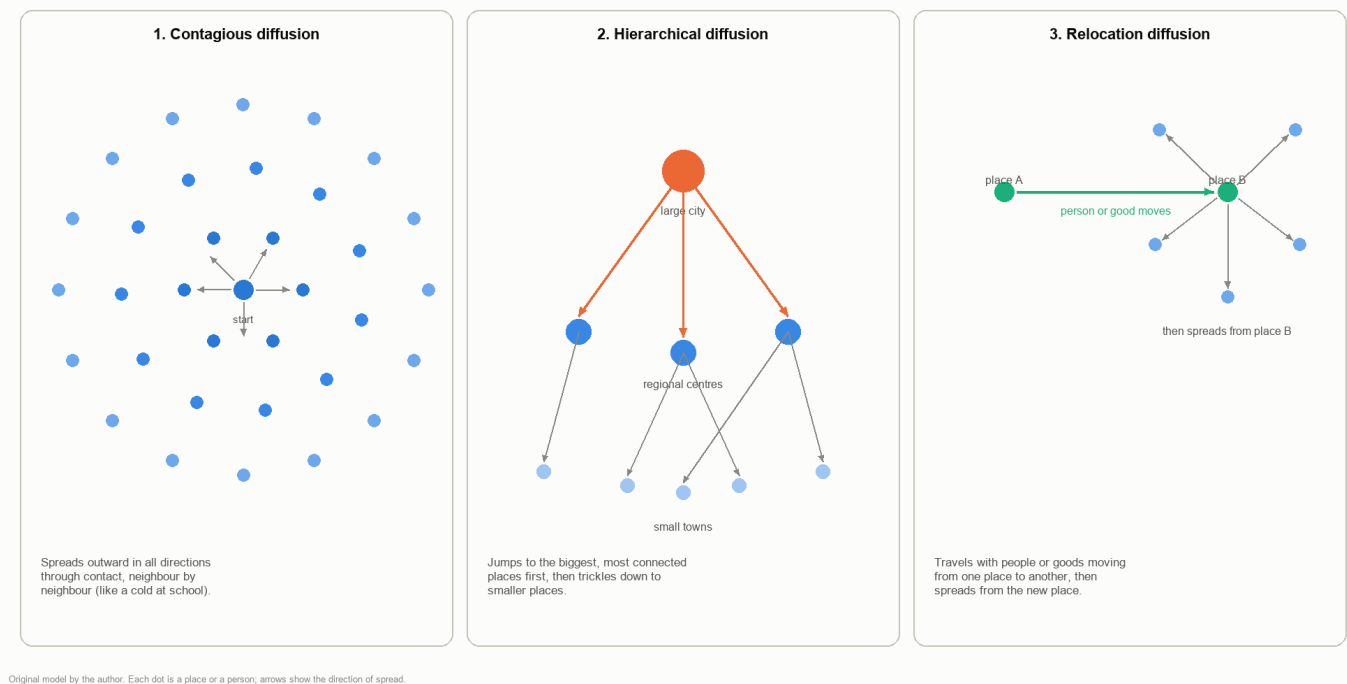
Figure 1. International tourist arrivals, 2019-2024 (UN Tourism).

Read Figure 1: in 2019 there were about 1.5 billion international arrivals. In 2020, as borders closed, arrivals fell to about 400 million — a drop of about three-quarters. By 2024 arrivals were back to about the 2019 level. The web of flights and shipping routes that carries tourists is the same web that carries trends, disease and financial shocks. That is why interconnectedness matters in geography, and why travel is worth investigating in its own right (E01).

Part 2 — Diffusion: how things spread

Geographers use the word **diffusion** for the spread of something — an idea, a fashion, a disease, a financial shock — from its starting point to new places. Three simple **models** (pictures of the main idea) describe most diffusion.

Three ways things spread: models of diffusion



Three-panel diagram of the diffusion models: contagious diffusion spreading outward neighbour by neighbour, hierarchical diffusion jumping from a large city to regional centres to small towns, and relocation diffusion moving with a person from place A to place B and then spreading

Figure 2. Three models of diffusion.

- **Contagious diffusion** spreads outward in all directions through contact, neighbour by neighbour, like a cold in a school.
- **Hierarchical diffusion** jumps to the biggest, most connected places first — major cities, famous people, big media — then trickles down to smaller places.
- **Relocation diffusion** travels when people or goods shift from one place to another, then spreads from the new place.

Most real spreads use more than one model at once. As you read the case studies below, check which model is doing the work at each step.

Part 3 — The spread of trends: music and fashion

Music. On 15 July 2012 the South Korean artist PSY released “Gangnam Style” in Seoul. Five months later it was the first YouTube video ever to reach 1 billion views (21 December 2012). Figure 3 traces the pathway.

How a song became a world trend in five months: “Gangnam Style”, 2012



Travel carried the song to new places; digital networks let it be copied almost instantly. The same routes that spread trends can spread other things too.

Real milestones: release 15 Jul 2012 (South Korea); No. 2 on the US Billboard Hot 100, Oct 2012; first YouTube video to 1 billion views, 21 Dec 2012. Original diagram by the author.

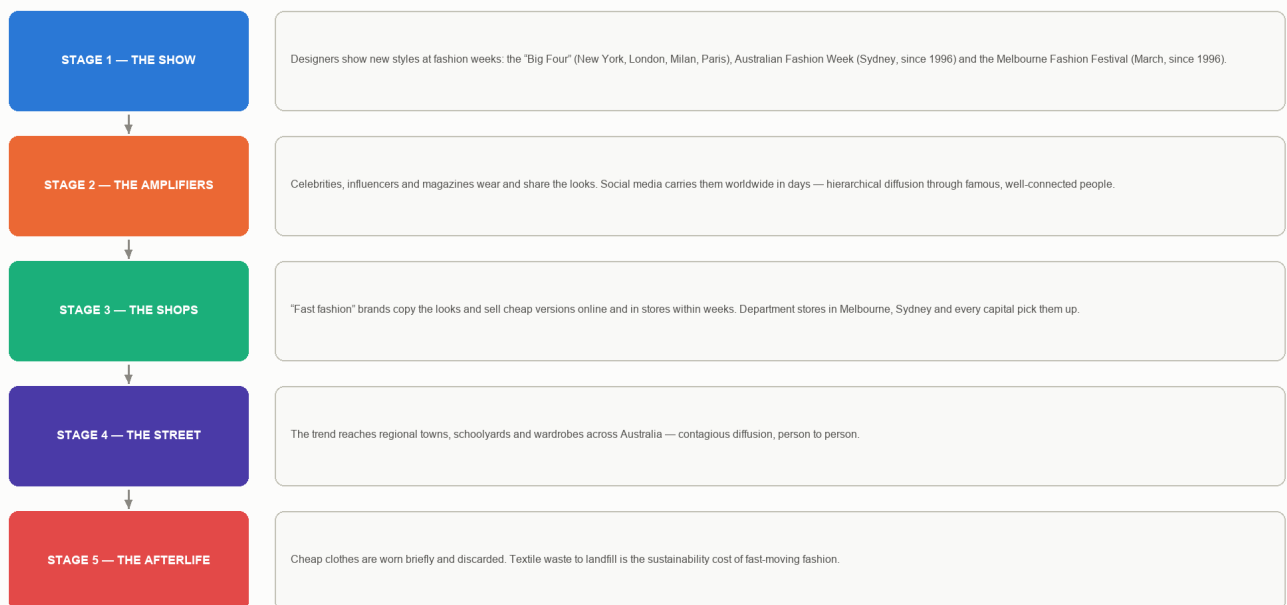
Timeline of five dated steps showing how “Gangnam Style” spread around the world in 2012: released in South Korea on 15 July, shared by fans overseas, copied by big media, number 2 on the US Billboard Hot 100 on 6 October, and 1 billion YouTube views on 21 December

Figure 3. The diffusion pathway of “Gangnam Style”, 2012.

The first step was **relocation diffusion** (fans and Korean communities overseas carried the link to new countries) plus **contagious diffusion** (friend-to-friend sharing). Once big media and famous performers picked it up, the spread became **hierarchical diffusion** — big channels, big cities, then everywhere else. Note the dates: from release to No. 2 on the US Billboard Hot 100 (6 October 2012) took under three months. Travel and the internet worked together: travel moved the people who carried the song, and digital networks let anyone copy and share it almost instantly (E02).

Fashion. Fashion trends usually spread down a hierarchy. Figure 4 shows the usual pathway from runway to wardrobe.

How a fashion trend spreads: from runway to wardrobe



Australian fashion industry: about A\$27.5 billion a year and about 489,000 jobs (Deloitte Access Economics for the Australian Fashion Council, 2021). Melbourne Fashion Festival each March since 1996; Australian Fashion Week in Sydney since 1996. Original diagram by the author.

Flow diagram of five stages of a fashion trend: the show at fashion weeks, the amplifiers (celebrities, influencers and magazines), the shops (fast fashion copies), the street (everyday wardrobes), and the afterlife (discarded textile waste)

Figure 4. How a fashion trend spreads, from runway to wardrobe.

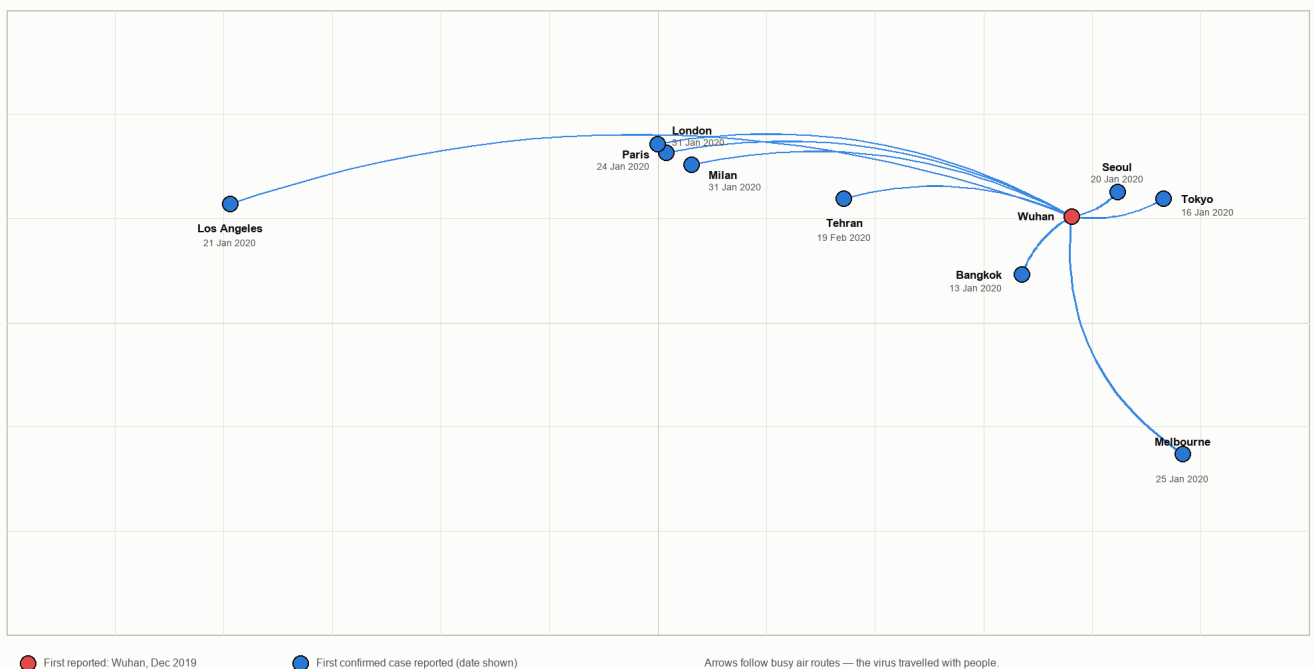
Australia is part of this web. Australian Fashion Week has run in Sydney since 1996, and the Melbourne Fashion Festival has run each March since 1996. Fashion is also big business: a 2021 Deloitte Access Economics report for the Australian Fashion Council put the Australian fashion industry at about A\$27.5 billion a year and about 489,000 jobs. When a look appears on a Paris or Milan runway, fast-fashion brands are selling copies in Australian shops within weeks — hierarchical diffusion (from the famous and the big cities) followed by contagious diffusion (person to person, schoolyard to street).

Part 4 — The diffusion of a pandemic

A **pandemic** is an outbreak of disease that has spread across many countries, often the whole world. The routes are the same web of interconnection: first the disease travels with people on the move (relocation diffusion, mostly along air routes), then it spreads within each place person to person (contagious diffusion).

In December 2019 a cluster of pneumonia (a serious chest infection) cases was reported in Wuhan, China. Figure 5 shows where the first confirmed cases were reported over the next weeks.

Early spread of the virus that causes COVID-19, December 2019 – February 2020

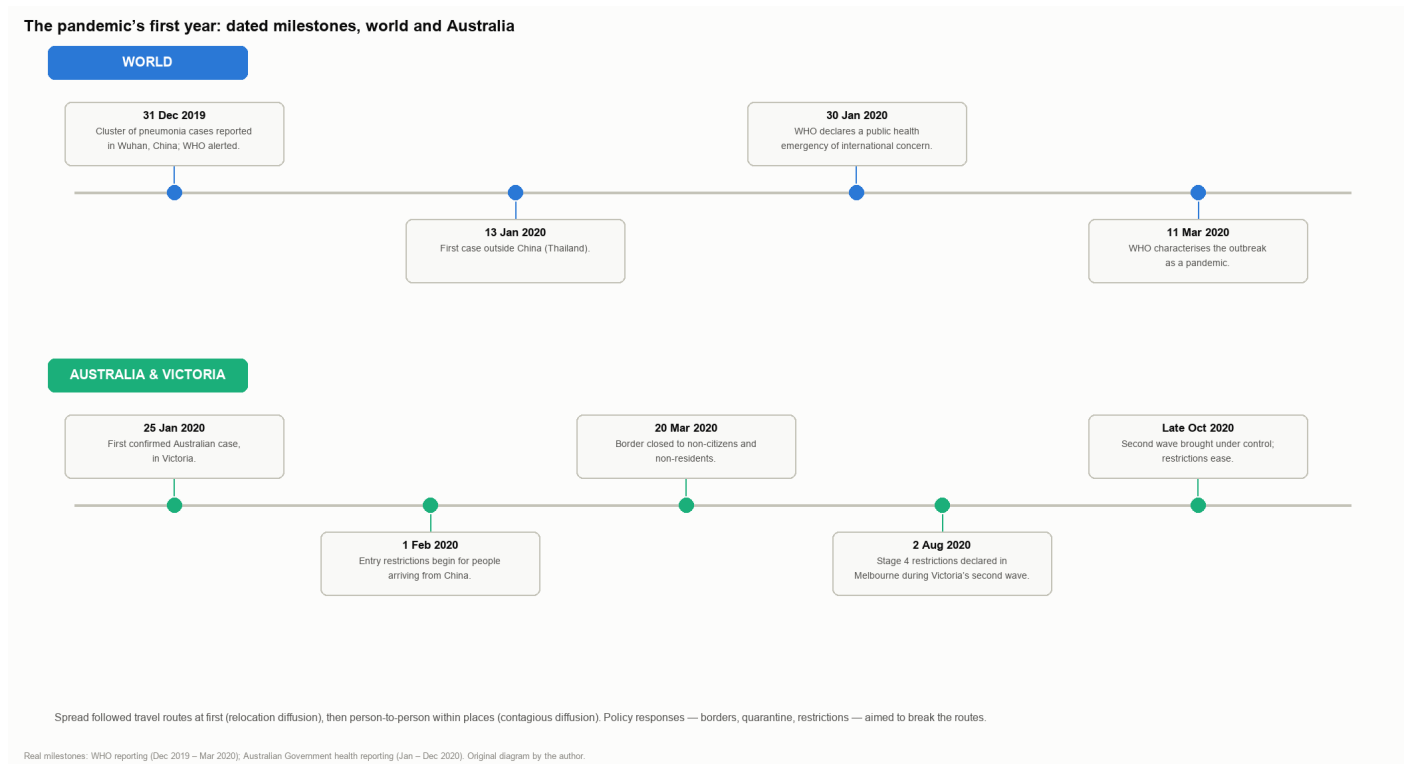


Simple world map with arrows from Wuhan to nine cities, each labelled with the date of that country's first confirmed case of COVID-19 between 13 January and 19 February 2020: Bangkok 13 January, Tokyo 16 January, Seoul 20 January, Los Angeles 21 January, Paris 24 January, Melbourne 25 January, Milan 31 January, London 31 January and Tehran 19 February

Figure 5. Early spread of the virus that causes COVID-19, December 2019 - February 2020.

The first cases outside China were reported in Bangkok (13 January 2020), Tokyo (16 January), Seoul (20 January), Los Angeles (21 January) and Paris (24 January). Australia's first confirmed case was reported in Victoria on 25 January 2020. The arrows mostly follow busy air routes — the virus travelled with people.

Figure 6 puts the first year on two lanes, world and Australia.

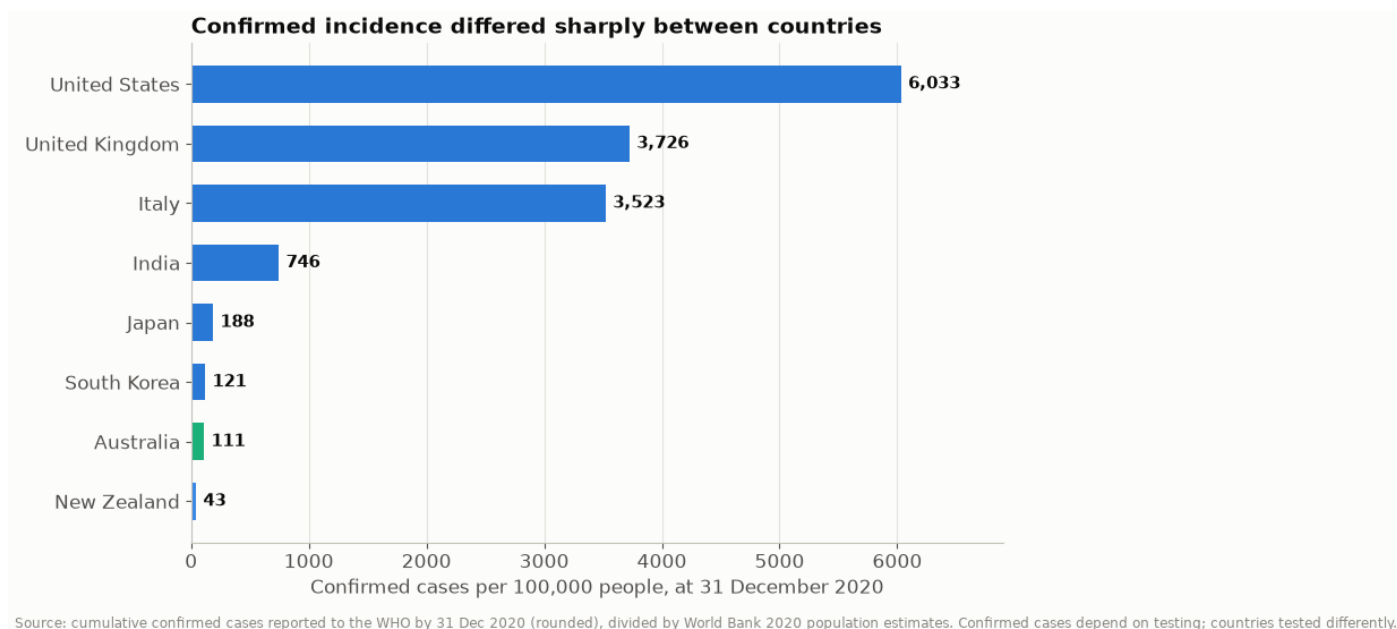


Two-lane timeline of dated milestones, December 2019 to December 2020: world lane (cluster reported 31 December 2019, first case outside China 13 January 2020, emergency declared 30 January 2020, pandemic declared 11 March 2020) and Australia and Victoria lane (first case 25 January 2020, entry restrictions 1 February 2020, border closed 20 March 2020, Stage 4 restrictions in Melbourne 2 August 2020, second wave under control late October 2020)

Figure 6. The pandemic's first year: dated milestones, world and Australia.

Governments tried to break the routes of diffusion: border closure (from 20 March 2020 Australia closed its border to non-citizens and non-residents), quarantine (forced isolation) for arrivals, and gathering restrictions to slow contagious diffusion.

Did it work? It worked differently in different countries. Figure 7 shows confirmed cases per 100,000 people in eight countries at 31 December 2020. This is the **incidence** of the disease — cases per head of population — which is the fair way to compare countries of different sizes.



Horizontal bar chart of confirmed cases per 100,000 people at 31 December 2020: United States 6,033; United Kingdom 3,726; Italy 3,523; India 746; Japan 188; South Korea 121; Australia 111; New Zealand 43

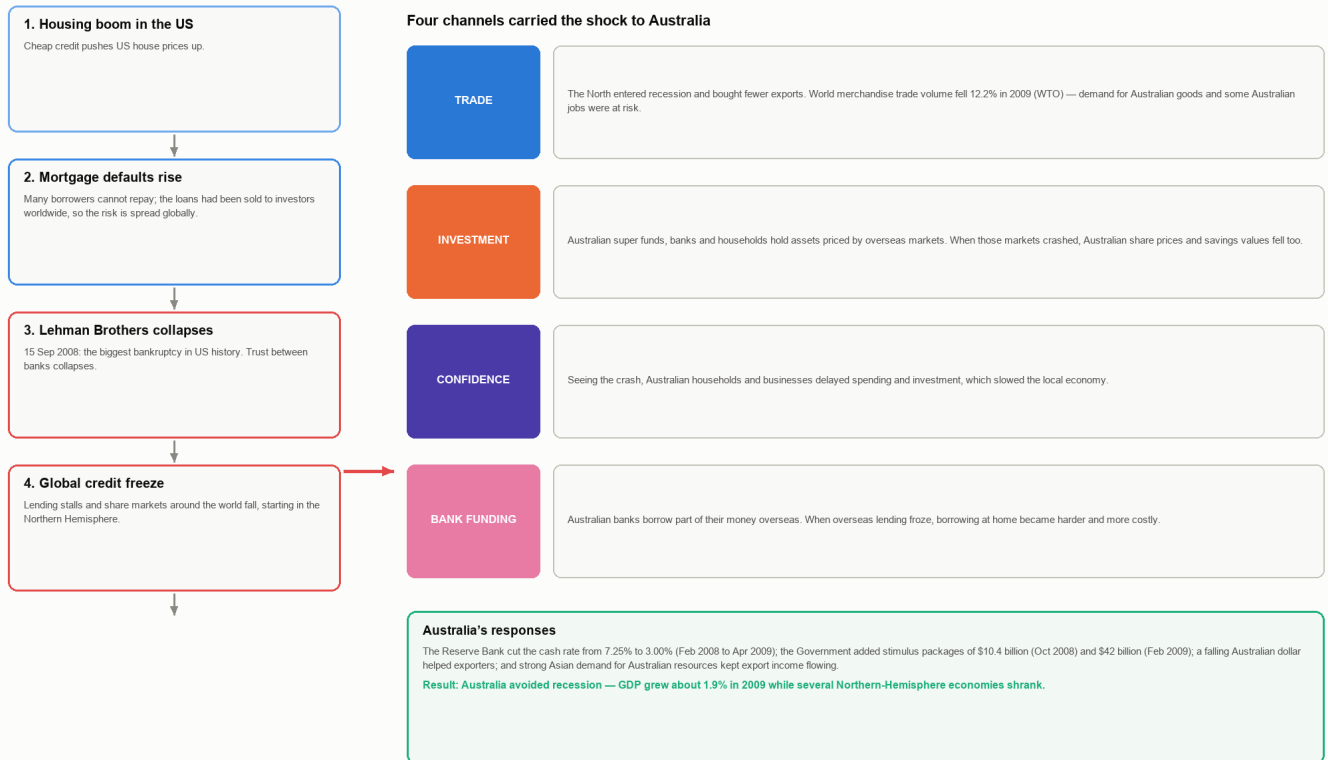
Figure 7. Confirmed incidence of COVID-19 per 100,000 people, 31 December 2020.

The differences are large: about 6,033 per 100,000 in the United States against about 111 in Australia and about 43 in New Zealand. Speculating about why (this is exactly what E03 asks): Australia and New Zealand are far from the first outbreaks and, as islands, could control who entered once borders closed; the United States and United Kingdom had heavy early travel from Europe before controls tightened. Countries also tested differently, so confirmed cases never tell the whole story (see the note under Figure 7). Different geography, different choices, different incidence.

Part 5 — The diffusion of financial disasters

Money is the most connected network of all, so financial disasters diffuse fast. The **global financial crisis (GFC)** of 2008-09 began with risky home loans in the United States. When those loans failed, banks around the world lost money. After the big US bank Lehman Brothers collapsed on 15 September 2008, fear spread, and the crash diffused to the Southern Hemisphere through four channels (Figure 8).

How a Northern-Hemisphere share market crash reached Australia, 2008–09



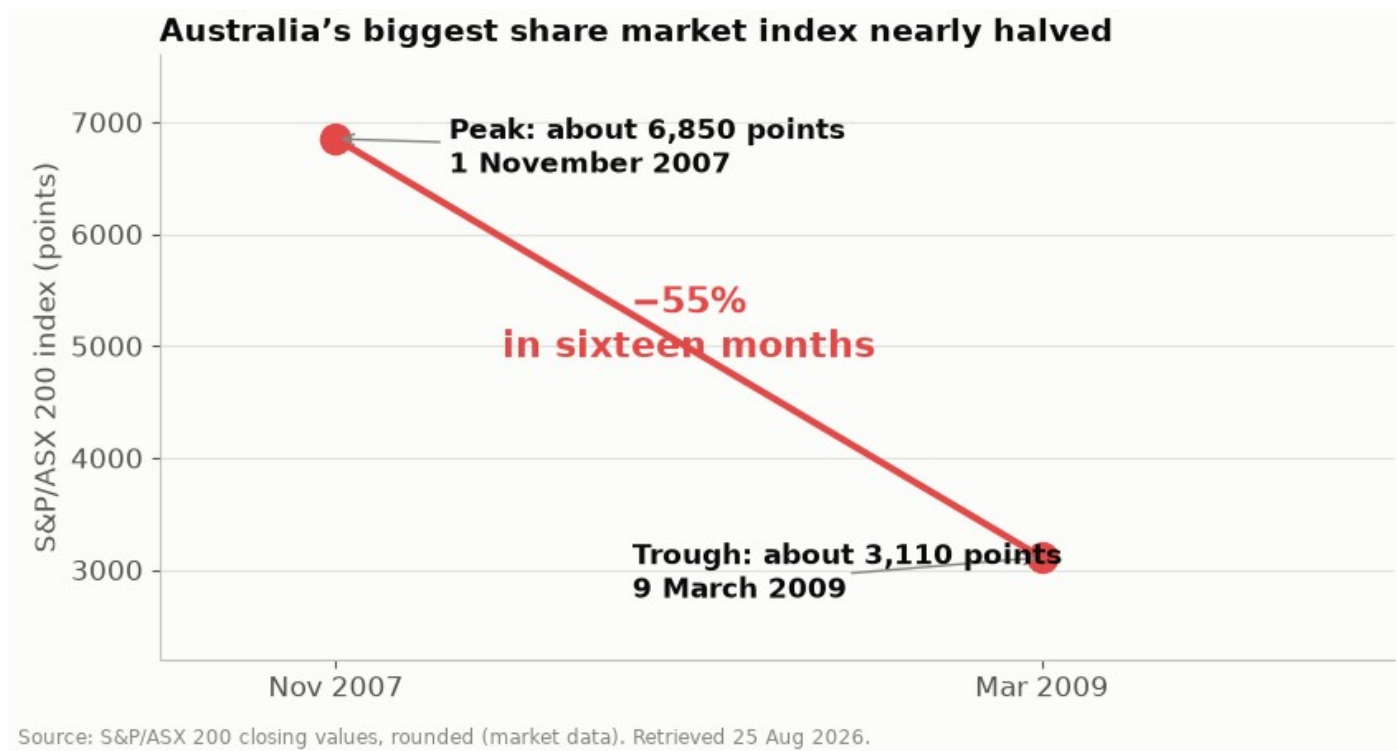
Lehman Brothers collapse 15 Sep 2008 (largest bankruptcy in US history, about US\$639b in assets); world merchandise trade volume fell 12.2% in 2009 (WTO). Original diagram by the author.

Flow diagram showing the 2008 US housing crash building through four steps and reaching Australia through four channels - trade, investment, confidence and bank funding - with the Australian response: the RBA cut the cash rate from 7.25 to 3.00 per cent and the government paid stimulus of 10.4 billion dollars in October 2008 and 42 billion dollars in February 2009

Figure 8. How a Northern-Hemisphere crash reached Australia, and the response.

This is E04 in practice: an Australian miner who has never left Queensland can lose work because a bank in New York fails — because world trade shrank (trade: world trade volume fell about 12 per cent in 2009), investors sold shares everywhere (investment), businesses and households stopped spending (confidence), and banks tightened lending (bank funding).

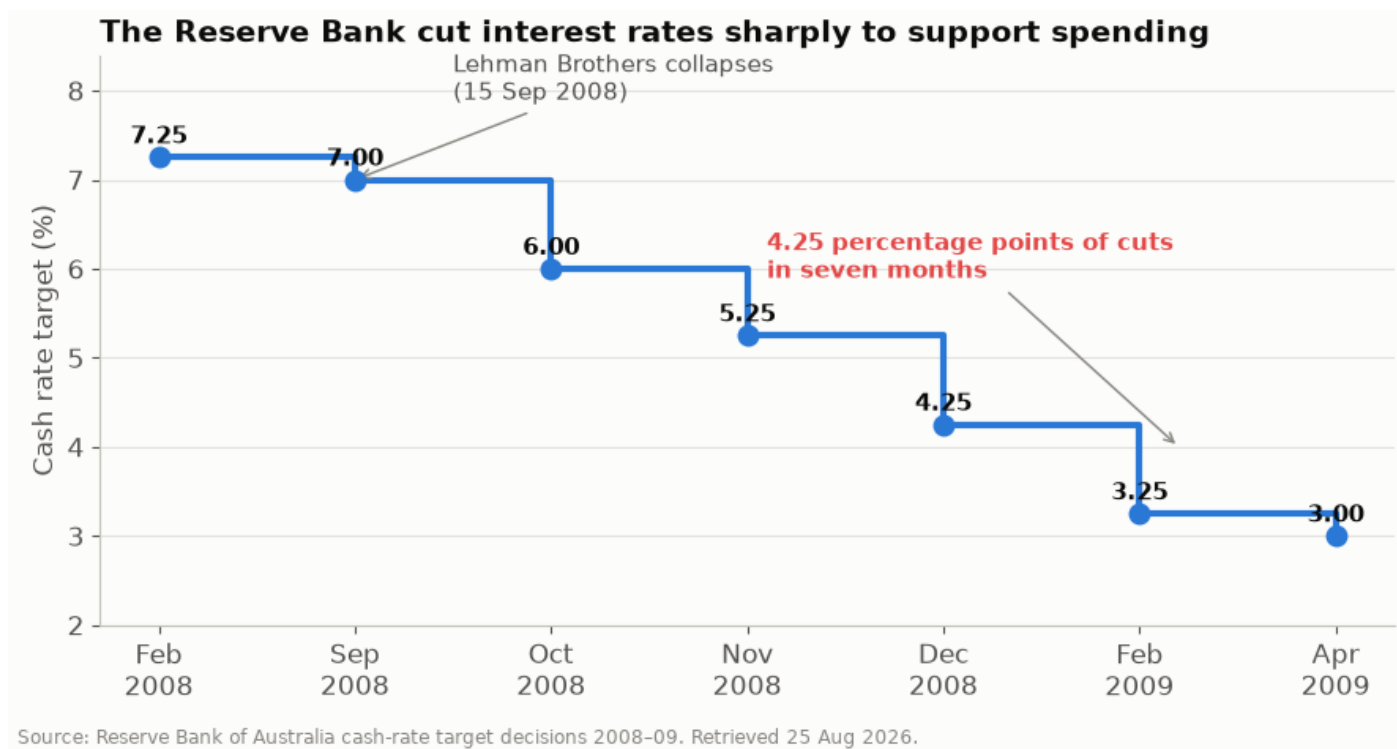
Australia felt it in the share market first. Figure 9 shows the S&P/ASX 200 index from its peak (highest point) to its trough (lowest point).



Line chart from a peak of about 6,850 points on 1 November 2007 to a trough of about 3,110 points on 9 March 2009, a fall of 55 per cent in sixteen months

Figure 9. The ASX 200 from peak to trough, 2007-2009.

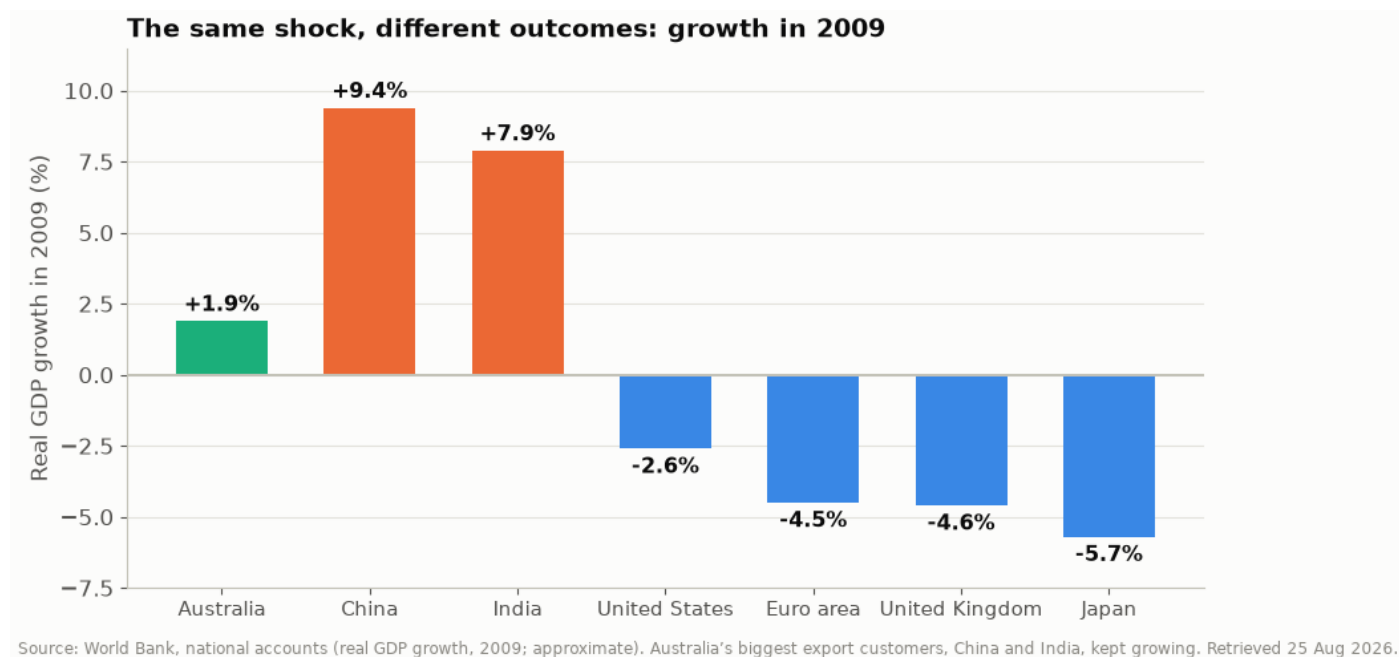
The index fell about 55 per cent, from about 6,850 to about 3,110, in sixteen months — wealth evaporated and confidence fell with it. The Reserve Bank of Australia responded by cutting the **cash rate** — the interest rate that guides the cost of borrowing in the economy — from 7.25 per cent to 3.00 per cent in seven months (Figure 10), and the government added **stimulus** — payments to households and spending on projects to keep money moving — of \$10.4 billion in October 2008 and \$42 billion in February 2009.



Step chart of the RBA cash rate target falling in steps from 7.25 per cent in early 2008 to 3.00 per cent by April 2009, with dates of each cut

Figure 10. The RBA cut the cash rate sharply, 2008-09.

The result is visible in Figure 11: in 2009 the United States economy shrank about 2.6 per cent, Japan about 5.7, the United Kingdom about 4.6 and the euro area about 4.5 — while Australia’s real **GDP** (gross domestic product, the total value of goods and services a country produces in a year) still grew about 1.9 per cent.



Bar chart of real GDP growth in 2009: Australia +1.9 per cent, China +9.4, India +7.9, United States -2.6, euro area -4.5, United Kingdom -4.6, Japan -5.7

Figure 11. The same shock, different outcomes: growth in 2009.

Why was Australia hit at all, and why did it hold up? Hit, because it is connected (shares, confidence, trade). Holding up, because its biggest export customers — China and India — kept growing and kept buying Australian iron ore and coal, and because rate cuts and stimulus supported spending at home. Interconnection carries the shock; the *pattern* of your connections (who you trade with) shapes how badly you feel it.

Part 6 — The same web

Figure 12 lines the three kinds of spread up side by side.

Three kinds of spread travel the same web of interconnection

What spreads	Main routes	Speed	Australian example	What can slow or manage it
Trends in music, fashion and entertainment	Travel, social media, streaming, trade in goods	Weeks to months	“Gangnam Style” (2012); runway styles reach Australian shops within weeks of overseas shows	Little — spread uses open networks; people choose what to adopt
Pandemics (disease)	Travel with people, especially air routes, then person-to-person	Weeks to months	First case 25 Jan 2020 (Victoria); second wave in Victoria, 2020	Border controls, quarantine, gathering restrictions, vaccination
Financial disasters	Trade, investment flows, bank lending, confidence	Days to weeks	GFC 2008-09: ASX 200 fell about 55%, yet GDP still grew about 1.9% in 2009	Central bank rate cuts, government stimulus, diverse export markets

Original summary by the author, built from the dated referents in this section.

Table comparing trends, pandemics and financial disasters by what spreads, main routes, speed, an Australian example, and what can slow or manage the spread

Figure 12. Three kinds of spread, one web of interconnection.

The cargo differs — a song, a virus, a financial shock — but the web is the same: travel, trade and digital networks. That is the big idea of VC2HG10K09: interconnectedness makes all three spreads faster and wider, and the same geography (distance, routes, who is connected to whom) explains the patterns.

Worked examples

Example 1 — scaffolded

Use Figure 3. For each step of the spread of “Gangnam Style”, name the diffusion model at work.

Working	Comment
Step 1 (15 Jul 2012): released in Seoul; video uploaded to YouTube.	The start point of the diffusion.
Step 2 (Jul-Aug): fans and Korean communities overseas share the link; friends share with friends.	Relocation (carried overseas by people) + contagious (person to person).
Steps 3-4 (Sep-Oct): big media and famous performers copy it; No. 2 on the US Billboard Hot 100.	Hierarchical — big channels and big cities first, then trickling down.
Step 5 (21 Dec): 1 billion views; a global trend.	End point: the trend has diffused worldwide in about five months.

So one trend, three models working in sequence — relocation and contagious first, hierarchical to lift it to global scale. Travel and digital networks supplied the routes (E01, E02).

Example 2 — scaffolded

Use Figure 7 (E03). (a) Read the confirmed incidence per 100,000 of the United States and of Australia at 31 December 2020. (b) Check the Australian figure from the rounded totals: 28,500 cases and a population of 25.7 million. (c) Speculate about two reasons the United States figure was so much higher.

Working	Comment
(a) United States about 6,033 per 100,000; Australia about 111.	Read straight off the bars.
(b) $28,500 / 25,700,000 \times 100,000$ is about 111.	Incidence = cases / population x 100,000. The bar checks out.
(c) Reason 1: Australia is far from the first outbreaks and closed its border on 20 Mar 2020, so fewer cases were carried in. Reason 2: gathering restrictions slowed contagious diffusion once cases arrived; the United States had heavy early arrivals and later controls.	Speculating: give reasons, and use dates or geography.
Result: US confirmed incidence was about 54 times Australia’s by end of 2020.	$6,033 / 111$ is about 54. Compare per head, not totals.

Practice questions

Scaffolded

Q1. Figure 2. Name the diffusion model that best fits each: (a) a cold spreading through a classroom; (b) a new style appearing in capital-city stores before regional towns; (c) migrants bringing a recipe to a new country, where it then becomes popular.

Q2. Figure 1. (a) Write down international tourist arrivals in 2019 and in 2020. (b) Describe what happened to travel in 2020, in one sentence. (c) Explain in one sentence how this shows that travel helps join the world together (E01).

Q3. Figure 4. (a) Put these in order: street, show, shops, amplifiers. (b) Which step is mostly hierarchical diffusion? Which is mostly contagious?

Q4. Figure 5. (a) Which city reported the first confirmed case outside China, and on what date? (b) Which European city on the map reported its first case earliest, and on what date? (c) On what date was Australia's first confirmed case reported, in Victoria?

Q5. Figure 6. Match each date to its event: 11 Mar 2020; 20 Mar 2020; 30 Jan 2020; 2 Aug 2020. Events: (i) Australia closes its border to non-citizens and non-residents; (ii) the WHO declares the outbreak a pandemic; (iii) Stage 4 restrictions declared in Melbourne; (iv) the WHO declares a public health emergency of international concern.

Q6. Figure 8. (a) List the four channels through which the crash diffused to Australia. (b) List the two Australian policy responses shown.

Unscaffolded

Q7. Figure 7. New Zealand's confirmed incidence at 31 December 2020 was about 43 per 100,000; the United Kingdom's was about 3,726. Speculate about the reasons for this difference, in four to five sentences. Use at least one geographic reason (distance, borders) and one policy reason (timing of controls, testing).

Q8. In September 2008 no Australian bank had failed, yet by March 2009 the ASX 200 had fallen about 55 per cent from its peak. Using two of the channels in Figure 8, explain why a Northern-Hemisphere crash dragged a Southern-Hemisphere share market down with it (E04).

Q9. Figures 10 and 11. In 2009 Japan's real GDP shrank about 5.7 per cent while Australia's grew about 1.9 per cent. Explain the difference, referring to export customers and to one policy shown in Figure 10.

Q10. Figure 12. Choose one row. In a short paragraph, judge how well the "what can slow or manage it" column worked for the Australian example. Use at least two dates from this section.

Inquiry task

Trace a spread of your own. Choose *one* thing that spread around the world between 2010 and today: a song, a fashion, or an entertainment trend (a streaming show, for example). In 150-200 words:

1. Build a simple dated spread map or timeline with at least five dated steps, including the start point and at least one Australian step.
2. Label each step with the diffusion model at work (contagious, hierarchical, relocation).
3. State, in one sentence, how travel or digital networks carried your trend (link to E01/E02).
4. List two real sources with retrieval dates (a news story, an official chart page).

Checklist: real dates; named places; models labelled; two sourced references.

Answers

Q1. (a) contagious; (b) hierarchical; (c) relocation (then contagious). **Q2.** (a) 2019 about 1,500 million (1.5 billion); 2020 about 400 million. (b) Arrivals fell by about three-quarters as borders closed. (c) Travel joins places; when travel collapsed, the joins weakened — so the size of the travel web is a measure of interconnectedness. **Q3.** (a) show, amplifiers, shops, street. (b) show/amplifiers: hierarchical; street: contagious. **Q4.** (a) Bangkok, 13 Jan 2020. (b) Paris, 24 Jan 2020. (c) 25 Jan 2020. **Q5.** 11 Mar 2020 - (ii); 20 Mar 2020 - (i); 30 Jan 2020 - (iv); 2 Aug 2020 - (iii). **Q6.** (a) trade, investment, confidence, bank funding. (b) RBA rate cuts (cash rate 7.25 to 3.00 per cent); government stimulus (\$10.4 billion Oct 2008, \$42 billion Feb 2009). **Q7.** Sample: NZ is far from the 2020 outbreak centres and is an island, so once its border closed few cases were carried in; NZ used early, strict border control and quarantine. The UK sat close to Europe's early spread with heavy travel, and its controls came later. Testing differences also change confirmed counts. **Q8.** Sample: investors worldwide sold shares in fear (confidence/investment channel), and Australian shares were sold with them; overseas banks tightened lending (bank funding), so money got tighter for Australian businesses too. The market fell through connections, not through Australian bank failures. **Q9.** Japan sells cars and machines to the US and Europe, whose markets collapsed, so its exports and output shrank hard. Australia sells iron ore and coal to China and India, which kept growing (China +9.4 per cent); RBA rate cuts (7.25 to 3.00 per cent) and stimulus also supported spending at home. **Q10.** Sample (pandemics row): border closure on 20 Mar 2020 and quarantine kept Australia's confirmed incidence to about 111 per 100,000 by 31 Dec 2020, far below the UK's about 3,726 — but Victoria's second wave (Stage 4 on 2 Aug 2020) shows slowing is not stopping. **Inquiry.** Assess against the checklist: real dated steps including an Australian step; models labelled correctly; one sentence on travel/digital networks; two sources with retrieval dates.

Fully-worked solutions

Q1. (a) A cold spreads by contact, neighbour to neighbour: **contagious**. (b) Big cities first, then smaller towns: **hierarchical**. (c) The recipe travels with people moving, then spreads locally: **relocation** (followed by contagious).

Q2. (a) 2019: about 1,500 million (1.5 billion); 2020: about 400 million. (b) International arrivals fell about three-quarters in 2020 as borders closed. (c) Travel joins places; the rise, collapse and recovery of arrivals traces how strongly places were joined — travel moves the people who carry ideas, money and disease (E01).

Q3. (a) show, amplifiers, shops, street (stages 1-4 of Figure 4). (b) The show and the amplifiers are hierarchical (from famous, well-connected people to everyone else); the street is contagious (person to person).

Q4. (a) Bangkok, 13 Jan 2020 (Thailand). (b) Paris, 24 Jan 2020 (France, first in Europe). (c) 25 Jan 2020.

Q5. 30 Jan 2020 - (iv); 11 Mar 2020 - (ii); 20 Mar 2020 - (i); 2 Aug 2020 - (iii).

Q6. (a) Trade, investment, confidence, bank funding. (b) The RBA cut the cash rate from 7.25 to 3.00 per cent in seven months; the government paid stimulus of \$10.4 billion (Oct 2008) and \$42 billion (Feb 2009).

Q7. Distance: New Zealand is an island group far from the 2020 outbreak centres; the United Kingdom sits close to Europe with heavy travel links. Borders: NZ closed to non-residents and used quarantine early; UK controls came later, after many arrivals. Testing: confirmed cases depend on who gets tested, and countries tested differently. So geography (distance, island edges) plus policy (timing of controls) plus testing produce the gap of 43 vs 3,726 per 100,000.

Q8. Channel 1 - investment/confidence: when US and European markets crashed, investors everywhere sold shares to cover losses and from fear; Australian shares sit in the same world market, so the ASX 200 fell from about 6,850 (1 Nov 2007) to about 3,110 (9 Mar 2009). Channel 2 - bank funding: overseas banks lost money and stopped lending; lending tightened in Australia too, so firms cut spending and investment, which weighed on share prices. The crash diffused through connections, not through Australian bank failures (E04).

Q9. Japan's biggest customers (US, Europe) were in recession in 2009, so its exports of cars and machines collapsed - real GDP -5.7 per cent. Australia's biggest customers (China +9.4 per cent, India +7.9) kept buying iron ore and coal, so export income held up; at home, the RBA cut the cash rate from 7.25 to 3.00 per cent and the government paid stimulus, supporting spending - real GDP +1.9 per cent. Who you are connected to shaped the outcome.

Q10. Sample using the financial row: the “what can slow or manage it” column worked reasonably well for Australia: the RBA cut the cash rate from 7.25 per cent (early 2008) to 3.00 per cent (by Apr 2009), and stimulus of \$10.4 billion (Oct 2008) and \$42 billion (Feb 2009) kept spending going; with resource exports to China continuing, Australia’s real GDP grew about 1.9 per cent in 2009 while the US shrank 2.6 and the UK 4.6. But the ASX 200 still fell about 55 per cent - policy softened the shock; it could not stop it arriving.

Inquiry. Assess against the checklist; a strong response has, e.g., five dated steps for a song or streaming trend, a start point (Seoul or Los Angeles, say), an Australian step (an Australian chart or tour date), a model label on every step, and two sources with retrieval dates.

Sources

- UN Tourism (World Tourism Organization), *World Tourism Barometer* releases, Jan 2020 - Jan 2025 — international tourist arrivals 2019-2024 (rounded release figures). Retrieved 25 August 2026.
- World Health Organization, WHO Coronavirus (COVID-19) dashboard and 2020 situation reports — first confirmed case dates; cumulative confirmed cases to 31 Dec 2020 (rounded). Retrieved 25 August 2026.
- World Bank, population estimates (2020) and national accounts (real GDP growth, 2009; approximate). Retrieved 25 August 2026.
- Australian Government health reporting (Department of Health) — first confirmed Australian case, Victoria, 25 Jan 2020; border measures; Victoria’s second wave and Stage 4 restrictions, 2 Aug 2020. Retrieved 25 August 2026.
- Reserve Bank of Australia, cash rate target decisions, 2008-09. Retrieved 25 August 2026.
- S&P/ASX 200 closing values (market data): peak about 6,850, 1 Nov 2007; trough about 3,110, 9 Mar 2009. Retrieved 25 August 2026.
- Australian Government Treasury, stimulus packages Oct 2008 (about \$10.4 billion) and Feb 2009 (about \$42 billion). Retrieved 25 August 2026.
- World Trade Organization, world trade volume 2009 (fall of about 12 per cent). Retrieved 25 August 2026.
- Deloitte Access Economics for the Australian Fashion Council (2021) — Australian fashion industry about A\$27.5 billion a year and about 489,000 jobs; Australian Fashion Week (Sydney, since 1996); Melbourne Fashion Festival (March, since 1996). Retrieved 25 August 2026.
- Billboard Hot 100 (Oct 2012, “Gangnam Style” No. 2); YouTube (first video to 1 billion views, 21 Dec 2012). Retrieved 25 August 2026.

All retrieval dates on or before 25 August 2026.