MA99 EDUCATION

People, Patterns and Processes: Topic Notes

02

NSW GEOGRAPHY 11-12 SYLLABUS 2022 FOR HSC 2028 AND LATER

Across this topic keep the seven concepts in view: place, space, environment, interconnection, scale, sustainability and change. Population geography is really the study of how these concepts play out for the eight billion people who share the planet.

1. Human diversity and the human footprint

Uneven distribution: people are not spread evenly across the Earth. Coastlines, river valleys, fertile plains and mild climates are crowded, while deserts, high mountains, dense rainforest and polar lands are almost empty. This spatial pattern reflects where people can most easily live, farm and trade.

The human footprint: the total imprint of people on the Earth's surface. It is made up of many overlapping patterns that geographers study using the concepts of place and space.

- **Settlement:** where people live, from scattered rural homesteads to dense city cores.
- **Infrastructure:** the roads, railways, ports, pipelines and cables that link places together.
- **Economic activity:** farming, mining, factories and services, each with its own location pattern.

Indigenous Peoples and languages: the world's Indigenous Peoples and the roughly 7,000 living languages also form a spatial pattern. Both are richest in tropical and remote regions, and both are shrinking as globalisation spreads dominant languages and land uses. In Australia the Aboriginal and Torres Strait Islander population was estimated at 983,700 people, or 3.8 per cent of the population, at 30 June 2021 (ABS).

Transformation of the surface: humans have cleared, farmed, built on or altered a large share of the land surface. Australia shows the pattern clearly: average population density is only about 3.6 people for each square kilometre, yet about 68 per cent of Australians lived in the greater capital cities in 2024 to 2025 (ABS; AIHW). A nearly empty interior sits beside a crowded coastal edge.

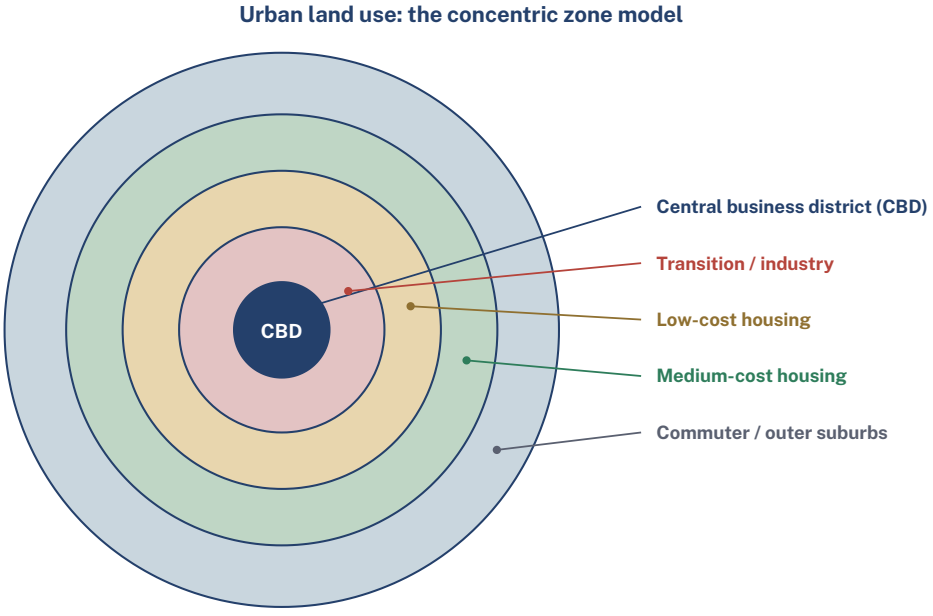


Figure 1 · A model of urban land use, showing how settlement and economic activity are arranged in zones around a city centre.

Key idea

The human footprint is a pattern, not a blanket. People, roads and industry cluster in favourable places and thin out elsewhere. Always describe both where the pattern is dense and where it is sparse, and suggest why.

2. Globalisation

Globalisation: the growing interconnection of the world's economies, societies and cultures, so that events and decisions in one place increasingly shape distant places. It works at a global scale but is felt locally.

Economic integration: national economies are being woven together as barriers to trade and investment fall. Governments cut tariffs (taxes on imports) and other rules so that goods, money and services can move more freely between countries.

Economic restructuring: as this happens, the mix of jobs shifts. Many wealthy countries have moved from manufacturing towards services such as finance, education and technology, while much factory work has relocated to lower cost countries.

Cultural integration: food, music, brands, sport and ideas now cross boundaries quickly. This can enrich places but can also erode local cultures and languages, an example of interconnection producing change.

Drivers of globalisation: several forces speed the process along.

DRIVER	HOW IT SPEEDS GLOBALISATION
Transport and telecommunications	Container ships, jet aircraft, the internet and mobile networks shrink distance and cost, so goods and information move almost instantly.
World trade	Rising flows of exports and imports tie producers and consumers in different countries together.
Transnational corporations (TNCs)	Large firms that operate across many countries, locating each activity where it is cheapest or most profitable.
World cities	Command centres such as New York, London and Tokyo concentrate finance and decision making. Geographers rank them Alpha, Beta and Gamma by global influence.
Migration and tourism	The movement of workers, students and travellers spreads money, skills and culture between places.

The pattern is real and current. India passed China as the world's most populous country in mid 2023, at about 1.43 billion people (United Nations), and about 57 per cent of the world's people lived in urban areas in 2023 to 2024 (World Bank; United Nations), both trends that global trade and cities help to drive.

> Tariff = a tax on imports. Cutting tariffs = removing barriers = deeper integration.

3. Population dynamics: fertility, mortality and natural increase

Demography: the study of the size, structure and growth of human populations. It uses standard measures so that places and times can be compared fairly.

World population trends: the world population reached 8 billion on 15 November 2022 (United Nations). It was about 8.2 billion in mid 2024 and is projected to peak at about 10.3 billion in the mid 2080s (UN World Population Prospects 2024). Growth has been rapid but is now slowing as families become smaller.

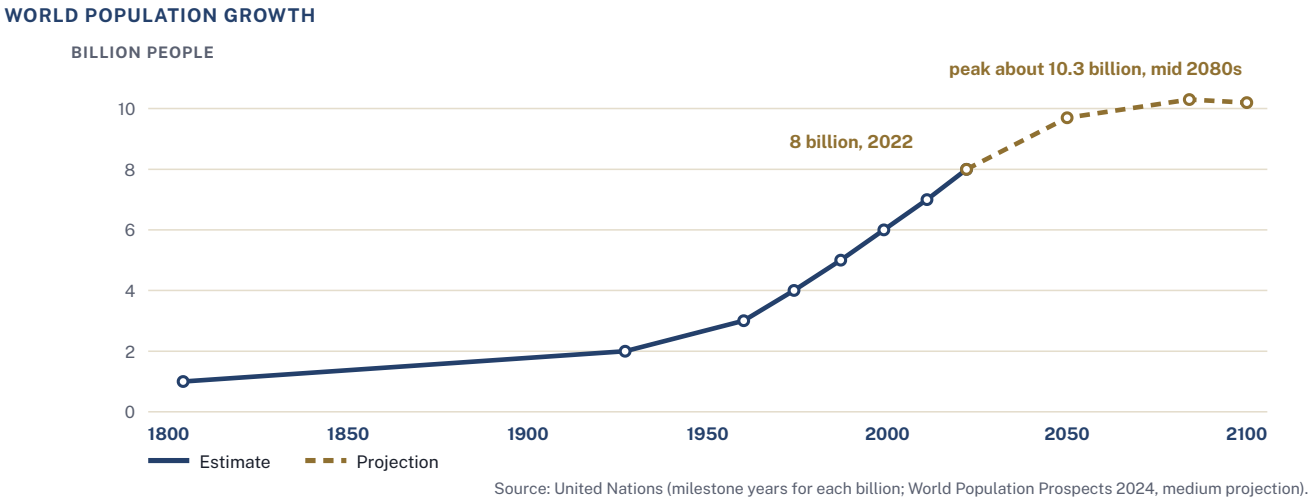


Figure 2 · World population growth, showing the steep recent rise that gives the curve its exponential shape.

Exponential growth and overpopulation: when a population grows by a steady percentage each year it increases by ever larger amounts, producing a curve that rises sharply. This fuelled a long debate about overpopulation: whether the number of people can outrun food, water and other resources. Others argue that new technology and falling birth rates ease the pressure, so the question is really about consumption and sustainability, not head count alone.

Fertility measures births. The **crude birth rate (CBR)** is the number of live births for each 1000 people in a year. The **total fertility rate (TFR)** is the average number of children a woman would have across her lifetime; about 2.1 is the replacement level.

Mortality measures deaths. The **crude death rate (CDR)** is deaths for each 1000 people in a year, the **infant mortality rate** is deaths of babies under one year for each 1000 live births, and **life expectancy** is the average number of years a newborn can expect to live.

MEASURE	WHAT IT TELLS US
Crude birth rate (CBR)	Live births for each 1000 people in a year.
Total fertility rate (TFR)	Average children for each woman over her lifetime; 2.1 replaces a population.
Crude death rate (CDR)	Deaths for each 1000 people in a year.
Infant mortality rate	Deaths under one year of age for each 1000 live births; a strong sign of development.
Life expectancy	Average years a newborn can expect to live.

Formula

Rate of natural increase = crude birth rate minus crude death rate (expressed for each 1000 people, or as a percentage). It ignores migration.

WORKED EXAMPLE

A country has a crude birth rate of 28 and a crude death rate of 8 for each 1000 people. The rate of natural increase is 28 minus 8 = 20 for each 1000 people, which is 2.0%. At that rate the population is growing quickly from births alone, before any migration is counted.

Australia today: the total fertility rate fell to a record low of 1.481 babies for each woman in 2024, well below replacement (ABS, released October 2025). Life expectancy at birth was 81.1 years for males and 85.1 years for females in 2022 to 2024 (ABS). Natural increase added only 112,600 people over the year to 30 September 2025 (ABS), so Australia now depends on migration for most of its growth.

Key idea

Natural increase is births minus deaths. A country can still grow when natural increase is low if migration is high, as Australia shows. Never confuse the two sources of change.

4. Population structure: pyramids and the demographic transition model

Population pyramid: a back to back bar graph showing the share of a population in each age group, split into males and females. Its shape reveals the past and hints at the future.

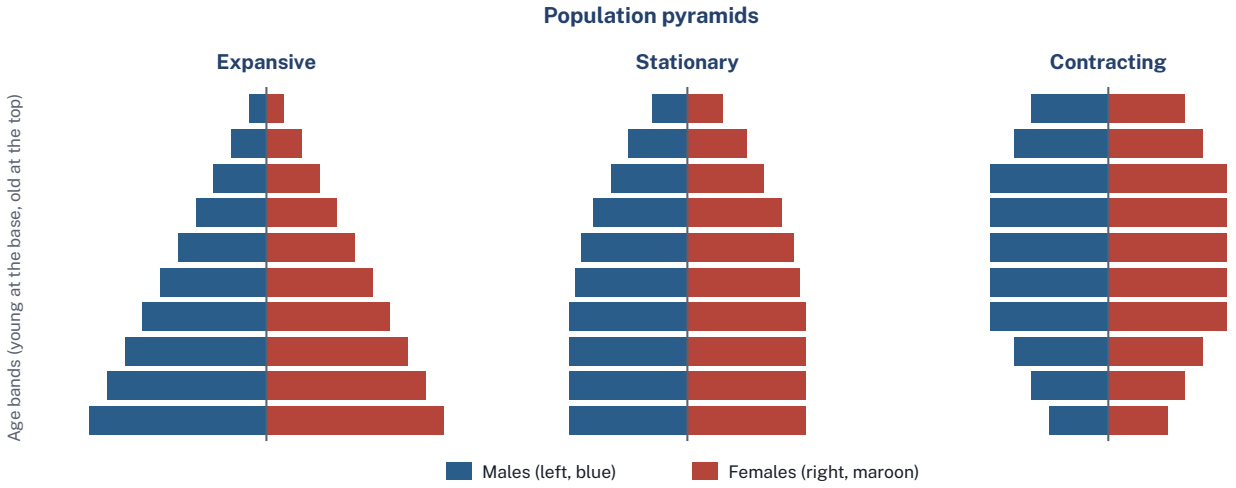


Figure 3 · Expansive, stationary and contracting population pyramids compared.

- **Expansive:** a wide base of children and a narrow top, showing high birth rates and rapid growth (many lower income countries).
- **Stationary:** fairly straight sides, showing low birth and death rates and stable numbers (many wealthy countries).
- **Contracting:** a narrow base, showing very low birth rates and an ageing, shrinking population (Japan, Italy).

Dependency ratio: the number of dependants (people aged 0 to 14 plus those 65 and over) for each 100 people of working age (15 to 64). A high ratio means fewer workers support each dependant, which shapes tax and services.

The demographic transition model (DTM): a model of how birth and death rates change over time as a country develops, passing through five stages. It links falling death rates, and later falling birth rates, to changes in the rate of natural increase.

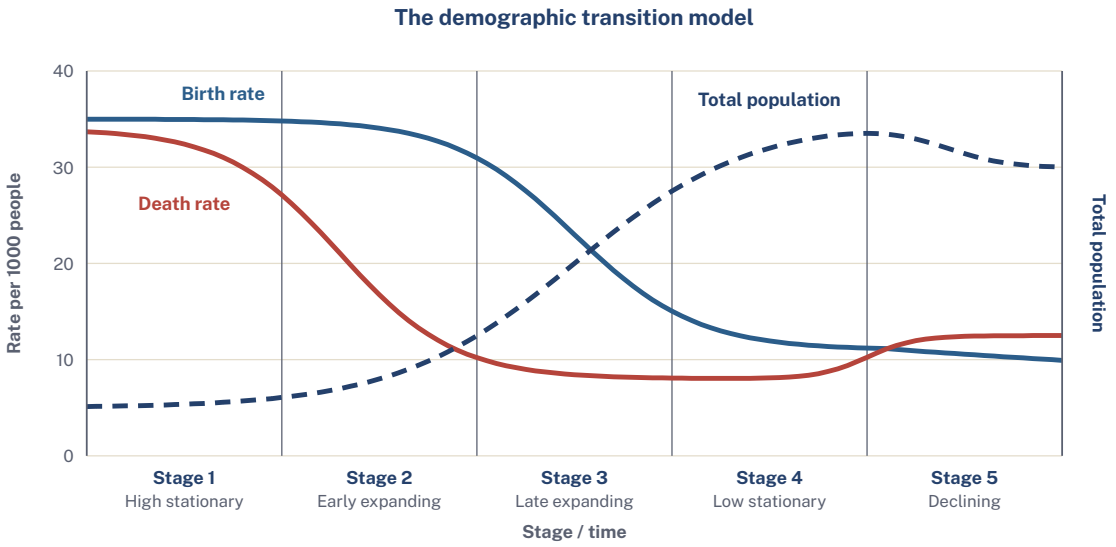


Figure 4 · The five stage demographic transition model, linking falling death rates and later falling birth rates to population change.

STAGE	BIRTH RATE	DEATH RATE	NATURAL INCREASE	TYPICAL EXAMPLE
1 High stationary	High	High	Low, population stable	Pre-industrial societies
2 Early expanding	High	Falling fast	High and rising	Parts of sub-Saharan Africa
3 Late expanding	Falling	Low	High but slowing	Many middle income countries
4 Low stationary	Low	Low	Low, population stable	Australia, United States
5 Declining	Very low	Low	Below zero, shrinking	Japan, Italy

Australia sits in stage 4 moving towards stage 5. Its median age reached 38.4 years in 2024 to 2025, up from 33.7 years thirty years earlier (ABS; AIHW), a clear sign of an ageing population.

5. Migration

Migration: the movement of people to live in a new place. Geographers sort it in two ways at once.

- **Voluntary or forced:** people may choose to move for work or study, or be driven out by war, persecution or disaster.
- **Internal or international:** movement within a country, such as rural to urban drift, or across national boundaries.

Forced movers have special names. **Refugees** have fled across a boundary and cannot safely return; **asylum seekers** have applied for that protection and await a decision; and **internally displaced people** have fled their homes but remain inside their own country.

Climate migration: a growing driver of movement. Rising seas and stronger storms threaten low lying Pacific island communities such as Kiribati, where some residents may need to relocate as land and fresh water are lost. It shows the interconnection of environment and human patterns.

PUSH FACTORS (DRIVE PEOPLE AWAY)	PULL FACTORS (DRAW PEOPLE IN)
War, conflict and persecution	Safety and political stability
Few jobs and low wages	Work and higher wages
Drought, flood and rising seas	A safer, more stable environment
Poor schools, housing and health care	Better services and opportunities

Australia is shaped by international migration. Net overseas migration added 311,000 people over the year to 30 September 2025, the largest contributor to population growth, which was 1.6 per cent or 423,600 people over the same year (ABS).

6. Population, resources and management

Distribution and density: population distribution is where people are spread, while population density is how many live in each unit of area. Australia's density of about 3.6 people for each square kilometre is one of the lowest of any country, reflecting its large arid interior.

Ecological footprint: the area of land and water needed to supply a person's resources and absorb their waste. High consumption in wealthy countries can matter more for sustainability than sheer numbers in poorer ones.

Ageing populations: where birth rates stay low for decades, the population grows old. Japan is the clearest case, with a shrinking, ageing population that strains pensions, health care and the size of the workforce. Responses include encouraging births, raising the retirement age and opening the door a little wider to migrants.

Rapid growth: fast growing populations, common in stage 2 countries, can outpace jobs, housing, schools and water. Management responses have ranged from voluntary family planning and girls' education to firmer government policy, with mixed results.

Key idea

There is no single population problem. Some countries manage rapid growth, others manage ageing and decline. Good answers match the challenge to the place and judge responses against sustainability.

7. Selected study: political power and contested spaces: Myanmar

Geopolitical characteristics: geopolitics studies how power is spread across space. Key features are **nation-states** and territories, their **political systems and ideologies** (such as democracy or military rule), and **power blocs**, groups of states that act together for shared interests.

Influences on tension and conflict: conflict grows from clashing ideologies, disputes over state sovereignty, competition for the ownership and control of resources, the reach of global media, and the pressures created by migration. Often several of these combine in one place.

The place: Myanmar. Myanmar has a long history of military rule. In February 2021 the military seized power from the elected government, triggering protests, armed resistance and a sharp response to any challenge to its authority.

The Rohingya displacement: the Rohingya, a mainly Muslim minority in Rakhine State, have long been denied citizenship. A military crackdown from 2017 forced hundreds of thousands to flee into neighbouring Bangladesh, creating one of the world's largest refugee movements and leaving many as internally displaced people or stateless. It shows how contested identity, resources and sovereignty can turn a place into a zone of conflict.

Impacts and responses: the impacts include loss of life, mass displacement, damaged livelihoods and a strained host country. Responses have come at several scales: humanitarian relief and camps run by international bodies, sanctions and condemnation from other governments, and legal action through international courts. Progress has been slow, showing the limits of outside power over a sovereign state.

Exam focus

Define, locate, explain, judge. Define each term precisely, describe spatial patterns before explaining them, and use dated evidence to support a point.

Command words matter. Describe means say what the pattern is; explain means say why; analyse and evaluate ask you to weigh factors or judge how useful a model or response is.

Weave the concepts. Reach for place, space, interconnection, scale, sustainability and change to lift an answer from description to geography.

About this resource

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Scope

NSW Geography, Year 11. Written to the NSW Geography 11-12 Syllabus 2022, People, Patterns and Processes, for students sitting the HSC in 2028 and later years. Every worked context uses real places and dated statistics from named sources (the ABS and the United Nations), with each figure dated and its source named where it is used, and every number was recomputed from its inputs before printing.

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