

# 18 Human Settlements

## Population and Urban Form



### Population and urban form issues



The impact that a human society has on the environment has to do with its size, levels of production and consumption (which will influence, for example, the amount of waste produced), the efficient use of resources, technology used to supply goods and services, and the effectiveness of government and other organisations in preventing or repairing environmental degradation. This fact sheet only considers the population component of this relationship, but we must remember that the impact of people on the environment is affected by these other key factors.

South Australia's population growth rate in the two decades after World War II was one of the highest in the country; however, it has slowed significantly since 1966 and is now the second slowest of all the states and territories, and less than half the nation's growth rate. Adelaide and its peri-urban (near urban) area are growing significantly though, and make up 81% of the state's population growth. This is placing pressure on the availability of land and urban services in these regions and increasing the tension between competing uses of land and environmental resources. In contrast, the populations of some urban centres such as Whyalla, Port Pirie and Port Augusta are continuing to decline. This is due mainly to job losses in these areas, and can have a big impact on the sustainability of these rural populations.

The number of homes in South Australia is increasing more rapidly than the number of people because the population is ageing (older people are more likely to live alone), and because of changes to lifestyle. The increase in the number of redeveloped houses is causing environmental problems in terms of infrastructure of cities, waste created through construction and demolition industries and the way we use open space. This, however, is providing the opportunity to improve the environmental sustainability of housing design, which in turn may lead to greater efficiency in water and energy use.

#### TRENDS



South Australia's population growth is **declining**.



The availability of undeveloped land for new housing development is **declining**.



The number of new homes being built on redeveloped sites within metropolitan Adelaide is **increasing**.



The average household size is **declining**.



Differences in population growth rates at the regional and local level is **increasing**.



The median (average) age of the population of South Australia is **increasing**.



Population density is **increasing** in the metropolitan area.

## Population and Urban Form



### What is the current population and urban form situation?

#### Pressure indicators

##### Changes in population growth

The population of South Australia grew by 70% between 1947 and 1966, an improvement and overall increase of 53% in Australia. This trend reversed in the late 1960s and by 2001 South Australia's share of the national population had fallen to just 7.8% from 9.4% in 1966.

##### Components of population change

The factors that make up population change are births, deaths and overseas and interstate migration. The most dramatic change for South Australia's declining population is a decrease in the number of births, which fell by over 13% between 1983/1984 to 2000/2001. The number of deaths in this same period increased by more than 21%. Since the births decreased and the deaths increased, the sum of these means that the natural increase of the population has almost halved since 1983/1984. Net interstate migration has been consistently negative; South Australia has lost more people interstate than it has gained. This is one of the major factors responsible for the state's slow population growth rate.

##### Regional and intra-regional changes in population growth

The predominant trend within South Australia over the past 20 years has been a concentration of population

within settled parts of the state. In 2001, 73.3% of all South Australians lived in Adelaide, and 7.5% in outer Adelaide. Many of the small towns on Eyre and Yorke Peninsula, and intensive agricultural regions in the state, have had some increase in population due to people retiring, tourism and investment in aquaculture. These patterns of population growth are important in environmental and planning processes. For example, the relocation of people to coastal locations will increase the demands on infrastructure provision (water, gas, sewage, electricity, etc) and place greater pressure on coastal habitats.

#### Population density

South Australia has an extremely low population density of 1.5 persons per square kilometre, reflecting its vast inland arid areas that do not sustain large cities or towns. We have amongst the lowest density urban settlements in the world. In contrast, population density in the United Kingdom is 247 persons per square kilometre, and in Japan it is 337 persons per square kilometre. The vast majority of the state's population (81%) is clustered in the better watered south-eastern corner along the coastal plains of Adelaide and in the Adelaide Hills. Population projections suggest that by 2016 this concentration of population will have increased to almost 83%.

#### Age structure – an ageing population

Like most developed countries, the population of Australia is experiencing

changes in its age structure with a greater proportion of the population in the older age groups (60+) over the last two decades. It is expected that the proportion of elderly in the population shall increase to 16.2% in 2011, and even more dramatically after that time.

#### Trends in housing demand

The number of new dwellings has grown at more than twice the rate of population growth between 1981 and 2001. The ageing of the population, and the fact that the elderly are enjoying increased longevity, means that more time is spent in a household without children, and possibly more years of living alone after the death of a spouse. Changes have also occurred from increased levels of marriage break-up and divorce. This continued demand for new dwellings will:

- divert resources to the built environment
- increase the energy requirements of the state
- increase the land occupied by housing
- create potential environmental problems associated with stormwater and wastewater management.

On a positive note, this could provide the opportunity to design into developments better use of stormwater and treated wastewater.





## Responding to population and urban form

The state government has developed an urban growth boundary to stop the urban sprawl of Adelaide. It will mean that development cannot keep growing out from the centre, but will have to become more dense (more crowded together).



## Taking action for population and urban form

Consider the impacts of the built environment you live in. Think about the things you can do to reduce this impact, such as buying energy efficient appliances, planting locally native species in your garden or reducing the amount of waste you produce.

## Population and Urban Form

### Impacts of population and urban form



#### Inland Waters

There are serious issues of wastewater disposal and increased stormwater run-off and pollution in South Australia's important catchment areas.



#### Biodiversity

Expansion of the city (urban sprawl) will lead to a greater clearance of land, and therefore reduced habitat for native species.



#### Atmosphere

Urban sprawl means that more and more people will have to travel further, so our dependence on cars for transport increases. This means that more air and noise pollution and greenhouse gas emissions will be released into the atmosphere.



#### Land Resources

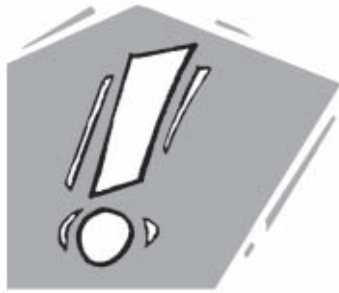
Change in land use to residential land is increasing the impact on the environment and reducing areas where there are prime agricultural lands.



#### Human Settlement

Redevelopment creates transport and waste disposal issues that need to be addressed.

## Population and Urban Form



### Attention!! What is urban sprawl?

#### RESOURCES

For more detailed information on the issue and actions you can take see the State of the Environment Report for South Australia 2003. This is available at:  
[www.environment.sa.gov.au/soe2003](http://www.environment.sa.gov.au/soe2003)



This fact sheet is part of a set of 23 fact sheets about the key environmental issues identified in the *State of the Environment report 2003*, produced for the Environment Reporting Education Resource. You can access the fact sheets and learn more about taking action for the environment at the Education Resource website: [www.environment.sa.gov.au/reporting/education](http://www.environment.sa.gov.au/reporting/education). For more information call the Environmental Education Unit of the Department for Environment and Heritage (08) 8226 4466.

The term 'urban sprawl' is the spreading (sprawl) of our cities (urban areas). In 1960, Adelaide city was a small centre that spread no more than 15km from the General Post Office. Today, residential development has claimed much of the land on the Adelaide coastal plain, to as far north as Gawler (about 40km) and south as far as Port Noarlunga (about 35km). Since 1960, the population of Adelaide has grown by 89% and there has been a 250% increase in the area of residential land.



Urban sprawl has many affects on the environment. In particular there are serious issues of wastewater disposal and increased stormwater run-off and pollution in Adelaide's most important run-off catchment, the Mt. Lofty Ranges. Any further development will involve increased waste disposal, increased stormwater run-off from expanded residential developments, effluent release from wastewater treatment plants and increased clearance of native vegetation to make way for housing. Urban sprawl also increases the distances that people need to travel, which has implications for air pollution and the greenhouse effect.



### Research Ideas about population and urban form

- 1 What is meant by population and urban form?

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- 2 What is urban sprawl? How does it affect the environment?

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- 3 How has urbanisation impacted on the environment in your community, South Australia, Australia and globally?

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- 4 What does the State of the Environment report tell us about urbanisation in South Australia?

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- 5 What might happen in the future if things continue as they are?

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- 6 What are government, business and industry doing to address population and urban form issues in South Australia?

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- 7 What can we do individually, or in communities, to reduce the impact urbanisation has on our environment?

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department for  
environment  
and heritage

