

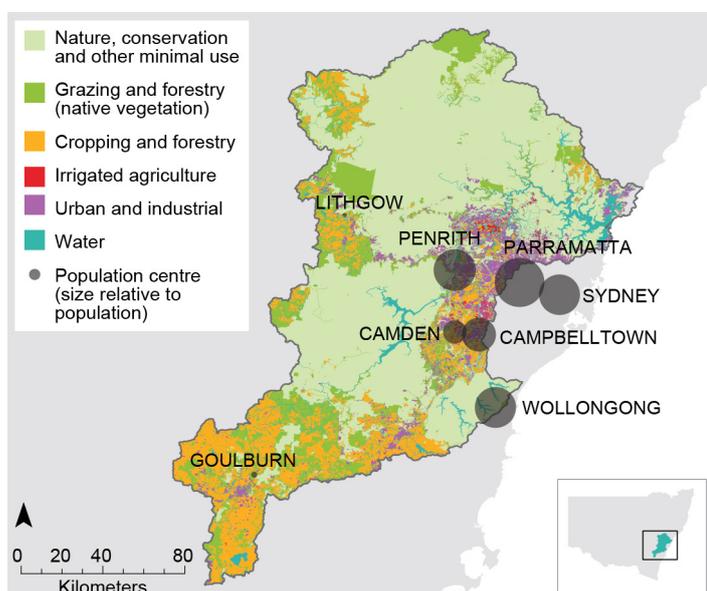
HAWKESBURY-NEPEAN RIVER COASTAL MANAGEMENT PROGRAM

Factsheet 3: URBANISATION & LAND USE INTENSIFICATION

Prepared October 2022

HAWKESBURY-NEPEAN CATCHMENTS FACE INCREASING PRESSURE FROM URBAN DEVELOPMENT, POPULATION GROWTH AND CLIMATE CHANGE

We are all connected to the rivers and streams that flow through our catchment, all the way downstream to our coastlines. Even if you don't work or live directly on a waterway, your actions can affect the health of our waterways, and the plants and animals that depend on them.



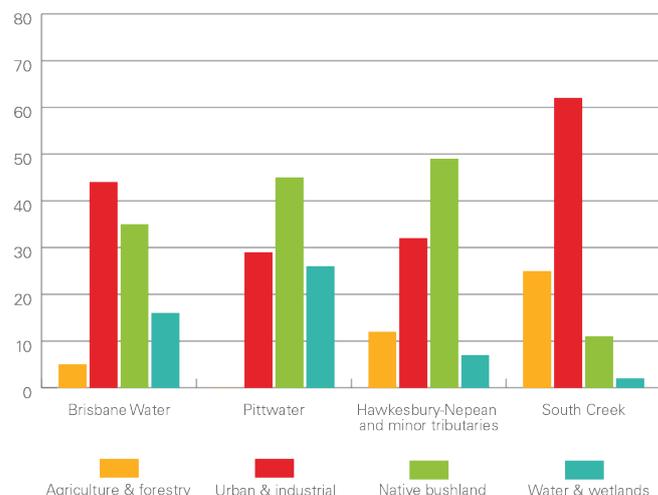
The Hawkesbury-Nepean River System has a lot of space dedicated to national parks and undeveloped bushland. The rest of our lands are mostly used for agriculture, forestry, and urban and industrial uses.

Intensifying land use and climate change put pressure on our catchment

We know that the Hawkesbury-Nepean catchment will have a significant population growth in the next 15 years – more than one million additional people will live in our catchment and estuarine areas.

As population grows and land use intensifies, we can expect:

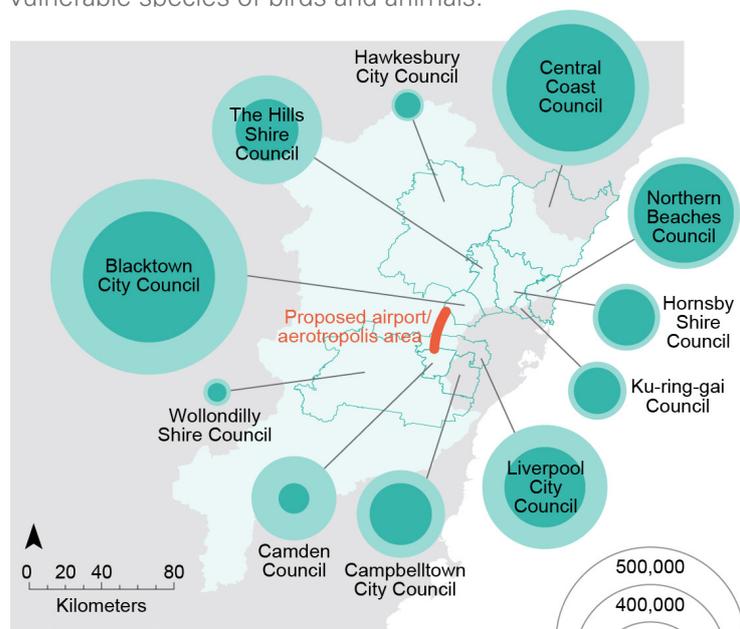
- more urban runoff and industrial discharge of worse quality, causing further pollution
- more disturbance of habitats, leading to a reduction in biodiversity
- changes to water flows caused by overextraction of groundwater and fresh water.



How land is used in four different sub-catchments: the balance of land-use can vary a lot throughout our many sub-catchments.

People use land across the Hawkesbury-Nepean River System in many different ways.

The Hawkesbury-Nepean catchment supports various agricultural activities (e.g. grazing, forestry and horticulture) that are essential to the NSW economy. It also provides drinking water for five million people across Greater Sydney, and is home to hundreds of vulnerable species of birds and animals.



Not only will the catchment's population increase, but there will be some particularly high-growth areas; for instance, the corridor between Campbelltown and Penrith that includes the planned Western Sydney International Airport and Aerotropolis.



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The impacts of increased urbanisation and changes to land use ('intensification') escalate pressure on the health of our river system and make it more vulnerable to climate change impacts – reducing its natural ability to bounce back.

URBANISATION is when the proportion of people living in towns/cities increases compared to people living in rural areas. As more people move to live and work in concentrated areas, towns and cities expand or are built new. This 2-minute video describes [urbanisation in the Brisbane Estuary](#) on our Central Coast.

INTENSIFICATION is about increasing the productivity or profitability of land. That could mean changing what we use the land for, or producing more from the same area of land.

DEVELOPMENT PRESSURES AND THEIR IMPACTS

EXAMPLES OF ENVIRONMENTAL IMPACTS

EXAMPLES OF HEALTH, SAFETY AND WELLBEING IMPACTS

1 Water pollution and sediment contamination from urban areas, agriculture, industry, dredging

More nutrients, litter and other contaminants leading to further pollution and algal blooms

Decreased water quality for recreation (on or near river) and river-dependent industries (including aquaculture and fishing)

2 Disturbed habitats from development, grazing, vegetation clearing, invasive animals and plants

Increased threats to vulnerable native species, and domination by pests
Clearing native vegetation resulting in loss of habitat and more unrestricted sediment/soil runoff into our streams

Reduced enjoyment and appeal of our coastal and river environments (and places of cultural significance) caused by declines in wildlife/visual amenity

3 Changes to water flows from increased groundwater and fresh water extraction, changed river and stream shapes and flows, dredging

Changes to the shape and stability of the river beds due to changed waterflows, shifting aquatic and riparian habitats, modifying natural watercourses
Over-sedimentation (erosion, dredging) and changes to chemical composition of our streams

Impacts on recreational and commercial use of waterways caused by sedimentation (murky water, fewer fish, blocked navigation channels)

Coastal development and global warming are on a 'collision course' for low-lying coastal and estuarine areas. It results in 'coastal squeeze' between the land and the sea, reducing public and private access to the estuary for residential, cultural, recreational and commercial uses.

Climate change will also have an impact on winds, waves, storms, sediment in our waters, and sea temperature. More intense rainfall events put heavier pressures on the capacity of critical infrastructure (e.g. our stormwater and wastewater systems), and change how often places flood.

We know that climate change and its related impacts will also affect how stable and productive our environments and ecosystems can be in the future. Our catchment's economic wellbeing relies on continued, 'normal' high levels of productivity.

By carefully planning for our future, we can work to address these pressures on our environment, economic productivity and what people value.

Get Involved

Creating the CMP helps us to consider and balance the opportunities and risks for our coastal communities and councils.

Don't just go with the flow, be part of the conversation. Visit hawkesburynepeancmp.org to:

- [tell us what priority threats we should address](#) in the CMP (survey or mapping tool)
- [subscribe to news and updates](#)
- [learn more about the CMP and current technical studies.](#)

