

# Barramundi

Barramundi are an iconic species in the Rockhampton region, where the Fitzroy Basin meets the sea. They are loved for game and sport fishing, as well as their quality for eating.

Barramundi can be found across Northern Australia and into the Indo-West Pacific region. They are an incredibly versatile species, inhabiting our coastal waters, estuaries, lagoons, and rivers; they are found in clear to turbid water, usually within a temperature range of 26–30 °C.

With an average length of between 0.6 to 1.2, they can reach up to 1.8m. Barramundi can live for over 20 years, and they are hermaphrodites, which means they change sex. They eat almost anything, from insects, spiders to prawns and other fish, including other barramundi. They have even been recorded eating small crocodiles!

Despite being so flexible, barramundi have very complex life cycles closely connected to their environment.

They depend on certain conditions to move between life stages.

**This makes them a great bioindicator for waterway health in our region.**

Bioindicators, or biological indicators, are living species whose presence, abundance and condition in ecosystems gives an indication of the health of the environment. Barramundi are highly connected to environmental changes across freshwater streams, estuaries, wetlands, and the ocean through their life cycle.

## Life cycle

At the beginning of the wet season, adult barramundi migrate to coastal estuaries. Spawning in estuaries is connected to salinity and water temperature. Tides wash eggs and larvae upstream where brackish/salty streams and wetlands become nurseries.

The success of eggs and larvae depends upon rainfall, salinity, temperature, clear passage upstream (which could be cut off by obstacles like dams), and the quality of nursery habitats, particularly vegetation which they use to hide in. Small barramundi, called fingerlings, leave the safety of the nursery when they are big enough, to move into tidal creeks and eventually upstream into freshwater. Once again, their success depends on rainfall, clear passage, salinity, temperature, and habitat quality.

Barramundi then spend a number of years in freshwater. When they are mature (2-4 years) barramundi will make the journey downstream to spawn. Up until this point, all barramundi are male. After meeting older females (5+ years old) for spawning, mature males will remain in salt water: tidal rivers, coastal estuaries and the ocean. Once they have reached a large enough size (~80cm and 5+years old) barramundi living in saltwater change sex, becoming female.

Barramundi depend on salinity, water temperature and clear passage downstream to undergo this sex change. Sometimes male barramundi will never venture into water with high enough salinity and remain male living in freshwater areas.



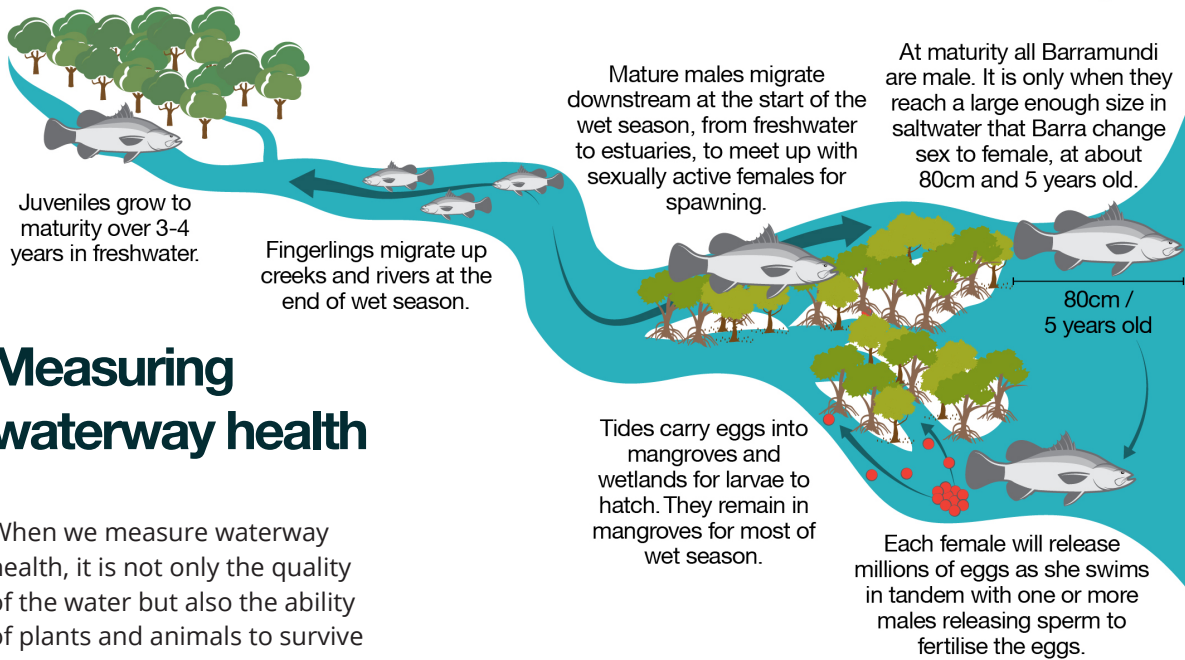
Female Barramundi migrate from oceans and estuaries, meeting their freshwater, male counterparts for spawning.

At all these different stages of life barramundi require differing levels of salinity, temperatures, different kinds of healthy habitats and clear passage up and down waterways.

Monitoring barramundi is key to better understanding the health of waterways in the Fitzroy Basin.



## Barramundi Life Cycle



## Measuring waterway health

When we measure waterway health, it is not only the quality of the water but also the ability of plants and animals to survive and persist in that water quality that is important. There are many methods for measuring biological indicator species.

Juvenile recruitment, which measures the success of barramundi spawning and survival to juvenile size, is monitored for the Fitzroy Basin Report Card every year. Over time, we see the effect rainfall and other changes in waterway environments have on ecosystem health. There can often be a clear correlation between barramundi recruitment and the pressures or impacts on waterways.

These might be related to Basin rainfall and flow or due to barriers to fish passage. For example, when you compare the barramundi grade for 2021-22 (A grade) and 2020-21 (E grade), the higher rainfall in the previous year that may have impacted the recruitment numbers.

## Barra Tourism

To find out more about how to catch a Barramundi – visit the page of our valued partner Rockhampton Regional Council and Explore Rockhampton <https://www.explorerockhampton.com.au/Blogs/An-Anglers-Guide-to-Rockhamptons-Barra-Season>

