

# Fact Sheet: Ord River

## Region

North Coast

## Summary

The East Kimberley is home to the impressive Ord River, a 650 kilometre long watercourse with an expansive catchment area of around 55,100 square kilometres.

Flowing through the town of Kununurra, the picturesque river provides the town with an abundant water supply and reflections of the boldly coloured ranges surrounding the town.

The upper reaches of the Ord is 150 metres wide with broad sand and gravel spits and permanent freshwater. From here, it snakes from its headwaters at Mount Wells, flowing east around the edge of World Heritage Purnululu National Park, before heading north through Lake Argyle, passing just to the west of Kununurra and onwards to discharge into the Cambridge Gulf.

The five kilometre wide mouth of the Ord is characterised by a maze of deltaic (forming a delta) channels, intertidal mudflats and low muddy islands, extending northwards around the coast to include the False Mouths of the Ord. The lower reaches, when not in full flood, are saline under the influence of coastal tides of up to eight metres amplitude.

## The beginning of the dam

The Ord was identified by the Western Australian government in 1941 as a river with a seasonal flow that could be harnessed, and extensive floodplains suitable for intensive irrigated agriculture. Ten years later, crops were identified that could justify the construction of a dam. With grant funding from the Commonwealth Government, Kununurra Diversion Dam was built in 1963 to store up to 101 gigalitres of freshwater for agriculture and a water supply for the town of Kununurra that was built as the service centre for the Ord River Irrigation Scheme.

With broad acre agriculture requiring more reliable source of irrigable water than could be supplied by Lake Kununurra, the Ord was damned again 60 kilometres upstream, to store a massive 5,800 gigalitres. The ambitious project was completed in 1974 and an exciting and productive agricultural area was created. However since the damming, major changes have occurred to the river's flow regime and ecology.

Prior to the construction of Lake Argyle, the Ord River burst its banks regularly, inundating its large floodplains at least every two to three wet seasons. Most floods were sufficiently powerful

to scour the riparian vegetation from its banks. The flow receded rapidly following each wet season, with the river reduced to a series of disconnected pools in the dry season. The dams have reduced wet season flooding by about a factor of ten and the regulated river flow continues throughout the dry season.



**Figure 1. Lake Argyle is part of the Ord River Irrigation Scheme. (Image: Mark Higgins)**

These dramatic man-made changes have markedly altered the ecology of the lower Ord, transforming it into a river from the wet tropics, rather than the dry tropics as found elsewhere in the Kimberley. Now, the Ord is a dynamic riverine ecosystem, shaped by permanent water flows and catchment management practices. Reductions in the size and erosive power of river floods, have resulted in a more stable and dense band of riparian vegetation along the main river channel. The permanent dry season flows have increased aquatic habitat and encouraged larger fish to flourish in the lower Ord than in nearby unregulated rivers, although the range of fish species has remained similar. Although regulated for more than 40 years, important elements of the riverine environment are considered to still be adapting to changes caused by construction of the dams.

The lower Ord River ecosystem now hosts an amazing abundance of wildlife year round, with the flora and fauna no longer contending with the stress of the dry season. Birds are particularly abundant along the waterway, with Australian pelicans commonly sighted, along with osprey, white-bellied sea eagles, multiple species of egrets and herons, darters, whiskered terns, comb-crusted jacanas, purple swamphens and numerous flycatchers and rainbow bee-eaters. Freshwater crocodiles also thrive, with an estimated 6,000 to 8,000 between Lake Kununurra

and Lake Argyle, with many more again in Lake Argyle. The Traditional Owners, the Miriuwung-Gajerrong people, suggest that the range of estuarine crocodiles upstream has increased since the Ord River Dam was constructed.

Toward the Cambridge Gulf, tidally influenced areas of the lower Ord and False Mouths support some of the most extensive mangrove communities in the region, with 14 known species. The intertidal mangroves support many species of birds and bats, and are a breeding area for banana prawns. The mangroves are important habitat for fish, hence the lower Ord has become a drawcard for local and visiting fishers. However, the habitat range of barramundi has been restricted to below the Kununurra Diversion Dam.

A barramundi restocking program was initiated by the State Government to boost barramundi numbers in Lake Kununurra and create a unique inland fishery for locals and visitors. In 2019, more than 650,000 barramundi have been released into Lake Kununurra through the restocking program since 2012.

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