

# Queensland Fish Habitat Fact Sheet



## Fixing Fish Habitat

Fish have a variety of habitat needs. Loss of preferred habitat and the inability to access habitats are, however, having an impact on fish populations. There are things we can do to fix these problems and more fish and better fishing is the result. Increasingly recreational fishers are helping make this change.

### Structure and why fish love it

'Structure' includes naturally-occurring features such as snags (or 'large woody debris'), undercut banks, rocks, and reefs, and built structures such as pylons, jetties and rock walls. Fish love structure because it provides shelter, cover from predators or sites for ambush predators, territory, shade, sources of food, and refuge from currents or floods.

Naturally, our rivers and estuaries were full of structure but much has been lost as rivers were 'desnagged' and channelised, banks cleared of vegetation, mangroves cleared and estuaries stripped of shellfish reefs.



**Resnagging** There are now many efforts to re-introduce wood back to degraded waterways. Large snags are added to re-shape channels, slow down flowing water, prevent further bank erosion and provide habitat for fish. 'Fish hotels' mimic log-jams and are also being introduced successfully. Monitoring has found increased fish numbers in resnagged reaches. (Photos: left, DSITIA; right, Queensland Times)



**Re-reefing** Shellfish reef restoration projects are in their early stages but already oysters and mussels are taking advantage of introduced structure. A key component is providing the surfaces for young shellfish to attach to: discarded oyster shells from restaurants, hessian bags filled with shell fragments and 'reef balls' made of non-toxic materials are all being used.

(Photo: OzFish)

**Revegetating** riparian areas improves fish habitat across the catchment: from upper tributary creeks through to estuaries. Overhanging vegetation provides leaf litter and the insects that many fish feast on, helps control erosion and reduces the flow of sediment and nutrients into the waterway. Controlling stock access to waterways and limiting grazing in riparian areas is also important. In estuaries, replanting and protecting mangroves and saltmarsh, provide benefits for fish. (Photos: left & right: Whitsunday Landcare; middle, Barron Catchment)



## Fish passage

Barriers to fish passage, such as weirs, floodgates, and poorly designed road and rail crossings, can have a significant impact on native fish. Barriers affect fish migration: stopping adult fish from reaching spawning sites and preventing juveniles from migrating to nursery habitats.

Many commercial and recreational target species migrate to and from the sea, including many of 78 freshwater fish species found in the Wet Tropics.

Fishways are constructed to help provide adequate fish movement across barrier such as weirs. There are three types used in Queensland: rock ramp fishways (for low height barriers to about two metres); vertical-slot fishways (for structures up to 6m high); and fishlocks (for dams over 8-10 metres high).

Improving fish passage through road crossing barriers often involves replacing pipe culverts with box culverts. Box culverts are more open, with more light and slower flowing water.



**Rock-ramp fishways** are the most common remediation for barriers to 2m high. They consist of a series of resting pools that help the fish make their way upstream and downstream and are designed to function at low flows. (Photo:

Catchment Solutions)



**Vertical-slot fishways** assist fish passage through barriers up to 6m high.

(Photo: Catchment Solutions)



**Box culverts** can open up access to upstream habitat as they have better light levels, lower velocities and are blocked less by debris than pipe culverts.

For more information about improving your local fish habitat, contact [OzFish Unlimited](#).



Photo: Barron Catchment Care