Ref. No. FR19
File No. FSC 01/07

RECOMMENDATION

DEGRADATION OF NATIVE RIPARIAN VEGETATION ALONG NEW SOUTH WALES WATER COURSES

The Fisheries Scientific Committee, established under Part 7A of the *Fisheries Management Act 1994* (the Act), has made a recommendation to list the degradation of native riparian vegetation along New South Wales water courses as a KEY THREATENING PROCESS in Schedule 6 of the Act.

Listing of Key Threatening Processes is provided for by Part 7A, Division 2 of the Act.

The Fisheries Scientific Committee has found that:

1. Riparian vegetation refers to the vegetation fringing water courses and can be defined as any vegetation on land which adjoins, directly influences, or is influenced by a body of water. Riparian habitats thus include land immediately alongside large and small creeks and rivers, including the river bank itself; gullies and dips that sometimes run with surface water; areas around lakes; wetlands on river floodplains that interact with the river in times of flood.

2. Estuarine and marine waters are excluded from this recommendation as the degradation of riparian vegetation in these areas does not adversely affect two or more listed threatened species, populations or ecological communities.

3. Degradation of riparian vegetation includes the removal or modification of native species. A major cause of degradation is the introduction of, or invasion by, non-native species.

4. Degradation of riparian vegetation has a major influence on stream ecosystems by;

- Increasing the amount of sediment and nutrients reaching streams as runoff, and increasing light penetration of the water body. These inputs have the combined effect of smothering benthic communities and increasing harmful algal growth.

- Reducing the inputs of organic carbon, via leaves, twigs, and branches. Terrestrially derived carbon inputs are the major energy source in most stream ecosystems.

- Reducing the amount of large woody debris entering the aquatic ecosystem and thereby negatively impacting on habitat and spawning sites of several vulnerable and endangered species listed under the *Fisheries Management Act*, 1994.

- Destabilising river banks.

- Reducing the amount of overhanging riparian vegetation resulting in a loss of shade and shelter for fish.

5. Degradation of riparian vegetation from New South Wales water courses has been included as a threatening process in the recommended listing of the Aquatic Ecological Community in the Natural Drainage Systems of the Lower Murray River Catchment as an Endangered Ecological Community in N.S.W.

6. Degradation of riparian vegetation adversely affects several species that are listed as vulnerable and or endangered under the *Fisheries Management Act* 1994. These include eastern freshwater cod (*Maccullochella ikei*), trout cod (*Maccullochella macquariensis*), Oxleyan pygmy perch (*Nannoperca oxleyana*), Murray hardyhead (*Craterocephalus fluviatilis*), Macquarie perch (*Macquaria australasica*), silver perch (*Bidyanus bidyanus*), southern pygmy perch (*Nannoperca australis*), purple-spotted gudgeon (*Mogurnda adspersa*), olive perchlet (*Ambassis agassizii*), river snail (*Notopala sublineata*), Adams emerald dragonfly (*Archaeophya adamsi*), and Buchanans fairy shrimp (*Branchinella buchananensis*).

7. Degradation of native riparian vegetation has been listed as a Potentially Threatening Process under the *Victorian Flora and Fauna Guarantee Act, 1998*

8. In light of the above, the Fisheries Scientific Committee is of the opinion that the degradation of native riparian vegetation along New South Wales water courses adversely affects two or more threatened species, populations or ecological communities and could cause species, populations or ecological communities that are not threatened to become threatened. Therefore, the process qualifies for inclusion in Schedule 6 of the *Fisheries Management Act 1994* as a KEY THREATENING PROCESS.

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Fisheries Scientific Committee