

# Natural Habitat Degradation



## Background

The Mid Murray has a diverse range of natural habitat including the River channel, floodplain wetlands and dry highland areas of Mallee and native grasslands. Unfortunately, all suffer varying degrees of degradation, a consequence of which has seen a marked decline in indigenous flora and fauna. With a significant area of floodplain and wetlands, some of state and national significance, degrading influences contributing to a decline in floodplain wetland health are of major concern.

Factors contributing to habitat degradation include:

- Native vegetation management – a consequence of over zealous development for agriculture and settlement, most remnants now only occur in isolated fragments. This exposes native fauna to greater predation, isolates breeding populations of plants and animals, and makes these areas vulnerable to weed infestation.
- Altered hydrological regimes – due to damming and locking have resulted in massive changes to the natural hydrological cycle, a major effect of which has ‘drowned’ the once temporal wetlands. This has been further exacerbated by the construction of causeways and levee banks, both of which modify the natural movement of water across the floodplain. Collectively, such changes have precipitated a reduction in natural habitat value and caused a marked change in the distribution of flora and fauna.
- Floodplain salinisation – is a process associated with dryland recharge, irrigation activity and River regulation. All cause underlying water tables to rise and as a consequence increase the presence of residual salts in the soil profile. Salts are normally flushed from the unsaturated zone by flooding, however river regulation and diversions for irrigation have greatly reduced the frequency of such floods. Vegetation communities are affected by increasing soil salinity, with mature redgums generally the first to show signs of stress and death (MMLAPC 1999).

- Grazing on the floodplain – affects the biodiversity of floodplain wetlands, and leads to an increase in the mass of nutrients deposited on the floodplain. Grazing by domestic stock has the potential to:
  - contaminate water bodies;
  - reduce the incidence of natural vegetation regeneration in favour of pest plants;
  - destroy native habitat; and
  - cause soil erosion and pugging (MMLAPC 1999).
- Pest plants and animals – introduced species have flourished in the altered environment of a number of natural habitats and have changed the nature of the floodplain ecosystem. Introduced animals compete and often drive native species away from their natural habitat, and pest plants have irrevocably altered the composition of indigenous plant associations.

## Links to other Issues

The issue of natural habitat degradation is linked to:

- Unsustainable Agriculture – clearance of native vegetation for irrigated horticulture and dryland farming has significantly contributed to Natural Habitat Degradation. River regulation and diversion of flows for irrigation has severely disrupted vital in-stream and floodplain processes.
- Unsustainable Recreation – compaction of soils beneath access roads, collection of vegetation for firewood, uncontrolled camping and shack development has compromised much of the Region's natural integrity.
- Declining Water Quality – salinisation of the floodplains and increased salt and nutrient loads to the riverine environment has had a detrimental affect upon aquatic and terrestrial flora and fauna.

### Extent and Severity

Information relating to the extent and severity of natural habitat degradation within the Mid Murray LAP Region indicates that:

- The Mid Murray LAP Region comprises over 3635 ha of floodplain wetlands of which:
  - 11% or about 400 ha are affected by pest plants and animals (Wetland Care, 1998); and
  - 23% or about 830 ha are salt affected (Wetland Care, 1998).
- Based on recent studies examining the state of vegetation within the Mid Murray LAP Region (Woodward-Clyde 1999a and 1999b), approximately 7% of the Region is covered by riparian vegetation of which:
  - 63% (3900ha) is grazed;
  - 49% (3050ha) is affected by salt;
  - 24% (1450ha) shows minor signs of salt stress;
  - 24% (1450ha) shows substantial signs of salt stress; and
  - 3% (200ha) shows extreme salt stress or evidence of salt scalds.

### Key References

For more a more detailed analysis of natural habitat degradation within the Mid Murray LAP Region please refer to the following references:

- Woodward-Clyde Pty Ltd 1999, A Study to Aid the Development of a Vegetation Management/Biodiversity Enhancement Strategy, report prepared for the Mid Murray Local Action Planning Committee.
- Woodward-Clyde Pty Ltd 1999, A Study to Aid the Development of a Remnant Roadside Vegetation Management Strategy for the Mid Murray Council, report prepared for the Mid Murray Council.
- Wetland Care Australia 1998, Wetlands Management Study – Final Report, prepared for the Riverine Local Action Planning Associations.
- PPK Pty Ltd 1998, Sustainable Recreation Area Management Report, prepared for the Mid Murray, Mannum to Wellington and Riverland West Local Action Planning Associations.
- Australian Water Environments Pty Ltd 1999, A Study to Underpin a Land and Water Management Plan, report prepared for the Mid Murray Local Action Planning Committee.



Since European settlement, over zealous development has resulted in the isolation of native vegetation.



All habitat types in the Region suffer varying degrees of degradation.



Vegetation communities are affected by increasing soil salinity.