

Impact Assessment Record

Scientific Name: *Cabomba caroliniana*

Common name: cabomba

QUESTION	COMMENTS	RATING	CONFIDENCE
Social			
1. Restrict human access?	Aquatic species (Panetta, <i>et al</i> 1998). Access to recreational areas not affected.	L	MH
2. Reduce tourism?	As a potentially invasive aquatic weed, water-based recreations may be seriously affected. "...water skiers or swimmers could easily become entangled by the weed's long thick stems and drown" (Panetta, <i>et al</i> 1998).	H	MH
3. Injurious to people?	No known toxic principles.	L	MH
4. Damage to cultural sites?	Moderate negative visual effect.	ML	MH
Abiotic			
5. Impact flow?	Cabomba could grow in irrigation channels, "...where it could impede water flow, cause overflows and blockages" (Panetta, <i>et al</i> 1998). Serious impact on flow.	H	MH
6. Impact water quality?	"Oxygen depletion can occur when massive dieback and consequent decomposition occurs. In Queensland, cabomba infestations may deleteriously affect water quality through increasing water colour" (Panetta, <i>et al</i> 1998). High effect on dissolved O ₂ levels.	H	MH
7. Increase soil erosion?	"Cabomba is found in ponds, ditches, small shallow lakes and slow flowing streams. If present in water storages, heavy infestations, because of the large volume of plant material, could cause water loss from overflow or seepage" (Panetta, <i>et al</i> 1998). Although water flow may not be significant, overflows may create some minor soil erosion,...	ML	MH
8. Reduce biomass?	"Cabomba is capable of rapid spread once it has been introduced in to a suitable water body. It was first reported from Lake MacDonald in April 1992, and by 1995 had invaded almost the whole of the lake's extensive littoral zone" (Panetta, <i>et al</i> 1998). As an aquatic species, the significant increase in biomass is a negative attribute.	H	MH
9. Change fire regime?	Aquatic species.	L	MH
Community Habitat			
10. Impact on composition (a) high value EVC	Basin=Snowy River- Brodnibb River (ISC=excellent); CMA=East Gippsland; CLIMATE=VH. "It is extremely persistent and can establish a monoculture by excluding native plant species" (ARMCANZ 2000). Monoculture within a specific layer.	H	MH
(b) medium value EVC	Aquatic species. All Victorian water bodies considered to comprise high value EVCs only (Weiss pers. coms.) ⁱ .	L	H
(c) low value EVC	Aquatic species. All Victorian water bodies considered to comprise high value EVCs only (Weiss pers. coms.) ⁱⁱ .	L	H
11. Impact on structure?	"It is extremely persistent and can establish a monoculture by excluding native plant species" (ARMCANZ 2000).	H	MH

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12. Effect on threatened flora?	This species is not documented as posing an additional risk to threatened flora.	MH	L
Fauna			
13. Effect on threatened fauna?	This species is not documented as posing an additional risk to threatened fauna.	MH	L
14. Effect on non-threatened fauna?	“Its ability to replace native aquatic plants, with the likely displacement of native fish and invertebrate populations, together with the ability to infest large areas of water, suggest that native aquatic life would be considerably endangered” (Panetta, <i>et al</i> 1998). Reduction in habitat leading to reduced populations.	MH	MH
15. Benefits fauna?	“In regions where it is invasive, it is not clear whether native fish and invertebrates utilize it readily as a habitat” (Panetta, <i>et al</i> 1998). Assume limited or no benefits.	H	MH
16. Injurious to fauna?	Not known to be injurious.	L	MH
Pest Animal			
17. Food source to pests?	Aquatic species (P & C 2001).	L	MH
18. Provides harbor?	Aquatic species (P & C 2001).	L	MH
Agriculture			
19. Impact yield?	No evidence. Not known as a weed of agriculture. It can occur in irrigation systems and demonstrate allelopathy on seed germination in wheat and lettuce (P & C 2001). Potential to affect irrigated crops. Impact unknown.	ML	MH
20. Impact quality?	Not weed of agriculture.	L	MH
21. Affect land value?	Not a weed of agriculture.	L	MH
22. Change land use?	Not a weed of agriculture.	L	MH
23. Increase harvest costs?	Not a weed of agriculture.	L	MH
24. Disease host/vector?	None evident.	L	MH

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References cited:

- ¹ Agriculture and Resource Management Council of Australia & New Zealand, Australian & New Zealand Environment & Conservation Council and Forestry Ministers, (2000) *Weeds of National Significance Cambomba (*Cabomba caroliniana*) Strategic Plan*. National Weeds Strategy Executive Committee, Launceston.
- Panetta, F.D., Groves R.H. & Shepherd, R.C.H. (eds) 1998, *The biology of Australian weeds: Volume 2*, R.G. & F. J. Richardson, Melbourne.
- Parsons, W.T. & Cuthbertson, E.G. 2001, *Noxious weeds of Australia*, 2nd ed., CSIRO Publishing, Collingwood.
- ¹ Weiss, J. Project Leader, Pest Plant Impact Assessment. DPI, Frankston. Tel 9785 0111. (11/07/03)

Revisions

Date	Revised by	Revision
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ⁱ Weiss, J. Project Leader, Pest Plant Impact Assessment. DPI, Frankston. Tel 9785 0111. (11/07/03)

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