Declared Plant Policy

Government of South Australia

This policy relates to natural resources management under section 9(1)(d) of the Landscape South Australia Act 2019 *(the Act), enabling co-ordinated implementation and promotion of sound management programs and practices for the use, development or protection of natural resources of the State. Specifically, this policy provides guidance on the use and management of natural resources relating to the prevention or control of impacts caused by pest species of plants that may have an adverse effect on the environment, primary production or the community, as per object s7(1)(f) of the Act.*

water hyacinth (*Eichhornia crassipes*)

Water hyacinth is an aquatic perennial with floating rosettes of leaves. It originated in the Amazon Basin of South America, and is now a weed in Africa, Asia, the Americas and Australia. It is not established in South Australia but still occurs in cultivation here, and is naturalised in some other States.

Management Plan for Water Hyacinth

Outcomes

- Maintain waterways free of blockages and keep streams and wetlands free of major weed threats.

Objectives

- Prevent incursion and establishment of water hyacinth in Australia.
- Destroy any detected water hyacinth plants.

Best Practice Implementation

- Any infestation of water hyacinth discovered to be treated as an incursion and destroyed.
- Sale and movement to be prohibited.
- Regional landscape boards and Green Adelaide to inspect waterways and wetlands for presence of aquatic weeds.

Regional Implementation

Refer to regional management plans for further details.

Region	Actions
Alinytjara Wilurara	Prevent entry or sale; destroy if detected
Eyre Peninsula	Prevent entry or sale; destroy if detected
Green Adelaide	Prevent entry or sale; destroy if detected
Hills and Fleurieu	Prevent entry or sale; destroy if detected
Kangaroo Island	Prevent entry or sale; destroy if detected
Limestone Coast	Prevent entry or sale; destroy if detected
Murraylands and Riverland	Prevent entry or sale; destroy if detected
Northern and Yorke	Prevent entry or sale; destroy if detected
South Australian Arid Lands	Prevent entry or sale; destroy if detected

Declaration

To implement this policy, water hyacinth is declared under the *Landscape South Australia Act 2019* throughout the whole of the State of South Australia. Its entry to South Australia, movement or transport on a public road by itself or as a contaminant, or sale by itself or as a contaminant, are prohibited. Notification of infestations is necessary to ensure these are destroyed. Land owners are required to destroy any water hyacinth plants growing on their properties.

Water hyacinth is declared in category 1 under the Act for the purpose of setting maximum penalties and for other purposes. Any permit to allow its entry, road transport or sale can only be issued by the Chief Executive of the Department for Environment and Water or their delegate pursuant to section 197.

Under the *Landscape South Australia (General) Regulations 2020*, Regulation 27 specifies the conditions under which a person is exempt from the operation of section 186 and may transport wool, grain or other produce or goods carrying water hyacinth on public roads, or bring them into the State. Regulation 28 specifies conditions under which a person is exempt from the operation of section 188(2) and may sell wool, grain or other produce or goods carrying water hyacinth. Note that certain produce or goods may be excluded from these general movement and sale exemptions by Gazettal Notice of the Chief Executive, DEW.

The following sections of the Act apply to water hyacinth throughout each of the regions noted below:

Region Sections of Act	AW	EP	GA	HF	KI	LC	MR	NY	SAAL
186(1) Prohibiting entry to area	X	X	X	X	X	X	X	X	X
186(2) Prohibiting movement on public roads	X	X	X	X	X	X	X	X	X
188(1) Prohibiting sale of the plant	X	X	X	X	X	X	X	X	X
188(2) Prohibiting sale of contaminated goods	X	X	X	X	X	X	X	X	X
190 Requiring notification of presence	X	X	X	X	X	X	X	X	X
192(1) Land owners to destroy the plant on their properties	X	X	X	X	X	X	X	X	X
192(2) Land owners to control the plant on their properties									
194 Recovery of control costs on adjoining road reserves									

Review

This policy is to be reviewed by 2025 or in the event of water hyacinth being found established in South Australia.

Weed Risk

Invasiveness

Most fresh water in slow-flowing or stagnant streams, swamps, reservoirs and farm dams could provide habitat for water hyacinth.

Plants reproduce vegetatively by offsets and short stolons. They have buoyant inflated leaf bases and develop roots from all nodes, spreading to form mats from which broken pieces can drift downstream and start new colonies. Growth from a single plant can cover 60 square metres in a season in warm climates.

Reproduction by seed has also been observed in Australia. Seeds are dispersed along waterways by water movement, birds or boats, and germinate on fringing mud.

Impacts

Water hyacinth forms dense mats that increase loss of water through transpiration, degrade habitat for aquatic fauna by reducing light levels, temperature and oxygen, and reduce water quality as they decay and deplete oxygen. Infestations may also restrict access to water for livestock and native animals, impede control of mosquitoes, and block small boat access or irrigation intakes.

Potential distribution

Water hyacinth could grow anywhere in South Australia where a permanent body of static or slow-moving fresh water exists. It is a threat mainly to the River Murray system where it could occupy backwaters and billabongs.

Feasibility of Containment

Control costs

Control of an infestation could be expensive as access for spraying may require a boat. Herbicide use would also be complicated by the close proximity of infestations to water resources used for irrigation, human and livestock consumption and to plants susceptible to off-target damage.

Persistence

Water hyacinth has no rhizomes or other reserves below the surface, and is dependent on foliage at the surface that would be vulnerable to herbicides.

Current distribution

Not present in the wild in South Australia. Some plants are likely to persist in gardens.

State Level Risk Assessment

Assessment using the Biosecurity SA Weed Risk Management System gave the following comparative weed risk and feasibility of containment scores by land use:

Land use	Weed Risk	Feasibility of control	Response at State Level
Aquatic	high 109	very high 0	destroy infestations alert

Considerations

Water hyacinth is a tropical plant native to north-eastern Brazil, French Guiana, Guyana, Surinam and Venezuela. It is now naturalised in NSW and Queensland, but also recorded from Western Australia and Victoria. Infestations in the Gwydir River system near Moree, NSW, have been the subject of an interstate control program since 1976.

Water hyacinth was established by 1939 in the River Murray with a large infestation over 16 ha at Ramco. The infestation was destroyed by the late 1950s. Small plantings are found at the rate of a few each year in home gardens and ponds.

Due to its high weed risk, presence in this State only as a rare cultivated plant, and very high feasibility of control, water hyacinth is regarded as a State Alert Weed and a high priority surveillance target to increase the likelihood of early detection.

Water hyacinth has been recognised as a Weed of National Significance and is the subject of a national control strategy.

Synonymy

Eichhornia crassipes (Mart.) Solms, Monogr. Phan. [A.DC. & C.DC.] 4: 527 (1883).

Basionym: *Pontederia crassipes* Mart., Nov. Gen. Sp. Pl. (Martius) 1: 9 (1823).

Nomenclatural synonym:
Priaropus crassipes (Mart.)Raf., Fl. Tellur. 2: 81 (1836)

Taxonomic synonyms:
Eichhornia crassicaulis Schltdl., Abh. Naturf. Ges. Halle 6: 177 (1862)
Eichhornia speciosa Kunth., Enum. Pl. 4: 131 (1843)
Priaropus mesomelas Raf., Fl. Tellur. 2: 81 (1836)
Heteranthera formosa Miq., Linnaea 17: 61 (1843)

Other common names include bèo tây, bèo lộc bình, bèo nhật ban, feng yan lan, lilac devil, Nile lily, jacinto de agua and water orchid.

References

Australian Weeds Committee (2012) *Weeds of National Significance, Water Hyacinth (Eichhornia crassipes) Strategic Plan.* Australian Weeds Committee, Canberra.

NSW Department of Primary Industries (2013) Water hyacinth Control Modules: Control options for water hyacinth (*Eichhornia crassipes*) in Australia.

Wright, A.D. & Purcell, M.F. (1995) *Eichhornia crassipes* (Mart.)Solms-Laubach. In Groves, R.H. et al., eds. *The Biology of Australian Weeds* 1: 111-122.

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Date: 28 March 2021