

## Using geographic information systems for the prioritisation of buffel grass (*Cenchrus ciliaris*) surveillance and control

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**Summary** Buffel grass (*Cenchrus ciliaris*) has been recognised as one of the greatest threats to biodiversity in South Australia's arid rangelands. It has the capacity to transform arid ecosystems through habitat loss, competition with native plants and alteration of natural fire regimes.

In this environment of uncertain budgets for the surveillance and control of weeds in Australia it is important to ensure that the funds we have available are used to deliver strategic outcomes and target critical pathways.

When considering priorities for the surveillance and control of buffel grass, there are a range of criteria that can be used to predict areas most likely to be infested and therefore can be used to prioritise management activities. Climatic variables, soil type, surface geology and proximity to transportation corridors,

watercourses and conservation areas can all be used to determine the likelihood of buffel grass establishment and its subsequent priority for control.

Given the state-wide distribution and limited buffel grass infestation data, the use of a geographic information system (GIS) tool will be integral in focusing surveillance activities on areas at most risk of invasion as additional distribution data becomes available.

Geographic information systems are increasingly used to inform management decisions and support continuous improvement. As part of a three year project funded by the Native Vegetation Council's Significant Environmental Benefit's program, a GIS prioritisation tool is being developed and road tested to assist the efficient delivery of surveillance and control activities throughout South Australia's arid rangelands.