

Future directions and issues for the national surveillance of weeds, insects and plant pathogens in Australia

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Summary Weeds are among the most serious threats to Australia's natural environment and primary production industries. They displace native species, contribute significantly to land degradation, and reduce farm and forest productivity. Australians spend significant time and money each year combating weed problems and protecting ecosystems and primary production. From 1992 to 2010, there were 23 incursions of prohibited or regulated weeds detected in Australia. In 2011 alone, 11 new or potential weeds were officially recorded in various states.

For incursions of pests of plants, government and plant industries contribute to their biosecurity responsibilities by becoming signatories to the Emergency Plant Pest Response Deed (EPPRD). Under the original ratification of the EPPRD in 2005, weed incursion provisions were deliberately excluded as it was felt that weeds would require the implementation of long term management programs and complicate the development of the EPPRD agreement. Given that the EPPRD and its mechanisms for plant pest incursion response are now well established, there is a potential opportunity to again assess the feasibility of including weed incursions with industry beneficiaries under the EPPRD arrangements.

Experience and research have shown that weed eradication is more likely to be successful if the infested area is small, less than 100 hectares. Therefore detecting weeds early in their spread can make the critical difference between eradication being feasible and the need to resort to less effective control methods. Australia's real time surveillance of weeds however is poor. The distribution mapping of weeds is inconsistent and it is difficult to get a complete picture of how the range and density of weeds are changing across

a single state let alone on a national basis. Reporting of new weeds by the public is not well organised as there are thousands of bodies, entities and jurisdictions involved in weeds and most people are unsure of who they should contact.

As a further consequence of this lack of dynamic real time data there is also insufficient information to track the outcomes of most weed management efforts or effectively plan where and how to best target strategic investment in weed incursion response or ongoing management.

This important and significant issue has been recognised in the National Plant Biosecurity Strategy which calls for the establishment of a national surveillance coordination centre. This centre would be responsible for reviewing the national design, collection, capture and analysis of data, as well as strategic action to establish a nationally coordinated weed alert and early warning system that includes effective surveillance mechanisms.

In early 2014 PHA embarked on a project to develop a tangible mechanism for gathering, harnessing and collating surveillance information on plant pests and weeds. A national surveillance system for weeds and plant pests, a virtual coordination centre (VCC) is being developed with funding from the National Landcare Programme Innovation Grants program.

Now in development, the VCC will promote new tools and integrate current technologies using identified national data standards to facilitate a mechanism for collating and distributing real time surveillance data on weeds and plant pests. The system will be designed to facilitate the integration of current surveillance systems and receive and extend surveillance data to those working in weed management in Australia.