Is it all just WoNS and the same? Successes and challenges in the management of WoNS across Australia

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Summary This paper outlines how national and regional management groups have worked to improve the management of Weeds of National Significance (WoNS) across Australia and some of the future challenges that await these groups. Through a selection of case studies, we demonstrate why and how these groups have formed, their achievements and the benefits to land and water managers who become involved with such groups. While the activities of each group may vary according to the weed in question, certain key elements common to all groups facilitate successful management. These include providing a coordinated focus, increasing public awareness, facilitating information exchange to improve best practice management and fostering effective long-term partnerships.

Keywords Weeds of National Significance (WoNS), management groups, public awareness, best practice management, partnerships.

INTRODUCTION

In 1997, twenty WoNS were determined in an attempt to prioritise the management of high priority weeds over a range of land uses at the national level. Each of the 20 WoNS now has a national strategic plan, national coordinator, national priority action framework and national WoNS management group (NWG). In addition, numerous regional working groups (RWG) have been established and regional WoNS strategies developed to coordinate the strategic management of these weeds within and across particular catchments. These groups consist of representatives from relevant sectors of the community, government and private industry from across the current and potential range of their respective weeds.

PROVIDING A COORDINATED FOCUS

National and regional management groups play complementary roles in guiding and implementing strategic weed management. By bringing together representatives from across land tenures and providing a forum for interaction across regional, State and federal levels, these groups have been successful in coordinating effective cross-tenure weed management, which is essential to ensure long term success.

National WoNS management groups NWGs provide key linkages across regions and States to ensure a coordinated, cross-regional and national approach. This fosters a shared approach to research, improving management techniques and developing education and awareness materials, whilst minimising duplication.

The NWGs are at different stages of development, with some groups operating for over five years (e.g. National Prickle Bush Management Group (NPBMG)) and others only recently established (e.g. the National Willows Taskforce (NWT) in August 2005). The NPBMG is currently undertaking a detailed evaluation of the extensive progress achieved in prickle bush (*Parkinsonia aculeata* L., *Acacia nilotica* subsp. *indica* (Benth.) Brenan and *Prosopis* L.) management over the past five years. The NWT, in contrast, is working to understand the current and potential distribution of different willow (*Salix* L.) taxa as a benchmark for future progress. Although in its infancy, the NWT is providing a coordinated focus through developing and implementing the national priority action framework for willows. The NWT consists of representatives from State/Territory, Federal and Local Governments, Catchment Management Authorities, the Weeds CRC, the Nursery and Garden Industry of Australia and the community who are committed to implementing high priority actions within their regions and States. These priorities include conducting mapping and weed risk assessment of different willow taxa, developing and implementing a broad communications plan, improving best practice management and investigating biological control options for willows.

Regional working groups RWGs provide critical linkages between national programs and on-ground action, ensuring that information from the region is fed to national programs and from national programs to on-ground managers. RWGs, such as the North Coast Weeds Advisory Committee (NCWAC), provide a forum for land managers to become involved in national initiatives, by bringing together all partners within their region, including community groups, local councils,

Natural Resource Management (NRM) regions, State Government and research partners.

The NCWAC, the lead organisation for weeds in the north coast region of New South Wales (NSW), is comprised of all stakeholders involved in weed management from Nambucca Shire to the Queensland (QLD) border. NCWAC includes representatives from 13 Local Government Areas on the north coast of NSW, as well as land managers from south-east QLD. The group facilitates interaction among these regions and acts as a unified front to interact with regional, State and Commonwealth agencies.

As a unified entity, NCWAC has achieved many successes at local, regional, State and national levels. These include: 1) establishing and maintaining WoNS eradication and containment zones critical to the success of national programs (e.g. the national bitou bush (*Chrysanthemoides monilifera* subsp. *Rotundata* (D.C.) Norl.) northern containment line); 2) completing regional weed strategies for WoNS and other weeds of regional importance; 3) achieving more targeted planning and effective weed control actions over large areas (e.g. aerial spraying of bitou bush along entire coastlines); 4) securing increased funding by having greater knowledge of funding sources, increased capacity for 'matching' funds and stronger and more coordinated applications; 5) achieving better communication regarding weed threats and potential opportunities (both for effective control and funding) within the group and to the community in general; 6) involving all stakeholders in annual weed forums to increase weed awareness; 7) increasing participation of aboriginal groups in weed management activities; and 8) maintaining support for long-term weed control across the region after external funding ceases.

Numerous other RWGs are achieving similar successes. Some of the RWGs developed as a direct result of the WoNS initiative (e.g. the Highland Weeds Working Group as a result of willows being proclaimed a WoNS). A major challenge for the RWGs is to maintain motivation and continue working together after external funding ceases. Many groups have responded to this challenge by broadening their scope to other regional weeds or environmental issues, thus providing greater opportunities for gaining continued funding.

INCREASING PUBLIC AWARENESS

NWGs provide an ideal forum for developing effective national awareness campaigns. By bringing together people with a range of expertise and backgrounds, NWGs are able to pool ideas and experiences and discuss the best options for raising awareness of their weed. They can also assess the success of initiatives and maximise available resources. This leads to improved direction and focus for public awareness initiatives, with the delivery tailored to suit each State and Territory.

NWGs have utilised numerous media for raising public awareness, including radio, television, newsletters, articles in industry publications, internet, conferences, field days, workshops, brochures, manuals and promotional items (e.g. magnets, stickers and posters). The type of media adopted depends on the weed in question and the intended audience.

The National Parthenium Weed Management Group has implemented a number of successful public awareness and extension campaigns. Parthenium weed (*Parthernium hysterophorus* L.) Television Community Service Announcements (TCSAs) were developed in consultation across States. The TCSAs relayed key messages regarding parthenium identification and reporting mechanisms and were tailored to suit specific areas within NSW and QLD. The TCSAs were targeted to vast audiences across the potential range of parthenium weed. TCSAs have been a cost efficient way of raising awareness within the wider community, costing approximately $6000 to develop and $33,000 for six months of prime time screening and six months as an off-peak filler. In addition, parthenium weed display trailers are an efficient and cost-effective way of bringing parthenium weed extension to the community. Three trailers were constructed and situated at locations in QLD and NSW. Many people now associate the trailers with parthenium weed and access them for information and awareness products such as best practice manuals, fact sheets, identification stickers and posters.

The National Rubber Vine Management Group seeks to raise awareness of rubber vine (*Cryptostegia grandiflora* Roxb. ex R.Br.) across northern Australia. Western Australia and the Northern Territory are currently developing a rubber vine identification brochure that provides information on the weed and relevant reporting mechanisms for dissemination across these regions. The parthenium weed and rubber vine NWGs will be evaluating the effectiveness of these products by surveying people across the range of each weed. Future work will focus on identifying and replicating products that have been most effective across different areas and a range of audiences.

Many challenges lie ahead in relation to raising public awareness of WoNS. Most critically, how do we keep an already overwhelmed community interested in weeds? Products and concepts developed both nationally and within regions and States need to be relevant, timely and tailored to suit the circumstances of different target audiences. The NWGs continue to work together and with regional working groups,

developing, evaluating and improving methods to ensure a further increase in public awareness of weeds across Australia. Many of the resources developed by NWGs are available either free of charge from the National WoNS Coordinators or on the Weeds Australia website at www.weeds.org.au/natsig.htm.

EXCHANGING INFORMATION AND IMPROVING BEST PRACTICE MANAGEMENT

The development of WoNS best practice manuals demonstrates the instrumental role NWGs can play in facilitating information exchange to improve management practices. Such manuals bring together current information, including biology, control methods and detailed management options. As a result, weed control authorities, landholders, relevant industries and the community are provided with an easy to use reference tool, enabling them to effectively tackle their respective WoNS at a local, regional or national scale. The manuals also present case studies to demonstrate exactly how groups or individuals have used best practice methods to successfully manage different weed infestations.

The Salvinia Control Manual is one example of such a manual (van Oosterhout in press). Salvinia (*Salvinia molesta* D.S.Mitch) is a floating aquatic weed that causes considerable environmental and social impacts to waterways. Infestations can double in size in less than a week and its aquatic nature poses safety and accessibility problems for weed managers. A control manual was deemed an effective approach to communicate best management practices for salvinia and inform users on how to manage weeds effectively in waterways whilst protecting social and environmental values.

Completed in 2006, the control manual provides a basis for developing site specific management strategies for salvinia. It covers a range of management options, each with detailed instructions on how they are best implemented. These include: hydrological and climatic factors to be considered when planning a control strategy; use of physical booms and fences to contain infestations; biological control strategies (e.g. sourcing, releasing and monitoring of agents); herbicide practices, including safe use in water; physical and mechanical removal techniques; and options for integrating the above methods. The manual also presents a number of practical examples (or case studies) of how salvinia has been successfully managed in different situations. These case studies provide an opportunity for groups to share their knowledge and experience in salvinia management and see how others have implemented best practice management.

The best practice manual concept was an initiative of the National Prickle Bush Management Group that was quickly adopted by other NWGs who saw the value of such a manual for filling a critical information gap. A commitment has now been made to produce manuals for all 20 WoNS. To date, best practice manuals for 14 WoNS are either published or under development. The exact processes taken to develop these manuals are outlined in Carter *et al.* (2006).

FOSTERING EFFECTIVE PARTNERSHIPS

Involving industry and other key stakeholders on NWGs has been instrumental in achieving strategic plan outcomes. The role of the Pet Industry Association of Australia (PIAA: representing the aquarium plant trade) on the National Aquatic Weeds Management Group (NAWMG) provides an outstanding example of this. Cabomba (*Cabomba caroliniana* Gray) was a popular aquarium plant, which was spread largely due to deliberate seeding of waterways by aquatic plant traders for commercial returns. Although it has now been banned from trade and distribution and most aquatic plants traded are now sourced from purpose-built facilities, the practice of deliberate seeding of waterways still continues in some areas of Australia (Petroeschevsky 2004). Despite this, most of the industry has a strong desire to not contribute to aquatic weed problems.

In 2003, the PIAA were invited to participate on the NAWMG to improve cooperation with the aquatic plant industry and to help implement key initiatives identified in the aquatic WoNS national strategic plans. Through their involvement in the NAWMG, the PIAA have developed a recognition of how past aquatic plant trading practices have contributed to aquatic WoNS spread as well as a range of solutions to minimise the risk of industry related aquatic weed spread.

Results of a survey of aquarium traders showed that more than 87% of traders supported bans from sale of harmful aquatic plants and 73% were willing to pay higher prices to wholesalers for aquatic plants grown responsibly (NAWMG 2004). Of concern, however, was the low awareness of aquatic WoNS among traders, with only 46%, 52% and 32% of respondents having heard of alligator weed (*Alternanthera philoxeriodes*), salvinia and cabomba respectively.

Since 2003, the PIAA and NAWMG have implemented a range of strategic initiatives to improve industry awareness and cooperation. These include:

- Feature articles in industry journals to improve industry awareness of impacts of aquatic WoNS and aquatic weed declarations in each State/Territory;

- Developing an industry code of practice, incorporating legal and safe trading of aquatic plants;
- Producing a poster for aquatic plant retailers, identifying declared aquatic plants in each State/Territory;
- The PIAA developing an aquatic weed training DVD for use in pet shop industry accredited training courses; and
- NAWMG representatives attending industry forums.

Although some problems still remain with small backyard operations and non-PIAA members, the PIAA and NAWMG are making clear progress towards minimising the risk of spreading aquatic weeds through aquatic plant trading practices.

Similar partnerships have been developed by other NWGs, such as involvement of the Rubus Growers Association in the National Blackberry Taskforce and participation by the Nursery and Garden Industry of Australia in the National Willows Taskforce.

CONCLUSION

National and regional management groups play critical roles in the management of weeds across Australia and provide benefits to organisations that become involved with such groups. This paper has highlighted some of the key achievements of these groups in providing a coordinated focus, increasing public awareness, facilitating information exchange and fostering effective partnerships. Other NWG achievements include the development of national maps and priorities for management (e.g. establishment of containment zones or eradication priorities); fostering effective on-ground management; helping prevent weed spread and conducting research into biological control and other management options. Despite such achievements by NWGs and RWGs, successful weed management ultimately relies on gaining the support and cooperation of all land managers, both rural and urban, across Australia.

So is it really all just WoNS and the same? Since its inception, the WoNS initiative has successfully raised public awareness and involved a broad range of people in weed management. However, major challenges still remain. NWGs have identified the continuation of funding, maintaining continuity of action after external funding has ceased and raising priorities for action where there is no economic benefit (e.g. environmental weeds) as the three most common challenges facing the national programs in future. In addition, numerous weed-specific challenges face each NWG. By working together and sharing information and resources to reduce the impacts of weeds, we can hope to overcome these challenges and make a long term commitment to weed management across the national landscape.

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