Prioritisation of Invasive Plants in DEC Regions

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Purpose of Presentation

- Provide an update on progress with the invasive plant prioritisation process being conducted at a regional scale in DEC.

Context to Invasive Plant Management in DEC

- Manage over 26m ha including more than 9% of WA's land area.
- Limited management responsibility for a further 89 m ha of UCL.
- Scale of land managed and available resources is an ongoing issue.

Expenditure on Invasive Plant Management in DEC

- 2008/09 expenditure - $3.08 million ($2.53 m recurrent, $0.55 m BCI) - including salaries, wages, O/H, vehicles and materials.
- Equates to:
  - 12 cents per hectare for 26m ha, or
  - Less than 3 cents per hectare for 115m ha

Aims of Prioritisation Process

To establish:

1. The weeds posing a threat to biodiversity
2. The biodiversity (and other assets) at risk from these weeds
3. The sites where control will have the greatest biodiversity benefit
4. Monitoring systems to show investment in control programs has resulted in progress towards original targets for undertaking weed control program.

Anticipated Process

- Species Prioritisation (commenced)
- Regional Weed Management Plans
- Asset-based Prioritisation (Biodiversity)
- Weed Management Guidelines
- Policy

Species Prioritisation Process

- Based on Environmental weed census and prioritisation, Swan NRM Region developed by Karen Bettink and Greg Keighery.
- Assess weed species by IBRA region within each DEC Region.

Species Prioritisation Process

List of species primarily developed from:

- "*The naturalised vascular plants of Western Australia 1: Checklist, environmental weeds and distribution in IBRA regions*" by Greg Keighery and Vanda Longman
- Florabase
- Other weed lists relevant to specific regions

Species Prioritisation Process

- Workshops –
  - Knowledgeable regional staff
  - Conducted over 2 - 4 days
  - Same fields discussed and ratings used across all regions
  - Some variation in process between regions
  - External stakeholder involvement

Potential Distribution	Area of potential habitat in the Region that could be occupied or the area at risk of invasion by the weed.	L M H E U	limited (localised) moderate high extensive (widespread) unknown
Current Distribution	Area of habitat in the Region currently occupied by the weed.	L M H E U	limited (localised) moderate high extensive (widespread) unknown
Survey Effort	Survey effort of IBRA	Nil Some Patchy Ext Com	Nil - 0% Some - 0-25% Patchy - 25-50% Extensive - 50-75% Complete - 75-100%
Abundance	Density class across one or more IBRA regions in the DEC Region.	occasional common abundant	light - Scattered individual plants (<10 populations or 1-10% of IBRA) medium – scattered patches with isolated plants interspersed (>10 populations or 11-50% of IBRA) Heavy – large dense infestations (>100 populations or 51-100% of IBRA)
Ecological Impact	Impact of species within the Region, from low (causes minimal disruption to ecological processes or loss of biodiversity) to high (causes acute disruption of ecological processes, dominates and/or significantly alters vegetation structure, composition & function of ecosystems).	L M H U	low impact species medium impact species high impact species unknown

Invasiveness	Rate of spread of a weed in native vegetation, encompassing factors of establishment, reproduction (time to seeding, seed production, vegetative reproduction) and dispersal (wind, water, flying animals, ground animals, deliberate human spread, accidental human spread, vehicles, produce contaminant).	S M R U	slow moderate rapid unknown
Feasibility of Control	The longer a coordinated control program takes to achieve its desired goal, the more expensive and less feasible it becomes. Key factors to consider include how widespread a weed is, ease of finding infestations, cost of controlling infestations, difficulty of limiting the weed's dispersal, willingness of landholders and governments to control the weed, and commercial use of the plant.	L M H U	low feasibility infestation medium feasibility infestation high feasibility infestation unknown
General Trend	General trend in distribution and abundance across the region	decreasing increasing stable unknown	
Status	Define whether the species is outside the region, considered emerging (density class of occasional), established (density class of common or abundant) or unknown	outside emerging established unknown	occurs outside the region but known from WA density class of occasional (see above) density class of common or abundant (see above) current status in doubt or unknown

Species Prioritisation Workshops

Completed in:

- Pilbara
- Midwest
- South West
- Goldfields
- Warren
- South Coast
- Wheatbelt

Yet to be completed in:

- Swan (Dec 2009)
- Kimberley (2010)

Outcomes from Species Prioritisation Process

- DEC Region prioritised list
- IBRA Region prioritised list (Regions to modify ratings as appropriate)
- Top ‘x’ prioritised list
- Alert List
- Gaps in knowledge identified

Example of DEC Region Prioritised List

Scientific Name	Common Name	Warren Region Notes	Pot Dist	Curr Dist	Survey Effort	Abundance	Ecological Impact	Invasiveness	Feasibility	General trend	Status
Agapanthus praecox		Diamond SF, Donnelly Huts. Widespread across the region.	H	L	Some	A	H	U	L	I	Est
Agave americana	Century Plant	Not widespread. Glennlyn	L	L	Some	O	L	L	H	D	Est
Allium triquetrum	Three-cornered Garlic	Widespread in Donnelly. Unknown from Frankland - needs survey effort	H	H	Some	A	H	R	L	I	Est
Ammophila arenaria	Marram Grass	Used in dune stabilisation. Creeping around Nornalup Inlet. Quite widespread across coastal areas of region.	U	L	Some	U	U	S	U	I	Est





Example of Top Priority Weeds

Scientific Name	Common Name	Warren Region Notes	Inv/Imp	Curr (U)	Curr (L)	Curr (M)	Curr (H)	Curr (E)	Pot (U)	Pot (L)	Pot (M)	Pot (H)	Pot (E)	Feasibility
Cortaderia jubata	Purple Pampas Grass	Around Manjimup industrial area. ALERT - needs to be controlled!!	HR		L							H		H
Pittosporum undulatum	Sweet Pittosporum	Frankland - still in relatively disturbed areas. Donnelly - growing in bush	HR		L							H		H
Acacia longifolia	Sydney Golden Wattle	Widespread throughout the region. More in northern/eastern areas of the region. Acacia longifolia subsp. Sophorae found in Gallamup NR. Limited locations within Frankland District.	HR			M							E	M





Outcomes from Species Prioritisation Process

Also,

- Greater awareness
- Documentation of species information

Where to from here?

- Regional Weed Management Plans
- Asset-based Prioritisation
- Weed Management Guidelines
- Policy revision
- Gap Analysis

Invasive Plant Website

- No central portal for providing invasive plant information to DEC staff and broader WA community.

- Housed on DEC Internet at www.dec.wa.gov.au/management-and-protection/invasive-plants/index.html

Thank you

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