National Willows Program

Weed Risk Assessment of Willows

Salix taxa in Australia

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Project Outline

- Determine the current distribution of naturalised willow taxa
- Produce risk assessments of some of the willow taxa present in Australia
- Produce interactive maps of the current and potential distribution
- Develop a national prioritisation matrix based on risk and feasibility for co-ordinated control
- Establish a process for monitoring change across Australia

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Why assess willows?

- **Prioritise willow management:**
  - identify which willows are the **biggest threat** to agriculture, environment, recreation
  - determine **where** willows could further invade
  - assist in determining State and regional willow **priorities**
- Identify “low risk” willows, for planting in **gardens**

Which willows to assess?

~ 300 species worldwide

>70 *Salix* species grown in Australia

The list for assessment

~ 20 taxa naturalised in Australia

- Willows that have naturalised overseas
- Willows exempt from noxious weed declaration
- Potentially ‘safe’ willows

= 32 taxa to be assessed & 3 subgenera

Which willows to assess?

Willow Groups

Genus *Salix*

Subgenus *Salix*	**Trees**
Subgenus *Vetrix* (syn. *Caprisalix*)	**Shrubs**
Subgenus *Chamaetia*	**Alpine**

- More easily identified
- Share many common features
- Hybrids between subgenera not common

Which willows to assess?

Trees

S. alba
– white willow

S. babylonica
- weeping willow

S. fragilis
– crack willow

S. nigra
– black willow

Shrubs

S. cinerea
– grey sallow; pussy willow

S. purpurea
– purple osier

S. viminalis
- osier

Subgenus *Chamaetia* Willows

S. serpyllifolia

S. glauca

S. retusa

Willows

Assessment method

Australian Standards

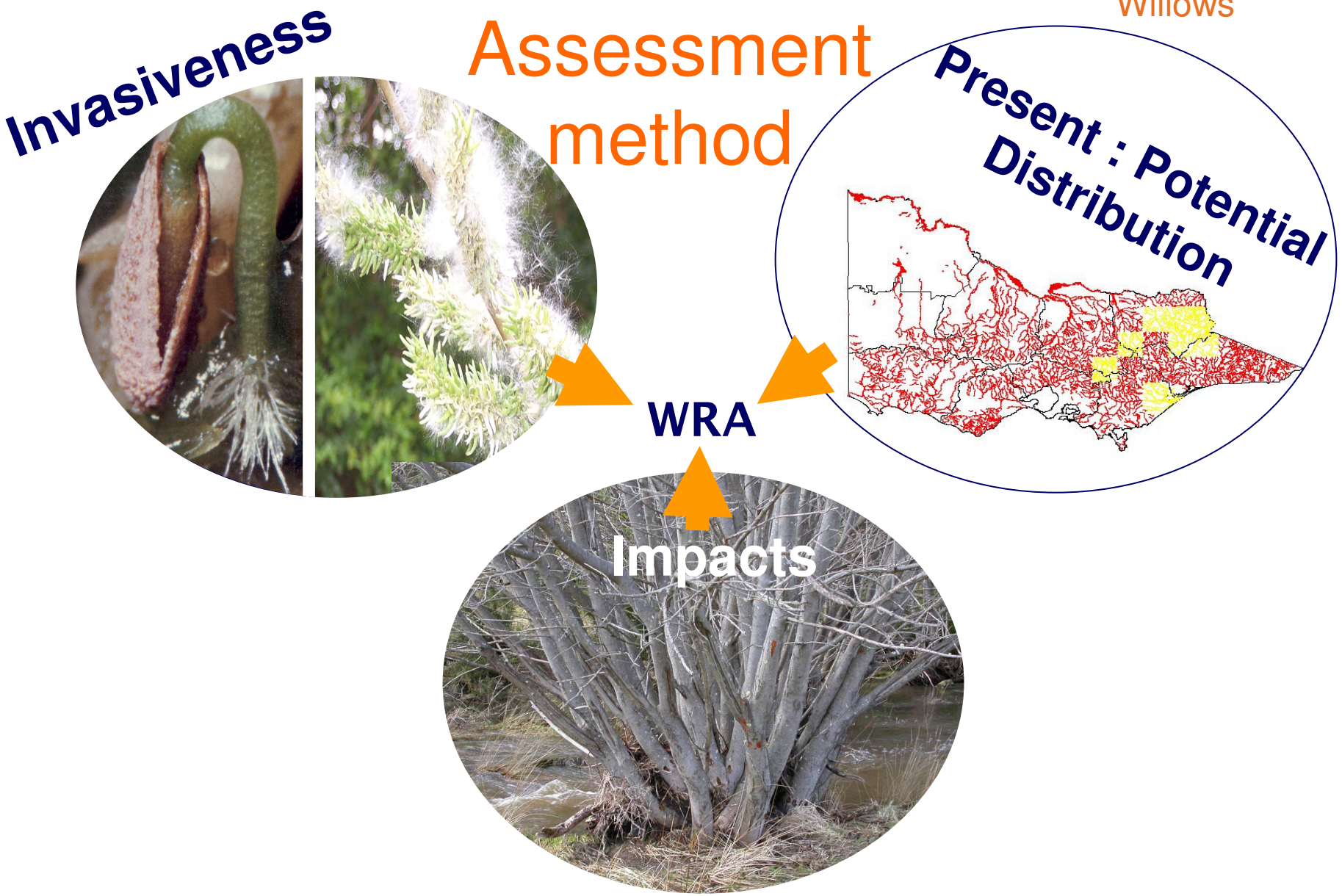
HB 294:2006

National Post-Border

Weed Risk Management Protocol

Willows

Assessment method



Willows

Rank by Invasiveness

Name	Invasiveness	Confidence
Salix cinerea	0.92	0.66
Salix purpurea	0.80	0.67
Salix exigua	0.63	0.66
Salix x rubens	0.61	0.66
Salix alba	0.60	0.64
Salix matsudana	0.60	0.63
Salix x sepulcralis	0.59	0.63
Salix x pendulina	0.59	0.63
Salix glaucophylloides	0.57	0.66
Salix nigra	0.57	0.63
Salix viminalis	0.56	0.67
Salix aegyptiaca	0.55	0.63
Salix fragilis	0.51	0.64
Salix humboldtiana	0.50	0.63
Salix x seringeana	0.46	0.26

Very high to Extremely invasive

Highly Invasive

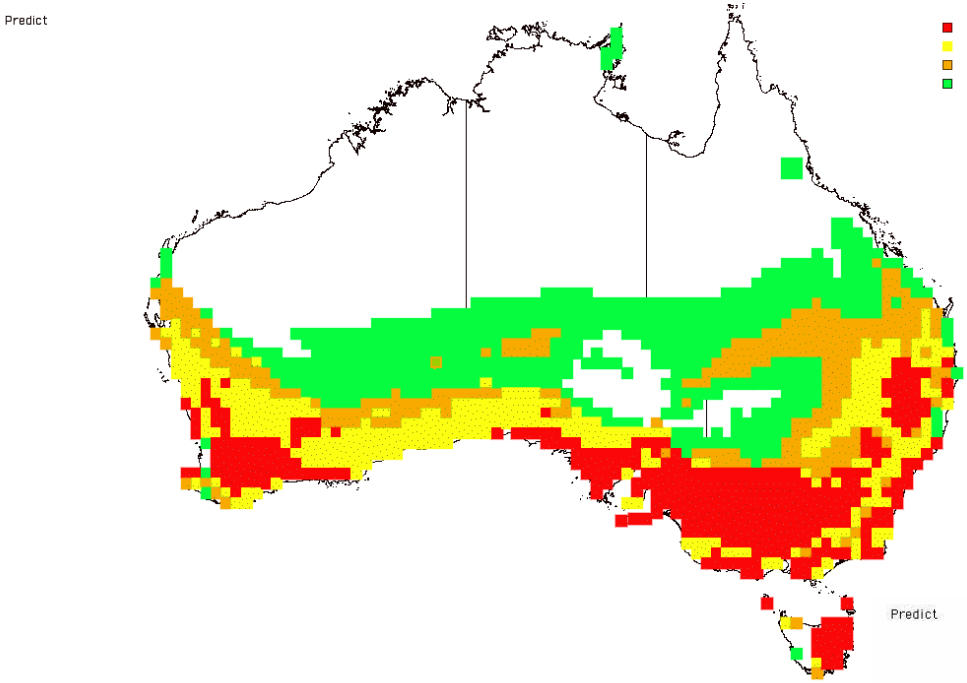
Moderately highly invasive

Moderately invasive

Potential Distribution

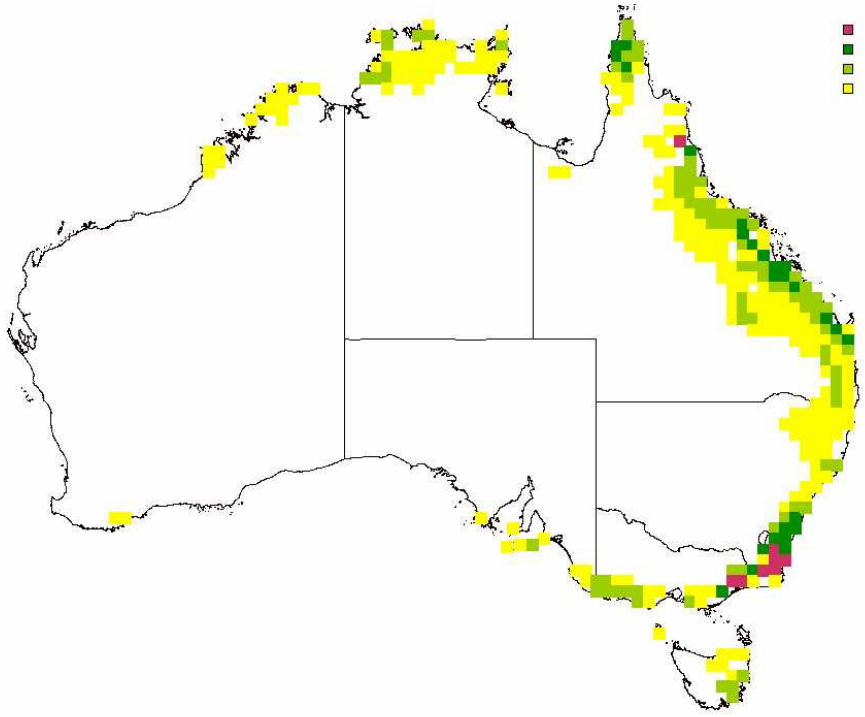
Weed Risk Assessment

Willows



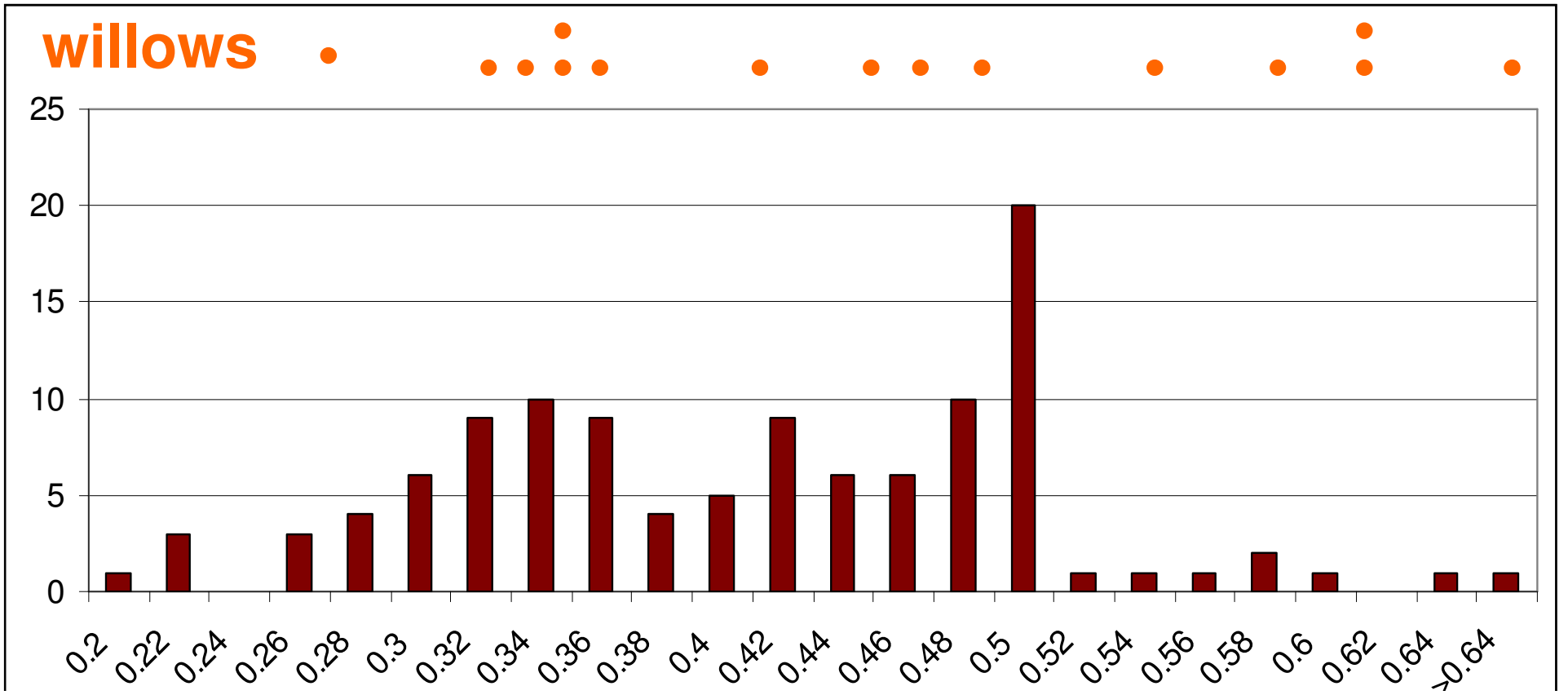
Australian climate match for
Salix fragilis

Australian climate match for
Salix humoldtiana



Willows

Impacts assessment



Victoria's noxious weeds

Impacts assessment

- Health and safety
- Root encroachment instream
- Hybridisation
- Ornamental value

Knowledge Gaps

Any observed **environmental/agricultural impacts** of following willows:
S. aegyptiaca, S. alba var. coerulea, S. daphnoides, S. eriocephala, S. myrsinifolia (syn. S. nigricans), S. pentandra, & S. X sericans.

- **Reproductive methods in Australia** (by seed/hybrids/vegetatively?):
S. caprea, S. daphnoides, S. gracistyla, S. myrsinifolia (syn. S. nigricans), S. matsudana X alba

- **The growth rate** of these willows:
S. daphnoides, S. elaegnos, S. triandra, S. X calodendron, S. X mollissima, S. X pendulina, S. X reichardtii & S. X sericans.

Any evidence of Salix subgenus Chamaetia (the alpine willows) becoming naturalised, anywhere in the world.

Setting Priorities

- Identify high risk species for particular regions

- Develop a strategic approach to willow control

Willows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the Vampire Slayer
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