

WORKSHOP NOTES
1ST INTERNATIONAL WORKSHOP ON WEED RISK ASSESSMENT
ADELAIDE 16-18TH FEBRUARY 1999

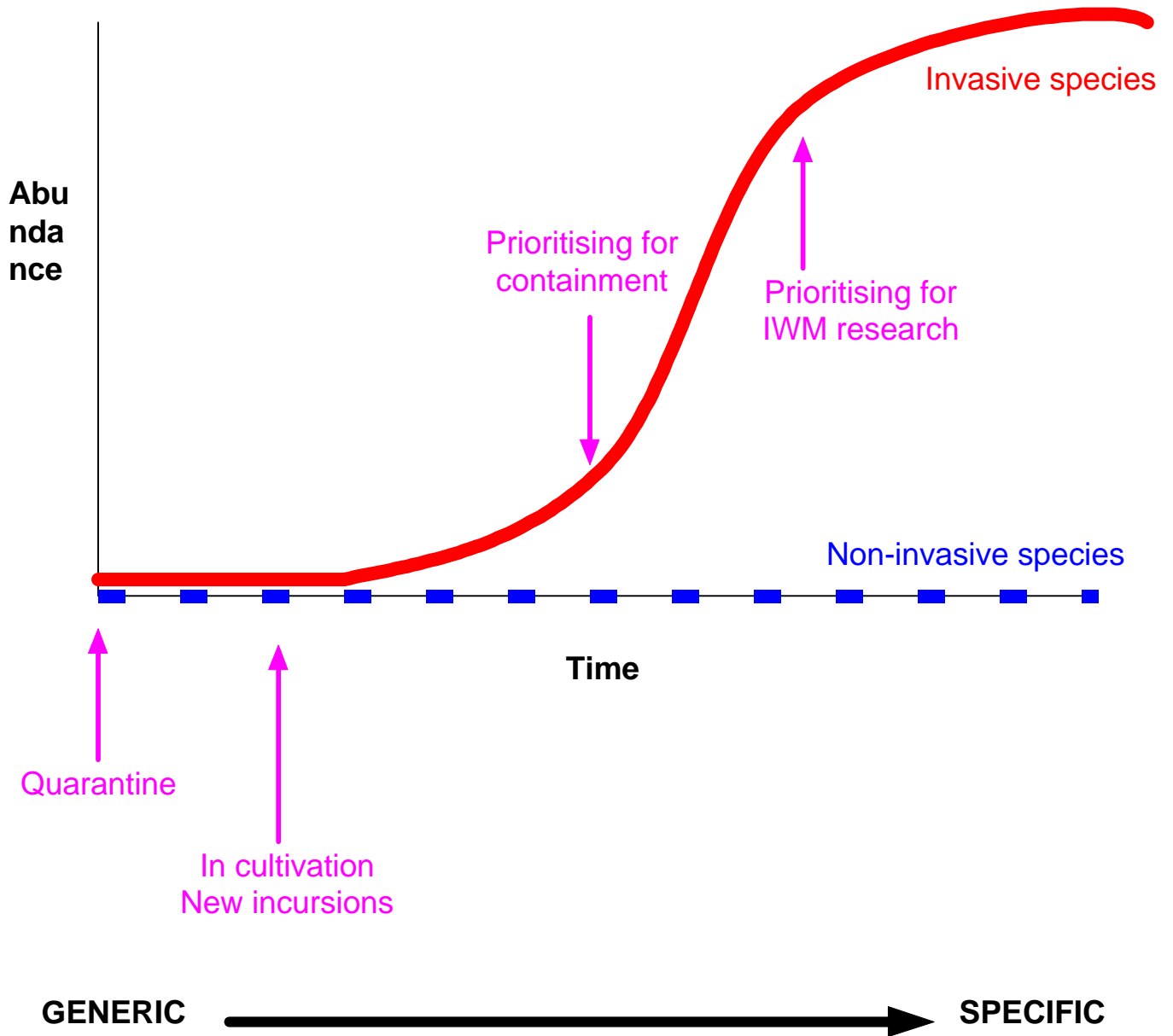
BURNING ISSUES / DEBRIEFS

WEDNESDAY MORNING

(Number of voting dots given to issue in brackets)

- Definitions of terms
- Where is information going (1)
- Impact and impact measurement (funding links) (2)
- Nexus between prediction and risk assessment (probability) (9)
- Links to world trade agreements (no conflict with agreements and risk assessment) (14)
- Holistic approach
- Economic analysis in absence of defined values (6)
- Whole notion of a generic scale – contexts
- "Quarantine" vs "Existing" (weed) mindsets in the discussion (1)
- Gap between quarantine barrier and evaluation of plants in the country but not yet a weed (21)
- Terminology: "Noxious": legal connotation
- Definition of audience
- Packaging of information for simple minded bureaucrats
- What we use to measure impacts: what people can relate to (4)
- Impact: a focus on "effect" (6)
- Value of early detection (11)
- "Species" vs overall perspective (1)
- Weed linkages to other natural resource management programs (2)
- Weed communities and making space for another weed
- Context is important for describing invasiveness and impact (2)
- Rate of spread to reach potential distribution
- Risk assessment vs impact assessment (1)
- Continuum of assessment (4)
- Two different systems needed for quarantine vs. prioritising (2)
- Scale dependent
- Template of core questions (17)
- Weed potential, weed impact – risk assessment?
- Who are the customers? (4)
 - What are their needs?
 - What questions are you answering?
 - What are the constraints?
- "Customer" changes along the continuum
- Search for information changes along the continuum (overseas/internal)
- Practicality - dearth of data to make practical decision (19)
- Education and awareness (5)

- Bureaucrats and public
- Integrity of the assessment system



NURSERY INDUSTRY ASSOCIATION VIEWPOINTS

1. Workshop participants were regularly mixing up processes to determine weed risk and tools to manage weed risks, eg. quarantine is a tool that can be used by a nation, a state, a region or even a landowner.
2. Nursery industry suffers from inconsistent approaches to determining declarations, noxious weed lists and so on. If State, National and local authorities can agree to more consistent approaches to determining "weed risk" life for our industry (which trades nationally) would be easier.

Ian Atkinson

Nursery industry feels there should be a workshop/meeting of national and state regulators to explore costs and benefits of improving consistency between regulatory systems (including weed risk assessment, control methods etc).

BURNING ISSUES / DEBRIEFS

THURSDAY MORNING

WHAT WE HAVE GOT SO FAR

- Stuck on pre-entry (this is straight forward)
- Great to meet people – opportunity to progress AFTER workshop
- Concern about transparency (→ researchers not involved in decision making "at the top") – all levels involved in decision making
- Information from working groups gone "into the ether"
- Working groups going around slightly different circles
- Appreciation of how Australia/US have gone
- Frustration – will we get to solving issues raised?
- Specialise more in groups (tackle different issues to progress more)
- Complexity of the process – systems developed for experts, but end users need to be involved (consulted) to make it useable
- Talk on potential distribution (Darren) → got a lot out of

MORE BURNING ISSUES

- Community education needed → community understanding of threat posed by invasive organisms → effect political process – legislation
- Call for international treaty limiting transfer of invasive weeds (eg CITES)
- How can we better restrict cross-border transport of problem plants?
- Why allow further introductions of exotic plants already established in Australia → more biotypes resistant to herbicides or bio-control
- Need to link outputs of climate models with GIS

OUTCOMES WANTED

- To work toward a generic system
- Commitment to share information
- Things "set in train" so as to not need a second conference (eg work groups)
- Resolve whether 'WE CAN PREDICT'
- A basic template for WRA – dynamic ... not on...
- Linkages between policy and research
- Go beyond quarantine
- How WRA fits existing trade agreements etc
- Prioritising problems, to be worked on – who to take further, how ⇒ small working groups
- Feedback from workshop groups
- Sort out the key questions we need to ask
- Discussion on dealing with species at the early part of the "entry/invasion" curve – sleepers, early invaders etc.
- Sense of urgency – need for national survey (small window of opportunity now)

WHERE TO FROM HERE

- People want different things – needed discussion of what people expected
- Establishment of a IPM network
- Involvement in modelling network

- Need to be challenged by others explain importance to
- Need to know form of outcomes of meeting and some actions to come out

INFORMATION FEEDBACK – HOW? WHEN?

- Verbal summation at end would help
- Written version later
- Something "to hang on to"
- Work on definitions - a group with Sarah Reichard

SESSION 5, THURSDAY 18TH - PRIORITISING WEEDS FOR CONTROL

WHAT ARE THE KEY PROBLEMS WE NEED TO ADDRESS?

- Uniform approaches
- Agrieved party must be able to come back and check system → transparency
- Definitions: "management" and "control"
- Resource allocation across agriculture/environmental/aquatic generic vs specific
- Equity and defensibility
- Communication tool

- Inappropriate political pressure – lack of mechanisms to deal with
- Control ability versus impact
- Feasibility criteria for eradication
- Who benefits? Who pays → priority
- Share data and experience – how?
- Lack of key data – where are they? Find more once start sharing?
- Weighting of core factors – additive? or multiplicative? invasiveness, impact, distribution
- \$\$ spent in past used to direct future priority
- ➔ educate to accept risk assessment
- Clarity of the rationale for decision making processes in Australia and NZ
- Generic system for different scales (geographic) and sectors (eg. agricultural, environmental) ??

BURNING ISSUES – TOP 6

1. Gap between quarantine barrier and evaluation of plants in the country but not yet weeds (22)
2. Practicality: Dearth of data to make practical decisions (19)
3. Template of core questions (17)
4. Links to World Trade Agreements (no conflict with agreements and risk assessment) (14)
5. Value of early detection (11)
6. Nexus between prediction and risk assessment (probability) (9)

WORKING GROUP ON ISSUE:

HOW TO COMBINE THE VARIOUS FACTORS INVOLVED IN ACHIEVING PRIORITIES FOR CO-ORDINATED CONTROL ?

WHAT IS THE ISSUE?

- how to weight and combine the core factors of invasiveness, impact and distribution
- whether to add or multiply or do something else

- Need to break questions into groups with similar basis for comparison \Rightarrow 3 separate scores for invasiveness, impact and distribution

- adding vs. multiplying:

A	B
1	1
2	2
3	3

$$1 \times 1 = 1$$

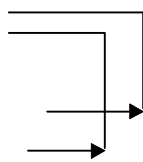
$$1 \times 1 = 1$$

$$1 + 3 = 4$$

$$1 \times 3 = 3$$

$$2 + 2 = 4$$

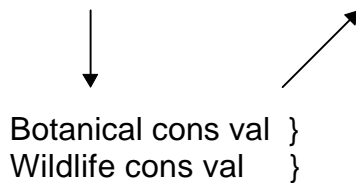
$$2 \times 2 = 4$$



- Multiplicative spreads the scores (\rightarrow "space to draw lines" between points/scores)
- If scoring criteria precise multiplicative has advantages (but potentially increases error)
- If scoring criteria imprecise then indifferent
- Multiplication has biological meaning
- use a hierarchical process / multi criteria analysis probably better

- Some scores may not be additive or multiply

(eg 2 related factors → take the higher score)



- Weightings
 - Need clearly defined principles
 - The question is very important – will determine how much emphasis you put on it;
 - the weightings sit behind the questions
 - you need to compare questions that have a common denominator
 - 'Judgemental' values are hard to validate
 - Have people recorded why they weighted how they weighted? (Assumptions on past research) → credibility?
- Multi-criteria analysis (weight and evaluate in groups of people, from different perspectives eg nursery industry, environmental)
- Can you pull out the critical decisions from the Victorian system/tool – yes, need to put a user-friendly front end on Victorian system
- Need to deal with the arbitrariness of the weighting
- How to sell (the process) to the people who have to use it (simple, understandable)
- Community involvement and acceptance and validation
- The end point is being able to compare like and distinguish differences
- Capture synergies
- ? National collection of data
- Set up a work group – bring in people from other disciplines (maths!) – Dane Panetta, Susan Timmins, John Randall (USA), Ray Maw, Philip Thomas, Paul Champion, Paul Jupp, John Weiss, David McLaren, John Randall (NZ), Alan Tye, John Virtue, Lisa Wainger, Randall Stocker, Alejandra Elizalde, Craig Walton
- Needs to be linked with activities of working group on core questions for WRA

WORKING GROUP ON ISSUE:

ACCESSING RESOURCES FOR MANAGEMENT DECISIONS

- Much information not published but there – how best to access?
- Sharing information – set up network
- Resource lists
- Some herbaria have databased collections:
 - Perth
 - MO Bot Gard
 - SI type collection
 - Others?
- Global "Weed Navigator"
- Registry of weed research projects and programs
- Some data is available at cost

ACTIONS

- David Cooke – websites with resources on weed distribution – emails for people who want to exchange that sort of information → mail out to interested parties (this group and others)
- Someone to compile registry of research projects (weed related)

COMPILATION WISH LIST

- Botanists that specialise in various families pto on line
- Funding for collation of information from "non-agency" people
- Published or other form of dissemination

WORKING GROUP ON ISSUE:

(TITLE OF TOPIC???)

Rebecca Bech, Colin Wilson, Carey Smith, Rod Lynch, Peter Williams, John Burley, Kate Blood, Rod Randall, Mark Williams

THE PROBLEM

- Lack of understanding, awareness
- Whole community
- Government - \$\$ for weed control on farms

ACTION

- Stage of involvement – development of systems
- Getting a cultural change
- Getting community to understand and value the external costs resulting from market failure
- Communicating feasible, logical management programs
- Addressing the Cause
- Better cost / benefit analysis
 - \$\$ spent using case studies
 - Historical information
 - Comparative case studies
- Real vs perceived benefits – real measurement
- Who – government agencies, high profile personality

WORKING GROUP ON ISSUE:

GAP BETWEEN QUARANTINE BARRIER AND EVALUATION OF PLANTS IN THE COUNTRY BUT NOT YET WEEDS (SLEEPERS)?

- Third tier of quarantine system → evaluate
- Illegal entries escaped
- How to identify?
- Which of the aspects we answered "yes" to are we most scared of
- Species just here → you have it in front of you therefore can be assessed (questions of biology)
- What do field people do about a found plant of concern – missed questions, not yet a weed of importance/national → early warning detection system
- Which (potential) sleepers are going to take off as weeds? (How can we tell?).
- Looking finding for the slope of the curve – what are the factors that influence slope?
- Needs full on monitoring of populations
- Management implications once a plant is in

STEP SYSTEM

1st Step

→ for plant you have identified

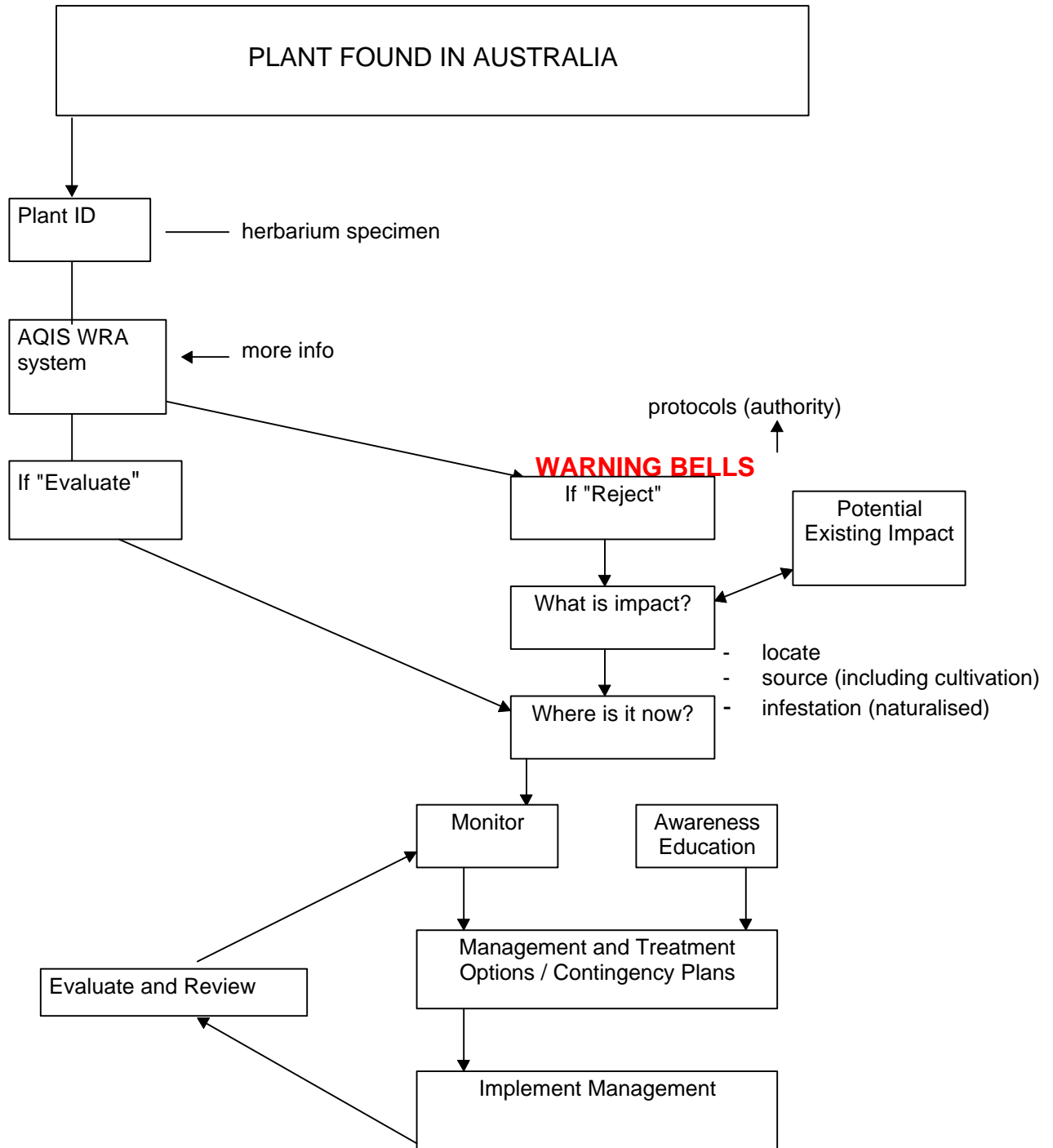
- apply WRA to something that hasn't been assessed (after correctly identifying the plant → problems with this)
- Find out its distribution in the country (→ ? in common cultivation, rare occurrences ?)
- Predicted impact on economy, environment – if minimal impact forget it/watch it?
- Look at plant → information, characters of significance/interest
- If restricted distribution → monitoring
- Assessment of capacity / capability to control / eradicate / contain / ignore
- Options available depend on where weed is found
- Model (mapped out on whiteboard) → some do it now "ad hoc" (does it work? sort of)
- Going back to questions on WRA → finding out more about the plant
- Who gets notified when the alarm bells go off? → Protocols → local jurisdiction → Office of Chief Plant Protection Officer
- What is the critical information that adds precision to decision about the plant on the pavement?:

- naturalised distribution
 - already know as a weed elsewhere
 - similarities to other big problem plants
 - "dirty dozen: questions of impacts
- Plants already here (naturalised), ticking over
 - Disruption / ecological cascades (eg. move to new location, other sex of species brought in to country) → major weeds
 - Could we build into system an enquiry about what would have to happen to trigger an impact ?
 - Resource limitations on evaluating these
 - Early warning systems with public
 - Focus on plants where there is some evidence currently of problems
 - Information flow from other countries helps sleepers to be recognised
 - need to expand the networks to include more countries
 - Action on this?

ACTIONS

- Kate – email discussion group "Weed Watch" → feed information into monitor/management loop of system.
- International Weed Science Society, Brazil, 2000 – taking a paper on this issue to the conference would raise the profile.
- CHAH → get Herbaria involved in networking / sharing information.
- Weeds people in the field best source of information about new plants → encourage them to send stuff in training to identify "risky" plants (eg. garden plants with anticipated potential to go weedy)

MODEL?



WORKING GROUP ON ISSUE:

UNIFORM APPROACH AND INFORMATION SHARING

Darren Kriticos, Gerry Mains, Peter Mackey, Iggy Honan, Ron Hiebert, Stefan Naser, Sarah Reichard, Paul Pheloung, Danny Joel, Philip Thomas (email list), David McLaren, John Thorpe, Rebecca Bech, John Virtue

(Prioritising weeds)

WHY IS THIS AN ISSUE?

- People are approaching from different levels, State, local..etc
- To avoid duplication of effort
- Strength of numbers
- More effective

WHERE DO WE NEED UNIFORMITY?

- In base data – criterion, template
- In decision making process
- In logic or rational depending on the situation more weighting to same criterion
- Already some uniformity on species characters – followed up on
- Two levels co-ordination - data sharing and criterion / decision making

HOW?

- Interest group on species (or groups of species)
- Email groups
- Workshops – national, state
- Data sharing – national
- Methodologies – global

MISSION STATEMENT FOR THE WORKING GROUP

KEY WORDS:

Template
Internet
Collation
Early Detection
Different scales and levels
Core questions to ask
Definitions

Methodology Information

Weed Risk Assessment Process (WRAP)

Development of a template that can be adapted to prioritise invasiveness plants at different scales and levels. This template would include explicit core questions and methods. Information sharing is a key aspect.

VISION/MISSION

Categories	Pre-entry	Post-entry
Impact	Question 1. Question 2. Question 3.	Question 1. Question 2. Question 3.
Invasiveness		
Distribution		
Controllability		
Landuse Value		

← Input various existing models into

GOAL: A superset of questions

WORKING GROUP

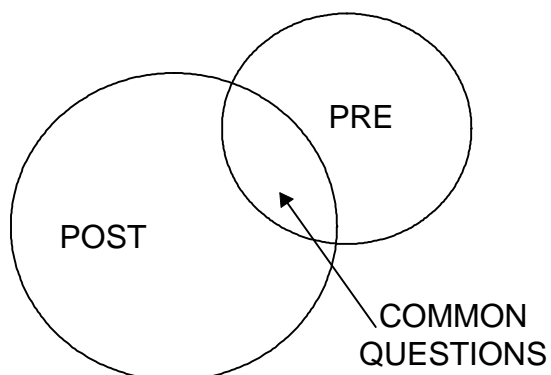
What are they going to do?

Develop the:

- 1 Categories
- 2 Sub categories
- 3 Develop the questions for 1 & 2

ACTION: Share sets of questions and see if we can develop an agreed set of questions

CORE QUESTIONS



- Union of both sets is the core questions
- Pre-entry questions are already available

ACTION: Testing Pheloung model and others on other countries data, particularly Sarah's core group of species tested with several models

- What questions have been asked? - collect all these questions
- Pull out the similar questions "superset" of questions
- Questions also need to be relevant
- Common definitions
- Assuming that a generic tool is going to work?
- IPCC already has a set of questions, worth examining

ACTION: Take different models and examine which of the questions in these models fit into "our" categories (action)

- Document these assessments and keep records
- Global, national or site level?
 - same but adapted to suit the system
 - national as BASE LEVEL of template
- Where should the uniformity start?
 - way forward → developing an effective tool to assess weed priority
 - metadatabase - needs to be expanded – formal arrangement
- Can the national approach be adapted globally? – May need adaptation
- System/procedure needs to be transparent – ADAPTABLE – similar to the law(?), these change as the situations change
- We need a formula for prioritising weeds, possibility as simple as:

IMPACT × INVASIVENESS × DISTRIBUTION

- Involvement of WTO, legal implications
- Global level – template (tool) for prioritising
 - WTO, IPCC

THE NEXT WORKSHOP?

Another workshop 2-3 years

Planning:

Alan Tye
Darren Kriticos
Richard Groves

Planning & Ed:

Sarah Reichard

Ed:

Peter McKay
Dane Panetta