How to do a PRA

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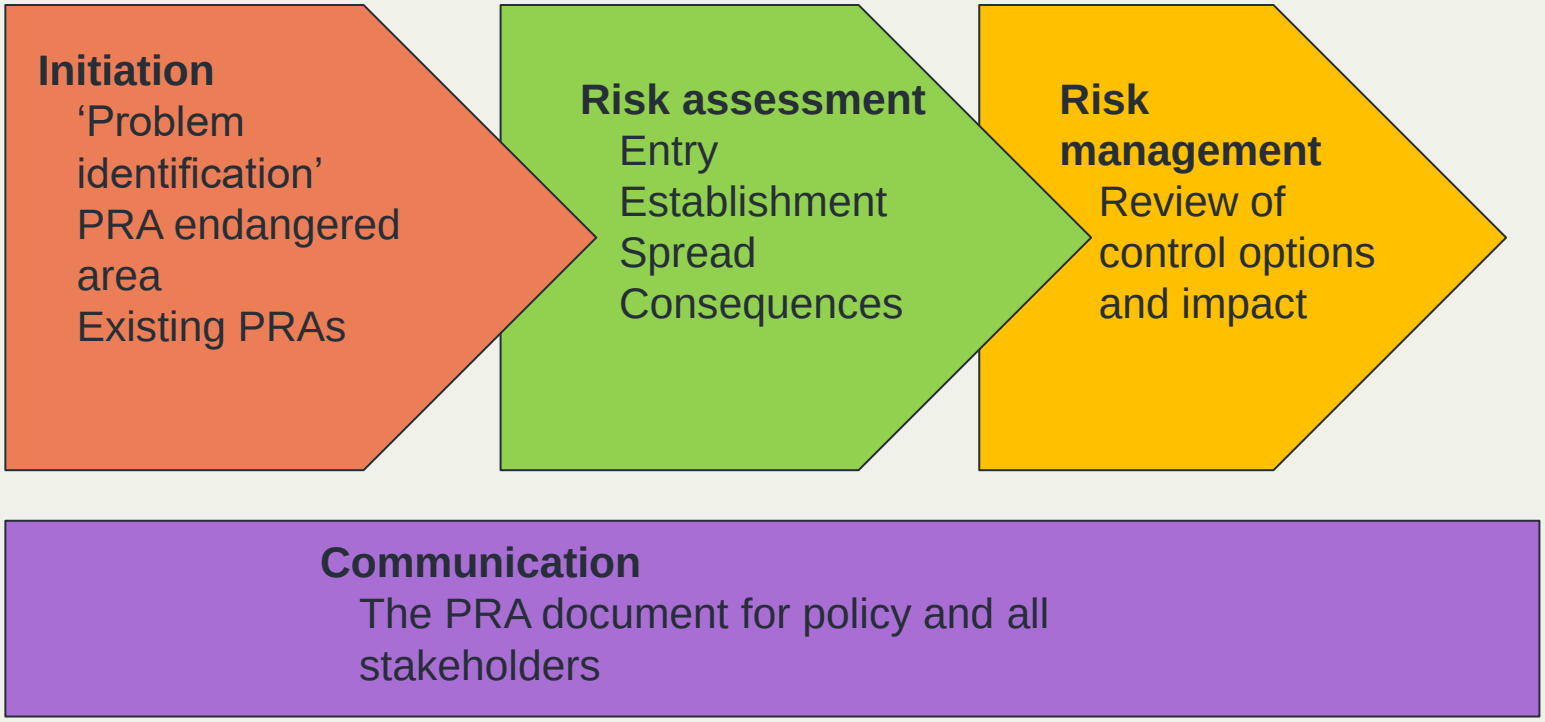
Purpose of a PRA

- To capture what is known and not known about the pest and pest pathways
- To assign risk and uncertainty to this knowledge with regards to the likelihood that the pest will gain entry, establish (if absent), spread and cause harm
- Harm can be economic, environmental and cultural
- To communicate to decision- makers areas of prioritisation

Stages of PRA

- PRA is a systematic approach to decide if a pest should be managed using legislation



Documentation

- The main elements to document are outlined in ISPM No. 1:
  - Purpose of the PRA
  - Pest, pest list, pathways, PRA area, endangered area
  - Sources of information
  - Categorized pest list
  - Conclusion of risk assessment
  - Risk management options identified
  - Options selected

- Supports the IPPC key principle of transparency

Systematic review of information

- PRA needs to conclude on a defensible outcome, that can not be seen as biased by the information considered
- Systematic review provides a set of rules that defines:
  - What information is gathered
  - How you give credibility to information i.e. peer or non-peer review
- Example of rules:
  - What information data bases will you search/not search
  - What terms are you to search for e.g. pest names, technical terms
  - What combination on terms
  - What time period will you restrict your self to
  - Filter results by expert opinion

Example

Table 2: Combination of search terms used.	
Set #	**Combination of search terms**
1	*Pseudomonas pseudoalcaligenes* subsp. *citrulli*
2	*Pseudomonas avenae* subsp. *citrulli*
3	*Acidovorax avenae* subsp. *citrulli*
4	*Acidovorax citrulli*
5	set1 OR set2 OR set3 OR set4
6	set5 AND identify*
7	set5 AND detection
8	set5 AND diag*
9	set5 AND pcr
10	set5 AND fatty acid
11	set5 AND biolog
12	set5 AND monoclonal
13	set5 AND polyclonal
14	set5 AND elisa
15	set5 AND character*
16	Set5 AND (identify* OR detection OR diag* OR pcr OR fatty acid OR biolog OR monoclonal OR polyclonal OR elisa OR character*) which is identical to Set6 OR set7 OR set8 OR set9 OR set10 OR set11 OR set 12 OR set13 OR set14 OR set15

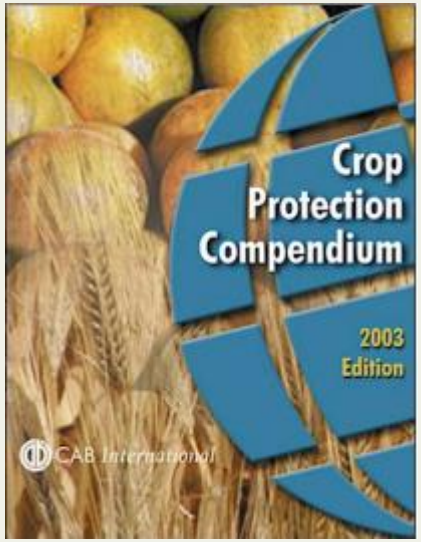
- OVID Host (http://ovidsp.ovid.com/ovidweb.cgi?T=JS&MODE=ovid&PAGE=main&NEWS=n&DBC= y&D=cbuf) including the following databases:
  - Plant Protection from 1973 -2010
- ISI Web of Knowledge (http://isi02knowledge.com/), including the following databases:
  - Science Citation Index Expanded, 1970-
  - Social Science Citation Index, 1970
  - Arts & Humanities Citation Index, 1975
- AGRICOLA (http://agricola.nal.usda.gov/), including the following databases:
  - Article Citation database
  - NAL Catalog

Search results

TABLE 4: Reasons for screening out the abstracts		
Reasons for screening out	**Total number of abstracts**	**% of pool**
1) abstracts not relevant to pest (from title and abstract)	97	58.8
2) abstracts relevant to pest but not to detection or identification methods	11	6.7
Total number of removed papers	**108**	65.5
Total number of papers for evaluation	**57 (*i.e.* 165-108)**	34.5

Sources of information

- Comprehensive summaries of information
  - CABI Crop Protection Compendium
  - Quarantine Pests for Europe
- All information from single source is impossible due to:
  - Rapid changes in events
  - Country specific information required
  - Some data are incomplete, or vary, e.g. trade pathways



Example of a PRA template

Any questions!

- If you have any questions please feel free to contact:
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Stages of PRA

- Pest Initiation PRA
  - Establishing reasonable cause to progress a PRA
- Pest Risk Assessment
  - Establishes probability of pest entry, establishment (introduction) and spread
  - Associates direct and indirect consequences of pest in terms of commercial, environmental and social metrics
- Pest Risk Management
  - Evaluation of additional control practices; cost and benefit, likelihood of adoption etc
- Communication
  - Reconcile the PRA outcomes with opinions of multiple stakeholders