



Pest Risk Analysis (PRA) Stage 2: Pest Risk Assessment



Pest Risk Analysis (PRA) Training



Uncertainty



Pest Risk Analysis (PRA) Training



Uncertainty

- Uncertainty is inherent to PRA
 - Using historical data to predict the future
 - Using data from one area to predict behaviour in another
- Complete information is rarely available



Uncertainty

- In ISPM No. 11
- Document areas of uncertainty and degree of uncertainty
- Necessary for transparency and to identify future research needs



Uncertainty

- Identifying uncertainty
- Reducing uncertainty
- Documenting uncertainty



Identifying uncertainty

- Sources of uncertainty include:
 - Incomplete data
 - Inconsistent or conflicting data
 - Imprecision or variability in data
 - Flaws in methodology
 - Subjective judgement
 - Lack of expertise



Sources of uncertainty

- Data
 - Missing, inconsistent, conflicting, imprecise
- Judgement
 - Subjective, time-limited, expertise-limited
- Methodology
 - Undeveloped, untested, inconsistent, not repeatable, pathways not considered or described inappropriately
- Other
 - Pest & human behaviour, random events, unexpected events, complexity of biological systems



Reducing uncertainty

- Collect more data
- Validate data with observations
- Statistical analysis
- Research
- Use original sources
- Expert consultation / peer review



Degree of uncertainty

Rating	Uncertainty
Very high	Little or no information – “Best guess”
High	
Moderate	
Low	
Very low	Extensive, peer-reviewed information



Documenting uncertainty

- Documenting uncertainty contributes to transparency
 - Define terms
 - Describe all plausible scenarios
 - State assumptions
- Use your judgement
 - Experience brings confidence



Uncertainty table

Element	Rank	Uncertainty
Probability of Entry	High	Low
Probability of Establishment		
Probability of Spread		
Direct Consequences	Low	High
Indirect Consequences		
Overall Risk		



Conclusion

- Uncertainty is an inherent part of PRA
- Documenting uncertainties and assumptions in PRA is a part of being transparent (IPC principle)