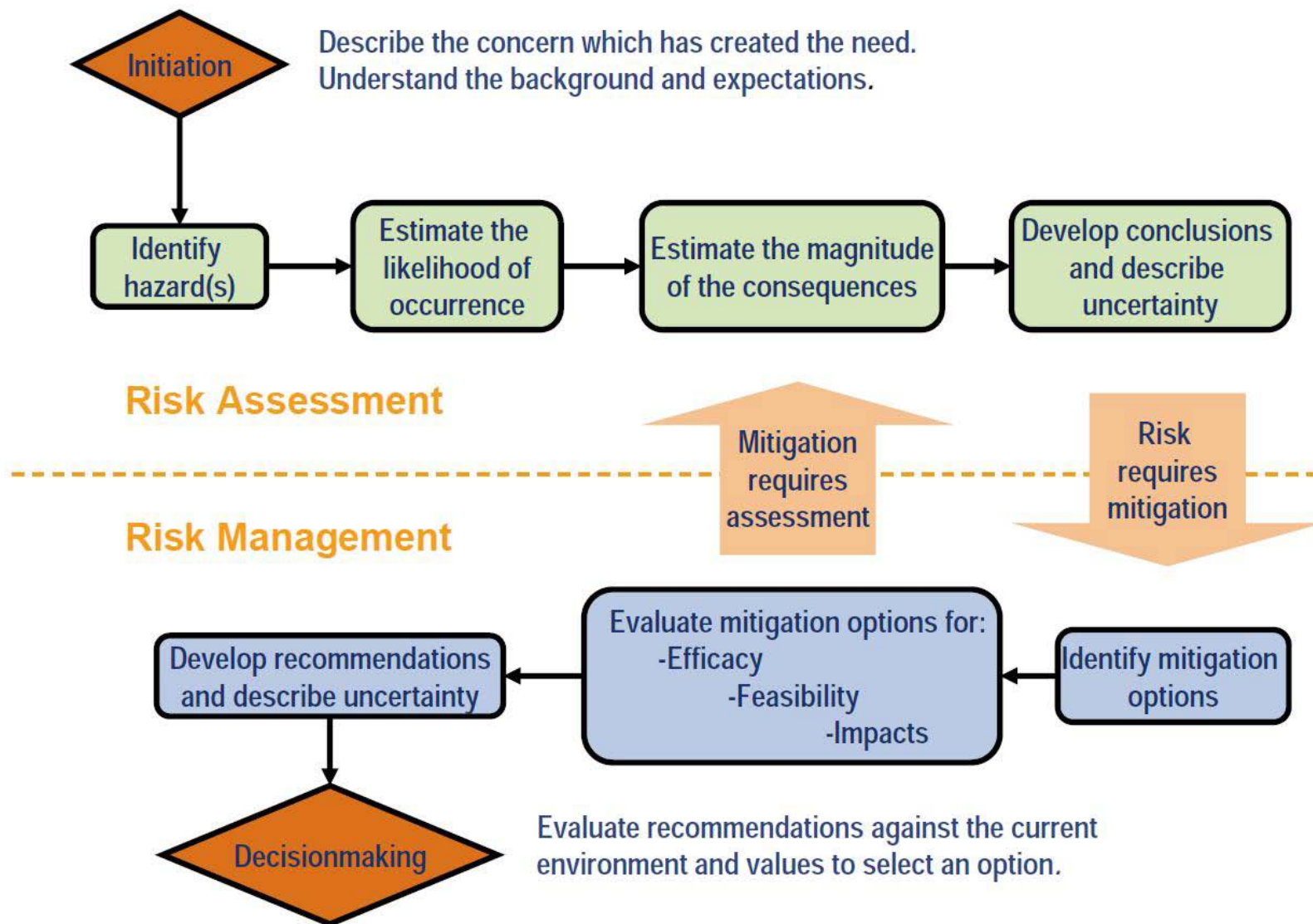


Risk Analysis: Definition

- **Initiation**
- **Risk Assessment:** evaluation of the likelihood and consequences of the introduction and establishment of an alien species.
- **Risk Management:** identification and evaluation of measures to mitigate identified risks.
- **Risk Communication:** communication of the results of the risk assessment and potential management measures to the responsible decision-making authority.
- **Decision-Making Process**

Risk Analysis: Diagram



Risk Analysis: Types

- 1) Screening
 - 2) Trait-based Evaluations
 - Questionnaires
 - Statistical models
 - 3) In-depth Quantitative and/or Qualitative
- Species: evaluation of a particular alien species
 - Pathway: evaluation of a means for the entry and spread of an alien species
 - Evaluate single/multiple alien species across single/multiple pathways
 - Focus on chain of events for analyzing risk and management measures (HACCP)
 - Compare/rank risk presented by multiple pathways

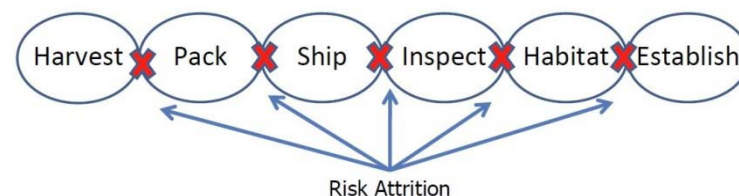
FAST/CURSORY



SLOW/RIGOROUS

Risk Analysis: Considerations

- Qualities: science-based, transparent, replicable
- Context: legal or institutional basis (ALOP/ALR)
- Data and resource availability
- Uncertainty
 - Methodology
 - Assessor/human error
 - Organism/environment
- (Re)Applicability of tools in other locations
- Gaps and omissions (e.g., pathogens/disease, unlicensed/illegal trade)
- Risk mitigation and HACCP/systems approach



Risk Analysis: Questions

- Whether and how to support risk analysis as a tool?
- Appropriate level of specificity re guidance around risk analysis methodology?
- Availability or development of relevant risk analysis examples and case studies?
- Attention to information and capacity needs (see UNEP/CBD/IAS/AHTEG/2/2 Annex 2)?
- Missing or under-stressed aspects?

Risk Analysis: Examples

Species

- IPPC ISPM11 Pest Risk Assessment
- CEC Risk Assessments for Snakehead (*Channidae*) and Armoured Catfish (*Loricariidae*)
- USFWS Chytrid Fungus (*in process*)

Pathways

- NAPPO RSPM31 Guidelines for Conducting Pathway Risk Analysis (*draft*)
- US ANSTF/NISC Training and Implementation Guide for Pathway Definition, Risk Analysis and Risk Prioritization
- Risk assessment Models for Establishment of Exotic Invertebrates in Australia and New Zealand
- Australia Risk Assessment Model for the Import and Keeping of Exotic Reptiles and Amphibians
- Florida Pathway Risk Analysis for Exotic Ornamental Marine and Estuarine Species

Capacity development tools

- IPPC risk assessment capacity tools
- Standards and Trade Development Facility
- GEF and Cartagena Protocol on Biosafety activities