Rapid Risk Assessment

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Definitions

• **Risk** – for risk assessors, the likelihood and consequence of a hazard occurring

• **Risk Assessment** – the framework for answering a risk question with appropriate evidence, uncertainty, assumptions

• **Rapid** – may depend on the situation but possibly 24-48 hours after the risk is identified
Risk Identification

- Something **old** – increase in cases – as seen with every season for example
- Something **new** – new pathogen with unknown pathogenicity
- Something **borrowed** – jump to new geographic area or new species of a known pathogen
- Something **blue** – increased mortality or morbidity
HPAI – the seasonal incursions

Worldwide outbreaks of HPAI in poultry and wild birds
Jan 2019 - April 2019
Overlay: the wild bird migration flyways
ASF – moves into new geographic areas
FMD – changes in the strain pathogenicity

Official OIE status for Foot and Mouth Disease with distribution of endemic viral pools and outbreaks reported in 2019
Rapid Risk Assessment

• Standard risk question: eg the risk of pathogen A carried in commodity B from area X to area Y during T time

• By including these points, you can generally cover most options
  • Imports arising from outbreak areas;
  • Licensing during outbreaks;
  • Simple pathway assessments;

• Qualitative score of the risk level

• Not always necessary to conduct an in-depth assessment of the exposure or the consequence

• Can be used to highlight the uncertainty and gaps in knowledge
Risk assessment team ensures continuity

- In emergency situations, there must be resource and capacity for all the roles
- Therefore do not rely on a few people only for carrying out the RAs
- The team should have a common understanding of risk assessment, terminology, uncertainty and qualitative levels
- Assemble a team in peace time who would include
  - Disease specialists
  - Epidemiologists
  - Risk analysts
  - Trade data and mapping specialists
  - Entomologists
  - Public health specialists
  - Wildlife specialists
  - Etc
Risk Management

• These are often emergency risk assessments where time is paramount;

• There may be occasions where the risk manager is content to allow the analyst to communicate to the operations teams when action is required;

• This should be agreed in advance, eg:
  • For licensing moves during outbreak, the risk assessor may suggest that certain risk management measures to reduce the risk to an acceptable level
  • For imports, the RA may highlight which consignments to check
International activity

- FAO rapid risk assessment guidance – including the Tripartite risk assessment process for zoonotic threats
- EFSA rapid risk assessment tools – G-RAID project looking at 7 different models from different EU MSs
Key conclusions:

- **Similarities**
  - Tools designed for rapid risk assessment
  - All able to prioritise between disease, pathway and/or region
  - All acknowledged the need for some disease expertise.
  - Same data sources to estimate movement from one area to another and prevalence in the area of origin.
  - Resolution limits the tools ability to evaluate intervention strategies (but not their primary aim)

- **Differences**
  - Different outputs/end points
  - Level/type of expertise needed to use (computing, risk assessment).
  - Inclusion of uncertainty/variability not universal.

- **Overall conclusion:** despite the different methods/objectives and independent development the tools have much in common
What an RRA cannot do

• It cannot provide a quantitative result;
• No in-depth assessment of effectiveness of control measures or to compare different control measures;
• Uncertainty cannot be expressed as mathematical error;
• It assumes there are no changes to the current system;
• There is no time to undertake complex modelling or research to improve the data.