NORA
- a rapid tool for qualitative release risk assessment

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Background

The NORA rapid risk assessment tool was developed for the changing situation in the disease status of easily transmissible animal diseases in neighbouring countries or in countries with noticeable interactions with Finland. The goal was to develop a fast and robust tool that will provide acceptable repeatability and reliability in order to support risk management decisions related to rapid changes in disease risks.

Methods

The model contains 63 questions which define the potential for entry and exposure by nine different pathways (**Figure 1**). 23 statements assess the magnitude of consequences. The weight of different pathways is defined according to the properties of the assessed disease. The model was built as an Excel-spreadsheet and its use does not require advanced computer skills. NORA is constructed for the use of animal health control administrators.

The model runs through four different steps.

1) identify the relevant pathways.
2) perform the assessment of entry and exposure: estimation of the probability of a hazard being introduced to Finland and susceptible animal getting exposed to the hazard. This can be called the probability of the first introduction.
3) assess consequences: consequences include economic and health aspects.
4) fourth step is optional and combines the results into an overall risk estimate.

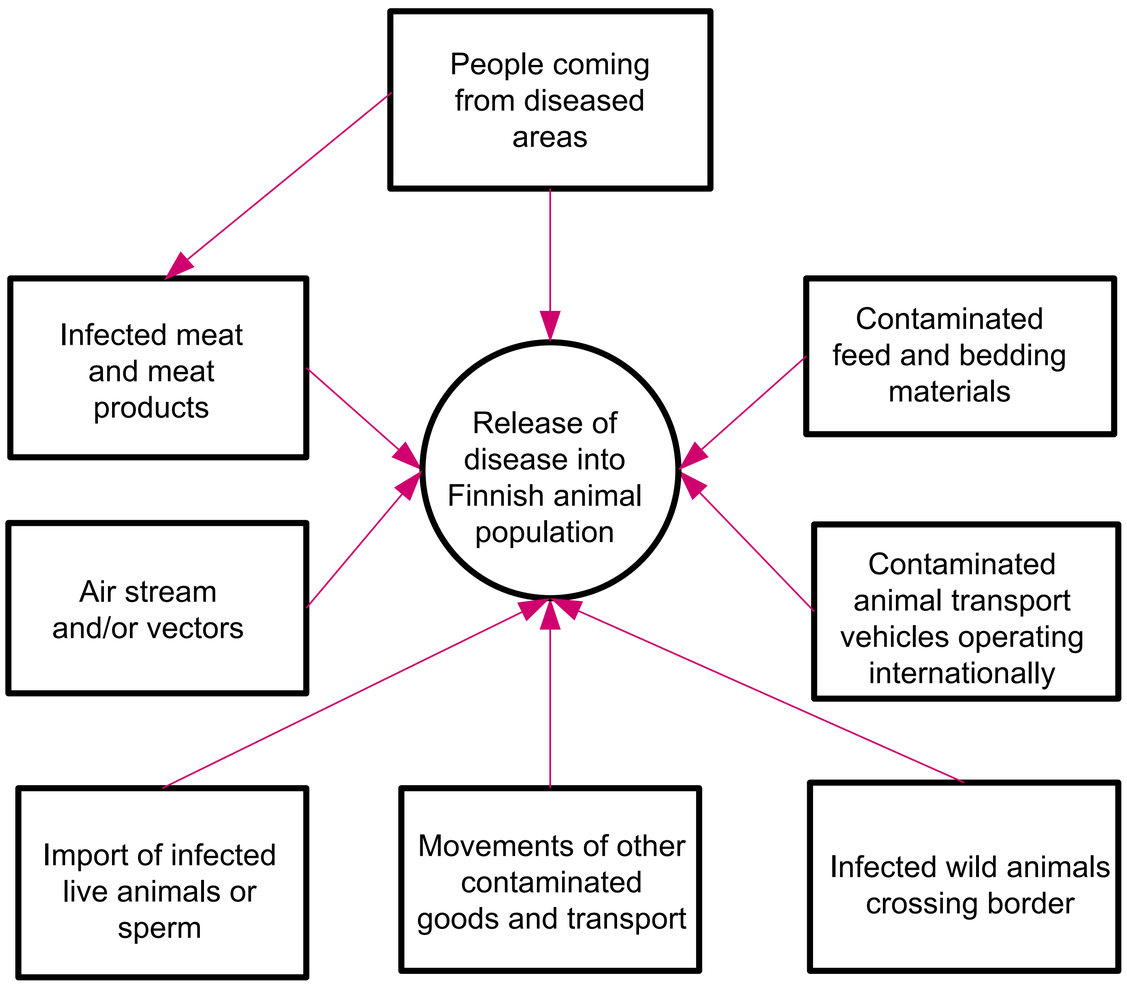

Figure 1. The pathways identified for entry of diseases

Summary

- **NORA is a rapid risk assessment tool for animal disease entry and exposure**
- **Nine different entry pathways are considered**
- **As an outcome, NORA gives the most possible entry pathways, the probability of the risk of introduction, the consequences and an overall risk estimate**

The principles of the model

In each pathway there are two sets of questions for entry and consequence assessment. The first set of questions defines if that pathway is relevant for the scenario. If it is relevant, the other set of questions defines the probability of that pathway. These pathways are relevant only if the entry of the disease is possibly followed by an exposure of a susceptible animal.

The probability of a pathway is a product of the questions defining the possibilities and magnitudes of certain actions that are risk related. Disease specific weights are used to change the importance of different pathways. After weighting, the probabilities of different pathways are summed and scaled by the maximum value of the sum.

Finally, the model gives an overall estimate for the consequences and a combined risk estimate.

Different scenarios can easily be constructed and compared in order to account for the uncertainty of the situation being assessed. Model repeatability and reliability were assessed by an expert panel.

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