**QUESTIONNAIRE FOR EVALUATION OF THE RISK-BASED SURVEILLANCE DESIGN METHODOLOGY**

|  |  |
| --- | --- |
| Code questionnaire |  |
| Date |  |
| location |  |
| Name of interviewee |  |
| position |  |
| Name of interviewer |  |

# Table of content

[Part 1: Selection of the hazard 5](#_Toc393977159)

[1- General informations 5](#_Toc393977160)

[2- Motivations for using risk concepts in hazard selection 6](#_Toc393977161)

[3- Persons involved in hazard selection 7](#_Toc393977162)

[a- Main actors of the hazard selection 7](#_Toc393977163)

[b- Partners of the hazard selection 7](#_Toc393977164)

[4- Method of surveillance object selection 9](#_Toc393977165)

[a- RISK ASSESSMENT 11](#_Toc393977166)

[b- MULTI CRITERIA DECISION ANALYSIS 24](#_Toc393977167)

[Part 2: surveillance components 26](#_Toc393977173)

[1- General informations 27](#_Toc393977175)

[2- Motivations for conducting a risk based surveillance 30](#_Toc393977176)

[3- Persons involved in the surveillance component design 31](#_Toc393977177)

[a- Main actors of the surveillance component design 31](#_Toc393977178)

[b- Partners of the risk based surveillance design 31](#_Toc393977179)

[4-Method of population strata selection 34](#_Toc393977180)

[a- RISK ASSESSMENT 35](#_Toc393977182)

[b- NETWORK ANALYSIS 47](#_Toc393977183)

[c- SPATIAL RISK ANALYSIS 50](#_Toc393977184)

[d- IDENTIFICATION OF RISK FACTORS 54](#_Toc393977204)

[e- MODELLING OF DISEASE SPREAD 56](#_Toc393977205)

[QUESTIONNAIRE SUMMARY 57 2](#_Toc393977158)

# Part 1: Selection of the hazard

### General informations

|  |  |  |  |
| --- | --- | --- | --- |
| What is the situation of the selected surveillance hazard? | Endemic | Yes  No | |
| Sporadic | Yes  No | |
| Free | Yes  No | |
| Exotic | Yes  No | |
| Re-emerging | Yes  No | |
| New | Yes  No | |
| Situation varies | Yes  No | *Describe:* |

|  |  |  |
| --- | --- | --- |
| **Selection of hazard was done using a method integrating risk concepts?**  *Concepts of risk in the design of surveillance programs refer to the likelihood of hazard occurrence and its consequences* | | Yes  No |
| **If no,** | **How the hazard was selected?** | |
|  | |
| * **GO TO Part 2** | |
| **If yes,** | **Next question** | |

### Motivations for using risk concepts in hazard selection

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| What reasons led to the integration of risk concepts in hazard selection? | | | | | | |
| Improving performances | Yes  No | | | | | |
| Limited economic resources | Yes  No | If yes, an economic evaluation was conducted? | Yes  No | If yes, of which type? | | |
| cost analysis | | Yes  No |
| cost-effectiveness | | Yes  No |
| cost-benefit | | Yes  No |
| other | | *Describe:* |
| Limited human resources | Yes  No | | | | | |
| Recommendation | Yes  No | *If yes, :* | | | | |
| Of whom? | | | some funds depend on the implementation of the recommendations? | |
|  | | | Yes  No | |
| other | *Describe:* | | | | | |

### Persons involved in hazard selection

#### Main actors of the hazard selection

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Name** | | |  | | **organism** | **qualification** |
|  | | |  | |  |  |
|  | | |  | |  |  |
|  | | |  | |  |  |
|  | | |  | |  |  |
|  | The main actors of the hazard selection have they received a special formation or training in risk-based approach? | | | | | |
| Yes  No  Don’t know | |  | | *If yes, specify organism and duration:*  *Name 1:*  *Name 2:*  *Name3:*  *Name4:*  *…*  *…*  *...* | | |

#### Partners of the hazard selection

|  |  |  |  |
| --- | --- | --- | --- |
| External partners were involved in the hazard selection? | | | |
| Yes  No | | *If yes, specify organism:*  *Partner 1:*  *Partner 2:*  *Partner 3:*  *Partner 4:*  *…*  *…*  *…* | |
| *Partner 1:* | | | |
| To which extend are they involved in the hazard selection? | | | |
| They conduct all the hazard selection with data that they collected themselves? | | | Yes  No |
| They conduct all the hazard selection resting on the data collected by the activities of previous surveillance components? | | | Yes  No |
| They conduct all the hazard selection resting on the data collected by the previous surveillance components and on limited consultations of the actors of the surveillance? | | | Yes  No |
| They conduct all the hazard selection in close collaboration with the actors of the surveillance? | | | Yes  No |
| They play a role of consultancy in the hazard selection and the actors of the surveillance mainly conduct the hazard selection process? | | | Yes  No |
| Other | *Describe:* | | |
| *Partner 2:* | | | |
| To which extend are they involved in the hazard selection? | | | |
| They conduct all the hazard selection with data that they collected themselves? | | | Yes  No |
| They conduct all the hazard selection resting on the data collected by the activities of previous surveillance components? | | | Yes  No |
| They conduct all the hazard selection resting on the data collected by the previous surveillance components and on limited consultations of the actors of the surveillance? | | | Yes  No |
| They conduct all the hazard selection in close collaboration with the actors of the surveillance? | | | Yes  No |
| They play a role of consultancy in the hazard selection and the actors of the surveillance mainly conduct the hazard selection process? | | | Yes  No |
| Other | *Describe:* | | |
| *Partner 3:* | | | |
| To which extend are they involved in the hazard selection? | | | |
| They conduct all the hazard selection with data that they collected themselves? | | | Yes  No |
| They conduct all the hazard selection resting on the data collected by the activities of previous surveillance components? | | | Yes  No |
| They conduct all the hazard selection resting on the data collected by the previous surveillance components and on limited consultations of the actors of the surveillance? | | | Yes  No |
| They conduct all the hazard selection in close collaboration with the actors of the surveillance? | | | Yes  No |
| They play a role of consultancy in the hazard selection and the actors of the surveillance mainly conduct the hazard selection process? | | | Yes  No |
| Other | *Describe:* | | |
| To which extend are they involved in the surveillance object selection? | | | |
| *Partner 4:* | | | |
| To which extend are they involved in the hazard selection? | | | |
| They conduct all the hazard selection with data that they collected themselves? | | | Yes  No |
| They conduct all the hazard selection resting on the data collected by the activities of previous surveillance components? | | | Yes  No |
| They conduct all the hazard selection resting on the data collected by the previous surveillance components and on limited consultations of the actors of the surveillance? | | | Yes  No |
| They conduct all the hazard selection in close collaboration with the actors of the surveillance? | | | Yes  No |
| They play a role of consultancy in the hazard selection and the actors of the surveillance mainly conduct the hazard selection process? | | | Yes  No |
| Other | *Describe:* | | |

### Method of surveillance object selection

|  |  |  |
| --- | --- | --- |
| Which method was used to select surveillance object? | | |
| Risk Assessment | Yes  No | If yes, go to part a |
| Multi criteria decision analysis | Yes  No | If yes, go to part b |
| other | *Describe:* | |

#### RISK ASSESSMENT

##### DATA

**Data collection**

|  |  |  |
| --- | --- | --- |
| Which source(s) did you use to gather information to inform the choice of the population strata? | | |
| Scientific publication | Yes  No | Give reference: |
| Technical report | Yes  No | Give reference: |
| Internet grey literature data | Yes  No | Give source: |
| Personal information from contact | Yes  No | Give details: |
| Personal information from other person | Yes  No | Give details: |
| Experts recommendation | Yes  No | Give details: |
| Instruction from ministry | Yes  No | Give details: |
| Animal disease surveillance components already implemented | Yes  No | |
| Other | *Describe:* | |

**Pooling, analysis and validation of data**

|  |  |
| --- | --- |
| Gathered data by all actors of risk based surveillance were pooled? | Yes  No |
| All actors of risk based surveillance were involved in data analysis | Yes  No |
| Validation of data was based on a consensus | Yes  No |

**Data exhaustivity**

|  |  |
| --- | --- |
| you estimate that the data is: | |
| Exhaustive | Yes  No |
| Almost exhaustive | Yes  No |
| Incomplete | Yes  No |

**Data accuracy**

|  |  |
| --- | --- |
| you estimate that available data is: | |
| Accurate | Yes  No |
| Almost accurate | Yes  No |
| Not accurate | Yes  No |

##### PROTOCOL

|  |  |  |
| --- | --- | --- |
| The risk assessment is based on the OIE general framework of risk analysis? | | Yes  No |
| Risk questions were assessed? | | Yes  No |
| If yes, does it include the following elements? | What can go wrong? | Yes  No |
| How likely is that to happen? | Yes  No |
| What would the consequences be if things went wrong? | Yes  No |

**SCENARIO TREE BUILDING**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| A scenario tree was built? | Yes  No | *If yes, by whom?* | | |
| Veterinary services | Yes  No | *If yes, mention department and unit:* |
| laboratories | Yes  No | *If yes, mention unit:* |
| university professor | Yes  No | *Give details:* |
| private consultants | Yes  No | *Give details:* |
| OIE Collaborating Center | Yes  No | *Give details:* |
| other organizations | Yes  No | *Give details:* |
| from a publication | Yes  No | *Give the reference:* |
| other | *Describe:* | |

**METHOD OF RISK ASSESSMENT**

|  |  |
| --- | --- |
| Which method of risk assessment was used? | |
| Qualitative | Yes  No |
| Semi-quantitative | Yes  No |
| Quantitative | Yes  No |
| Other | *Describe:* |
| What reasons led to this choice? | |
| reasons related to time (emergency or not) | Yes  No |
| reasons related to data (detailed or not) | Yes  No |
| reasons related to training | Yes  No |
| reasons related to funding | Yes  No |
| other reasons | *Describe:* |

**QUALITATIVE RISK ASSESSMENT**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **DEFINING QUALIFIERS** | | | | | |
| Probability of risk occurrence was assessed? | Yes  No | | **If yes, go to the next question** | | |
| **If no, go to question X** | | |
| probability levels of risk were used to estimate: | Risk related to agent release | | | | Yes  No |
| Risk related to agent exposure | | | | Yes  No |
| Risk related to both release and exposure | | | | Yes  No |
| Qualifiers were used to describe probability levels of risk ? | Yes  No | If no, how was the level of risk assessed? | |  | |
| **If yes, go to the next question** | | | |
| What qualifiers were used to describe probability levels of risk ? |  | | | | |
| Have they been used in a risk assessment protocol before? | Yes  No | | | | |
| If yes, | what is the reference of this protocol? | | | | |
|  | | | | |
| If no, new qualifiers were established for this study? | Yes  No | *If yes, describe them:* | | | |
| *If no, how risk was qualitatively described?* | | | |
| Choosing qualifiers that don’t’ to carry too many connotations in every-day language was considered? | Yes  No | | | | |
| A written definition was established for each qualifier? | Yes  No | | | | |
| If yes, how the qualifiers were defined? | | | | |
| Defined by one person  Experts consensus | | | | |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Consequences of risk occurrence were estimated? | Yes  No | **If yes, go to the next question** | | | |
| **If no, go to the question X** | | | |
| Different qualifiers were used to describe levels consequences? | Yes  No | **If yes, go to the next question** | | | |
| **If no, go to the question X** | | | |
| What qualifiers were used to describe levels of consequences? |  | | | | |
| Have they been used in a risk assessment protocol before? | Yes  No | | | | |
| If yes, | what is the reference of this protocol? | | | | |
|  | | | | |
| If no, new qualifiers were established for this study? | Yes  No | *If yes, describe them:* | | | |
| *If no, how risk was qualitatively described?* | | | |
| Choosing qualifiers that don’t’ to carry too many connotations in every-day language was considered? | Yes  No | | | | |
| A written definition was established for each qualifier? | Yes  No | | | | |
| If yes, how the qualifiers were defined? | | | | |
| Defined by one person  Experts consensus | | | | |
| **COMBINING QUALIFIERS LEVELS OF PROBABILITY** | | | | | |
| How the probability levels of the qualifiers were combined? | | | | | |
| By using a matrix | Yes  No | | | | |
| If yes, this matrix was used in a risk assessment protocol before? | Yes  No | | | | |
| If yes, what is the reference of this matrix? |  | | | |
| If no, describe the matrix |  | | | |
| other | Yes  No | | | | |
| If yes, this method was used in a risk assessment protocol before? | If yes, what is the reference of this method? |  | | | |
| If no, describe the method |  | | | |
| The probability combination leads to: | An inferior probability | | | | Yes  No |
| A similar probability (risk exaggeration) | | | | Yes  No |
| **EVALUATING UNCERTAINTY** | | | | | |
| Is risk uncertainty considered in probability results? | Yes  No | | | | |
| If yes, the level of uncertainty has been categorized by qualifiers? | Yes  No | | | | |
| If yes, | | what qualifiers were used to describe the levels of uncertainty? | | |
|  | | |
| Have they been used in a risk assessment protocol before? | Yes  No | |
| If yes, what is the reference of this protocol? | | |
|  | | |
| If no, | | new qualifiers were established for this study? | Yes  No | |
| If yes, what are these qualifiers? | | |
|  | | |
| A written definition was established for each qualifier? | Yes  No | |

**SEMI-QUANTITATIVE RISK ASSESSMENT**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **DEFINING SCALE AND QUALIFIERS** | | | | | | | | |
| Probability of risk occurrence was assessed? | Yes  No | | | | **If yes, go to the next question** | | | |
| **If no, go to question X** | | | |
| probability levels of risk were used to estimate: | Risk related to agent release | | | | | | | Yes  No |
| Risk related to agent exposure | | | | | | | Yes  No |
| Risk related to both release and exposure | | | | | | | Yes  No |
| An ordinal numeric scale with corresponding qualifiers to describe probability levels of risk was established? | Yes  No | If no, how was the level of risk assessed? | |  | | | | |
| **If yes, go to the next question** | | | | | | |
| Has it been used in a risk assessment protocol before? | Yes  No | | | | | | | |
| If yes, | what is the reference of this protocol? | | | | | | | |
|  | | | | | | | |
| If no, a new scale with new qualifiers was established for this study? | Yes  No | If yes, *describe this scale:* | | | | | | |
| *If no, describe the method of semi-quantitative risk analysis used:* | | | | | | |
| Choosing qualifiers that don’t’ to carry too many connotations in every-day language was considered? | Yes  No | | | | | | | |
| A written definition was established for each qualifier? | Yes  No | | | | | | | |
| If yes, how the qualifiers were defined? | | | | | | | |
| Defined by one person  Experts consensus | | | | | | | |
| Consequences of risk occurrence were estimated? | Yes  No | **If yes, go to the next question** | | | | | | |
| **If no, go to the question X** | | | | | | |
| A different ordinal numeric scale with corresponding qualifiers to describe levels of consequences was established? | Yes  No | **If yes, go to the next question** | | | | | | |
| **If no, go to question X** | | | | | | |
| Has it been used in a risk assessment protocol before? | Yes  No | | | | | | | |
| If yes, | what is the reference of this protocol? | | | | | | | |
|  | | | | | | | |
| If no, a new scale with new qualifiers was established for this study? | Yes  No | If yes, *describe this scale:* | | | | | | |
| *If no, describe the method of semi-quantitative risk analysis used:* | | | | | | |
| Choosing qualifiers that don’t’ to carry too many connotations in every-day language was considered? | Yes  No | | | | | | | |
| A written definition was established for each qualifier? | Yes  No | | | | | | | |
| If yes, how the qualifiers were defined? | | | | | | | |
| Defined by one person  Experts consensus | | | | | | | |
| **COMBINING QUALIFIERS LEVELS OF PROBABILITY** | | | | | | | | |
| How the probability levels of the qualifiers were combined? | | | | | | | | |
| By using a matrix | Yes  No | | | | | | | |
| If yes, this matrix was used in a risk assessment protocol before? | Yes  No | | | | | | | |
| If yes, what is the reference of this matrix? |  | | | | | | |
| If no, describe the matrix |  | | | | | | |
| other | Yes  No | | | | | | | |
| If yes, this method was used in a risk assessment protocol before? | If yes, what is the reference of this method? |  | | | | | | |
| If no, describe the method |  | | | | | | |
| The probability combination leads to: | An inferior probability | | | | | | Yes  No | |
| A similar probability (risk exaggeration) | | | | | | Yes  No | |
| **EVALUATING UNCERTAINTY** | | | | | | | | |
| Is risk uncertainty considered in probability results? | Yes  No | | | | | | | |
| If yes, the level of uncertainty has been categorized by qualifiers? | Yes  No | | | | | | | |
| If yes, | | what qualifiers were used to describe the levels of uncertainty? | | | | | |
|  | | | | | |
| Have they been used in a risk assessment protocol before? | | | Yes  No | | |
| If yes, what is the reference of this protocol? | | | | | |
|  | | | | | |
| If no, | | new qualifiers were established for this study? | | | Yes  No | | |
| If yes, what are these qualifiers? | | | | | |
|  | | | | | |
| A written definition was established for each qualifier? | | | Yes  No | | |

**QUANTITATIVE RISK ASSESSMENT**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **CALCULATION MODEL** | | | | | | |
| Risk probability calculation included: | Risk related to agent release | | | Yes  No | | |
| Risk related to agent exposure | | | Yes  No | | |
| Risk related to sanitary consequences | | | Yes  No | | |
| Risk related to economic consequences | | | Yes  No | | |
| A model for risk probability calculation was built? | Yes  No | | **If no , go to question X**  **If yes, go to the next question** | | | |
| If yes, what type of calculation is it? | Scenario tree direct calculation | | | | | Yes  No |
| Simulation | | | | | Yes  No |
| Risk probability was calculated : | without considering preventive measures | | | | | Yes  No |
| with consideration of preventive measures | | | | | Yes  No |
| If yes, more than one scenario are established? | | | | | Yes  No |
| Both (before applying preventive measures and after applying preventives measures) | | | | | Yes  No |
| If yes, more than one scenario are established? | | | | | Yes  No |
| Which software was used to compute the model? | Microsoft Excel | | | | | Yes  No |
| other | | | | | *Describe:* |
| What type of model was used? | Unilevel binomial model | | | | | Yes  No |
| Unilevel ordinal model | | | | | Yes  No |
| Multilevel binomial model | | | | | Yes  No |
| Multilevel ordinal model | | | | | Yes  No |
| If a multilevel tree was used, what were the differences among start inputs of the tree? | Different importing countries | | | | | Yes  No |
| Different importing regions | | | | | Yes  No |
| Different sources of risk | | | | | Yes  No |
| Different periods (months, seasons) | | | | | Yes  No |
| Differents prevention mesures | | | | | Yes  No |
| Other | | | | | *Describe:* |
| **X** how was the risk probability calculation performed? | Equation | | | | | Yes  No |
| other | | | | | *Describe:* |
| **PARAMETERS** | | | | | | |
| What types of values were attributed to the model parameters ? | Unique values for all parameters | | | | | Yes  No |
| Unique values for certain parameters and a number of them admit a distribution of values | | | | | Yes  No |
| If one or more parameters admit a distribution of values, | which method of values sampling is used? | | | | | |
| Montecarlo method | | | | | Yes  No |
| Hypercube method | | | | | Yes  No |
| Other | | | | | *Describe:* |
| Which software was used to sample parameters values? | | | | | |
| @RISK  Other | | | | | |
| The risk factors were determined?  *A risk factor is a parameter correlated with an increased incidence of disease.* | Yes  No | | | | | |
| If yes, by whom? | Main actors | Yes  No | | | | |
| Partners | Yes  No | | | | |
| Publication | Yes  No | | | If yes, mention reference: | |
| other | *Describe:* | | | | |
| **CATEGORISATION OF THE PROBABILITY VALUES** | | | | | | |
| Obtained risk probability values were ranked in a category corresponding to a certain range of values and characterized by a qualifier? | Yes  No | | | | | |
| If yes, these categories and their qualifiers were used in a risk assessment protocol before? | If yes, what is the reference of this protocol? | | | | | |
|  | | | | | |
| If no, new categories and qualifiers were established for this study? | | | | | |
| *If yes, describe them:* | | | | | |
| A written definition was established for each qualifier? | Yes  No | | | | | |
| **SENSITIVITY ANALYSIS** | | | | | | |
| A sensitivity analysis was performed to estimate uncertainty associated to certains parameters? | Yes  No | | | | | |
| If yes, how the most influent uncertain parameters were determined? | By experts consensus | | | | | Yes  No |
| By a regression analysis | | | | | Yes  No |
| By spearman coefficient calculation for each parameters | | | | | Yes  No |
| Other | | | | | *Describe:* |
| On which basis variations among selected parameters values were performed? | Number of times of model running | | ………………………. | | | |
| Range of values variations | | ………………………. | | | |

#### MULTI CRITERIA DECISION ANALYSIS

##### DATA

**Data collection**

|  |  |  |
| --- | --- | --- |
| Which source(s) did you use to gather information to inform the choice of the population strata? | | |
| Scientific publication | Yes  No | Give reference: |
| Technical report | Yes  No | Give reference: |
| Internet grey literature data | Yes  No | Give source: |
| Personal information from contact | Yes  No | Give details: |
| Personal information from other person | Yes  No | Give details: |
| Experts recommendation | Yes  No | Give details: |
| Instruction from ministry | Yes  No | Give details: |
| Animal disease surveillance components already implemented | Yes  No | |
| Other | *Describe:* | |

**Pooling, analysis and validation of data**

|  |  |
| --- | --- |
| Gathered data by all actors of risk based surveillance were pooled? | Yes  No |
| All actors of risk based surveillance were involved in data analysis | Yes  No |
| Validation of data was based on a consensus | Yes  No |

**Data exhaustivity**

|  |  |
| --- | --- |
| you estimate that the data is: | |
| Exhaustive | Yes  No |
| Almost exhaustive | Yes  No |
| Incomplete | Yes  No |

**Data accuracy**

|  |  |
| --- | --- |
| you estimate that available data is: | |
| Accurate | Yes  No |
| Almost accurate | Yes  No |
| Not accurate | Yes  No |

##### PROTOCOL

|  |  |  |  |
| --- | --- | --- | --- |
| Multiple-criteria decision analysis | Yes  No | | |
| if yes, which method is used for combination of determinants weight ? | weighted linear combination | Yes  No |
| ordered weighted averages | Yes  No |
| other | *Describe:* |
| other | *Describe:* | | |

# Part 2: surveillance components

*A single surveillance activity (defined by the source of data and the methods used for its collection) used to investigate the occurrence of one or more hazards in a specified population*

|  |  |
| --- | --- |
| What are the different surveillance components? | |
| Surveillance component NUMBER 1 | ….. |
| Surveillance component NUMBER 2 | ….. |
| Surveillance component NUMBER 3 | ….. |
| Surveillance component NUMBER 4 | ….. |
| Surveillance component NUMBER 5 | ….. |
| Surveillance component NUMBER 6 | ….. |

## Surveillance component NUMBER 1:………………………….

### General informations

|  |  |  |  |
| --- | --- | --- | --- |
| Year of implementation : |  | | |
| is it implemented to date? | Yes  No | *If no,* | *specify date of stopping this component:* |
| What Are the reasons of stopping this component ? |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Type of surveillance: | | ACTIVE | Yes  No | | | | | |
| PASSIVE | Yes  No | | | | | |
| Other | *Describe:* | | | | | |
| Specify surveillance object(s):  *Surveillance object is the agent or disease of interest.* | |  | | | | | | |
| Specify the objectives of this surveillance component: | | Early detection/warning | | | Yes  No | | *Give additional details:* | |
| Substantiate freedom from disease or infection | | | Yes  No | | *Give additional details:* | |
| Describe baseline disease level (prevalence estimation), distribution and/or impact of disease | | | Yes  No | | *Give additional details:* | |
| Describe changes in the health of the population | | | Yes  No | | *Give additional details:* | |
| Describe changes that may threaten the health of the population | | | Yes  No | | *Give additional details:* | |
| Detect cases to allow specific action to be taken in animals or holdings which will facilitate control or eradication | | | Yes  No | | *Give additional details:* | |
| other | | | *Describe:* | | | |
| Specify population strata (species, breed, geographic level) which is the focus of the surveillance component | |  | | | | | | |
| Observational unit | | Individual Animal | | Yes  No | | | | |
| Herd/flock | | Yes  No | | If yes, specify type: | | |
| o Pen / house | | Yes  No | | | | |
| other | | Describe: | | | | |
| **Selection of population strata was done using a method integrating risk concepts?**  *Concepts of risk in the design of surveillance programs refer to the likelihood of hazard occurrence and its consequences* | | | | | | | | Yes  No |
| **If no,** | **GO TO QUESTION X** | | | | | | | |
| **If yes,** | **Next question** | | | | | | | |
| Specify targeted geographic level | | Country | | Yes  No | | | | |
| Governorate | | Yes  No | | | | |
| District | | Yes  No | | | | |
| village | | Yes  No | | | | |
| other | | *Describe:* | | | | |
| Describe briefly population strata selection criteria: | |  | | | | | | |
| Describe briefly sampling  Criteria and frequency | |  | | | | | | |

### Motivations for conducting a risk based surveillance

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| What reasons led to the integration of aspects of risk to the surveillance? | | | | | | |
| Improving performances | Yes  No | | | | | |
| Limited economic resources | Yes  No | If yes, an economic evaluation was conducted? | Yes  No | If yes, of which type? | | |
| cost analysis | | Yes  No |
| cost-effectiveness | | Yes  No |
| cost-benefit | | Yes  No |
| other | | *Describe:* |
| Limited human resources | Yes  No | | | | | |
| Recommendation | Yes  No | *If yes, :* | | | | |
| Of whom? | | | some funds depend on the implementation of the recommendations? | |
|  | | | Yes  No | |
| other | *Describe:* | | | | | |

### Persons involved in the surveillance component design

#### Main actors of the surveillance component design

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | | **organism** | **qualification** |
|  | |  |  |
|  | |  |  |
|  | |  |  |
|  | |  |  |
| The main actors of the surveillance component have they received a special formation or training in risk-based approach? | | | |
| Yes  No  Don’t know | *If yes, specify organism and duration:*  *Name 1:*  *Name 2:*  *Name3:*  *Name4:*  *…*  *…*  *...* | | |

#### Partners of the risk based surveillance design

|  |  |  |  |
| --- | --- | --- | --- |
| External partners were involved in the surveillance component design? | | | |
| Yes  No | | *If yes, specify organism:*  *Partner 1:*  *Partner 2:*  *Partner 3:*  *Partner 4:*  *…*  *…*  *…* | |
| *Partner 1:* | | | |
| To which extend are they involved in the surveillance component design? | | | |
| They conduct all the surveillance component design with data that they collected themselves? | | | Yes  No |
| They conduct all the surveillance component design resting on the data collected by the activities of previous surveillance components? | | | Yes  No |
| They conduct all the surveillance component design resting on the data collected by the previous surveillance components and on limited consultations of the actors of the surveillance? | | | Yes  No |
| They conduct all the surveillance component design in close collaboration with the actors of the surveillance? | | | Yes  No |
| They play a role of consultancy in the surveillance component design and the actors of the surveillance mainly conduct the surveillance component design? | | | Yes  No |
| Other | *Describe:* | | |
| *Partner 2:* | | | |
| To which extend are they involved in the surveillance component design? | | | |
| They conduct all the surveillance component design with data that they collected themselves? | | | Yes  No |
| They conduct all the surveillance component design resting on the data collected by the activities of previous surveillance components? | | | Yes  No |
| They conduct all the surveillance component design resting on the data collected by the previous surveillance components and on limited consultations of the actors of the surveillance? | | | Yes  No |
| They conduct all the surveillance component design in close collaboration with the actors of the surveillance? | | | Yes  No |
| They play a role of consultancy in the surveillance component design and the actors of the surveillance mainly conduct the surveillance component design? | | | Yes  No |
| Other | *Describe:* | | |
| *Partner 3:* | | | |
| To which extend are they involved in the surveillance component design? | | | |
| They conduct all the surveillance component design with data that they collected themselves? | | | Yes  No |
| They conduct all the surveillance component design resting on the data collected by the activities of previous surveillance components? | | | Yes  No |
| They conduct all the surveillance component design resting on the data collected by the previous surveillance components and on limited consultations of the actors of the surveillance? | | | Yes  No |
| They conduct all the surveillance component design in close collaboration with the actors of the surveillance? | | | Yes  No |
| They play a role of consultancy in the surveillance component design and the actors of the surveillance mainly conduct the surveillance component design? | | | Yes  No |
| Other | *Describe:* | | |
| *Partner 4:* | | | |
| To which extend are they involved in the surveillance component design? | | | |
| They conduct all the surveillance component design with data that they collected themselves? | | | Yes  No |
| They conduct all the surveillance component design resting on the data collected by the activities of previous surveillance components? | | | Yes  No |
| They conduct all the surveillance component design resting on the data collected by the previous surveillance components and on limited consultations of the actors of the surveillance? | | | Yes  No |
| They conduct all the surveillance component design in close collaboration with the actors of the surveillance? | | | Yes  No |
| They play a role of consultancy in the surveillance component design and the actors of the surveillance mainly conduct the surveillance component design? | | | Yes  No |
| Other | *Describe:* | | |

### Method of population strata selection

|  |  |  |
| --- | --- | --- |
| Which method was used to select population strata on which surveillance activities were focused? | | |
| Risk assessment | Yes  No | **If yes, go to part a** |
| Network analysis | Yes  No | **If yes, go to part b** |
| Spatial analysis | Yes  No | **If yes, go to part c** |
| Risk factor identification | Yes  No | **If yes, go to part d** |
| Modelling of disease spread | Yes  No | **If yes, go to part e** |
| other | *Describe:* | |

#### RISK ASSESSMENT

##### DATA

**Data collection**

|  |  |  |
| --- | --- | --- |
| Which source(s) did you use to gather information to inform the choice of the population strata? | | |
| Scientific publication | Yes  No | Give reference: |
| Technical report | Yes  No | Give reference: |
| Internet grey literature data | Yes  No | Give source: |
| Personal information from contact | Yes  No | Give details: |
| Personal information from other person | Yes  No | Give details: |
| Experts recommendation | Yes  No | Give details: |
| Instruction from ministry | Yes  No | Give details: |
| Animal disease surveillance components already implemented | Yes  No | |
| Other | *Describe:* | |

Pooling, analysis and validation of data

|  |  |
| --- | --- |
| Gathered data by all actors of risk-based surveillance were pooled? | Yes  No |
| All actors of risk based surveillance were involved in data analysis? | Yes  No |
| Validation of data was based on a consensus? | Yes  No |

Data exhaustivity

|  |  |
| --- | --- |
| you estimate that the data is: | |
| *Exhaustive* | Yes  No |
| *Almost exhaustive* | Yes  No |
| *Incomplete* | Yes  No |

Data accuracy

|  |  |
| --- | --- |
| you estimate that available data is: | |
| *Accurate* | Yes  No |
| *Almost accurate* | Yes  No |
| *Not accurate* | Yes  No |

##### PROTOCOL

|  |  |  |
| --- | --- | --- |
| The risk assessment is based on the OIE general framework of risk analysis? | | Yes  No |
| Risk questions were assessed? | | Yes  No |
| If yes, does it include the following elements? | What can go wrong? | Yes  No |
| How likely is that to happen? | Yes  No |
| What would the consequences be if things went wrong? | Yes  No |

**SCENARIO TREE BUILDING**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| A scenario tree was built? | Yes  No | *If yes, by whom?* | | |
| Veterinary services | Yes  No | *If yes, mention department and unit:* |
| laboratories | Yes  No | *If yes, mention unit:* |
| university professor | Yes  No | *Give details:* |
| private consultants | Yes  No | *Give details:* |
| OIE Collaborating Center | Yes  No | *Give details:* |
| other organizations | Yes  No | *Give details:* |
| from a publication | Yes  No | *Give the reference:* |
| other | *Describe:* | |

##### APPROACH OF RISK ASSESSMENT

|  |  |
| --- | --- |
| Which approach of risk assessment was used? | |
| Qualitative | Yes  No |
| Semi-quantitative | Yes  No |
| Quantitative | Yes  No |
| Other | *Describe:* |
| What reasons led to this choice? | |
| reasons related to time (emergency or not) | Yes  No |
| reasons related to data (detailed or not) | Yes  No |
| reasons related to training | Yes  No |
| reasons related to funding | Yes  No |
| other reasons | *Describe:* |

###### QUALITATIVE RISK ASSESSMENT

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **DEFINING QUALIFIERS** | | | | | |
| Probability of risk occurrence was assessed? | Yes  No | | **If yes, go to the next question** | | |
| **If no, go to question X** | | |
| probability levels of risk were used to estimate: | Risk related to agent release | | | | Yes  No |
| Risk related to agent exposure | | | | Yes  No |
| Risk related to both release and exposure | | | | Yes  No |
| Qualifiers were used to describe probability levels of risk ? | Yes  No | If no, how was the level of risk assessed? | |  | |
| **If yes, go to the next question** | | | |
| What qualifiers were used to describe probability levels of risk ? |  | | | | |
| Have they been used in a risk assessment protocol before? | Yes  No | | | | |
| If yes, | what is the reference of this protocol? | | | | |
|  | | | | |
| If no, new qualifiers were established for this study? | Yes  No | *If yes, describe them:* | | | |
| *If no, how risk was qualitatively described?* | | | |
| Choosing qualifiers that don’t’ to carry too many connotations in every-day language was considered? | Yes  No | | | | |
| A written definition was established for each qualifier? | Yes  No | | | | |
| If yes, how the qualifiers were defined? | | | | |
| Defined by one person  Experts consensus | | | | |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Consequences of risk occurrence were estimated? | Yes  No | **If yes, go to the next question** | | | |
| **If no, go to the question X** | | | |
| Different qualifiers were used to describe levels consequences? | Yes  No | **If yes, go to the next question** | | | |
| **If no, go to the question X** | | | |
| What qualifiers were used to describe levels of consequences? |  | | | | |
| Have they been used in a risk assessment protocol before? | Yes  No | | | | |
| If yes, | what is the reference of this protocol? | | | | |
|  | | | | |
| If no, new qualifiers were established for this study? | Yes  No | *If yes, describe them:* | | | |
| *If no, how risk was qualitatively described?* | | | |
| Choosing qualifiers that don’t’ to carry too many connotations in every-day language was considered? | Yes  No | | | | |
| A written definition was established for each qualifier? | Yes  No | | | | |
| If yes, how the qualifiers were defined? | | | | |
| Defined by one person  Experts consensus | | | | |
| **COMBINING QUALIFIERS LEVELS OF PROBABILITY** | | | | | |
| How the probability levels of the qualifiers were combined? | | | | | |
| By using a matrix | Yes  No | | | | |
| If yes, this matrix was used in a risk assessment protocol before? | Yes  No | | | | |
| If yes, what is the reference of this matrix? |  | | | |
| If no, describe the matrix |  | | | |
| other | Yes  No | | | | |
| If yes, this method was used in a risk assessment protocol before? | If yes, what is the reference of this method? |  | | | |
| If no, describe the method |  | | | |
| The probability combination leads to: | An inferior probability | | | | Yes  No |
| A similar probability (risk exaggeration) | | | | Yes  No |
| **EVALUATING UNCERTAINTY** | | | | | |
| Is risk uncertainty considered in probability results? | Yes  No | | | | |
| If yes, the level of uncertainty has been categorized by qualifiers? | Yes  No | | | | |
| If yes, | | what qualifiers were used to describe the levels of uncertainty? | | |
|  | | |
| Have they been used in a risk assessment protocol before? | Yes  No | |
| If yes, what is the reference of this protocol? | | |
|  | | |
| If no, | | new qualifiers were established for this study? | Yes  No | |
| If yes, what are these qualifiers? | | |
|  | | |
| A written definition was established for each qualifier? | Yes  No | |

###### SEMI-QUANTITATIVE RISK ASSESSMENT

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **DEFINING SCALE AND QUALIFIERS** | | | | | | | | |
| Probability of risk occurrence was assessed? | Yes  No | | | | **If yes, go to the next question** | | | |
| **If no, go to question X** | | | |
| probability levels of risk were used to estimate: | Risk related to agent release | | | | | | | Yes  No |
| Risk related to agent exposure | | | | | | | Yes  No |
| Risk related to both release and exposure | | | | | | | Yes  No |
| An ordinal numeric scale with corresponding qualifiers to describe probability levels of risk was established? | Yes  No | If no, how was the level of risk assessed? | |  | | | | |
| **If yes, go to the next question** | | | | | | |
| Has it been used in a risk assessment protocol before? | Yes  No | | | | | | | |
| If yes, | what is the reference of this protocol? | | | | | | | |
|  | | | | | | | |
| If no, a new scale with new qualifiers was established for this study? | Yes  No | If yes, *describe this scale:* | | | | | | |
| *If no, describe the method of semi-quantitative risk analysis used:* | | | | | | |
| Choosing qualifiers that don’t’ to carry too many connotations in every-day language was considered? | Yes  No | | | | | | | |
| A written definition was established for each qualifier? | Yes  No | | | | | | | |
| If yes, how the qualifiers were defined? | | | | | | | |
| Defined by one person  Experts consensus | | | | | | | |
| Consequences of risk occurrence were estimated? | Yes  No | **If yes, go to the next question** | | | | | | |
| **If no, go to the question X** | | | | | | |
| A different ordinal numeric scale with corresponding qualifiers to describe levels of consequences was established? | Yes  No | **If yes, go to the next question** | | | | | | |
| **If no, go to question X** | | | | | | |
| Has it been used in a risk assessment protocol before? | Yes  No | | | | | | | |
| If yes, | what is the reference of this protocol? | | | | | | | |
|  | | | | | | | |
| If no, a new scale with new qualifiers was established for this study? | Yes  No | If yes, *describe this scale:* | | | | | | |
| *If no, describe the method of semi-quantitative risk analysis used:* | | | | | | |
| Choosing qualifiers that don’t’ to carry too many connotations in every-day language was considered? | Yes  No | | | | | | | |
| A written definition was established for each qualifier? | Yes  No | | | | | | | |
| If yes, how the qualifiers were defined? | | | | | | | |
| Defined by one person  Experts consensus | | | | | | | |
| **COMBINING QUALIFIERS LEVELS OF PROBABILITY** | | | | | | | | |
| How the probability levels of the qualifiers were combined? | | | | | | | | |
| By using a matrix | Yes  No | | | | | | | |
| If yes, this matrix was used in a risk assessment protocol before? | Yes  No | | | | | | | |
| If yes, what is the reference of this matrix? |  | | | | | | |
| If no, describe the matrix |  | | | | | | |
| other | Yes  No | | | | | | | |
| If yes, this method was used in a risk assessment protocol before? | If yes, what is the reference of this method? |  | | | | | | |
| If no, describe the method |  | | | | | | |
| The probability combination leads to: | An inferior probability | | | | | | Yes  No | |
| A similar probability (risk exaggeration) | | | | | | Yes  No | |
| **EVALUATING UNCERTAINTY** | | | | | | | | |
| Is risk uncertainty considered in probability results? | Yes  No | | | | | | | |
| If yes, the level of uncertainty has been categorized by qualifiers? | Yes  No | | | | | | | |
| If yes, | | what qualifiers were used to describe the levels of uncertainty? | | | | | |
|  | | | | | |
| Have they been used in a risk assessment protocol before? | | | Yes  No | | |
| If yes, what is the reference of this protocol? | | | | | |
|  | | | | | |
| If no, | | new qualifiers were established for this study? | | | Yes  No | | |
| If yes, what are these qualifiers? | | | | | |
|  | | | | | |
| A written definition was established for each qualifier? | | | Yes  No | | |

###### QUANTITATIVE RISK ASSESSMENT

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **CALCULATION MODEL** | | | | | | |
| Risk probability calculation included: | Risk related to agent release | | | Yes  No | | |
| Risk related to agent exposure | | | Yes  No | | |
| Risk related to sanitary consequences | | | Yes  No | | |
| Risk related to economic consequences | | | Yes  No | | |
| A model for risk probability calculation was built? | Yes  No | | **If no , go to question X**  **If yes, go to the next question** | | | |
| If yes, what type of calculation is it? | Scenario tree direct calculation | | | | | Yes  No |
| Simulation | | | | | Yes  No |
| Risk probability was calculated : | without considering preventive measures | | | | | Yes  No |
| with consideration of preventive measures | | | | | Yes  No |
| If yes, more than one scenario are established? | | | | | Yes  No |
| Both (before applying preventive measures and after applying preventives measures) | | | | | Yes  No |
| If yes, more than one scenario are established? | | | | | Yes  No |
| Which software was used to compute the model? | Microsoft Excel | | | | | Yes  No |
| other | | | | | *Describe:* |
| What type of model was used? | Unilevel binomial model | | | | | Yes  No |
| Unilevel ordinal model | | | | | Yes  No |
| Multilevel binomial model | | | | | Yes  No |
| Multilevel ordinal model | | | | | Yes  No |
| If a multilevel tree was used, what were the differences among start inputs of the tree? | Different importing countries | | | | | Yes  No |
| Different importing regions | | | | | Yes  No |
| Different sources of risk | | | | | Yes  No |
| Different periods (months, seasons) | | | | | Yes  No |
| Differents prevention mesures | | | | | Yes  No |
| Other | | | | | *Describe:* |
| **X** how was the risk probability calculation performed? | Equation | | | | | Yes  No |
| other | | | | | *Describe:* |
| **PARAMETERS** | | | | | | |
| What types of values were attributed to the model parameters ? | Unique values for all parameters | | | | | Yes  No |
| Unique values for certain parameters and a number of them admit a distribution of values | | | | | Yes  No |
| If one or more parameters admit a distribution of values, | which method of values sampling is used? | | | | | |
| Montecarlo method | | | | | Yes  No |
| Hypercube method | | | | | Yes  No |
| Other | | | | | *Describe:* |
| Which software was used to sample parameters values? | | | | | |
| @RISK  Other | | | | | |
| The risk factors were determined?  *A risk factor is a parameter correlated with an increased incidence of disease.* | Yes  No | | | | | |
| If yes, by whom? | Main actors | Yes  No | | | | |
| Partners | Yes  No | | | | |
| Publication | Yes  No | | | If yes, mention reference: | |
| other | *Describe:* | | | | |
| **CATEGORISATION OF THE PROBABILITY VALUES** | | | | | | |
| Obtained risk probability values were ranked in a category corresponding to a certain range of values and characterized by a qualifier? | Yes  No | | | | | |
| If yes, these categories and their qualifiers were used in a risk assessment protocol before? | If yes, what is the reference of this protocol? | | | | | |
|  | | | | | |
| If no, new categories and qualifiers were established for this study? | | | | | |
| *If yes, describe them:* | | | | | |
| A written definition was established for each qualifier? | Yes  No | | | | | |
| **SENSITIVITY ANALYSIS** | | | | | | |
| A sensitivity analysis was performed to estimate uncertainty associated to certains parameters? | Yes  No | | | | | |
| If yes, how the most influent uncertain parameters were determined? | By experts consensus | | | | | Yes  No |
| By a regression analysis | | | | | Yes  No |
| By spearman coefficient calculation for each parameters | | | | | Yes  No |
| Other | | | | | *Describe:* |
| On which basis variations among selected parameters values were performed? | Number of times of model running | | ………………………. | | | |
| Range of values variations | | ………………………. | | | |

#### NETWORK ANALYSIS

##### DATA

**Data collection**

|  |  |  |
| --- | --- | --- |
| Which source(s) did you use to gather information to inform the choice of the population strata? | | |
| Scientific publication | Yes  No | Give reference: |
| Technical report | Yes  No | Give reference: |
| Internet grey literature data | Yes  No | Give source: |
| Personal information from contact | Yes  No | Give details: |
| Personal information from other person | Yes  No | Give details: |
| Experts recommendation | Yes  No | Give details: |
| Instruction from ministry | Yes  No | Give details: |
| Animal disease surveillance components already implemented | Yes  No | |
| Other | *Describe:* | |

Pooling, analysis and validation of data

|  |  |
| --- | --- |
| Gathered data by all actors of risk-based surveillance were pooled? | Yes  No |
| All actors of risk based surveillance were involved in data analysis? | Yes  No |
| Validation of data was based on a consensus? | Yes  No |

Data exhaustivity

|  |  |
| --- | --- |
| you estimate that the data is: | |
| *Exhaustive* | Yes  No |
| *Almost exhaustive* | Yes  No |
| *Incomplete* | Yes  No |

Data accuracy

|  |  |
| --- | --- |
| you estimate that available data is: | |
| *Accurate* | Yes  No |
| *Almost accurate* | Yes  No |
| *Not accurate* | Yes  No |

##### PROTOCOL

|  |  |  |
| --- | --- | --- |
| Which approach was applied in SNA? | | |
| Identifying risk factors related to disease spread | Yes  No | |
| Spatial modelling of disease spread | Yes  No | |
| What was the time frame of the data collected for the study ? |  | |
| Network designing | | |
| Which type of network was built? |  | |
| directed | Yes  No | |
| undirected | Yes  No | |
| The nodes of the network represent: | Traders | Yes  No |
| Markets | Yes  No |
| Farms | Yes  No |
| Villages | Yes  No |
| Other | *Describe:* |
| What were the nodes attributes? | Animal species | Yes  No |
| Animal breed | Yes  No |
| Number of animal per shipment | Yes  No |
| Geographic location | Yes  No |
| other | *Describe:* |
| What were the data computed to characterized the links between the nodes? | Distance between nodes | Yes  No |
| Number of contacts of the node | Yes  No |
| Frequency of movements | Yes  No |
| Size of shipment | Yes  No |
| other | *Describe:* |
| Method of ARS employed | | |
| Network measures | | |
| Centrality measures | Degree | Yes  No |
| In degree | Yes  No |
| Out degree | Yes  No |
| Closeness | Yes  No |
| Betweenness | Yes  No |
| In-infection chain | Yes  No |
| Out-infection chain | Yes  No |
| Other | *Describe:* |
| Cohesive measures | Density | Yes  No |
| Clustering coefficient | Yes  No |
| Other | *Describe:* |
| Experts opinion |  | |
| other | *Describe:* | |

#### SPATIAL RISK ANALYSIS

##### DATA

**Data collection**

|  |  |  |
| --- | --- | --- |
| Which source(s) did you use to gather information to inform the choice of the population strata? | | |
| Scientific publication | Yes  No | Give reference: |
| Technical report | Yes  No | Give reference: |
| Internet grey literature data | Yes  No | Give source: |
| Personal information from contact | Yes  No | Give details: |
| Personal information from other person | Yes  No | Give details: |
| Experts recommendation | Yes  No | Give details: |
| Instruction from ministry | Yes  No | Give details: |
| Animal disease surveillance components already implemented | Yes  No | |
| Other | *Describe:* | |

Pooling, analysis and validation of data

|  |  |
| --- | --- |
| Gathered data by all actors of risk-based surveillance were pooled? | Yes  No |
| All actors of risk based surveillance were involved in data analysis? | Yes  No |
| Validation of data was based on a consensus? | Yes  No |

Data exhaustivity

|  |  |
| --- | --- |
| you estimate that the data is: | |
| *Exhaustive* | Yes  No |
| *Almost exhaustive* | Yes  No |
| *Incomplete* | Yes  No |

Data accuracy

|  |  |
| --- | --- |
| you estimate that available data is: | |
| *Accurate* | Yes  No |
| *Almost accurate* | Yes  No |
| *Not accurate* | Yes  No |

##### PROTOCOL

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Which type of spatial risk analysis was used? | | | | | |
| Construction of a regression model | Yes  No | | | | |
| If yes,of which type is it? | Logistic regression model | Yes  No | | | |
| Linear regression model | Yes  No | | | |
| Poisson regression model | Yes  No | | | |
| other | Describe: | | | |
| Geostatistical analysis | Yes  No | | | | |
| If yes, | Of which type is it? | | | | |
| Kriging | Yes  No | | | |
| Cokriging | Yes  No | | | |
| Other | *Describe:* | | | |
| Mention the predictive variables employed: | | | | |
|  | | | | |
| Use of a method from the decision sciences | Yes  No | | | | |
| If yes,of which type is it? | Multiple-criteria decision analysis | | Yes  No | | |
| if MCDA, which method is used for combination of determinants weight ? | weighted linear combination | Yes  No |
| ordered weighted averages | Yes  No |
| other | *Describe:* |
| other | | *Describe:* | | |
| Bayesian method | Yes  No | | | | |
| If yes, Mention the predictive variables employed |  | | | | |
| Dempster-Shafer | Yes  No | | | | |
| If yes, Mention the predictive variables employed |  | | | | |
| Other | Describe: | | | | |

#### IDENTIFICATION OF RISK FACTORS

##### DATA

**Data collection**

|  |  |  |
| --- | --- | --- |
| Which source(s) did you use to gather information to inform the choice of the population strata? | | |
| Scientific publication | Yes  No | Give reference: |
| Technical report | Yes  No | Give reference: |
| Internet grey literature data | Yes  No | Give source: |
| Personal information from contact | Yes  No | Give details: |
| Personal information from other person | Yes  No | Give details: |
| Experts recommendation | Yes  No | Give details: |
| Instruction from ministry | Yes  No | Give details: |
| Animal disease surveillance components already implemented | Yes  No | |
| Other | *Describe:* | |

Pooling, analysis and validation of data

|  |  |
| --- | --- |
| Gathered data by all actors of risk-based surveillance were pooled? | Yes  No |
| All actors of risk based surveillance were involved in data analysis? | Yes  No |
| Validation of data was based on a consensus? | Yes  No |

Data exhaustivity

|  |  |
| --- | --- |
| you estimate that the data is: | |
| Exhaustive | Yes  No |
| Almost exhaustive | Yes  No |
| Incomplete | Yes  No |

Data accuracy

|  |  |
| --- | --- |
| you estimate that available data is: | |
| Accurate | Yes  No |
| Almost accurate | Yes  No |
| Not accurate | Yes  No |

##### PROTOCOL

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Which type of risk factors were considered in the study? | | | | | | | |
| Geographic factors | | | | Yes  No | *Describe:* | | |
| Animal factors | | | | Yes  No | *Describe:* | | |
| Management factors | | | | Yes  No | *Describe:* | | |
| Environmental factors | | | | Yes  No | *Describe:* | | |
| Other factors | | | | *Describe:* | | | |
| Which type of method was used to identify risk factors? | | | | | | | |
| Epidemiologic study | | | Yes  No | | | | |
| If yes , | what type of epidemiological study is it? | Cross-sectional study | | | Yes  No | | |
| Case-control study | | | Yes  No | if yes OR were calculated? | Yes  No |
| Cohort study | | | Yes  No | if yes RR were calculated? | Yes  No |
| A Multivariate regression analysis was performed? | | | | | Yes  No | |
| Literature review | | | Yes  No | | | | |
| If yes, a systematic review was performed? | | | Yes  No | | | | |
| Other | | | *Describe:* | | | | |

#### MODELLING OF DISEASE SPREAD

##### DATA

**Data collection**

|  |  |  |
| --- | --- | --- |
| Which source(s) did you use to gather information to inform the choice of the population strata? | | |
| Scientific publication | Yes  No | Give reference: |
| Technical report | Yes  No | Give reference: |
| Internet grey literature data | Yes  No | Give source: |
| Personal information from contact | Yes  No | Give details: |
| Personal information from other person | Yes  No | Give details: |
| Experts recommendation | Yes  No | Give details: |
| Instruction from ministry | Yes  No | Give details: |
| Animal disease surveillance components already implemented | Yes  No | |
| Other | *Describe:* | |

Pooling, analysis and validation of data

|  |  |
| --- | --- |
| Gathered data by all actors of risk-based surveillance were pooled? | Yes  No |
| All actors of risk based surveillance were involved in data analysis? | Yes  No |
| Validation of data was based on a consensus? | Yes  No |

Data exhaustivity

|  |  |
| --- | --- |
| you estimate that the data is: | |
| Exhaustive | Yes  No |
| Almost exhaustive | Yes  No |
| Incomplete | Yes  No |

Data accuracy

|  |  |
| --- | --- |
| you estimate that available data is: | |
| Accurate | Yes  No |
| Almost accurate | Yes  No |
| Not accurate | Yes  No |

##### PROTOCOL

|  |  |  |
| --- | --- | --- |
| A model was built to reach specific objective(s) | | Yes  No |
| **Model inputs** | | |
| A complete description was made for : | assumptions | Yes  No |
| limitations | Yes  No |
| simplifications | Yes  No |
| Input parameters used in the model included: | Real population data | Yes  No |
| Actual knowledge of agent epidemiology | Yes  No |
| Experimental results of disease transmission patterns | Yes  No |
| Experts opinions | Yes  No |
| other | *Describe:* |
| **Model evaluation** | | |
| Used method of model evaluation were: | Experts opinions | Yes  No |
| Sensitivity analysis | Yes  No |
| Comparison with real field data | Yes  No |
|  | other | *Describe:* |
| **uncertainties and assumptions** | | |
| uncertainties and assumptions were considered? | | Yes  No |

# QUESTIONNAIRE SUMMARY

**1. Selection of hazard under surveillance**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Hazard situation** | | Endemic  Sporadic  Free  Exotic | | | Re-emerging  New  Situation varies *Specify:* | | | | |
| **Motivations for using risk concepts in hazard selection** | | | | | | | | | |
| Improving performances  Limited economic resources  *If an economic evaluation was done, specify type:* | | | | | Limited human resources  Recommendation *Of whom?:*  other *Specify:* | | | | |
| **Persons involved surveillance object selection** | | | | | | | | | |
| Main actors | | | | | Partners | | | | |
| *…….*  *…….*  *…….*  *…….* | | | | | *…….*  *…….*  *…….*  *…….* | | | | |
| **Hazard selection method?** | | | | | | | | | |
| Risk Assessment | Yes  No | | If yes, | qualitative | Yes  No | If yes, risk assessment included: | Release assessment | | Yes  No |
| Exposure assessment | | Yes  No |
| Consequences  assessment | | Yes  No |
| Semi-quantitative | Yes  No | If yes, risk assessment included: | Release assessment | | Yes  No |
| Exposure assessment | | Yes  No |
| Consequences  assessment | | Yes  No |
| quantitative | Yes  No | If yes, risk assessment included: | Release assessment | | Yes  No |
| Exposure assessment | | Yes  No |
| Consequences  assessment | | Yes  No |
| Multi criteria decision analysis | Yes  No | | | | | | | | |
| other | *Name it:* | | | | | | | | |
| **Data** | | | | | | | | | |
| Data collection source(s) | | | Data treatment | | Data exhaustivity | | | Data accuracy | |
|  | | | pooling of gathered data  all actors were involved in data analysis  all actors were involved in data validation | | Exhaustive  Almost exhaustive  Incomplete  Comments:  ------------------ | | | Accurate  Almost accurate  Not accurate  Comments: | |

**2. Listing of surveillance components**

*A single surveillance activity (defined by the source of data and the methods used for its collection) used to investigate the occurrence of one or more hazards in a specified population*

|  |  |
| --- | --- |
| What are the different surveillance components for the hazard under surveillance? | |
| Surveillance component NUMBER 1 | ….. |
| Surveillance component NUMBER 2 | ….. |
| Surveillance component NUMBER 3 | ….. |
| Surveillance component NUMBER 4 | ….. |
| Surveillance component NUMBER 5 | ….. |
| Surveillance component NUMBER 6 | ….. |

**3. SURVEILLANCE COMPONENT NUMBER (…)**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **General informations** | | | | | | | | | | | | | | | |
| Period of implementation | surveillance object(s) | | | | | objectives | | | Type of surveillance | | | use of risk concepts | | | |
| ………………… | ……………….. | | | | | ……………….. | | | Active  passive  Other *Specify:* | | | Yes  No  Which level:   * heterogeneity of harbouring the disease * heterogeneity of spreading the disease * level of disease consequences   (maybe other level?)  ----------------------- | | | |
| **Motivations for using risk concepts in population strata selection** | | | | | | | | | | | | | | | |
| Improving performances  Limited economic resources  *If an economic evaluation was done, specify type:* | | | | | | | | | | Limited human resources  Recommendation *Of whom?:*  other *Specify:* | | | | | |
| **Persons involved population strata selection** | | | | | | | | | | | | | | | |
| Main actors | | | | | | | | | | Partners | | | | | |
| *…….*  *…….*  *…….*  *…….* | | | | | | | | | | *…….*  *…….*  *…….*  *…….* | | | | | |
| **Population strata selection method** | | | | | | | | | | | | | | | |
| Risk Assessment | | Yes  No | If yes, | | qualitative | | | Yes  No | | | If yes, risk assessment included: | | Release assessment | | Yes  No |
| Exposure assessment | | Yes  No |
| Consequences  assessment | | Yes  No |
| Semi-quantitative | | | Yes  No | | | If yes, risk assessment included: | | Release assessment | | Yes  No |
| Exposure assessment | | Yes  No |
| Consequences  assessment | | Yes  No |
| quantitative | | | Yes  No | | | If yes, risk assessment included: | | Release assessment | | Yes  No |
| Exposure assessment | | Yes  No |
| Consequences  assessment | | Yes  No |
| Network analysis | | | | | | | Yes  No | | | | | | | | |
| Spatial analysis | | | | | | | Yes  No | | | | | | | | |
| Risk factor identification | | | | | | | Yes  No | | | | | | | | |
| Modelling of disease spread | | | | | | | Yes  No | | | | | | | | |
| other | | | | | | | *Name it:* | | | | | | | | |
| **Data** | | | | | | | | | | | | | | | |
| Data collection source(s) | | | | Data treatment | | | | | | Data exhaustivity | | | | Data accuracy | |
| *…….*  *…….*  *…….*  *…….* | | | | pooling of gathered data  all actors were involved in data analysis  all actors were involved in data validation | | | | | | Exhaustive  Almost exhaustive  Incomplete | | | | Accurate  Almost accurate  Not accurate | |

## END