RISKSUR SURVEILLANCE DESIGN FRAMEWORK – A MANUAL TO THE EXCEL TOOL

The RISKSUR set of surveillance tools has been built to guide the design and evaluation of surveillance activities. The following tools work to complement each other:

A surveillance design framework – which helps with designing and documenting surveillance activities. This tool is available online (LINK) and as a downloadable Excel file.

A surveillance design WIKI – all the advice from the design tool has been placed online, so that users can comment, discuss, and contribute. The tool is meant to be used in conjunction with this WIKI (http://surveillance-design-framework.wikispaces.com/).

A surveillance evaluation tool (EVA tool), available online (LINK).

This manual refers specifically to the use of the Excel version of the ***Surveillance design framework***. Please note that the manual contains only practical instructions for the use of the Excel file as a tool for design. Surveillance design content and advice is placed on the WIKI (http://surveillance-design-framework.wikispaces.com/), where it can be kept up to date.

SURVEILLANCE DESIGN PROCESS

The surveillance design set of tools is intended to be used in the following manner:

1. If surveillance is already in place, use the *Surveillance **design** framework* to document the existing surveillance system for one hazard at a time. If surveillance is not in place, use the same framework to design a desirable system based on the target hazard, and using the help of the advice provided in the WIKI. The WIKI also contains examples for EU regulated diseases.
2. With guidance of the *EVA tool*, evaluate your system.
3. If performance needs to be improved, based on the assessment conducted in step 2 or due to other demands, use the ***surveillance RE-design section*** of the *Surveillance design framework*.
4. Use the ***report*** function of the *Surveillance design framework* after design or re-design to document the existing surveillance system, and/or planned changes (re-designed system).
5. For ***multi-hazard surveillance***, visit the appropriate section of the *Surveillance design framework*.

GENERAL INSTRUCTIONS

The framework was kept as clean as possible, to facilitate navigation, but extra information is available throughout the process, for those interested:

	HELP ICON: Hover the mouse over the icon to pop a comment with extra information (usually definitions of terms used).
	A glossary is available online, CLICK ON THE ICON to access.
	Every step of the framework is supported by an online WIKI, with advice, discussion from other users, etc. CLICK ON THE ICON.
	LINK TO STATISTICAL TOOLS: Specific steps in which statistical tools may be needed are highlighted, and links to the needed tools are available.

You can also choose how much time and effort to put into the framework. **ANY INPUT CAN BE SKIPPED**, but you will take more advantage of the documentation features if you enter all information requested.

The following input identification patterns were used throughout the framework:

DROP-DOWN list	Click on the cell to see the drop-down menu – that is, you will have to select from a pre-set list of options.
FREE-TEXT input	Enter any text you want
You don't need to do anything	The information has been pasted from your previous answers, and you should not change the cell. Input is already done.

We have also highlighted when inputs can be linked to specific decision nodes, so that you can decide whether that input is important for your design process.

	Links to step X.X

Click on the button at the top of the welcome page to get started:

CLICK HERE to get started designing surveillance!

NAVIGATING THROUGH THE FRAMEWORK:

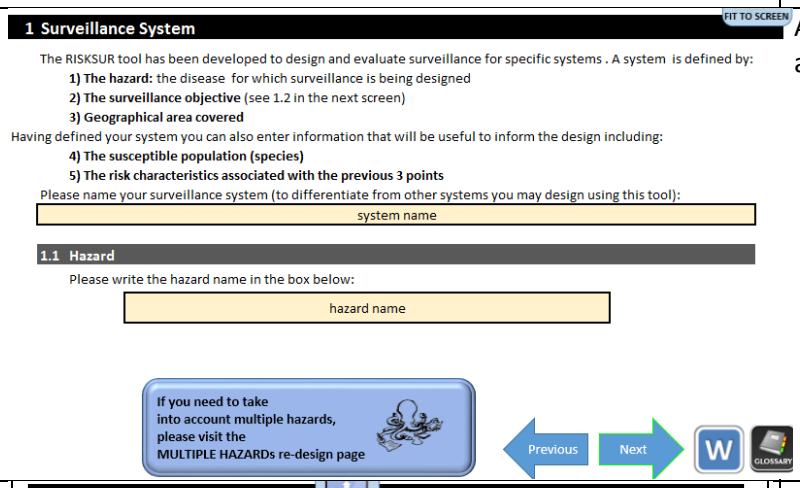
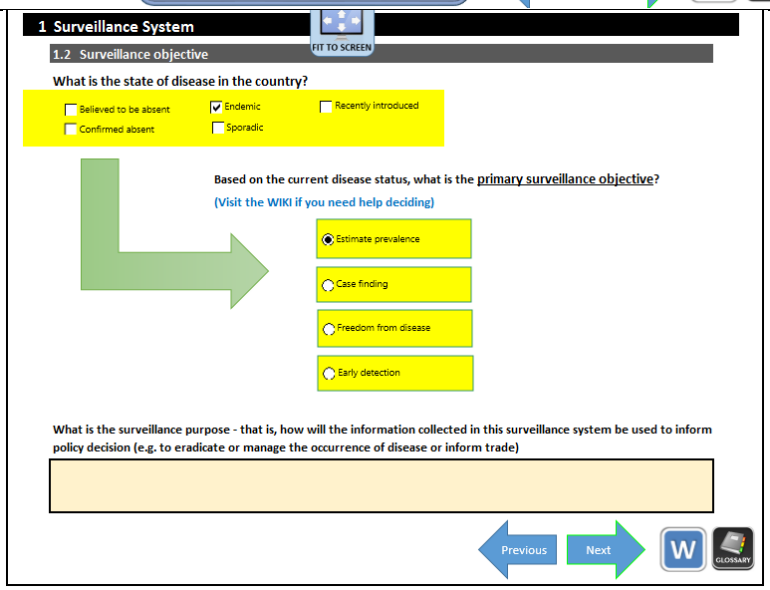
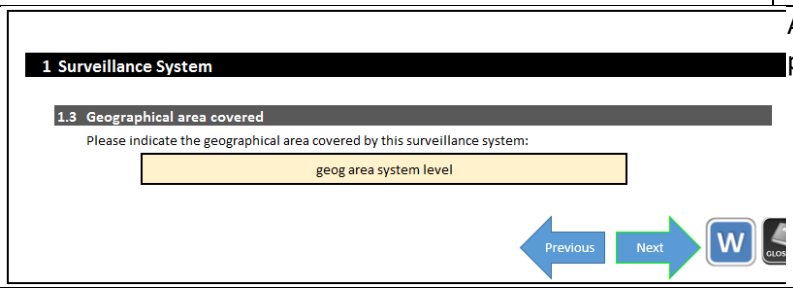
In any given page, click on this icon to make the questions fit on your screen, or scroll down to see more questions.

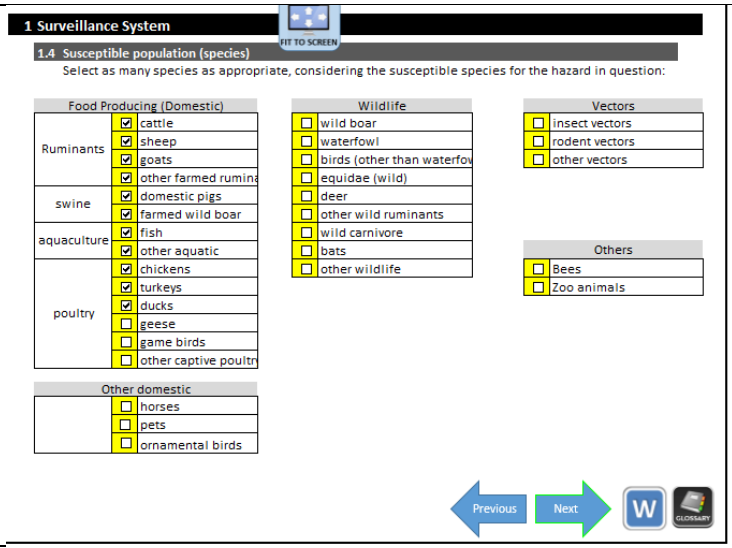
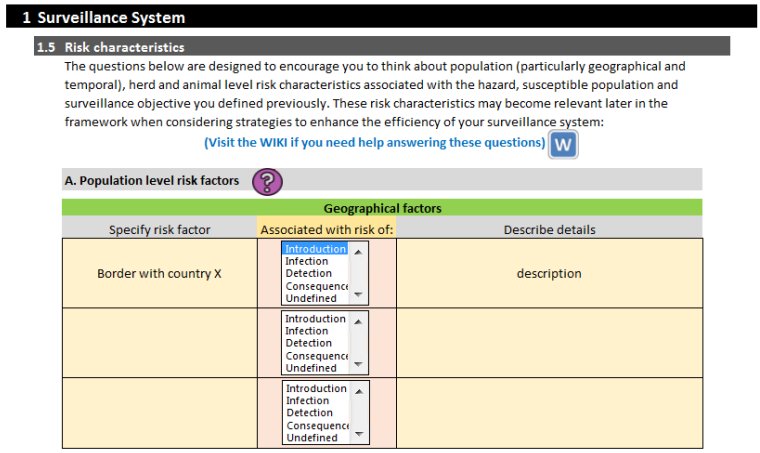
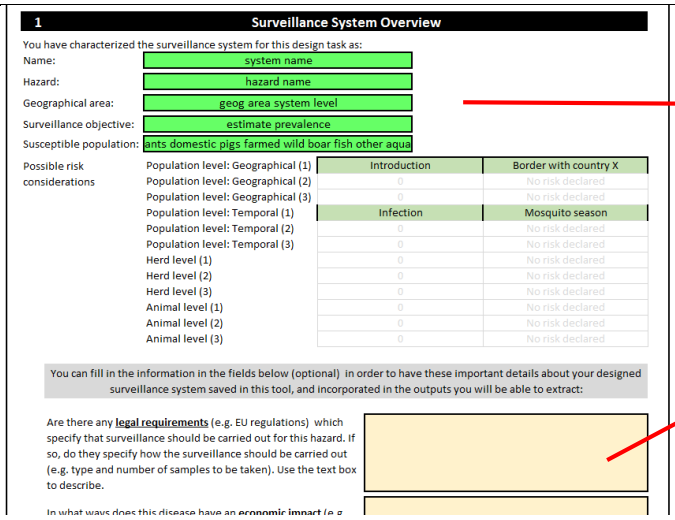
At the bottom of every page you will find navigation buttons to proceed to the previous or next page, or access the wiki page and glossary.

To the right of every page there is a navigation menu. Use this menu to jump straight to any step desired. Your current step is highlighted in green.

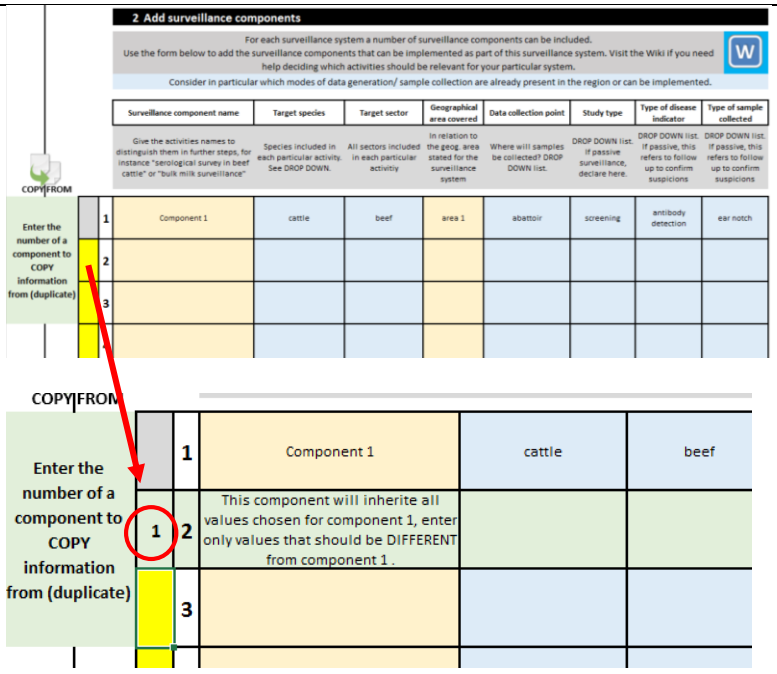
You can also navigate directly using the Excel tabs at the bottom:

1. SURVEILLANCE SYSTEM

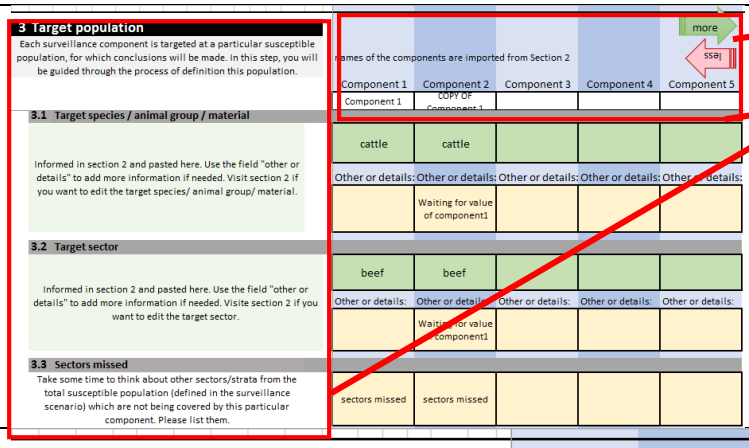
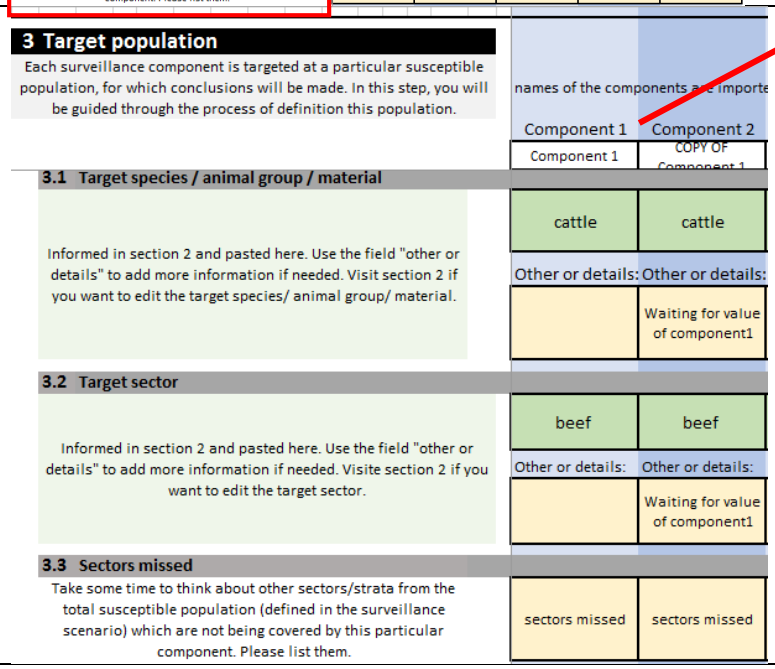
Step	Screen	Instructions
1.1		Answer the two-free text questions and proceed to the next.
1.2		**Choose ONE answer for each of the two questions proposed (two lists of options highlighted in yellow).** For the state of the disease in the country, each box can be clicked once to check it, and clicked again to uncheck it (click on the box or on the text). Choose one answer for surveillance objective. Only one option can be selected, and the other options are automatically unselected. Visit the WIKI if you need help choosing the appropriate surveillance objective. Surveillance purpose in the bottom: free-text question.
1.3		Answer the free text question and proceed to the next.

Step	Screen	Instructions
1.4		Check as many options as appropriate. Every box can be clicked once to check it, and clicked again to un-check it (you must click on the box – yellow cells, clicking on the text will have no effect).
1.5		For each type of risk to be considered (geographical, temporal, herd and animal), give the risk factor a name and a description in the free-text boxes. In the middle column, select all appropriate types of risk - click– once to select, and click again on the same word to un-select. Multiple options can be selected. Visit the WIKI if you need help understand risk factors.
1.6		Review your answers (displayed automatically, no action needed. If you wish to change any answers, go back to the respective step, do not make any changes to the green cells directly on this screen). Answer the free-text questions.

2. SURVEILLANCE COMPONENTS OVERVIEW

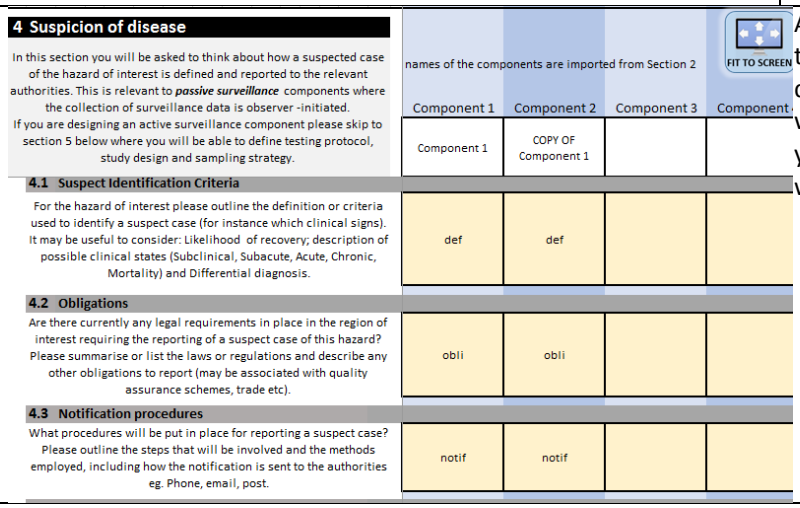
Step	Screen	Instructions
2		Fill in one surveillance component per line. Note that most columns' inputs are drop-down lists, and only the name and area are a free-text input. **For details about any column (study type, disease indicator, etc) visit the WIKI.** In general, you should create **one component for each animal species**, and only include multiple sectors if the sampling design will be exactly the same for each sector. If you need help defining components, visit the WIKI. If you need to enter multiple species or multiple sectors, choose "**Other**", and a free-text input option will be given to you later. If a given component will be applied to multiple species and/or sectors, but some small details of the design can change (for instance different design prevalence for each sector), then the ideal is to **fill in one component for the first species/sector, and then duplicate that component as many times as necessary**. To duplicate any component, enter its number in the bright yellow cell (first column) in a row for a new component (SEE FIGURE TO THE LEFT). All information from the first component will be pasted for the second throughout the framework. You then only have to enter any information IF that information is different for the new component. Otherwise all information is duplicated.

3. TARGET POPULATION

Step	Screen	Instructions
3.1 to 3.5		Click more to see more components. The top and the left parts of the pages from here on are frozen, to you can scroll to the right to see more components (and questions are still going to be shown on the left) or scroll down to see more questions (and component names on the top are still going to be shown).
		Component names are copied from information entered on Step 1. The input in green has been pasted from section 2. You can add additional information on the free-text boxes (yellow). Don't modify the green cells. If any components were duplicated, the information from the primary component will always be pasted automatically into the duplicated, but you can still change it as you wish by just clicking on the cell and overwriting the values.

4. SUSPICION OF DISEASE

General navigation details: as explained in section 3 (target population)

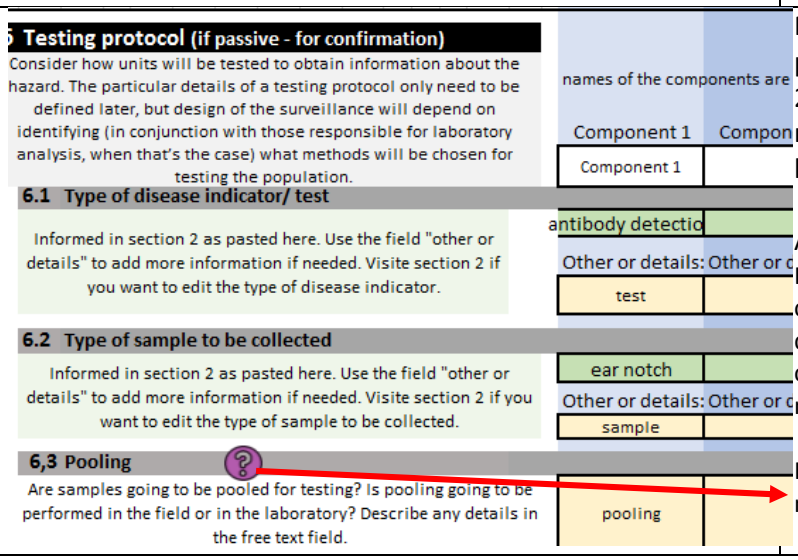
Step	Screen	Instructions
4.1 to 4.5		All questions in this section are free-text. Just keep in mind that for duplicated components information will be duplicated automatically, but you can click on the cell and overwrite with new information.

5. ENHANCEMENTS

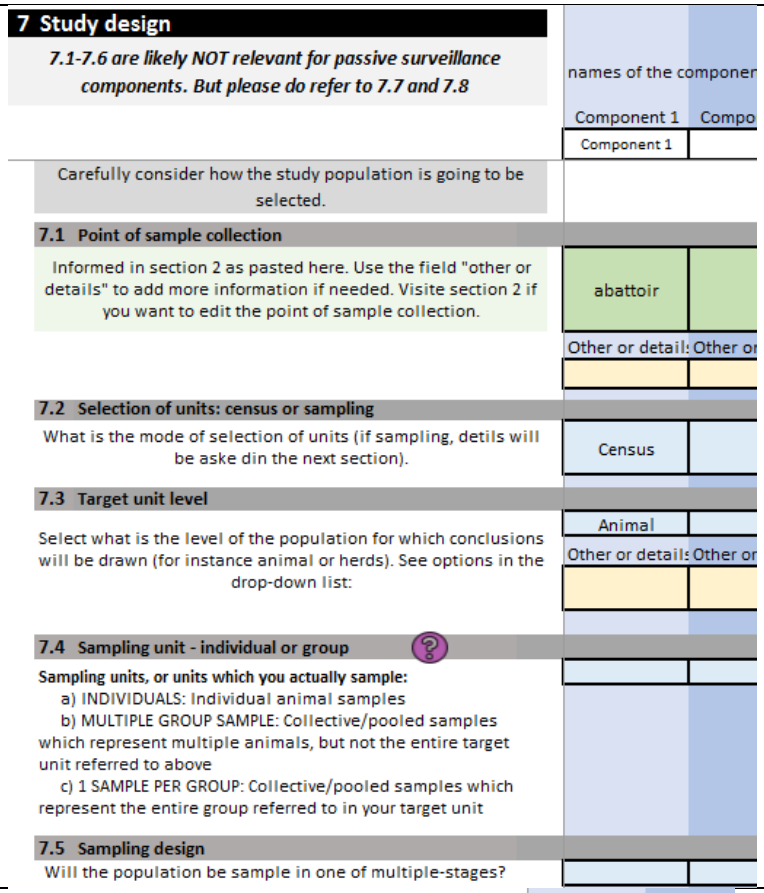
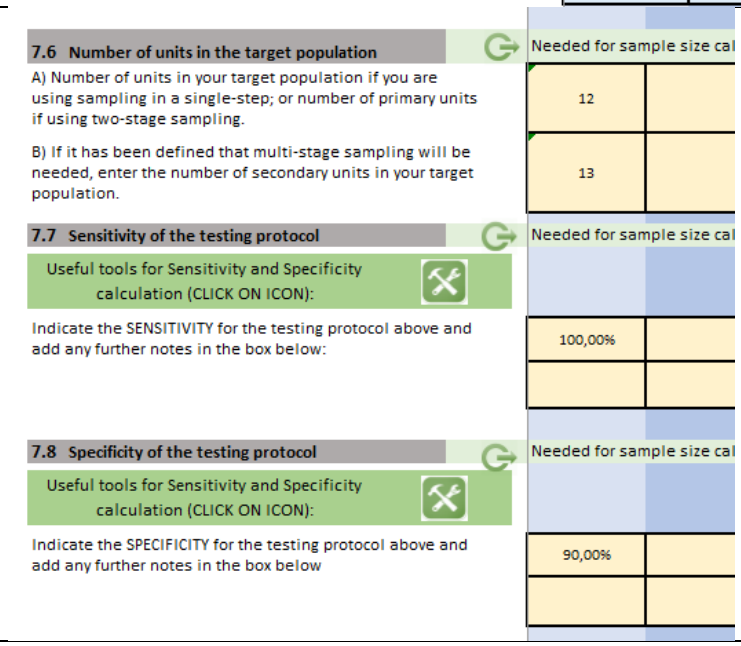
Step	Screen	Instructions
	5 Enhancements Using the table provided please add as many enhancements or other incentives to participation as are suitable for your surveillance components. For each enhancement, please fill in the information requested for your own reference:	All questions are free-text. For each individual component, list up to 5 enhancements for participation. **Visit the WIKI if you need help understanding what enhancements are, and to see some examples.**

	Component 1	Componen
	Component 1	
Enhancement 1		
A) Enhancement/Incentive name		
B) Target (e.g. public, farmers, veterinarians)		
C) Responsibility for implementing/ overseeing		
D) Financial responsibility		
E) Frequency e.g monthly, quartely, yearly)		
F) Further information and description		
Enhancement 2		
A) Enhancement/Incentive name (examples on diagram above)		
B) Target (e.g. public, farmers, veterinarians)		
C) Responsibility for implementing/ overseeing		
D) Financial responsibility		
E) Frequency e.g monthly, quartely, yearly)		
F) Further information and description		

6. TESTING PROTOCOL

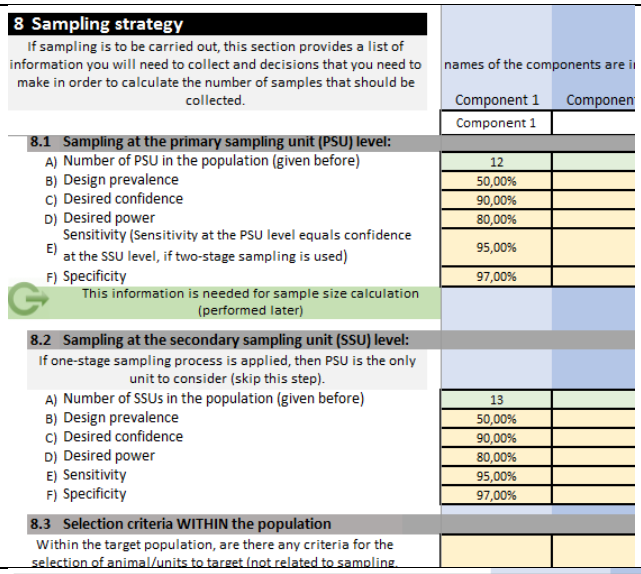
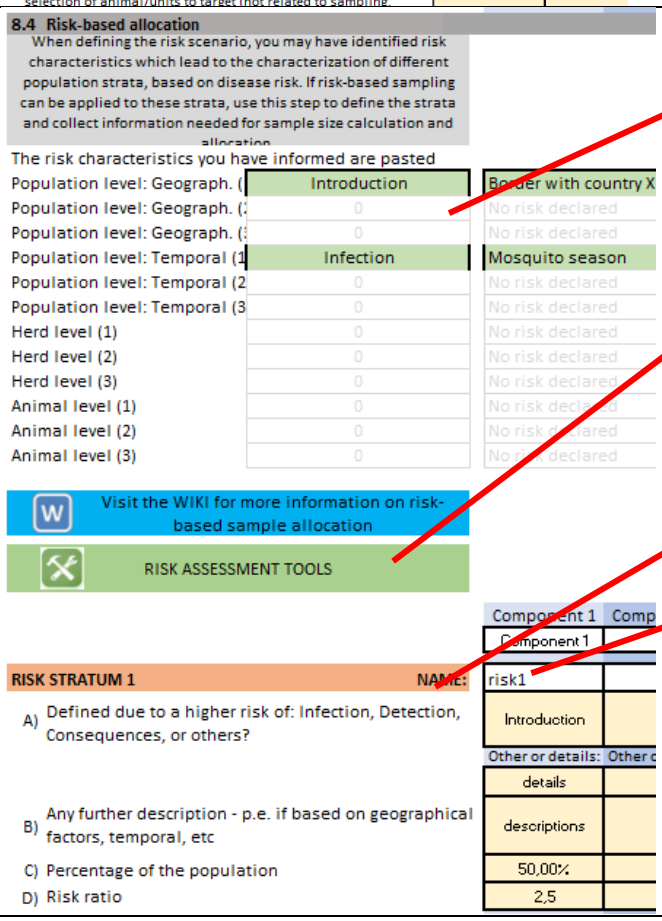
Step	Screen	Instructions
6.1-6.6		Note that two questions have been pasted from section 2, visit section 2 if you need to modify them (do not modify green cells directly here). Answer the free-text questions. Keep in mind that for duplicated components information will be duplicated automatically, but you can click on the cell and overwrite with new information. Hover the mouse over the question mark to get terminology information.

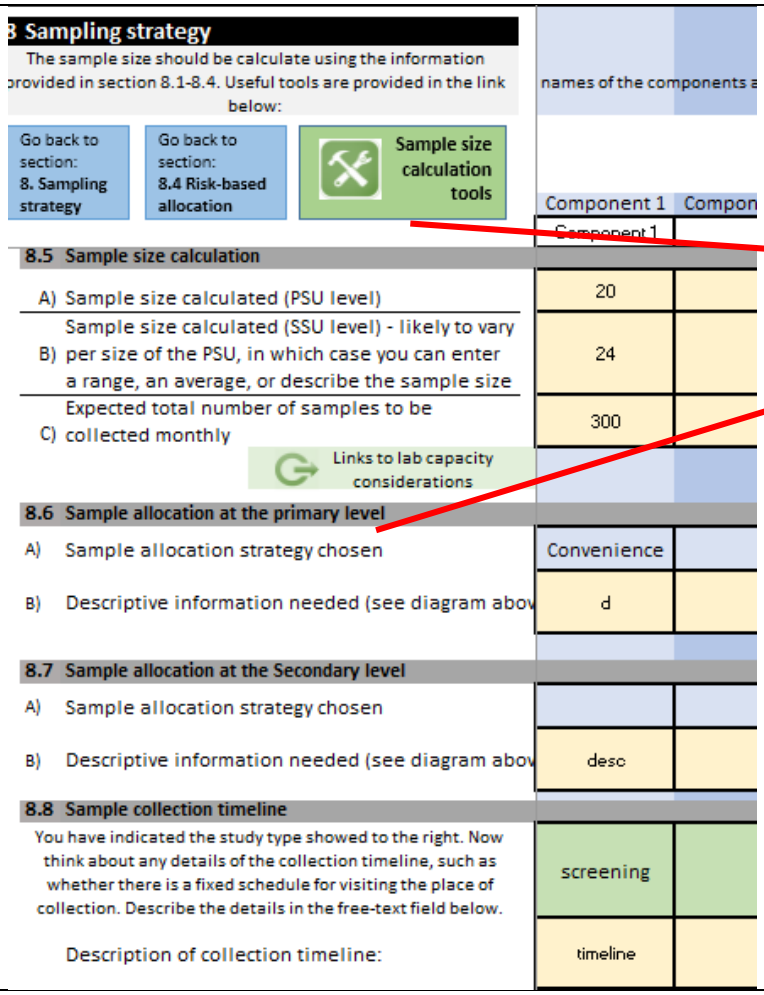
7. STUDY DESIGN

Step	Screen	Instructions
7.1 – 7.5		7.1 has been pasted from section 2, visit section 2 if you need to modify answers (do not modify green cells directly here). Questions 7.2 to 7.5 are drop-down lists. Select an option and enter any further details into the free-text boxes (yellow). Keep in mind that for duplicated components information will be duplicated automatically, but you can click on the cell and overwrite with new information.
7.6 – 7.8		All these questions are free-text, but for 7.7 and 7.8 you should try to enter a single value on the first cell, and any details on the second line. Links to statistical tools that may be needed are provided, just click on the icon. **Visit the WIKI if you need help answering the questions, or would like to see examples.**

8. SAMPLING STRATEGY

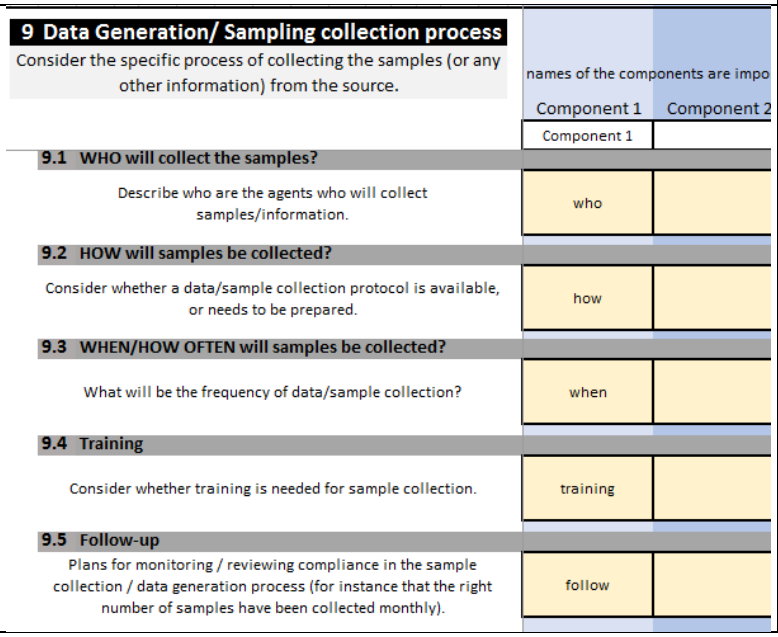
General navigation details: as explained in section 3 (target population)

Step	Screen	Instructions
8.1-8.3		All these questions are free-text, the green cells are pasted automatically from section 7. **Visit the WIKI if you need help answering the questions, or would like to see examples.**
8.4		Information you entered on section 1.5 (risk characteristic) will be automatically pasted here. Consider these risk characteristics, and if necessary use risk assessment tools to identify risk strata. **Visit the WIKI if you need help with Risk-based surveillance.** For each Risk strata, enter the information requested (free-text fields). Start naming each individual risk stratum.

Step	Screen	Instructions
8.5-8.8		Note that some fields are drop-down lists (blue) and some are free-text (yellow). Click to have access to tools that will help you determine the sample size, based on the information gathered in steps 8.1 to 8.4 **Visit the WIKI if you need help with sample allocation.**

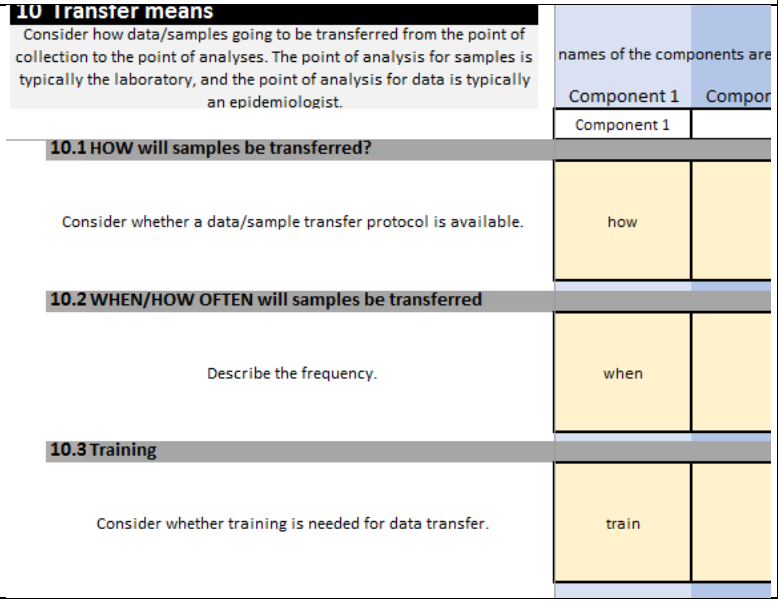
9. DATA GENERATION

General navigation details: as explained in section 3 (target population)

Step	Screen	Instructions
9.1 to 9.5		All questions in this section are free-text. Just keep in mind that for duplicated components information will be duplicated automatically, but you can click on the cell and overwrite with new information. **Visit the WIKI if you need help answering the questions, or would like to see examples.**

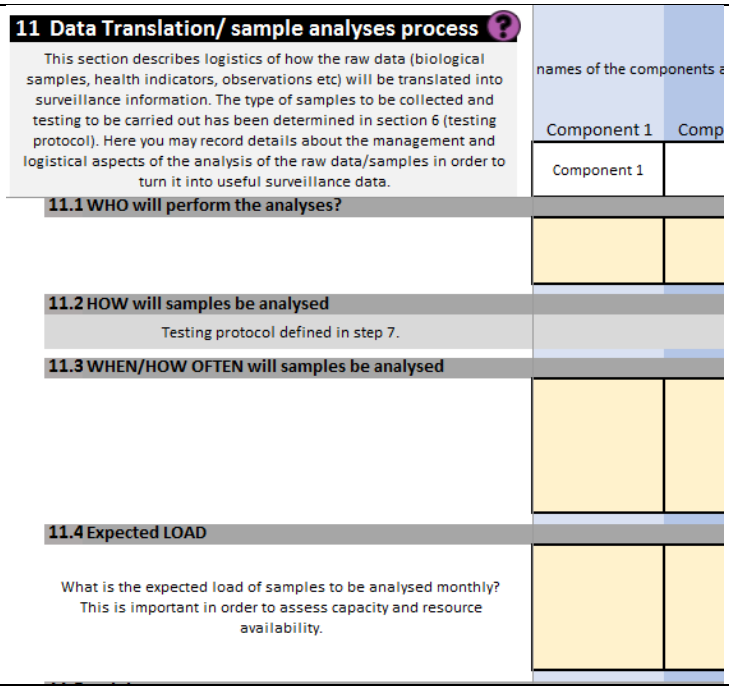
10. TRANSFER MEANS

General navigation details: as explained in section 3 (target population)

Step	Screen	Instructions
10.1 – 10.3		All questions in this section are free-text. Just keep in mind that for duplicated components information will be duplicated automatically, but you can click on the cell and overwrite with new information. **Visit the WIKI if you need help answering the questions, or would like to see examples.**

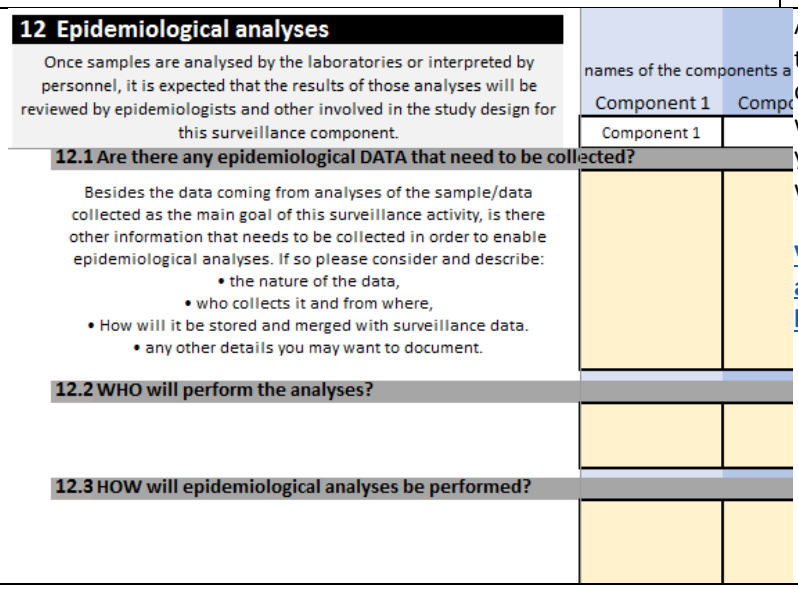
11. DATA TRANSLATION

General navigation details: as explained in section 3 (target population)

Step	Screen	Instructions
11.1 – 11.6		All questions in this section are free-text. Just keep in mind that for duplicated components information will be duplicated automatically, but you can click on the cell and overwrite with new information. **Visit the WIKI if you need help answering the questions, or would like to see examples.**

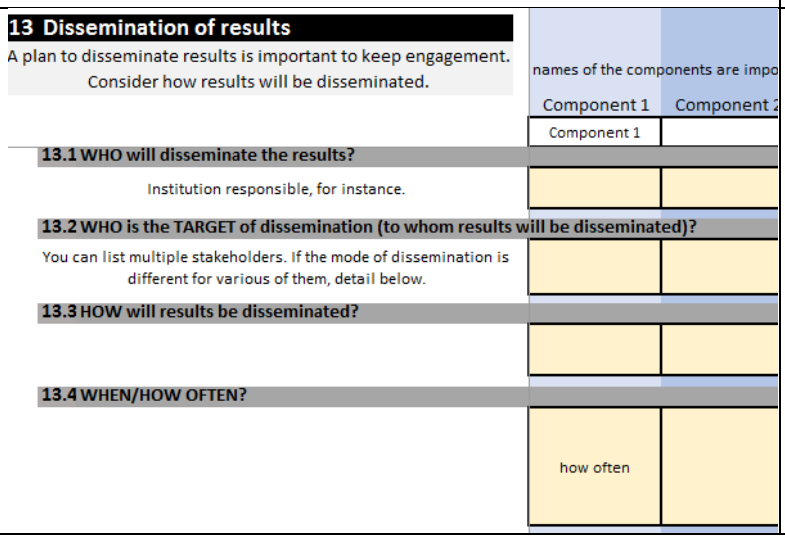
12. EPIDEMIOLOGICAL ANALYSES

General navigation details: as explained in section 3 (target population)

Step	Screen	Instructions
12.1 – 12.7		All questions in this section are free-text. Just keep in mind that for duplicated components information will be duplicated automatically, but you can click on the cell and overwrite with new information. **Visit the WIKI if you need help answering the questions, or would like to see examples.**

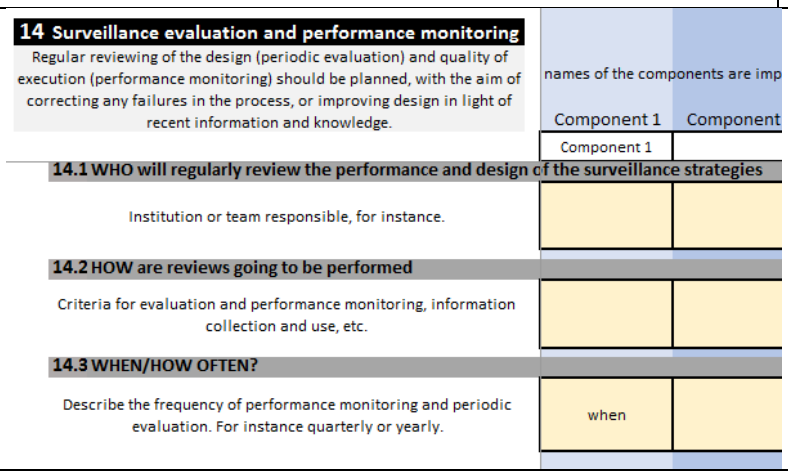
13. DISSEMINATION OF RESULTS

General navigation details: as explained in section 3 (target population)

Step	Screen	Instructions
13.1 – 13.4		All questions in this section are free-text. Just keep in mind that for duplicated components information will be duplicated automatically, but you can click on the cell and overwrite with new information. **Visit the WIKI if you need help answering the questions, or would like to see examples.**

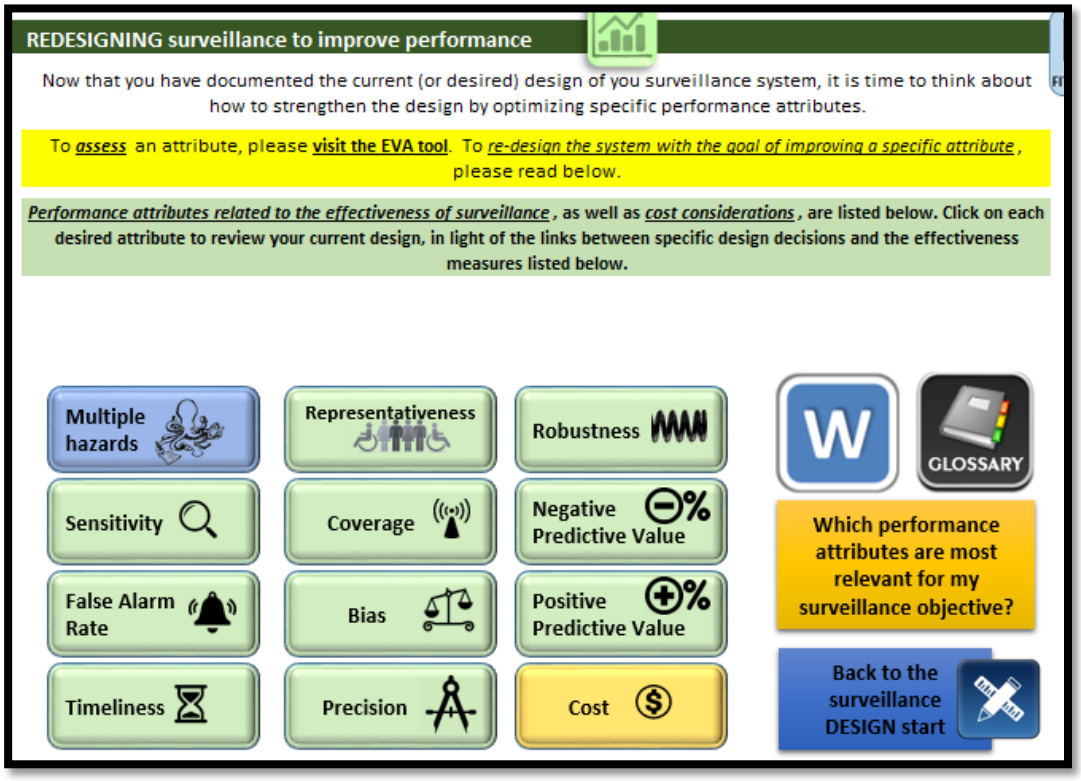
14. SURVEILLANCE EVALUATION AND PERFORMANCE MONITORING

General navigation details: as explained in section 3 (target population)

Step	Screen	Instructions
14.1 – 14.3		All questions in this section are free-text. Just keep in mind that for duplicated components information will be duplicated automatically, but you can click on the cell and overwrite with new information. **Visit the WIKI if you need help answering the questions, or would like to see examples.**

If you are done with the surveillance design, we recommend going to the **reporting section**, or the **re-design section**.

RE-DESIGN

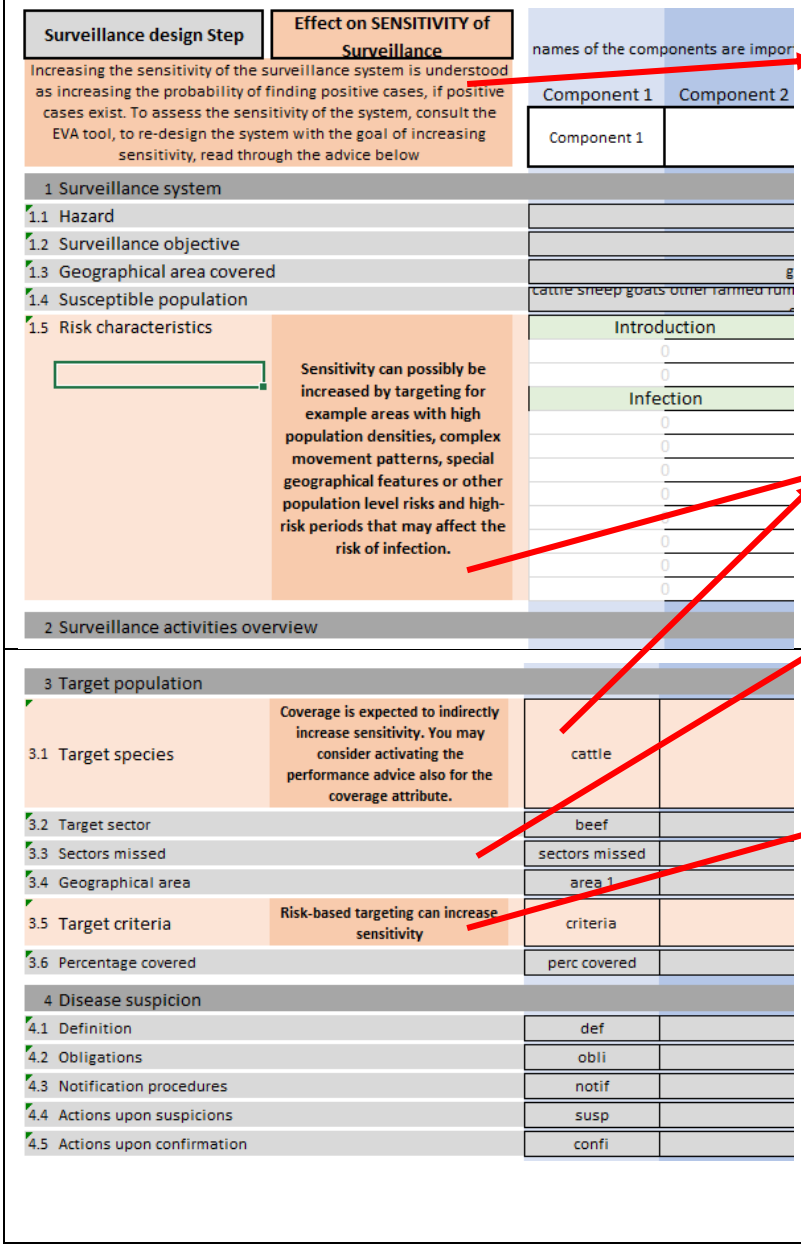


Click on any attribute to access the re-design page.

This section of the framework will help you review the surveillance design with the goal of improving performance for specific attributes. It will NOT guide you to assessing those attributes. TO get guidance on that, consult the EVA tool.

The page for **multiple hazards** is different from the others, and show at the end of this manual. For all other attributes, see the instructions below exemplified using the attribute **Sensitivity**.

PERFORMANCE ATTRIBUTE SPECIFIC RE-DESIGN – EXAMPLE OF SENSITIVITY



The definition of the performance attribute is given at the top.

All steps of the surveillance design framework are listed, and the answers you provided are pasted.

The steps with relevance to the performance attribute (here for instance, the steps with potential to improve Sensitivity) **are highlighted**, and the non relevant ones are greyed out.

Some advice is given here as to why that step is relevant, but for up to date and more complete advice, **visit the WIKI**.

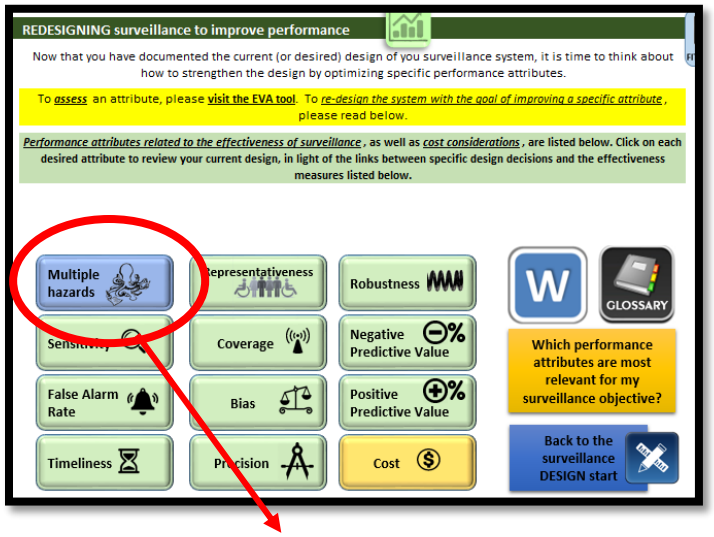
Read the advice, and decide if the step can be reviewed (re-designed) to improve performance. **If so, revisit the step in the surveillance design framework**. Do not change your answers in this page, as this will not change them in the surveillance design framework and report. IF you want to

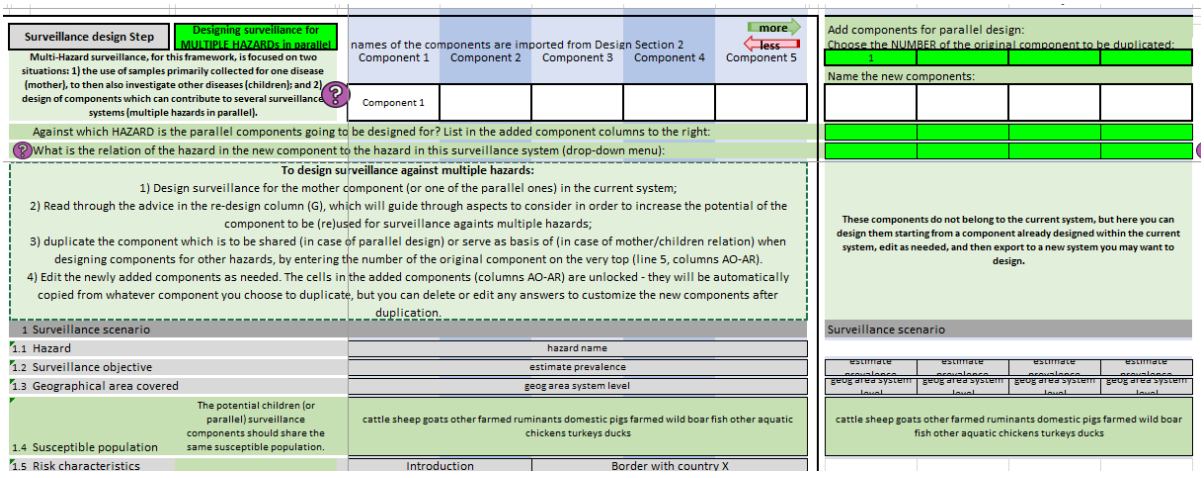
MULTI-HAZARD SURVEILLANCE

The framework is meant to be used for the design of surveillance systems individually, that is, one hazard at a time. However, in practice, many surveillance activities will be connected to surveillance against other hazards, and many times one activity is part of multiple surveillance systems.

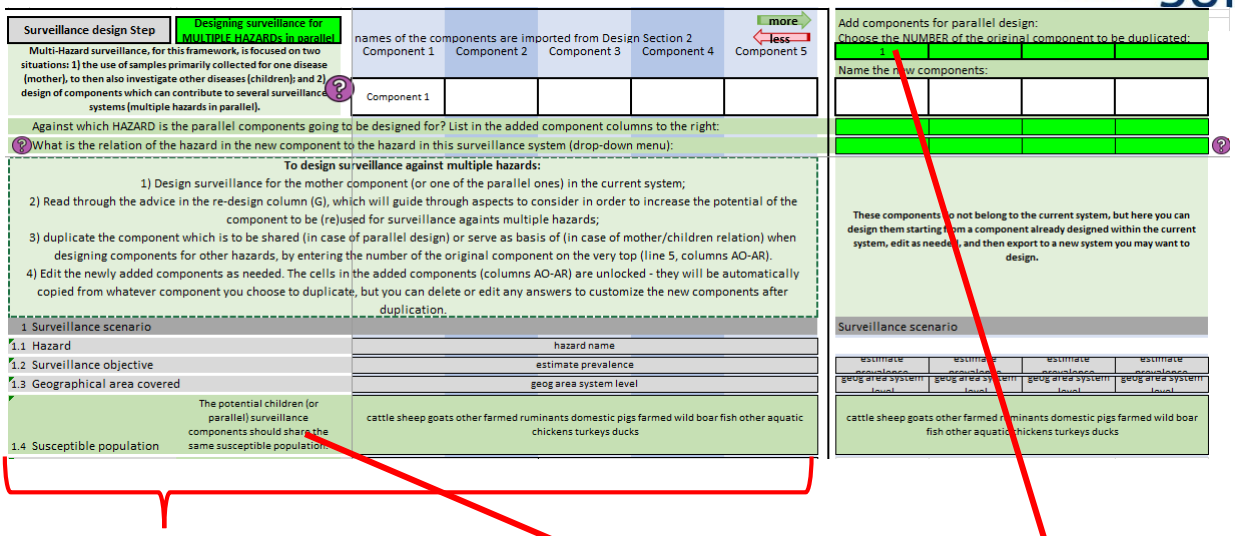
When that is the case, you can re-use the information entered in the framework for your current surveillance systems, in order to design surveillance components that will be added to other surveillance systems.

In order to do that, visit the Multi-hazard surveillance page:





See instructions below to use this page:



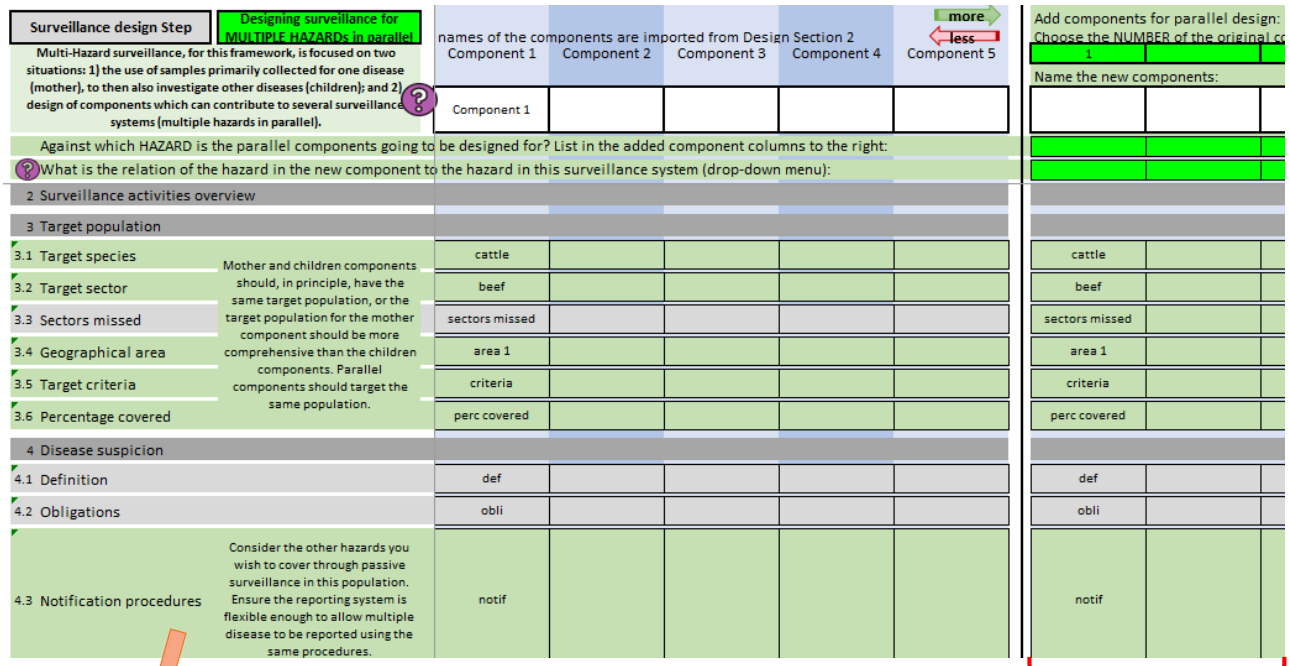
All the steps of the surveillance design will appear here (left) , and the answers you provided will be pasted (right). Do not modify them here, as this will NOT cause them to be modified in the design framework or the report.

Read through the advice in the re-design column (G), which will guide through aspects to consider in order to increase the potential of the component to be (re)used for surveillance against multiple hazards

At the top of one of the multi-hazard columns (right) type the number of the component from the current surveillance system which will be used for surveillance against other hazard (duplicated).

Name the new component and list the new hazard. If you wish you can also indicate whether this will be a parallel component (activity designed for both surveillance systems), or a child component (activity design for a primary surveillance system, but part of the collected samples are then re-used for surveillance against another hazard). Visit the WIKI to understand more.

For instance, say the current surveillance system is for PRRS, and component 2 is a serological survey. You want to use the samples collected in that component to also test for CSF. Then type 2 at the top of the column indicated with the arrow. This will paste all information from component 2 into this column.



Surveillance design Step	Designing surveillance for MULTIPLE HAZARDs in parallel	names of the components are imported from Design Section 2				more / less	Add components for parallel design: Choose the NUMBER of the original co		
Multi-Hazard surveillance, for this framework, is focused on two situations: 1) the use of samples primarily collected for one disease (mother), to then also investigate other diseases (children); and 2) design of components which can contribute to several surveillance systems (multiple hazards in parallel).		Component 1	Component 2	Component 3	Component 4	Component 5	1		
		Component 1					Name the new components:		
Against which HAZARD is the parallel components going to be designed for? List in the added component columns to the right:									
What is the relation of the hazard in the new component to the hazard in this surveillance system (drop-down menu):									
2 Surveillance activities overview									
3 Target population									
3.1 Target species	Mother and children components should, in principle, have the same target population, or the target population for the mother component should be more comprehensive than the children components. Parallel components should target the same population.	cattle					cattle		
3.2 Target sector		beef					beef		
3.3 Sectors missed		sectors missed					sectors missed		
3.4 Geographical area		area 1					area 1		
3.5 Target criteria		criteria					criteria		
3.6 Percentage covered		perc covered					perc covered		
4 Disease suspicion									
4.1 Definition		def					def		
4.2 Obligations		obli					obli		
4.3 Notification procedures	Consider the other hazards you wish to cover through passive surveillance in this population. Ensure the reporting system is flexible enough to allow multiple disease to be reported using the same procedures.	notif					notif		

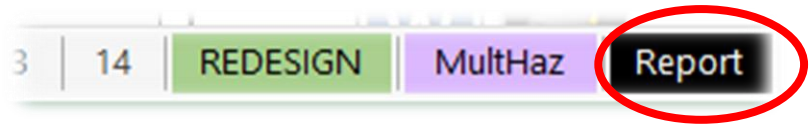
Once all information from the component desired is duplicated here, you can scroll down through the surveillance steps, and review the information looking at all relevant components (from the current surveillance system and the new ones) side by side.

Edit the newly added components as needed. The cells in the added components (columns AO-AR) are unlocked - they will be automatically copied from whatever component you choose to duplicate, but you can delete or edit any answers to customize the new components after duplication.

Remember that the most relevant steps that may need your attention are highlighted, and advice is given on column G.

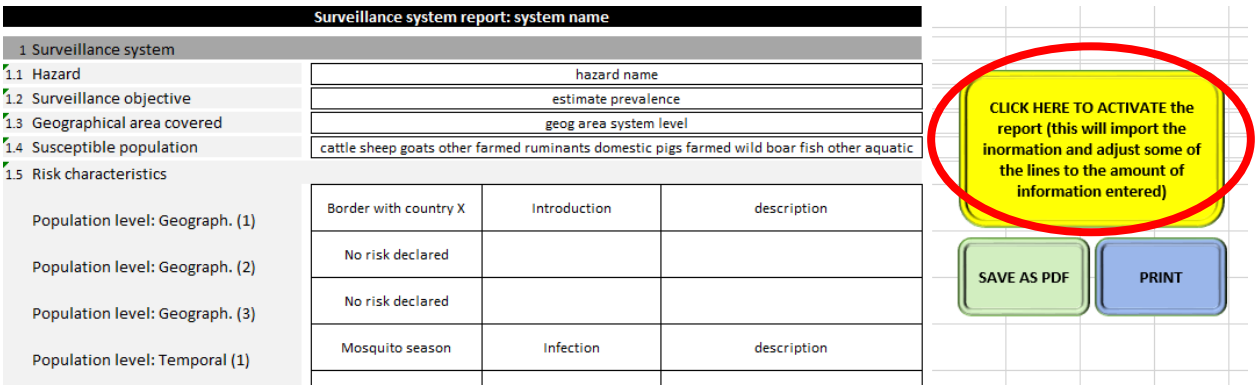
REPORT

To generate a PDF report, visit the report tab:



This generates a first page reporting all the information about the surveillance system (section 1), then then and overview of the surveillance components (section 2), and then, for the rest of the design, each component is reported individually (one report per component for sections 3-14).

<u>To generate the report, therefore, the tool has to check how many components were designed. To generate the report, click on the yellow button</u>:



You should not need to modify anything in this page, all rows will adjust to the amount of information on them. Changing any information here will NOT change them in the design framework.