



# One Health surveillance evaluation applied to ABR surveillance in Vietnam

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# Outline

- Research context and question
- Method
- Result



# Working definitions

## I. Research context and question

## II. Method

## III. Results

### Surveillance

**Ongoing collection of data** about a health event in a specific population to study its evolution in time and space and to inform appropriate decision to mitigate the related risk *(adapted from Hoinville et al., 2013)*

### One Health surveillance system:

System in which **collaborative** efforts exist across **at least two sectors** (among human health, animal health, and environment) in the surveillance process to produce and disseminate information with a purpose to improve any of human, animal or environmental health. *(Bordier)*

### Evaluation of a surveillance system/component

The **determination of its merit** by confronting the results to the standards, targets, criteria or a counterfactual system. *(Calba et al., 2013)*

# One Health surveillance

## I. Research context and question

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### Why do we want to do One Health surveillance?

- More efficient approach to tackle health hazard issues at the human-animal-environment
  - Generate knowledge
  - Early warnings
  - Information from public health policy and implementation of control strategies
- More cost effective (economy of scope)

### The reality...

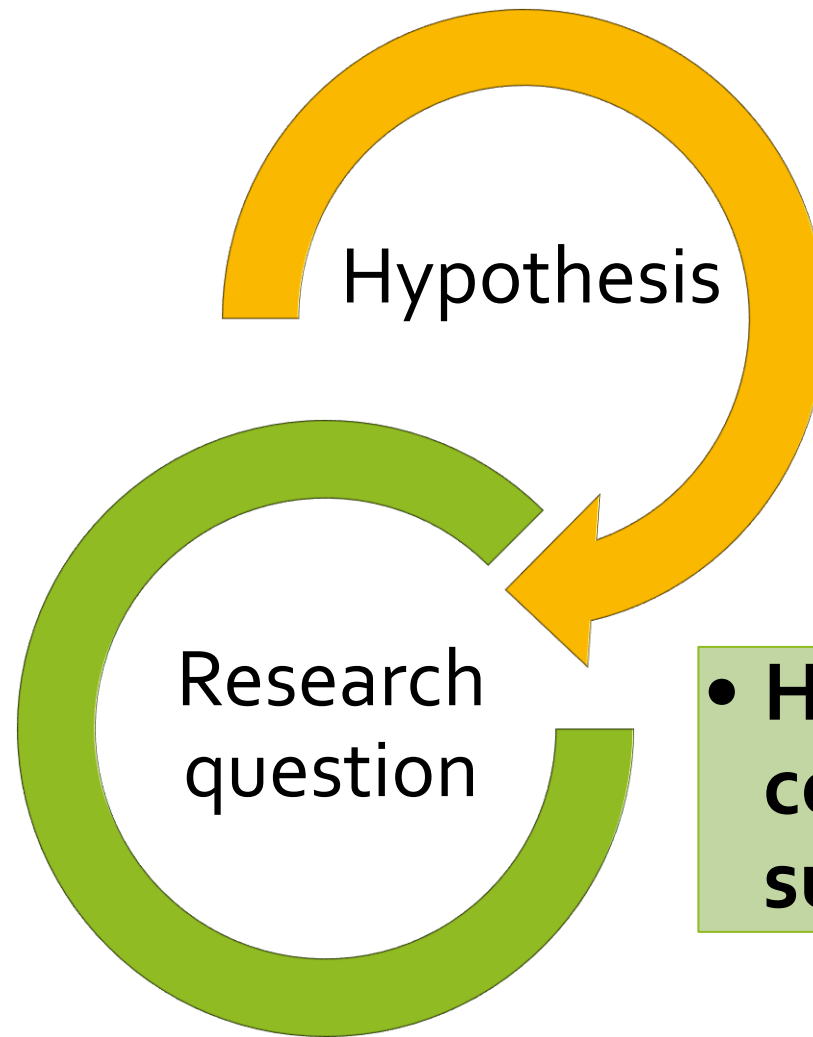
- Resource demanding
- Difficult to operationalize
- Ecosystem health often put aside

# Research framework

I. Research context and question

II. Method

III. Results



- Difficult to identify the appropriate collaborations.
- No clear evidence of the impact of collaborations on surveillance value
- No tools to evaluate the appropriateness of collaborations and their impact on the surveillance value

**• How to evaluate collaborations in a OH surveillance system?**

# Research methodology

I. Research context and question

II. Method

III. Results

## Evaluation matrix

- Define the attributes
  - Based on conceptual framework + attributes OASIS/Risk Sur
  - Refined by elicitation of expert opinion
- Define methodology to measure attributes + targets/standards for the evaluation

## Application- Evaluation of ABR surveillance in Vietnam

- Defining evaluation question
- Choosing the relevant attributes to answer the question
- Assessing the chosen attributes
  - Interviews and literature review



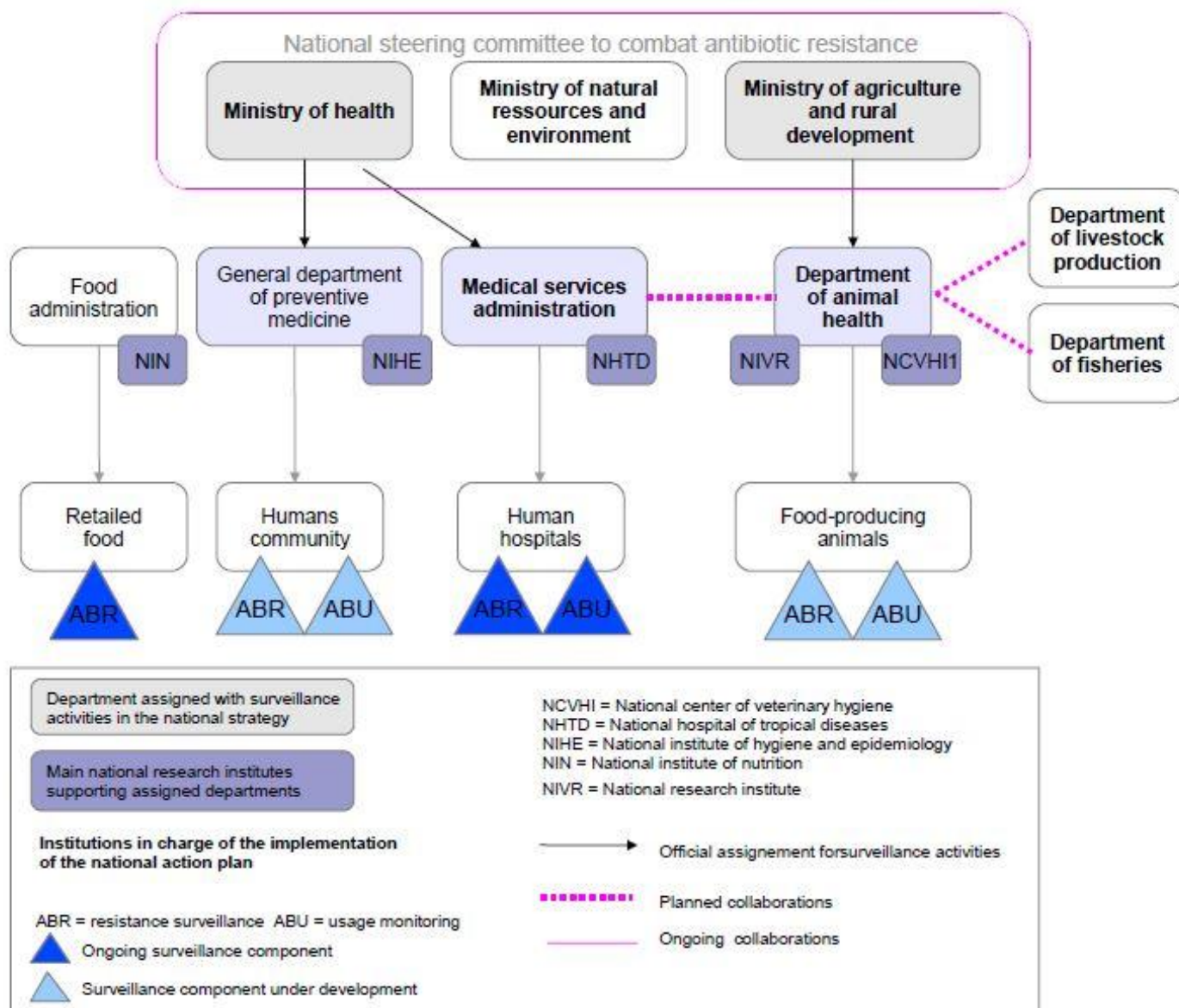


Figure by M. Bordier

# Surveillance of ABR in Vietnam: a One Health surveillance system?

I. Research context and question

II. Method

III. Results

# Conceptual framework

I. Research context and question

II. Method

III. Results

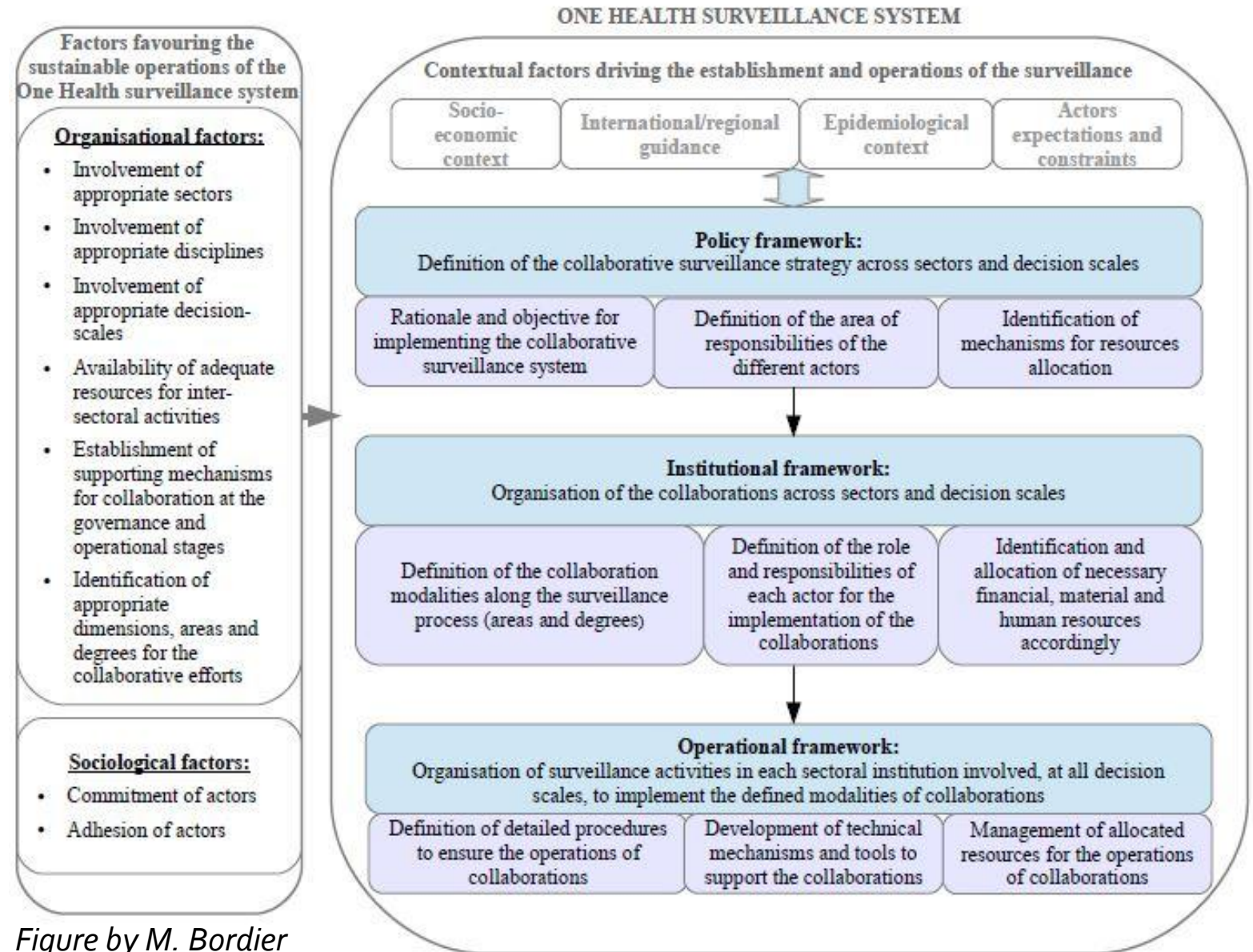


Figure by M. Bordier



# Attributes defined by OASIS and Risk Sur (in 5 groups)

*I. Research context and question*

*II. Method*

**III. Results**

Name	Group	Definition
<b>Governance</b>	Formalization at the policy level	Level of detail, precision and formalization of the objectives at the policy level
<b>Operations</b>	Data collection	The use of appropriate data sources and collection methods including automation of data collection where appropriate and the existence of a case definition and data collection protocol including an appropriate sampling strategy
<b>Function</b>	Acceptability and engagement	Willingness of persons and organizations to participate in the surveillance system, the degree to which each of these users is involved in the surveillance.
<b>Effectiveness</b>	Timeliness	This is usually defined as the time between any two defined steps in a surveillance system, the time points chosen are likely to vary depending on the purpose of the surveillance activity.
<b>Surveillance value</b>	Benefit	The benefit of surveillance quantifies the monetary and non-monetary positive direct and indirect consequences produced by the surveillance system and assesses whether users are satisfied that their requirements have been met.

(Hendrikx et al., 2011) (Calba et al., 2013)

# Attributes for collaboration

*I. Research context and question*

*II. Method*

**III. Results**

Name	Risk Sur/ OASIS definition for the evaluation sectoral surveillance system	Definition for the evaluation of collaboration in a OH surveillance system
<b>Formalization at the policy level</b>	Level of detail, precision and formalization of the objectives at the policy level	Formulation of the <b>rationale and objectives of the collaborative surveillance effort</b> as well as the <b>area of responsibilities of the surveillance actors</b> and the dimensions of the collaboration in document(s), and <b>endorsed by all</b> the actors from different sectors and decision scales involved.
<b>Data collection</b>	The use of appropriate data sources and collection methods including automation of data collection where appropriate and the existence of a case definition and data collection protocol including an appropriate sampling strategy	Implementation of <b>appropriate collaborative activities</b> for the data collection (ex: data standardization to allow inter-sectoral comparison and combination of data) and <b>availability of related resources</b> (financial, technical, human), to meet the collaborative surveillance objective and to comply with the collaborative modalities defined at the institutional level
<b>New attribute</b>	Definition for the evaluation of collaboration in a OH surveillance system	
<b>Data exchange</b>	Implementation of appropriate collaborative activities for data exchange (ex: compatibility of information systems across sectors) and availability of related resources (financial, technical, human), to meet the collaborative surveillance objective and to comply with the collaborative modalities defined at the institutional level	

# Expert opinion elicitation

## I. Research context and question

## II. Method

## III. Results



Thank you for your willingness to participate in our study!

The purpose of this questionnaire is to elicit your expertise to refine our findings about the characterization and evaluation of collaboration within a One Health surveillance system.

A **One Health surveillance system** is defined in this study as "a system in which collaborative efforts exist across at least two sectors (among human health, animal health and environment health) during the surveillance process to produce and disseminate information which leads to actions aimed at attaining optimal health of humans and/or animals and/or ecosystems." The analysis of our system surveillance systems allowed us to identify that dimensions and under different modalities.

0 of 36 answered

Do you identify some **missing evaluation attributes** to assess the collaboration in a One Health surveillance system?

YES

NO

If YES, please specify and be as detailed as you can. Thank you!

22 of 36 answered

### Effectiveness

For more details with an "i", you can find a reminder of the OASIS and/or EVA Tool description by clicking "here".

Attributes' name	Definition
Relevance	Assess whether collaboration affects the value of information at a component level.
Appropriateness	The appropriateness of sectoral components include surveillance system in relation to the surveillance context and context.
Representativeness	Assess whether collaboration affects the value of representativeness" at a component level.
Early alarm	Assess whether collaboration affects the value of early alarm" at a component level.
Decision	Assess whether collaboration affects the value of decision" at a component level.
Timeliness	Assess whether collaboration affects the value of timeliness" at a component level.
Sensitivity	Assess whether collaboration affects the value of sensitivity" at a component level.
Predictive value	Assess whether collaboration affects the value of Predictive value" at a component level.

27 of 36 answered

Training	Provision of adequate initial and ongoing training for operating sectoral surveillance collaborative activities.
Information	Provision of adequate initial and ongoing information about (i) the rationale behind the collaborative effort (ii) the overall organization of the surveillance system, as well as of all the different sectoral components.

OK

\* 26. Are all those attributes relevant when it comes to the evaluation of collaboration within a surveillance system?

☐ YES

☐ NO

If NO, please specify and be as detailed as you can. Thank you!

21 of 36 answered

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Thank you !



# Bibliographie

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- Figure 1 “One Health”: [https://www.wur.nl/upload\\_mm/5/a/6/f2983a5c-a8f7-485c-8af3-47d2bc25a160\\_onehealth.jpg](https://www.wur.nl/upload_mm/5/a/6/f2983a5c-a8f7-485c-8af3-47d2bc25a160_onehealth.jpg)