

Levers and barriers to inter-sectoral collaborations in the One Health surveillance system of antibiotic resistance in Vietnam

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Summary: Antibiotic resistance (ABR) is a global health threat that calls for the implementation of an inter-disciplinary and inter-sectoral surveillance system, in line with the One Health (OH) concept. The international community is strongly advocating the implementation of OH surveillance system for ABR at country level. In this context, the Vietnamese authorities have developed an inter-ministerial strategy (2013) to combat the phenomenon, including a surveillance system for ABR, that targets hospitals, community, food-producing animals and retailed food. However, those in charge of surveillance tasks are having trouble implementing the intersectoral and inter-disciplinary collaborations promoted at policy level. To elucidate the rationale behind success or unsuccessful collaborations and in order to suggest solutions to overcome identified obstacles, we interviewed actors involved in the national strategy. Based on actors' perspectives, we identified seven factors that may impede the development of the collaborations required by the OH approach: the current governance and operational framework, a divergent institutional culture, the level of knowledge, technical capacities, availability of resources, conflicting commercial interests and the international partners' influence. Based on this study, we propose a guidance framework to open the way to a more effective and sustainable OH surveillance system for ABR in Vietnam.

In Vietnam, the Government recognizes that ABR represents a multi-dimensional risk that threatens public health, trade, economy and, more generally, the over-all sustainable development of the country. While the real health and economic impact remains unknown, many studies show that ABR in the human and animal sectors is very high. Supported by international organizations and cooperation, the Vietnamese authorities have developed an inter-ministerial strategy to combat the phenomenon, including a systemic surveillance system for ABR (including usage). However, operational actors report difficulties in implementing the required collaboration. We have conducted a research project to investigate the role and perception of stakeholders involved by the Vietnamese strategy for ABR surveillance. This study aims to identify, through key surveillance actors, the factors that influence collaboration across sectors and disciplines, and barriers to their implementation. Based on the situation analysis, we propose a guidance framework to

METHOD

This study adopted a qualitative approach based on an iterative stakeholder mapping and analysis, conducted in three distinct steps:

1. A structural analysis of the ABR surveillance strategy in order to characterise and map the surveillance system, as well as the actors involved based on organisational and functional attributes. Data were collected using literature review and interviews with key informants.
2. An analysis of the abilities of the key actors to comply with the inter-sectoral surveillance strategy. Data were collected using semi-structured interviews and participatory mapping of participant's position and interactions within the surveillance system.
3. Analysis of the influence of actors' abilities on the implementation of the ABR surveillance strategy, in order to identify relevant factors that could play as levers and barriers to the operationalization of inter-sectoral and multi-disciplinary collaborations.

RESULTS

1. The structural characterisation and mapping of the stakeholders in relation to the national surveillance strategy

We have identified 40 institutions directly concerned by the operations of the national surveillance system, belonging to governmental authorities (20), national research institutes and universities (6), international organisations (6) the private sector (8). The figure 1 represents a simplified mapping of the actors based on their role in the strategy (operating, influencing, absent) and their current involvement in surveillance activities (active, prospective, inactive). This onion mapping also provides an overview of actors' interactions in terms of chain of command or legal supervision, technical and financial support and inter-sectoral collaborations.

2. Barriers to the implementation of the surveillance strategy

- **Governance and operational model for the OH strategy:** The Ministry of Health is in charge of the implementation of the inter-ministerial action plan, while it has no authority over other ministries. The National Steering Committee appointed to follow up on the implementation of the action plan is dedicated to strategic discussions only and any framework for technical collaborations among operational actors is in place.
- **Institutional culture:** Actors report the coexistence of divergent cultures and competing agendas across departments, belonging to the same or to different ministries. This leads to little sense of mutual understanding and a lack of common goals for surveillance activities.
- **Level of knowledge:** Some actors admit that they do not perceive the added value of collaborating across sectors or have not identified relevant areas of collaborations for surveillance activities. This is explained by a lack of knowledge about (i) the complex epidemiology of ABR, (ii) the functioning of a OH surveillance system, (iii) the national strategy.
- **Technical capacities:** The priority remains the strengthening of sectoral surveillance components, which is considered as a pre-requisite to the implementation of cross-sectoral and international collaborations for most of the sectors. In some sectors, actors consider that there is no interest in sharing the data they are currently collecting due to their poor quality.
- **Resources:** Stakeholders deplore the lack of resources dedicated to sectoral surveillance activities and even more dramatically to the implementation of the inter-institutional actions as envisaged in the national strategy.
- **Conflicting commercial interests:** Some actors fear that the revenue represented by antibiotic sales might hamper the private sector's adhesion to the surveillance strategy.
- **International partners' influence:** Support from inter-governmental organisations and donors usually targets a single domain and does not allow the implementation of activities at the interface of several sectors; this approach in turn influences the financial support of the government for one domain to the detriment of another, according to some actors.

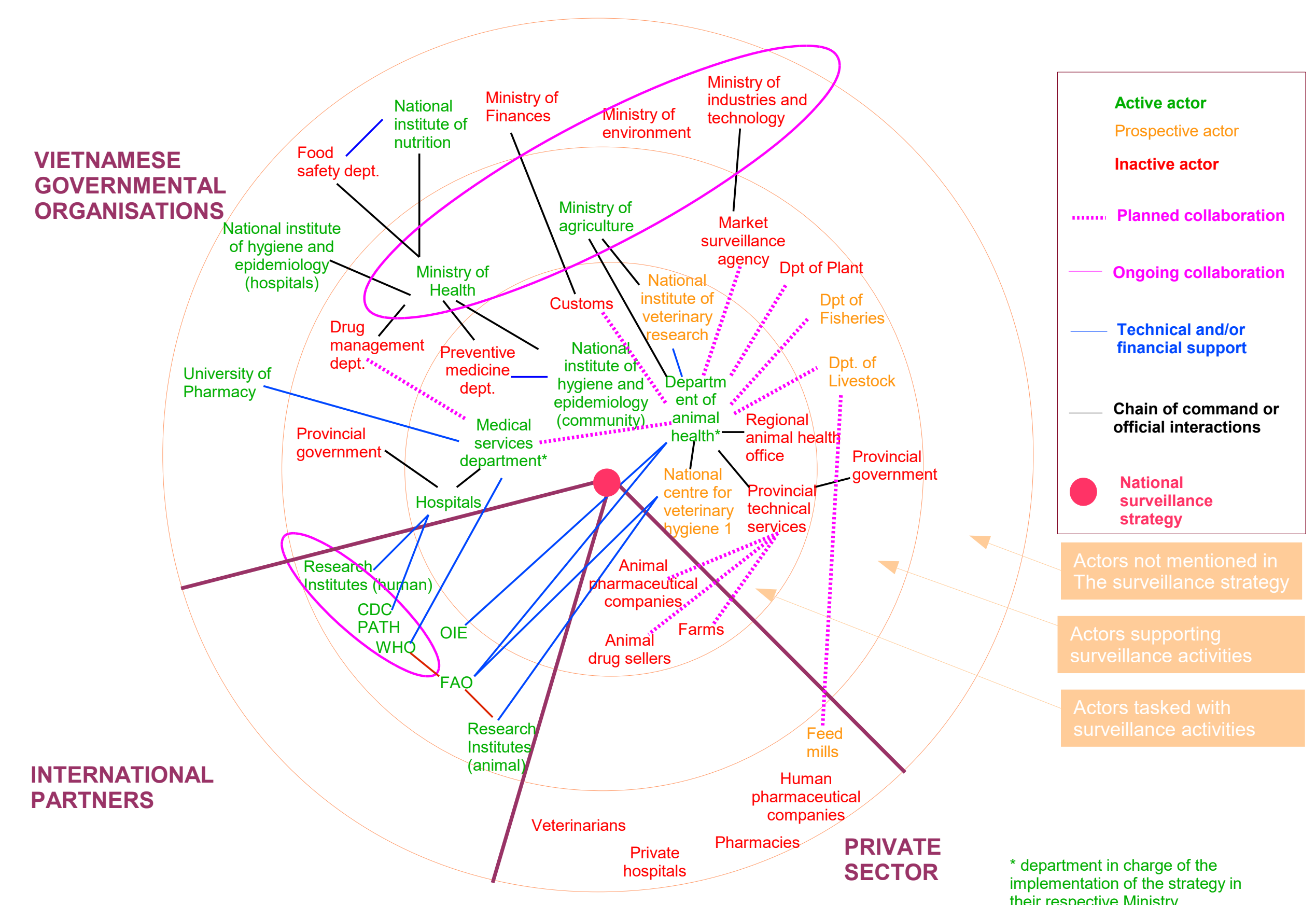


Figure 1. Organisational and functional mapping of the actors of the ABR surveillance strategy in Vietnam (July 2017).

DISCUSSION

The study suggests that a collaborative surveillance system for ABR in Vietnam can only be operationalised in a sustainable manner if the full adhesion of actors is obtained and if appropriate financial, human and material resources are available.

The willingness of actors to embark in this collaborative strategy depends on two social conditions. First, mutual understanding and trust across institutions and sectors are needed. Secondly, actors should perceive the added-value of working beyond their sectoral and disciplinary boundaries, without fearing to lose their autonomy and leadership in their jurisdiction. Then, collaboration is resource-consuming both in terms of human and financial resources and working with people with different culture and expertise requires to step out one's comfort zone. As a result, actors need to see benefits of linking to each other to compensate the cost of their collaborative efforts.

The adhesion of actors and its translation into sustainable collaborative actions require an appropriate framework for the governance and the operations of the surveillance system. Adequate governance modalities are required to define the collaborative strategy and to provide necessary guidance and resources for its implementation. A regulatory framework should be defined accordingly to clearly state the role and responsibilities for all stakeholders (authorities, national reference laboratories, national research institutes, private sector) in the implementation of the strategy. Financial mechanisms should be established and approved at a high policy level to ensure the allocation of appropriate resources to surveillance activities, including those requiring inter-sectoral collaborations.

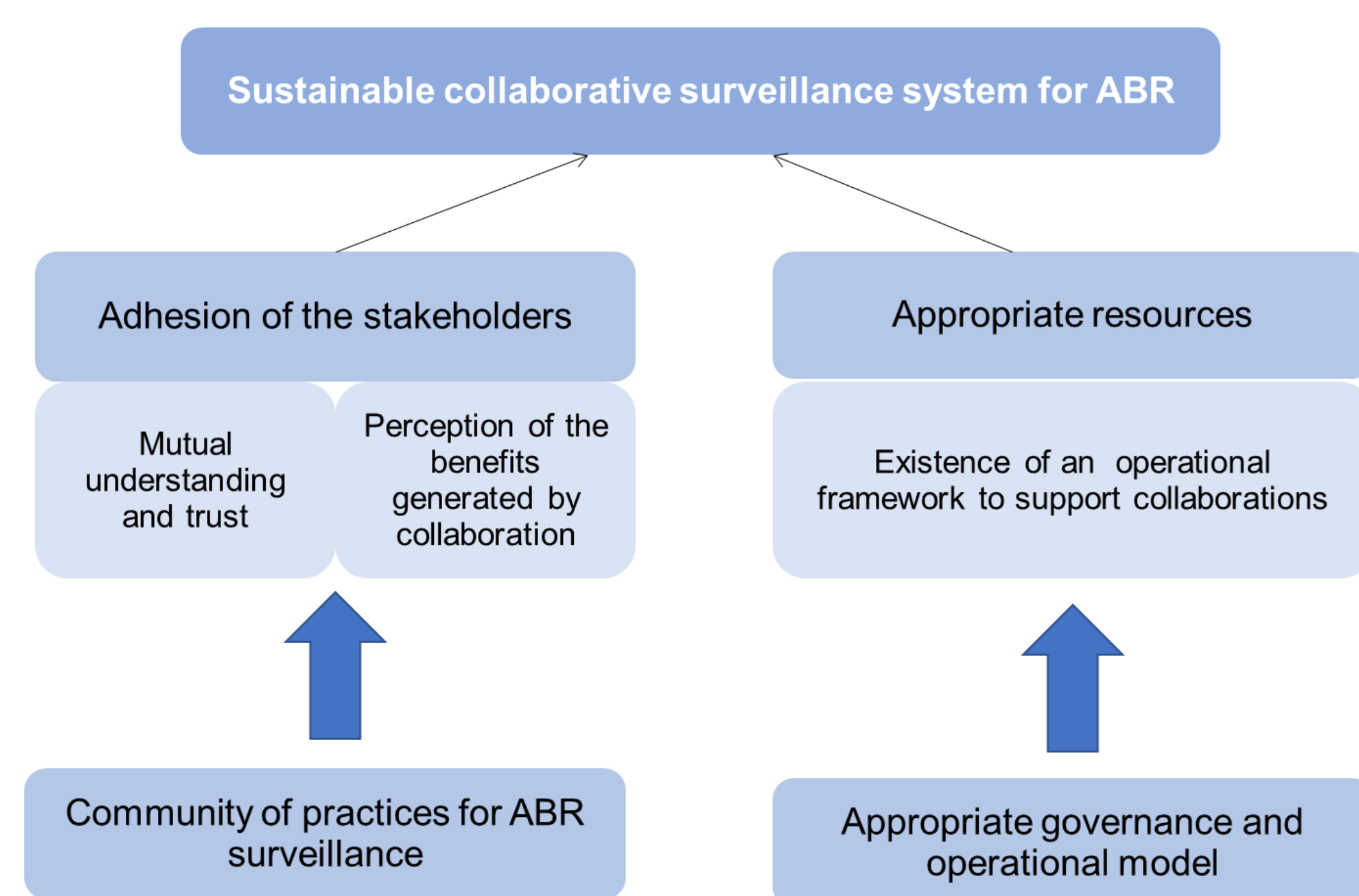


Figure 2. A guidance framework to support the operationalisation of One Health surveillance of ABR in Vietnam.

CONCLUSION

This study suggest that the Vietnamese surveillance strategy will be difficult to implement in the current context. Actions must be taken to guide actors through a better understanding of the added value arising from collaboration and to improve their mutual understanding. Participatory modelling could be successfully applied to define concerted practical collaboration modalities and mechanisms, accepted and endorsed by all and one. This approach could progressively lead to the development of an inter-sectoral and multi-disciplinary community of practices, supporting the implementation and operation of a

References

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