

# Learning event on integrated One Health approaches to antimicrobial resistance management in Vietnam



Agroscope

Swiss TPH

Swiss Tropical and Public Health Institute  
Schweizerisches Tropen- und Public Health-Institut  
Institut Tropical et de Santé Publique Suisse



CENPHER  
TRUNG TÂM NGHIÊN CỨU Y TẾ CÔNG CỘNG VÀ HỆ SINH THÁI  
CENTER FOR PUBLIC HEALTH AND ECOSYSTEM RESEARCH

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## Learning event description

If no actions are taken to address the global antimicrobial resistance (AMR) threat, it is estimated that by 2050 AMR will cost 10 million lives every year. AMR can lead to serious economic implications, such as causing illness of workers and delays in workflows. In Vietnam, 20% of the aquaculture export is lost due to antimicrobial residues. In view of the complex interactions of animal production and human health practices, meeting directly or indirectly in the environment and coupled with movements of people, livestock and goods, no country or sector alone can tackle the problem. To come up with effective solutions to AMR, One Health approaches with closer cooperation of different health, together with other concerned sectors and disciplines, has a role to play. The international health organizations – WHO, OIE and FAO - also welcome more design and performance evaluations of integrated cross-sectoral AMR surveillance and response. The goal

of this learning event was to present, discuss and formulate paths forward for integrated methods and intersectoral collaboration in Vietnam regarding AMR surveillance. Vietnamese postgraduate trainees had a background in associated disciplines such as medical (human and animal), public health, agriculture, food sciences, policy, economics, and microbiology or social sciences. The course took place in Hanoi, July 25-30, 2016, and a total of 23 people participated. It was co-organised by the Centre for Public Health and Ecosystem Research (CENPHER that is part of the Hanoi School of Public Health), the Institute of Environmental Health and Development (IHESD) and the International Livestock Research Institute based in Vietnam as well as the Swiss TPH and Agroscope based in Switzerland. The course was a mix between lectures and proposal writing. The planned field visit, unfortunately, was not possible due to a storm passing Hanoi in the week of the course.



## Outline of the course

The presentations of the first two and a half days were on overviews of the situation of antimicrobial resistance (AMR) world-wide and in Vietnam specifically, on mechanisms of AMR and laboratory approaches, on qualitative methods to assess potential incentives of providers and consumers of antimicrobials to reduce their use. The perspectives were from the human health and animal husbandry

sectors. In addition, a presentation of incentives of private industry was important to open the focus of discussion what is also economically viable. And bearing the export markets in mind was of importance to give a fuller picture. The next two and a half days were reserved for group work and outline of an integrated AMR surveillance in Vietnam proposal. Participants have outlined how

they would link the so far independently operating sectors to achieve earlier detection of new AMR and how this would help to see where priority actions should be taken. Participants have actively

contributed to this outline. The environment (water, sludge, fertilizer) were prominently included. The last half day of the course was about reference reviews and proposal writing.

### Added value for participants

A total of eleven lecturers (8 from Vietnam, 2 from Switzerland and 1 from the US) have covered 3 days of lectures and discussion. The perspective of the private sector was highly informative for the 14 participants of this 5 and a half day course. A trainee from Thailand could show the similarities and differences of health and animal husbandry systems between Thailand and Vietnam. Next to inter-country exchange, there was also good

exchange of participants between different sectors and regions of Vietnam. Trainees received for the first time training on One Health, interdisciplinary and transdisciplinary approaches and were involved in proposal writing. The field visit to mixed livestock-aquaculture farms had to be cancelled due to a storm. Therefore, the trainees have practiced qualitative interview techniques among each other in small group works.

### Feedback from participants

It was an eye-opener to participants (and lecturers) to exchange between different public and private sectors in Vietnam on one shared topic: how to reduce AMR and antimicrobial use in the country

and thd region. They all could actively contribute to outline a proposal and give their inputs from their perspective while also knowing now other perspectives. They need to work together.

### Conclusion and lessons learnt

During and after the course participants and lecturers were highly motivated to continue working on proposal development. No university could have offered such an interdisciplinary and intersectoral training. AMR is an important health and economic

topic in the region and One Health approaches are appropriate to address these at different levels. This course has established a new network working on a shared topic, which was, in addition to the quality of the lectures, highly appreciated.

Modules	Lecturer	Institutions
Global emergence of AMR and the potential role of One Health	E. Schelling, Phuc Pham Duc, Hung Viet Nguyen	Swiss TPH, CENPHER, ILRI
Situation of AMR and policies in Vietnam	Nguyen Viet Khong, Nguyen Van Kinh	National Institute of Veterinary Research (NIVR); National Hospital of Tropical Diseases
Mechanisms of AMR and persistence of resistance	Jörg Hummerjohann	Agroscope
Case studies from the health and veterinary sectors	Hong Ha, Vu Thi Thu Huong	OUCRU; National Institute of Hygiene and Epidemiology
Laboratory methods	Pham Thi Ngoc,	NIVR
Qualitative methods, transdisciplinarity	Esther Schelling	Swiss TPH
Private industry	Viet M Huynh	Bio Spring
Group work	Phuc Pham Duc, Hung Viet Nguyen	CENPHER, ILRI
Literature review and proposal writing	Jeffrey Blaine Bender	Minnesota University

### Contacts

**Dr. Pham Phuc Duc**  
IEHSD (director) and CENPHER/HSPH (co-director)  
Hanoi, Vietnam  
[phucnihe@gmail.com](mailto:phucnihe@gmail.com)

**Prof. hon. Dr. Hung Nguyen Viet**  
ILRI Vietnam and director of CENPHER/HSPH  
Hanoi, Vietnam  
[H.Nguyen@cgiar.org](mailto:H.Nguyen@cgiar.org)

**PD Dr. Esther Schelling**  
Swiss TPH, Department of Epidemiology and Public Health  
Basel, Switzerland ; [esther.schelling@unibas.ch](mailto:esther.schelling@unibas.ch)