Inter-sectoral collaboration for One Health implementation in Vietnam: training, research and EIDs control policies

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Swiss TPH

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

Associated Institute of the University of Basel
1. One Health and Ecohealth in Vietnam
2. Training and Research
3. Inter-sectoral One Health development
4. Challenges and way forwards
Ecohealth framework assumes human, livestock, wildlife, and environmental health are integrally related.

6 principles (IDRC, 2012)

1. Systems Thinking
2. Transdisciplinary Research
3. Participation
4. Sustainability
5. Gender and Social Equity
6. Knowledge to Action
One Health

The collaborative efforts of multiple disciplines working locally, nationally and globally to attain optimal health for people, animal and our environment

(FAO, OIE, WHO, WB...)

From theoretical to operational definition:

“One Health” can be defined as the added value in terms of lives of animals and humans saved, financial savings and improved ecosystem services from a closer cooperation of human and animal health as compared to single sector approaches (Zinsstag et al., 2012)
Mapping of One Health issues, stakeholders and projects in Vietnam

More than 40 national and regional One Health stakeholders at the central level, including Government of Viet Nam agencies, civic organizations and associations and universities who are active in Vietnam potentially involve in OH

- 26 internationally funded projects related to One Health have been identified

- In which 32 national agencies working at the national and regional levels and 20 international agencies are implementing projects

- 11 donors providing funding support to One Health

PAHI (2013)
One Health training in Vietnam

**One Health:** Vietnam One Health University Network (VOHUN)
- Elective module

**Ecohealth:** Ecohealth Field Building Leadership Initiative (FBLI)
- Short course
- Leadership
- Degree training

**Professional training**
- Risk assessment: food safety, EIDs
- FETP: Field Epidemiology Training Program
- AVET : Applied Veterinary Epidemiology Training ...
VOHUN (Vietnam One Health University Network)

Hanoi (Network Secretariat):
- Hanoi School of Public Health
- Hanoi Medical University
- Hanoi University of Agriculture

Thai Nguyen University:
- College of Medicine
- College of Agriculture & Forestry

Thai Binh University of Medicine

Hai Phong Medical University

Hue University:
- College of Medicine and Pharmacy
- College of Agriculture and Forestry

Dak Lak:
- Tay Nguyen University, Faculty of Medicine and Pharmacy

Nam Dinh University of Nursing

Hochiminh City:
- HCMC Medicine and Pharmacy University;
- HCMC University of Agriculture & Forestry

Can Tho
- University of Medicine & Pharmacy
- University of Agriculture

Emerging Pandemic Threats Program

PREDICT • RESPOND • PREVENT • IDENTIFY

17 UNIVERSITIES/SCHOOLS

USAID FROM THE AMERICAN PEOPLE
OH training module development

SEAOHUN
OH modules & OH activities examples

Presented and discussed by all VOHUN members
Identified the gaps

Integrate OH modules into the current training program
Optional OH training program for preventive medicine, public health & veterinary students
In-service training for public health & vet professionals

- Reviews all of current training curriculum for medical, PH and Vet. Students
- Identified the relevant OH modules to be developed
- Development of the detail OH modules and materials
- Development of the specific case studies (e.g. Avian influenza, Rabies, Leptospirosis)
- Pilot training for students at the universities
OH training module development

OH core competency modules

1. Collaboration and Partnership
2. Communication and Informatics
3. Culture, Beliefs, Values and Ethics
4. Leadership
5. Management
6. Policy, Advocacy and Regulation
7. Systems Thinking

OH technical modules

1. One Health Concepts and Knowledge
2. Fundamentals of Infectious Disease
3. Infectious Disease Management
4. Epidemiology and Risk Analysis
5. Public Heath
6. Ecosystem Health
7. Behavior Development
8. One Health Economics
Object: preventive medicine & public health students
Subject: elective module
Duration: 60 hours (3 credits)
Starting time: 2014-2015

Objectives: At the end of module students could:
- Present basic concepts of One Health & Ecohealth
- Analysis issues related to human health, animal health and environmental health in the ecosystem context
- Present the relationship between One Health / Ecohealth and Preventive Medicine and Public Health
- Identify the specific problems related to a One Health problem.
- Recommend an interdisciplinary solutions to solve the specific health problems (human, animal and environment).
EcoHealth Field Building Leadership Initiative in SE Asia (FBLI)

"Site based-concept"

ÅYuanmou (CN)
ÅHanam (VN)
ÅChachoengsao (TH)
ÅPangalengan, West Java (ID)
New Generation of Eco-Health Field Builders

Degree Programmes in Eco-Health
(2-3-year training of field builders)

Future Leadership Training in Eco-Health
(4-day training of potential leaders)

Certificate Training or Training of the Trainers
(1-week training of lecturers/advisors/etc.)

LEADERSHIP BUILDING

ECOHEALTH CONCEPT

DEGREE EDUCATION
Mahidol University (Thailand)

1. Faculty of Graduate Studies
2. Faculty of Environmental and Resource Studies
3. Faculty of Public Health
4. Faculty of Science
5. Faculty of Social Science and Humanities
6. Faculty of Tropical Medicine
7. Faculty of Veterinary Science
<table>
<thead>
<tr>
<th>Course Category</th>
<th>Minimum Credits</th>
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<tr>
<td>For Ph.D. candidates holding a Bachelor’s degree</td>
<td></td>
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<tr>
<td>Required courses</td>
<td>12 credits</td>
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<tr>
<td>Elective courses</td>
<td>12 credits</td>
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<tr>
<td>Dissertation</td>
<td>48 credits</td>
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<td>Total</td>
<td>72 credits</td>
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<tr>
<td>For Ph.D. candidates holding a Master’s degree or Master students holding a Bachelor’s degree</td>
<td></td>
</tr>
<tr>
<td>Required courses</td>
<td>11 credits</td>
</tr>
<tr>
<td>Elective courses</td>
<td>3 credits</td>
</tr>
<tr>
<td>Dissertation</td>
<td>36 credits</td>
</tr>
<tr>
<td>Total</td>
<td>50 credits</td>
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Required Courses

SCID 505 Systems Ecology and Disease Emergence 3 (3-0)
SCID 5XX Methodologies in Eco-health Research 3 (0-6)
PHEP602 Principles of Epidemiology 3 (3-0)
SCID 6XX Eco-health Seminar I - III 3 credits
ENIE 501 Basic Principles of Environmental Science 3 (3-0)
ENIE 534 Energy and Resource Efficiency 3 (3-0-6)
ENIE 531 Environmental Planning and Assessment 3 (3-0-6)
GRID 612 Cell and Molecular Biology 3 (3-0)
GRID 617 Bioinformatics 2 (1-2)
PHEP603 Epidemiological Studies in Infectious diseases 3 (3-0)
PHMI1602 Ecology and Epidemiology of Infectious Diseases 3 (3-0)
PHMI1621 Global Infectious Diseases Prevention and Control 3 (3-0)
SCBI 505 Population and Community Ecology 3 (2-3-5)
SCBI 518 Environmental Aquatic Toxicology 3 (2-3-5)
SCBI 524 Environmental Biology and Management 3 (3-0-6)
SCBI 530 Conservation Biology 3 (3-0-6)
SCBI 532 Basic Principles of Sociobiology 3 (3-0-6)
SCBI 539 Techniques in Ecology and Conservation 2 (0-6-3)
SCBI 540 Behavioral Ecology 3 (2-3-5)
SCBI 546 Population and Ecological Genetics 3 (3-0-6)
SCBI 577 Host-Microbe Interactions 3 (3-0-6)
SCBI 578 Techniques in Animal Cell and Tissue Culture 2 (0-6-3)
SCBI 579 Research Techniques in Biological Sciences 2 (0-6-3)
One Health Research

- AI, AMR, zoonoses...
- Still very disciplinary

- Limited research & need more One Health case studies on the ground
- More inter/trans-disciplinary
Where is FBLI active?

- Reduce pesticide use and its health and environment impact in Yuanmou County, Yunnan Province, China
- Better Human and Animal Waste Management in Hanam Province, Vietnam (Eco-HAWAM)
- Rubber Plantation Expansion and Increased Risk of Vector-Borne Diseases in Eastern Thailand
- Dairy Production: Connecting Issues and Finding Interventions for Small-Scale Farming in a Southeast Asian Context

“Site based- concept”

- Yuanmou (CN)
- Hanam (VN)
- Chachoengsao (TH)
- Pangalengen, West Java (ID)
Inter-sectoral collaboration
And
EID control policies
Moving to a One Health approach in Viet Nam

- Global focus on animal health-human health coordination and single-disease response (SARS then AI)
- PAHI Partnership – transitioning to the OH partnership
- Pandemic Influenza Steering Committee
- Avian Influenza Steering Committee

- Global inter-ministerial meetings (Beijing, Bamako, Delhi, Egypt, Hanoi) move beyond AI
- Hanoi IMCAPI 2010 affirms need for a global OH approach
- 1st National One Health Conference

- Increasing OH focus of ODA: VAHIP, UNJP, EPT, AVET/FETP, VOHUN, etc.
- Pandemic H1N1
- H7N9, H6N6 etc.
- 1st Global OH Congress, Melbourne
- 2nd Global OH Congress PMAC, BKK
- 3rd Global OH Congress Amsterdam
- 1st Global OH Congress, Melbourne
- 2nd National One Health Conference *
  Road map & Action plan

- 1st Global OH Congress, Melbourne
- 2nd Global OH Congress PMAC, BKK
- 3rd Global OH Congress Amsterdam

- Pandemic Influenza Steering Committee
- Avian Influenza Steering Committee

- MOH/MARD Joint Circular 16

- Other diseases of concern, including rabies, strep suis, anthrax, leptospirosis, FMD, etc.
Building on Avian Influenza efforts for a One Health approach to EIDs

Focus on HPAI, human cases of Influenza A (H5N1), maintaining preparedness for a potential (influenza) pandemic & broaden to other diseases

AIPED made a clear commitment to moving to a One Health approach in Vietnam, building on and sustaining the national response to avian influenza

AIPED identified 15 key elements for consideration in the adoption of a One Health approach during the period 2011–2015

Mainstreaming & linking to related areas for long-term sustainability
Moving towards a One Health approach

MARD-MOH joint inter-ministerial circular (16) on coordinated prevention and control of zoonotic diseases (May 2013)

Establishment of new DAH division on veterinary public health as well as the Emergency Operations Center located in GDPM office

OH is in the national strategies
Emerging Pandemic Threats activities, VAHIP, SEA-EU-NET and associated donor commitment

Recognition of the need to include wildlife in animal health efforts and zoonotic risks

One Health Communication Network for journalists
Jointly identified 5 priority diseases

- Avian influenza A (H5N1)
- Rabies
- Streptococcus suis
- Anthrax
- Leptospirosis

Mode of operation

- Joint surveillance
- Outbreak investigation
- Communication on prevention and control
- Training and research
Challenges of One Health/ Ecohealth

- Institutional challenges: acceptance, policy engagement
- Capacity building: One Health workforce
- Incentives: how to share credits, added values of One Health
- Deeper coordination between sectors on human and animal (and wildlife) health and the environmental agencies
- Improving the translation of evidence and research into policy
Summary and conclusion

One Health in Vietnam
- Great attention and support from different level
- Training in good way, but limited research
- Inter-sectoral collaboration and policies: good enabling environment

Challenges and ways forward
- Capacity building: One Health workforce
- Deeper coordination of sectors: further (re)-organization
- Resources