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This report documents the outcome of the INDOHUN Inaugural National Symposium. INDOHUN is a national One Health University Network in Indonesia, linked to the regional South East Asia One Health University Network (SEAOHUN), whose mission is to leverage the training, education, and research capacities of the university network to build the skills, knowledge and attitude base for One Health leaders. The INDOHUN Inaugural National Symposium report reflects in detail on setting missions for Indonesian Universities and on appropriate ways to work with the Government to embed and implement the One Health approach to disease outbreak response, investigation, surveillance and control in Indonesia. A strategic plan for INDOHUN and its member organisations will be developed following the meeting. The organisers, Prof. Drh. Wiku Adisasmito, MSc, Ph.D. (INDOHUN Chairperson), the team from the National Coordinating Office at the University of Indonesia and SEAOHUN extend their gratitude to every individual and organisation who contributed to the symposium, the group and panel discussions, and this report, whether on or offstage. The Chairperson would like to thank in particular Mr. Brian McLaughlin, Regional Director of USAID-RESPOND, and Dr. Stanley Fenwick, Regional Technical Director of USAID-RESPOND, for playing an important part in the preparation of this meeting, and to all organizers, for making this event success.

Prof. Wiku Adisasmito, DVM, MSc, PhD.
BACKGROUND

As we know there are many threats to our health status, both globally and locally. These can also create serious problems for Indonesia if this country cannot effectively prepare for the threats. The latest pandemics (SARS, H5N1, and H1N1), global trade of livestock, climate change, pathogen ecology and bioterrorism are all related to the threats and should be handled professionally using the One Health (OH) approach, where multidisciplinary teams work both cross-disciplinarily and cross-sectorally to respond. This needs involvement from those who are in line with the vision to improve the health status in Indonesia.

Based on this need, the South East Asia One Health University Network (SEAOHUN) is supporting the implementation and strengthening of One Health in the South East Asia region and within countries in the region by the creation of national OH university networks. In Indonesia, this network is starting to develop across disciplines. The preparation of forming INDOHUN began in January 2012 at the first meeting of university faculties in Yogyakarta. This symposium in Bali follows on from that inaugural meeting and is the first INDOHUN symposium with many participants from universities, communities, government and other health-related stakeholders in Indonesia.
Each of the four countries has set up a National Network (INDOHUN in Indonesia, MYOHUN in Malaysia, THOHUN in Thailand, and VOHUN in Vietnam) to share and disseminate the benefits of the regional network – SEAOHUN. These involve multiple faculties within each country who are involved in educating professionals in the skills required to support the One Health approach.

The Indonesia One Health University Network (formally known as INDOHUN) was established in January 2012 as a platform where leading academicians, stakeholders, scientists, communities, and professionals from Indonesia could transcend provincial and national borders to address issues of regional and global concern. The mission of INDOHUN is to implement the One Health concept across the country with the support of multiple disciplines. The vision is to improve the health of people, animals and the ecosystem, which are all interconnected for global survival. This meeting aimed to unite all health sectors in Indonesia (especially university) to conceive and build one health concept in Indonesia.

The discussion topics of the symposium are the vision, mission, objectives and Indonesian essential activities, such as how to establish and sustain INDOHUN, to develop collaborative research, training and exchange programs, and to identify INDOHUN’s OH core competencies for use in university curriculum mapping. The discussion topics are based on academic necessities that are essential in Indonesia to meet the future needs of the integrated health systems. In the future, the members of INDOHUN are expected to collaborate responding the threats of health status in Indonesia.
The Symposium

The symposium was successfully held from May 3 – 4 2012 in the Sanur Paradise Hotel, Bali, Indonesia. This was the first INDOHUN symposium with 92 participants from various disciplines and organizations. The names and organizations of the participants who attended the symposium were:

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Day 1
Day 1

The 1st day of the INDOHUN Inaugural National Symposium was on May 3rd, 2012 in Sanur Paradise Hotel, Bali. Participants began the symposium by registering their attendance at 08.00 AM. Following registration, the Symposium was opened with Welcome Remarks by Prof. Dr. dr. I Made Bakta, Sp.PD (KHOM), Rector of Udayana University, and an Introductions and Agenda speech by Prof. drh. Wiku Adisasmito, MSc., Ph.D. Before closing his speech, Prof. Wiku also asked the participants to take a moment of silence and condolence for the Minister of Health Republic of Indonesia who passed away a day before the symposium began.

At 09.15 AM, Dr. Stanley Fenwick presented a talk entitled “Overview of One Health, SEAOHUN, and Indonesia Perspective”. In addition, Dr. Nguyen Viet Hung presented his summary of the establishment of a sister network entitled “Vietnam One Health University Network (VOHUN): Lessons learned”. After both presentations, a panel discussion was held to elicit more information and to develop some new ideas. The discussion was facilitated by Prof. Em. drh. Setyawan Budiharta, MPH, Ph.D. Some participants were interested to discuss Dr. Fenwick and Dr. Hung’s presentations. Firstly, the Dean of the Faculty of Medicine, Gadjah Mada University, dr. Titi Savitri, shared her opinion about areas of One Health in education, research, and practice and the collaboration of three disciplines such as Faculty of Medicine, Faculty of Veterinary Medicine and Faculty of Public Health. She wondered about how “multidisciplinary” would work in practice? She also wanted to discuss the role of the institutions in determining the competencies and how to get support and work together through other collaborative projects.

Meanwhile, the President of IDI, dr. Prijo Sidiyatmo, asked about an MoU between medicine and veterinary medicine and about support from medicine and veterinary medicine professional associations. The Dean of the Faculty of Medicine Hassanudin Makassar asked about standard competencies of medicine, public health, and veterinary medicine. He wondered that “is it as a guideline or not?” because his faculty had the standards since long ago. He also shared his opinion about a new paradigm: academic to social accountability. Dr. Irene Jansen, the DAAD Indonesia representative, also discussed about the universities role in OH, the funding system for basic research, how the government will support this in terms of funding, and consideration for capacity building in OH. After the discussion, the symposium was continued with introduction of the One Health Concept topic.

Before the group discussion began, speakers who were from multiple disciplines introduced their views on OH concepts to participants. From medicine, the One Health concept was introduced by Vice Dean from Faculty of Medicine Gadjah Mada University, Dr. Abu Tholb Aman, Sp.MK, MSc., Ph.D. The Public Health One Health concept was presented by Dean from Faculty of Public Health Universitas Indonesia, Drs. Bambarng Wisnuyono, Apl., Ph.D. The last concept of One Health came from Faculty of Veterinary Medicine Dean, Bogor Agricultural Institute, Drh. Snihadi Agungpriyono, Ph.D.
After a break, participants were separated into 3 different groups. Group 1 discussed “Overview of SEAOHUN: Vision, Mission, Objectives” and Indonesian needs - How to Make the INDOHUN Network work”. The group discussion in Group 1 was headed by Drs. Bambang Wispriyono, Apt., Ph.D. During discussion of the topic a number of issues were worked through, including national health problems, emerging pandemic threats (transportation, tourism, and bioterrorism), differentiated responsibilities and collaboration, stakeholder identification, and boundary partners.

Group 2 discussed “Research, Training and Exchange Programs” which was facilitated by Dr. drh. Denny W. Lukman, MSi. They also discussed curriculum-based research, emerging and re-emerging diseases, advanced technology, policy, university internationalization, trans-disciplinary approach, and student involvement. The last group, Group 3, talked about “INDOHUN’s student Core Competencies and Curriculum Mapping”. Group 3 was facilitated by Prof. Dr. drh. Wayan T. Artama. They discussed the topic around several approaches such as research-based curriculum, OH concepts on promotive, prevention, curative, and rehabilitation integrated into the curriculum, OH curriculum and module development, integrated OH field work, and the development of a credit transfer system. After group discussions, each group had to present the resultsof the discussions on Day 2.
GROUP 1

PRESENTATION

On the 2nd Day, the symposium began with refreshment at the opening followed by summaries of the group discussions from Day 1. The first presentation came from Group 1 which was facilitated by Drs. Bambang Wispriyono, Apt., Ph.D. Group 1 presented about “Overview of SEAOHUN : Vision, Mission, and Objectives & Indonesian needs - How to Make The INDOHUN Network work”.

Group 1 opened by presenting the vision of SEAOHUN which is “fostering sustainable transdisciplinary capacity building to respond to emerging and re-emerging infectious and zoonotic diseases” while its mission is to “leverage the training, education, and research capacities of the university network to build the skills, knowledge and attitude base for One Health leaders and to develop education, research, and public services capacities of the university network to build the competencies for One Health leaders”. They also presented SEAOHUN’s 4 objectives (1) to promote and advance the One Health approach for control of emerging and re-emerging infectious and zoonotic diseases, (2) to improve the competencies of One Health professionals, (3) to build a One Health evidence base through research activities, and (4) to build cadres of trained professional to be One Health current and future leaders.

The discussion of group 1 resulted in their views on possible INDOHUN objectives. These were (1) to improve competencies in each profession to apply to One Health, (2) to build a sustainable network (International and National Experts, Institutions, etc), (3) to develop the One Health approach for control of emerging and re-emerging infectious and zoonotic diseases, (4) to improve skills, knowledge, and attitude based on One Health approach, (5) to strengthen One Health evidence base through research activities, and (6) to build strong leadership for the futures of One Health.

They also identified a number of national One Health issues:
- Zoonotic diseases
- Emerging and re-emerging diseases
- Approaches
- Lack of Communication
- Minimum Budget
- Mechanism
- System
- Low Awareness
- Decentralisation
- Skills
- Policy
- Leadership at all level

How can universities assist government to further the OH approach? Group 1 separated this into 4 ideas. The first idea was related to zoonotic diseases. They argued that universities can assist government in zoonotic diseases by developing the curriculum of zoonotic diseases for education, facilitating collaborative research on zoonotic diseases, developing the laboratory and other facilities which are related to zoonotic diseases, and improving the skills of university staff in this area.

With the second idea, they discussed approaches to support government with seminars, workshops, training, consultation, socialization to community (media electronic, mass media, etc). The third idea was research to assist government. They argued that the result of a study will contribute to improve and strengthen government. The last point was to include education in assisting government using in-house training to produce health workers, research, both applied and basic, and public services, and advocacy training. Group 1 also discussed strengthening of biosecurity and biosafety systems and regulations for emerging pandemic threats.
The Group 1 representative also explained about the roles and responsibilities among multiple disciplines, government, and the community. Public health would take roles in surveillance, monitoring, and public awareness while government and veterinary medicine also had those tasks with medical and veterinary services, with vaccination as further responsibilities. In addition, medicine only took roles in medical services, treatments, vaccination, and public awareness. Group 1 also argued that community only take responsibility in public awareness.

<table>
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<th>Drug &amp; Vaccination</th>
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**Roles & Responsibilities**
The next presentation came from Group 2 who discussed “Research, Training & Exchange Programs”. They presented the result and divided it in 7 main ideas.

1) Curriculum-based Research
Group 2 was interested to explain in more detail about curriculum-based research. The discussion decided that basic research was based on local context using a holistic and comprehensive approach. The second point of their discussion was multidisciplinary research. It meant research not only in one field of study but also across the disciplines. They thought that it was related to the One Health concept. The group also argued that research activities should be embedded in the curriculum. The research must have benefits to the curriculum in the university. They were interested in the development of research trees at faculty, university, or regional levels and the dissemination of result of the studies. The group also explained that research should be classified based on capacity levels of researchers. It had to be defined among undergraduate, postgraduate, junior or senior staff levels. How to implement it? Group 2 had the idea of inserting the curriculum in specific subjects (e.g. research methodology, planning health program, thesis, paper, assignments, etc)

2) Advanced technology in response to emerging zoonotic diseases
Group 2 shared their ideas in advanced technology research in response to emerging zoonotic diseases. They thought that this was a new idea with some new approaches such as vaccine development, new-drug development, technology that has the ability to detect threats earlier (early detection), bio-marker detection (genetics, proteins, etc), exchange activities for bio-markers.

3) Policy-related research
Group 2 was also interested in developing a study about policy. The results can be used in an advocacy role to the policy makers based on the research results. This can also be involved in the implementation of policy and in the monitoring and evaluation process of the policy. By gaining lessons learned from the policy implementation, it would improve curricula in the universities. The dissemination of the research results can be informed through seminars, workshops, press conferences, etc

4) Emerging and re-emerging diseases
Group 2 used preparation for emerging and re-emerging diseases as a topic of training. The target of the training was health officers, students, community, community leaders, and lecturers. The training would be held based on One Health Core Competencies (OHCC). The materials and technical subjects included were surveillance, statistical analysis, biostatistics, project management, strategy development, collaboration skills, community diagnosis, and laboratory diagnosis. The training would be implemented using simulations (disaster response simulation), elective modules for students, workshop series, collaborative workshop between universities, and MoU with governments (e.g. Puslitbangkes, related ministries, departments).

5) University Internationalization
University Internationalization was an idea that Group 2 were concerned about. It was related to exchange programs that would be used in INDOHUN across regional and local institutions. Group 2 thought that shared curricula, studium generale, seminars, workshops dissemination of OH material, student exchanges, lectorer exchanges, collaborative research, benchmarking, joint publications, and developing a One Health Journal can be used as a way of University Internationalization.
6) Trans-disciplinary Teaching
Trans-disciplinary teaching was based on the competency in the One Health concept. Group 2 gave Avian Influenza as an example. Virologists took the place of virus examiners because it was related with their field. Furthermore, the diseases would be examined by specialists in internal medicine and radiology. Pathologists (Clinical Pathologist & Anatomical Pathologist) would take responsibility to learn the pathology of the disease. In addition, public awareness would be introduced by Public Health and Veterinary Public Health experts. The OH concept in Trans-disciplinary Teaching that group 2 presented, not only talked about health but also included economists, sociologists, anthropologists, communication experts, and information technology experts.

7) Student involvement in One Health
Group 2 explained that the involvement of students could occur in lectures, discussions, public service, special interest groups (SIG) meetings (example SIG on zoonotic, SIG on poultry, etc), student field practice (KKN), seminars, research, campaigns, and student exchanges.
The last presentation conducted by Group 3. This group presented “INDOHUN's student Core Competencies and Curriculum Mapping”. Their discussions centred round core competencies in One Health for response to Emerging Infectious Diseases outbreaks. The competencies included technical, leadership, management skills, communication and collaboration, analytical skills, and cultural and ethical values.

Technical Competencies of One Health for response to Emerging Infectious Diseases outbreaks consisted of diagnosing (identifying the cause of) the outbreaks, analyzing, and solving problems. Furthermore, the leadership skills would improve the ability to develop or implement the One Health approach, problem-solving skills, the ability to work as a group (internally and externally), and the ability to compromise (win-win solution). The communication and collaboration skills consisted of inter-professional Communication and Collaboration (internally and externally), making network skills, relationship building, interfacing with others, and making Effective communication through others.

Group 3 also explained that analytical skills should be accompanied by the ability to prioritize, ability to diagnose, analyze, and respond to situations, and the ability to monitor and evaluate. Meanwhile, Cultural and Ethical Values consisted of the ability to appreciate local wisdom, cultures and religions, and the ability to install local approaches in tackling local issues.

The discussion in Group 3 resulted in the belief that each faculty should undertake curriculum mapping to integrate the One Health concept. The One Health concept can be included into existing curricula by inserting the concept into existing courses or modules or creating new courses. It also can be fused with Student Study-service Activities (Kuliah Kerja Nyata).
The integration of the One Health concept could occur if the disciplines found solutions for collaboration among with others (physician, nurse, veterinarians, pharmacists, public health and social science specialists), collaboration among leaders, and carrying out pilot project integrating among disciplines. They would be used by inserting the One Health concept into the existing curriculum in lectures, case studies, assignments, field works, visits, elective studies, seminars, symposium, or conferences for Continuing Professional Development (CPD). The integration also can be exerted in trainings which consisted of students activities (extra-curricular) among faculties (integrated field work/social services), developed trainings specific on awareness and preparedness of outbreak responses (possible topics: disaster, anthrax, avian influenza, or others relevant to local problems). The at least one trainings should be completed at least one during the period of study. This integration was composed proposed by a collaborative team consisting of medicine, public health, veterinary medicine, nursing, and social scientists. The Credit Transfer System would be used to develop new modules/courses and curriculum agreement among the faculties.
In closing the Symposium, the Vice Minister of Health, Republic of Indonesia, Prof. Dr Ali Ghufron Mukti, MSc, PhD, reviewed the discussions from the beginning until the second day. He presented closing remarks and conclusions of this Symposium. He explained that the One Health concept consisted of three main disciplines, Medicine, Public Health, and Veterinary Medicine. He stated that participants of this symposium came from universities (81%), donors (8%), governments (4%), and professional organizations (7%). He also informed all participants that INDOHUN had a number of programs. Those programs were INDOHUN One Health Curriculum Development Program, INDOHUN Capacity Building Program, INDOHUN One Health Future Leader Program, and INDOHUN Research Program. Those were related to the three topics of group discussions which consisted of “How to Make The INDOHUN Network work”, “Research, training & exchange programs”, and “INDOHUN’s student Core Competencies and Curriculum Mapping”.

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Closing

The final presentation, came from the Director of the Zoonotic National Committee, dr. Emil Agustiono, M.Kes. He presented “Challenges and Opportunities to Build One Health National Policy across Sectors”. Dr. Emil Agustiono, MPH (Epidemiologist) is the Deputy Coordinating Minister for People’s Welfare and Secretary of National Commission of Zoonotic Control. Dr. Emil said that the One Health approach complexity consisted of Wildlife health, Livestock health and Human health. Those were in agricultural, urban and natural ecosystem health. He also discussed Current Challenges in Strengthening Multi Sectoral Zoonotic Risk Reduction which were Human Surveillance, Vaccination, Accountability and Transparency, Wet Market Clean-Up, Biosecurity, Antivirals, Social Isolation, Public private partnerships, etc. Based on his presentation, the government is now re-focusing its national strategies in zoonotic control & pandemic influenza preparedness.
This symposium released **four conclusions**

**First**  The participants who represent Indonesia’s prominent universities, agreed to support the national One Health University network and to participate in the future activities.

**Second**  The participants agreed with and supported the three main INDOHUN programs on training, education, and research.

**Third**  The participants and university network at INDOHUN welcomed the RESPOND-USAID program to support One Health university networking in Indonesia.

**Fourth**  The Vice Minister of Health fully supports the One Health University network through its government policy to achieve the goal of controlling emerging zoonotic diseases.