



Emerging Pandemic Threats Program
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One Health Assessment:

A Survey of RESPOND Participant Views and Uses of the One Health Approach

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Table of Contents

Executive Summary	3
Data Collection & Methodology	5
Acknowledgements	5
Survey Respondent Demographics	6
National and University Affiliations	6
Affiliated schools/departments	7
Current Positions.....	7
Participants’ Professional Activities/Responsibilities	8
One Health Understanding	9
Usefulness of the One Health Approach	10
Individual One Health Applications	12
Institutional Implementation of One Health	13
Types of One Health activities being implemented	13
Most Valuable One Health Activities	14
Most frequently requested types of support by position.....	15
Obstacles to One Health Implementation	16
Suggested Changes to the One Health Approach	17
Conclusion	18
Project Recommendations	19

Executive Summary

The purpose of this survey was to understand how participants of One Health related events view the One Health approach and integrate it into their work. In January 2014, an online survey was sent to individuals who participated in One Health related events as part of the USAID funded RESPOND Project since its inception in 2009. Respondents are overwhelmingly positive about their experiences, but also provided concrete suggestions on how to improve and expand One Health efforts within their home institutions and countries.

Participant Demographics:

- The majority of respondents are affiliated with Veterinary Medicine (52%), Public Health (37%), or Medicine (17%), and Health Sciences (16%) departments.
- Most participants are Instructors/Lecturers (47%), Health Professionals (29%), or University Professors (28%), though many identified with more than one position.

OH participation

- The most attended events among respondents were conferences (52%), One Health Core Competency workshops (37%), One Health short courses (37%), and health related trainings (32%).
- 70% of respondents participated in 1-4 events in the past 12 months.
- Respondents participated in an average of 3 different types of events.

OH understanding

- 94% of respondents said they at least moderately understand the One Health concept.
- 75% of respondents were at least moderately familiar with the One Health Core Competency (OHCC) domains.

Usefulness of the OH approach

- Most believe that the OH concept is very useful to their work and even more useful for addressing EPTs in their countries. However, many would like the approach to be more practical and expand to address a wider range of health issues.

Individual OH applications

- 90% of respondents said they use One Health in their work in some capacity.
- Participants most commonly apply the One Health approach to their teaching and research.

Institutional Implementation

- 73% of respondents are aware of One Health activities or programs at their institutions.
- The survey shows that One Health activities are currently underway in at least 34 institutions of higher education/faculties and 21 government offices/research institutes in 13 different countries across Africa and Asia.
- The survey participants or their colleagues often lead these efforts at their institutions.

Most valuable OH activities

- International and national networking opportunities and One Health trainings were viewed as the most helpful activities. Professional development and grant writing support were also highly valued.
- Improving One Health awareness, capacity building, collaboration, and professional development were the most commonly cited reasons for the above activities.

Obstacles of OH Implementation

- Limited funding and uneven and unpredictable budget allocations were of primary concern. Other concerns included a lack of transparency, inadequate One Health understanding among colleagues, limited awareness and support among policy makers and upper-level university management, silo thinking, and bureaucracy.

Suggested changes to the OH approach

- Of the 21% that said they would like to add or change elements of the One Health approach, many recommend expanding the One Health participant base to include more policy makers and other disciplines/sectors/perspectives.
- Many are eager to see more practical One Health activities take place. Making the One Health approach more concrete and operational would help.

Summary

- The results of this survey suggest that the RESPOND project has been highly successful in generating support and awareness of the One Health approach among faculty across the OHCEA and SEAOHUN networks. Participants see a lot of value in this approach and are actively engaging with it through their teaching and research. However, many faculty members would like support applying their knowledge and skills and advocating for One Health within their communities. This report highlights areas of interest and concern as well as strategies for moving forward.

Data Collection & Methodology

Using event registries from the Southeast Asia One Health Network (SEAOHUN) and the One Health Central and Eastern Africa (OHCEA) network, the online survey reached 825 participants with functioning email addresses. Of those 825 participants, 262 responded (a 32% overall response rate).

We obtained email addresses for 676 SEAOHUN participants and 149 OHCEA participants. The number of responses from each network, 174 SEAOHUN participants and 51 OHCEA participants, is somewhat proportional to this divide. 37 individuals (14%) did not indicate their network affiliation. By region, the SEAOHUN participant response rate was 26% and the OHCEA participant response rate was 34%.

The survey consisted of 21 questions, which included a mix of numerical, 7-point likert-scale, rank order, categorical, and open-ended questions. Open-ended responses and comments provided additional explanation and were coded for emergent themes and frequency.

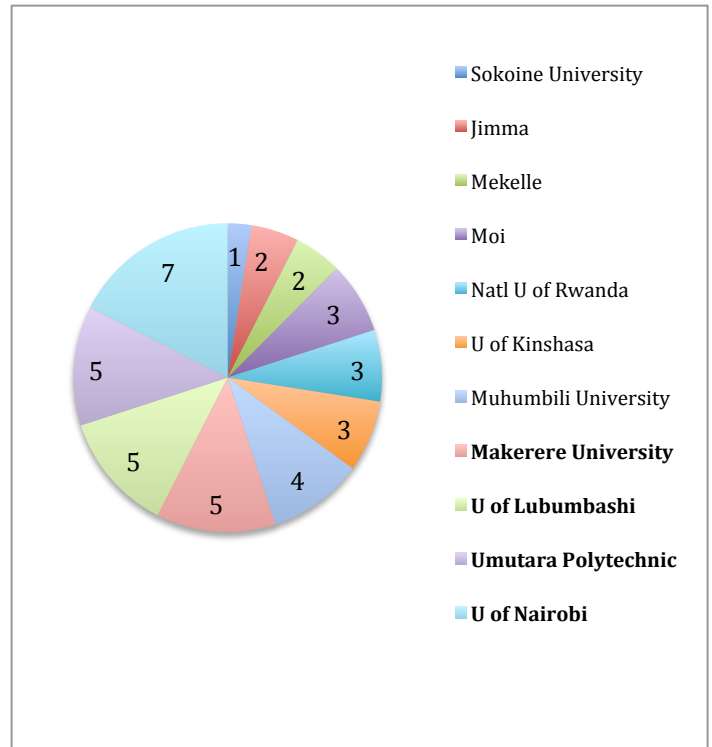
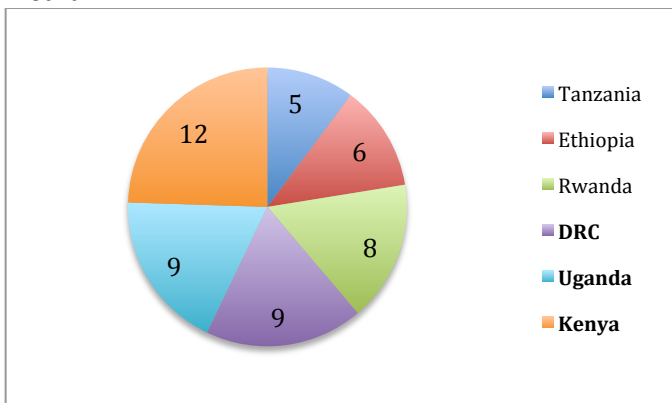
Acknowledgements

The authors would like to express their gratitude to the many One Health participants across the SEAOHUN and OHCEA networks that volunteered their time to take this survey. In addition to taking this survey, an overwhelming 80% of respondents expressed their willingness to participate in follow-up interviews to inform and improve the One Health approach. The commitment and enthusiasm of these core One Health leaders is encouraging and worth commending. We would also like to thank members of the One Health Core Competency Working group for their input and support of this assessment.

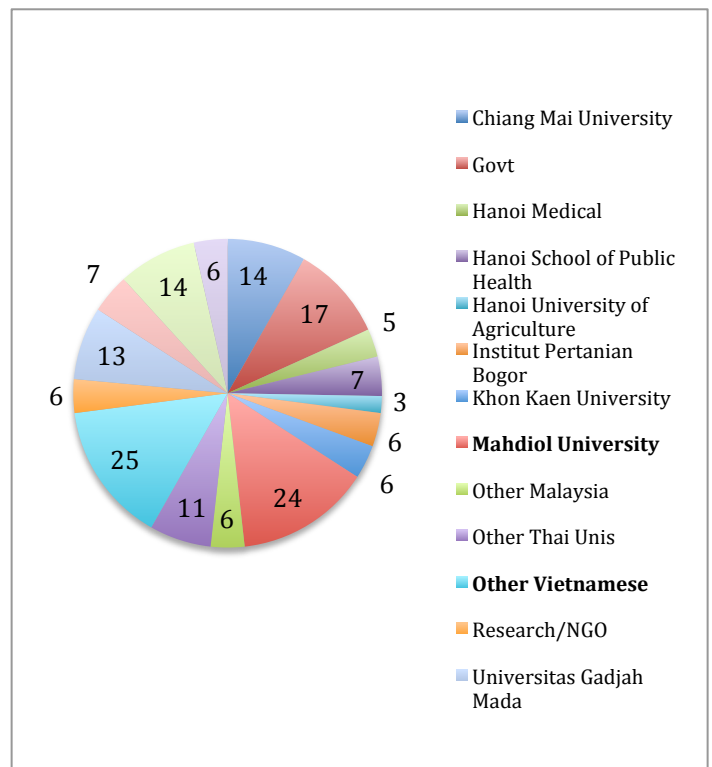
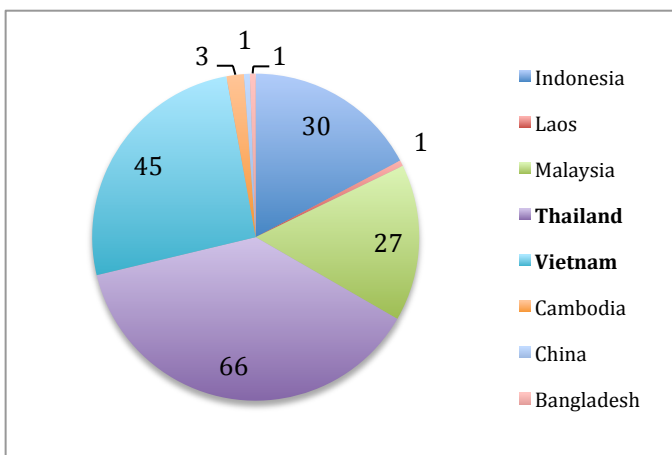
Survey Respondent Demographics

National and University Affiliations

OHCEA: The 51 participants who identified themselves as part of the OHCEA network came from **6 different Central/Eastern African countries** and **11 different universities** indicated in the charts below. In addition, participants represented different government ministries, including the Ministries of Education and Sports, Health, and Agriculture and Animal Health.

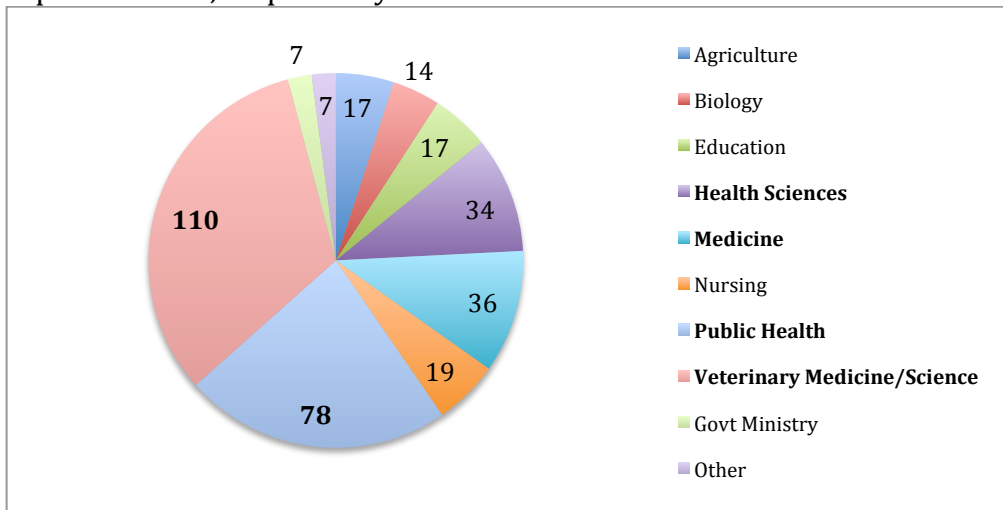


SEAOHUN: The 171 participants who identified themselves as part of the SEAOHUN network came from **8 different Southeast/Asian countries** and more than **15 different universities** indicated in the charts below. In addition, participants represented government ministries, research institutes, NGOs, and the WHO.



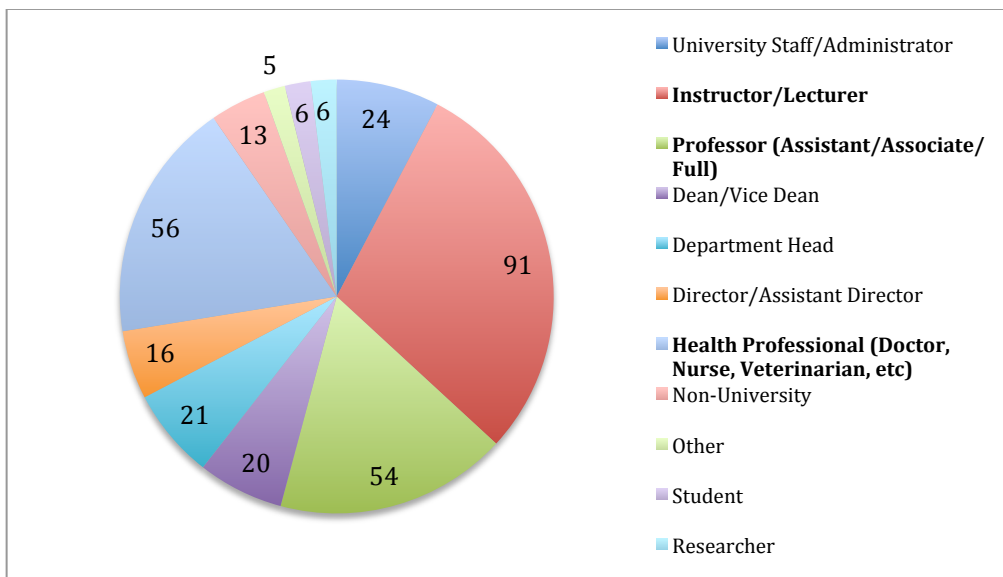
Affiliated schools/departments

The majority of respondents are affiliated with Veterinary Medicine (52%) or Public Health (37%) departments. Medicine and Health Sciences trailed behind with 17% and 16% representation, respectively.



Current Positions

The survey reached individuals from a variety of positions across universities and government ministries. The majority of respondents are Instructors/Lecturers (47%), Health Professionals (29%), or University Professors (28%). Many participants identified with more than one position.

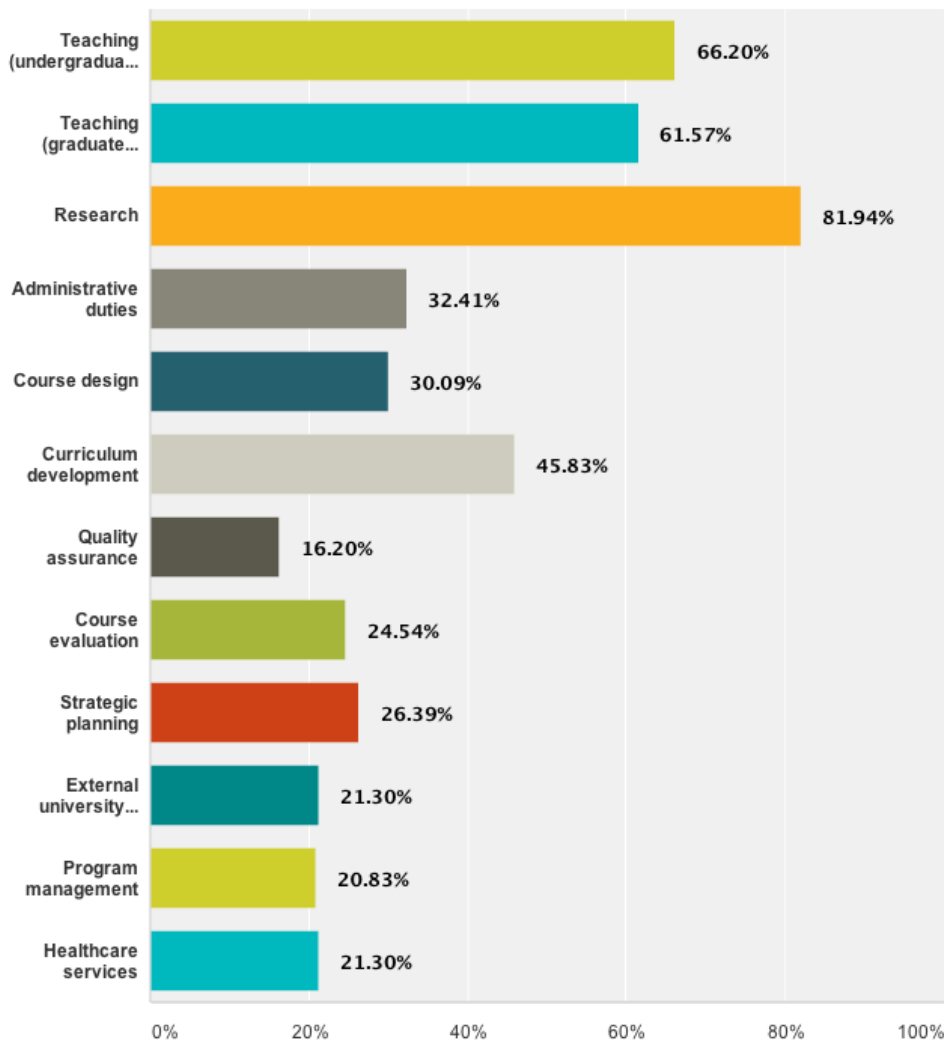


Participants' Professional Activities/Responsibilities

The most common activities in which respondents were engaged at their institution were research (82%), undergraduate teaching (66%), graduate teaching (62%), and curriculum development (45%). This is expected as 75% of respondents serve as university, instructors, lecturers, or professors. This also suggests that the activities are successfully targeting their primary intended audiences. **Since the vast majority of participants have research interests and/or responsibilities, research is a critical area for One Health expansion.**

In which types of activities are you involved at your institution? (select all that apply)

Answered: 216 Skipped: 46



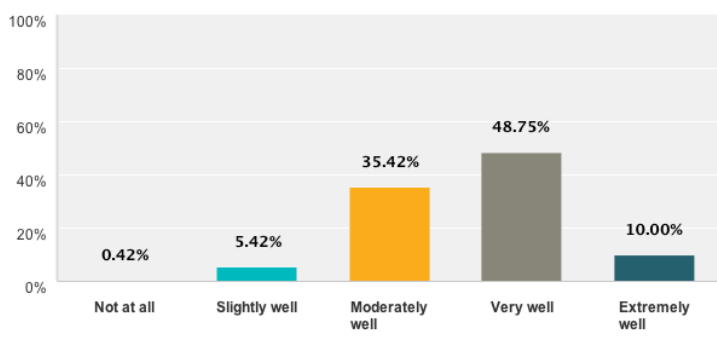
One Health Understanding

94% of respondents said they at least moderately understand the One Health concept. A few people said they learned about the concept through colleagues working on a One Health project or from attending a One Health conference. However, some pointed to the **need to build awareness among policy makers**, especially where OH is not yet formalized into national health policies.

75% of respondents were at least moderately familiar with the One Health Core Competency (OHCC) domains. Several respondents said they practice the OHCCs or **teach them to their students, though not always in a formal or explicit way**.

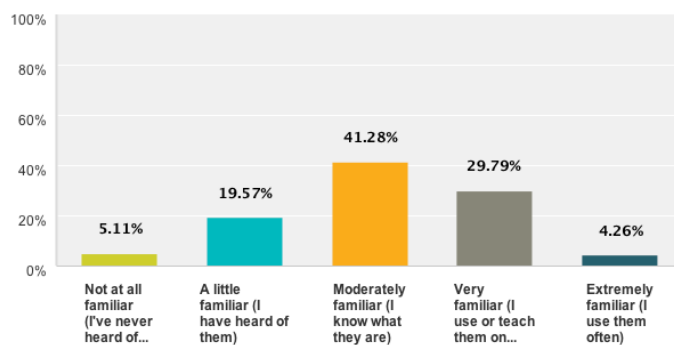
How well do you understand the concept of One Health?

Answered: 240 Skipped: 22



How familiar are you with the One Health Core Competency domains?

Answered: 235 Skipped: 27



In your own words, please describe what One Health means to you?

Most respondents provided a rich description of what One Health means to them. Most highlighted the interconnectedness of humans, animals, and their environment. Many used the terms *partnership, collaboration, integration, relationship, network, social, communication, and sharing* to describe the importance of interdisciplinary collaboration to solve wicked public and global health problems.



This word cloud shows some of the most commonly used words where larger sized font indicates more frequent use of that particular word.

Usefulness of the One Health Approach

Usefulness of the OH approach to their work: 6.47/7 average rating
(on a scale of 0-7, where 0=not at all useful and 7=extremely useful).

Most believe that the OH concept is very useful to their work and many gave examples of its applications to their teaching, research, community work, and efforts to identify and manage disease outbreaks (which requires One Health collaboration). Despite an overwhelming belief in the usefulness of the OH concept, **some struggle to apply it to their everyday work.** These findings suggests that the One Health workshops have been effective in creating awareness about the importance and usefulness of the One Health approach, but additional support is needed to help them apply it to their own work.

“Very useful in theory but the practical part of it needs to be improved” (R216).

“It has not been very clear how to incorporate one health activities in our work... However, during compliance promotion or awareness creation sessions, I apply this knowledge where appropriate” (R209, government).

Usefulness of the OH approach to addressing EPTs in their country: 6.68/7
average rating (on a scale of 0-7, where 0=not at all useful and 7=extremely useful).

Overall, individuals find the OH approach to be extremely useful in addressing EPTs in their own country. Many agreed that their own countries were high risk or hot spot zones for emerging pandemic threats (EPTs) and that there was an urgent need for a collaborative, multi-sectoral One Health approach. **Specific mention was made of the following threats: Viral Hemorrhagic Fever, Avian Influenza, Rift Valley Fever, Influenza, Dengue Fever, Leptospirosis, Ebola, and Cholera.**

While most find the concept useful and important, on the ground realities tell a different story. Many indicated that they have not yet seen the One Health approach used in practice. Some suggest that **significant barriers lie ahead,** particularly where **government structures** are not conducive to cross-sectoral collaboration and **national policies** have yet to adopt a One Health approach.

But it is still at the level of concepts, not yet formalized into policies (R181)

The approach is extremely useful but nothing is done on the ground except meetings of some individuals. (R32)

But I fear that the implementation of that concept still challenging for anyone wants to move it forward. (R160)

It is very useful but need to notify the stakeholder and policy maker to take action more in One Health. (R10)

In your opinion, what is the most important issue that the One Health approach should address in your country? R=200

Respondents believe that a One Health approach could and should help address the following threats in their countries: Emerging and re-emerging infectious diseases, Zoonotic diseases, Avian Influenza (AI), Viral Hemorrhagic Fever (VHF), Rift Valley Fever, Influenza, Dengue Fever, Leptospirosis, Ebola, Cholera, Anthrax, Jiggers, and the mysterious death of Indian bison in Thailand. A few respondents suggested that a One Health approach should extend to food safety, antimicrobial resistance, natural disaster management, and pollution control.

Others took their responses a step further by explaining how a One Health approach could be effective in their country. 40 respondents (20%) felt that increased collaboration and communication were essential. 8 individuals (4%) identified the need to inform and influence national policy through the sensitization of policy makers, policy advocacy, and the creation of a strategic plan. Others described the importance of building awareness and capacity through various trainings, sensitizations, curriculum reforms, education, research, and networking.

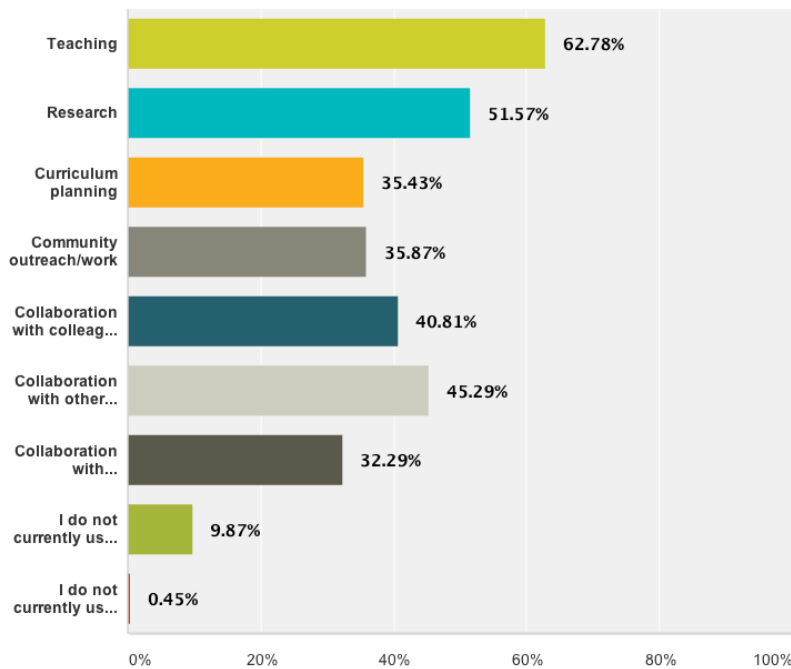
The word cloud below shows some of the most commonly used words where larger sized font indicates more frequent use of that particular word.

Avian Influenza Capacity **Collaboration**
Communication Curriculum Dengue **Diseases**
Ebola **Education** Establish Food Safety **Health**
Human Important Issue Leptospirosis **Level**
Natural Disaster Planning and Implementation **Policy**
Prevention and Control **Professional**
Surveillance Teaching **Training** Transdisciplinary Zoonosis

Individual One Health Applications

How do you currently use a One Health approach in your work?

Answered: 223 Skipped: 39



90% of respondents said they use One Health in their work in some capacity.

Participants most commonly apply the One Health approach to their teaching and research.

The results indicate that the One Health approach is currently being applied to a wide variety of activities and facilitating collaboration at the institutional, national, and international levels. 90% of respondents said they use One Health in their work in some capacity. They most commonly apply the One Health approach to their teaching and research.

In the comments section, 59 respondents elaborated on the specific ways in which they apply a One Health approach in their own work. At the universities, 25 individuals include the One Health approach in their teaching. 15 respondents either currently use or would like to use a One Health approach in their research. 10 individuals have already incorporated One Health into university curricula.

Outside of the university, many individuals apply One Health principles to their everyday work, in field work, community outreach, disease surveillance, outbreak response, training, and collaborations with others. 14 individuals indicated that they use a OH approach to collaborate with professionals in other disciplines and/or sectors.

Institutional Implementation of One Health

When asked if they were aware of any activities or programs at their institutions that apply a One Health approach, **73% of respondents (156/215) said yes**. The survey revealed that One Health activities are currently underway in 34 institutions of higher education and 21 government offices/research institutes in 13 different countries across Africa and Asia.¹ Reported SEAOHUN countries include Bangladesh, Cambodia, Indonesia, Laos, Malaysia, Thailand, and Vietnam. Reported OHCEA countries include DRC, Ethiopia, Kenya, Rwanda, Tanzania, and Uganda.

As the chart below indicates, One Health activities have been observed by 80% of respondents within the OHCEA network and 71% of respondents within the SEAOHUN network. Within each country, at least 50% of the survey population knew about One Health activities taking place at their institutions. Taken together, this suggests that One Health activities are being implemented across a wide range of countries and institutions. In many cases, the survey participants or their colleagues are leading these efforts at their institutions.

Institutions/cases in which One Health institutional activities have been observed

Country/ Network	Universities identified as having OH activities	Government entities identified as having OH activities	Respondents who are aware of OH activities	Survey population	% activity awareness within population (observed cases / population)
SEAOHUN	24	13	121	171	70.76
OHCEA	9	6	41	51	80.39
Bangladesh	0	1	1	1	100.00
Cambodia	1	1	2	3	66.67
DRC	2	1	7	9	77.78
Ethiopia	2	1	3	6	50.00
Indonesia	3	2	21	30	70.00
Kenya	2	1	9	12	75.00
Laos	1	0	1	1	100.00
Malaysia	3	1	18	27	66.67
Rwanda	1	0	8	8	100.00
Tanzania	1	1	5	5	100.00
Thailand	5	4	46	66	69.70
Uganda	1	2	8	9	88.89
Vietnam	11	4	31	45	68.89

Types of One Health activities being implemented

¹ This is based on survey data from a limited number of cases (262 total respondents, 171 from SEAOHUN and 51 from OHCEA). The actual number of cases is expected to be higher.

When asked how the One Health approach is being implemented at their institution:

- 34 indicated that **university courses** have incorporated One Health
- 27 noted **curriculum revisions** to incorporate the One Health approach
- 25 reported One Health related research/**research projects**
- 14 observed **student clubs** at their institutions
- 13 observed the use of One Health in **field trips** at their institutions

Most Valuable One Health Activities

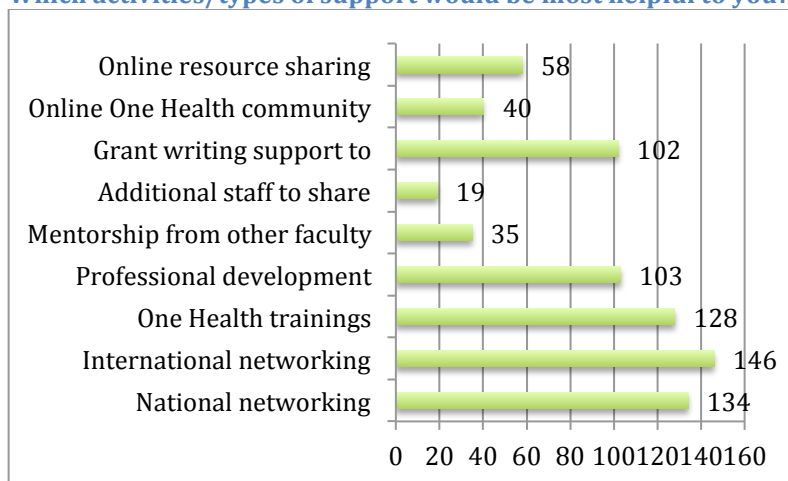
International and national networking opportunities and One Health trainings were viewed as the most helpful activities. Professional development and grant writing support were also highly valued.

It is worth noting that many participants saw international and national networking activities as achieving very distinct goals. Whereas national networking provides important collaboration opportunities, international networking expands opportunities and facilitates the exchange of knowledge and experiences. **In other words, national networking=collaboration and international networking=capacity building.** Thus, participants ranked both types of networking as highly valued rather than choosing one at the expense of the other.

In order to increase **One Health awareness** one participant feels that national networking opportunities, One Health trainings, and professional development workshops would be most effective. Another believes online resource sharing would help increase One Health knowledge and awareness where funding for individual participation is limited.

One participant said he would like to see a shift from training to more **practical activities**. Another individual expressed a desire for **One Health research support**.

Which activities/types of support would be most helpful to you?



Participants were asked to identify the 3 most helpful activities.

Most frequently requested types of support by position

Position	Most frequently requested support
Junior faculty	International networking (66%)
Senior faculty	International networking (70%)
Deans	Professional development (55%)
Department heads	National networking (55%) One Health trainings (55%) Grant writing support (55%)
University administrators	National networking (67%) International networking (67%)
Directors	One Health trainings (56%) Professional development (56%)
Health practitioners	National networking (69%) International networking (67%)

Proponents of other forms of support

Mentorship support was most requested by junior faculty (20% of junior faculty respondents opted for this type of support).

Grant writing support was most requested by department heads (55%), senior faculty (51%), and directors (50%).

Online resource sharing was most requested by health practitioners and junior faculty (35% and 33% of respondents, respectively).

Obstacles to One Health Implementation

Q: What obstacles, if any, do you face in implementing a One Health approach at your institution?

Activities Approach Budget
Collaboration Commitment Concept Curricula Ego
Environmental Exiting Experiences Funding Gain Health
Leadership Management Not Easy Obstacles
Organization Policy Research Space Suitable Support
Think Understand University
Zoonotic Disease

Funding and budget allocation were the most commonly cited obstacles. Limited funding for activities was the primary concern, though unpredictable and uneven distribution of funds (at all levels) was another challenge. The latter issue was most pronounced in Africa. A related concern involves the lack of transparency regarding how funds are used. Again, this was mainly a concern of OHCEA participants.

Limited understanding of One Health among colleagues was another frequently cited challenge. Many felt that One Health understanding was hindered by a lack of concrete examples and opportunities to apply the concept in practice. Time and budget constraints were also contributing factors.

A lack of awareness of the One Health approach among policy makers and those in management positions was another widespread concern. This is doubly problematic as a lack of awareness often results in limited support from upper university management, policy makers and local government. To address this gap, a respondent recommended developing an evidence base and models for One Health education.

Respondents also mentioned high start-up costs, inertia, silo thinking/limited collaboration, demanding faculty schedules, insufficient compensation for faculty efforts, ineffective or exclusive leadership, bureaucracy, and low institutional commitment as additional obstacles.

Suggested Changes to the One Health Approach

49 respondents (21%) said they would add or change elements of the One Health approach. Many recommend **expanding the One Health participant base** to include more policy makers, government ministries, agriculturalists, anthropologists, community leaders, and human medicine doctors/nurses and hospital based practitioners. Respondents also recommended recruiting more One Health allies/champions and including more academic institutions in the One Health university networks.

A wider participation base is seen as important for:

- Mobilizing greater local resources and support
- Planning for sustainability
- Getting government buy-in
- Influencing national health policy
- Mobilizing the community
- A more holistic understanding of the issues
- Incorporating cultural and spiritual understanding of the issues
- Addressing socioeconomic as well as health issues

Again, there was an appeal to **make the One Health approach more practical and efficient**. In the words of one respondent, *“Let's do it. The concept is not necessary”* (R73). Another individual suggested altering the definition of One Health to make it more operational and concrete (R181). One respondent simply remarked, *“make it quicker”* and expressed frustration at the slow pace of creating a center to respond to the new Avian Influenza threat (R46).

Other suggestions and observations include:

- Increase networking among animal, human health, and environmental experts
- Support One Health research
- Expand public education/community awareness
- Integrate One Health into the undergraduate curriculum
- Invite policy makers to participate to increase awareness and buy-in
- *“Make sure that the **wildlife component** is not sidelined by the human concerns”* (R94)
- *“This is an approach to doing things and **should not be owned by a group of persons or turned into a program**”* (R60)
- *“Set and empower **interdisciplinary committees** that can discuss health related issues”* (R27)
- *“In meetings conferences, or projects I often notice dominance the field (human, animal, or environmental) that initiated or organized the even or project. I would like to see **professional equality** among the different fields.”* (R11)

Conclusion

Based on survey results, it appears that participants share and support the broader project goals of One Health collaboration, awareness, and capacity building. They see national networking events, policy advocacy, and international exchanges, trainings, and professional development workshops as important activities to accomplish these goals. Furthermore, participants of RESPOND One Health activities have already undertaken efforts to integrate the One Health approach within courses and curriculum and 73% of survey respondents are aware of One Health activities taking place at their institutions.

Despite widespread support and belief in the usefulness of the One Health concept many participants still struggle to advocate for and apply a One Health approach outside of academia. They have suggested numerous ways the project can continue to support them in this effort, including reaching a wider audience through events and online platforms, more engagement with policy makers, and providing support for One Health related research and practical activities beyond initial workshops and training programs. Developing an evidence base and models for One Health education would also help. In addition, many participants would like to extend a One Health approach to other pressing health issues in their own communities, making the approach more relevant to local community needs and priorities. This could also strengthen community and government awareness and support.

In summary, the RESPOND project has been highly successful in generating support and awareness of the One Health approach among faculty across the OHCEA and SEAOHUN networks. Surveyed participants see a lot of value in this approach and are actively engaging with it, particularly in their teaching and research activities. However, they emphasize that they cannot do it alone. They believe that greater One Health advocacy and participation across a broader range of stakeholders, more practical and applied One Health activities, and the development and sharing of One Health education models would help them increase One Health awareness and support.

Project Recommendations

Participation

- *Online resources and knowledge sharing platforms* can increase networking opportunities and allow more faculty members to participate in One Health discussions on a more frequent basis. This is particularly important where money is scarce and many feel excluded from the existing One Health opportunities. However, the success of an online platform depends heavily on stable and widespread connectivity, faculty or administrator time and expertise to manage it, and faculty willingness to share their work and participate in an open and collaborative environment. It is worth noting that health practitioners and junior faculty were among the stronger proponents of this type of support.
- *Recruiting participants from other sectors and disciplines* such as education, medicine, nursing, anthropology, ecology, and applied economics will support a more holistic approach to complex global health issues while also generating a wider support base for One Health initiatives within universities as well as governments.

Awareness & Advocacy

- *Inviting policy makers and government ministries to participate* in more One Health activities will support One Health awareness and advocacy efforts. Participants viewed the lack of government awareness and support as a significant barrier to expanding the One Health approach in their countries. Many feel that their governments are not yet conducive to cross-sectoral collaboration and national policies have yet to adopt a One Health approach.

Research Support

- *Research is a critical area for One Health expansion* since the vast majority of participants (82%) have research interests and/or responsibilities. Research is also the second most common way in which faculty members apply a One Health approach to their work. The promotion and support of One Health research builds One Health awareness while tapping into existing faculty incentives and expectations to conduct research. Research support also provides participants with opportunities to apply the One Health concept, explore and experiment with models of One Health education, generate best practices, and engage with an international community of One Health practitioners.

Support for Junior Faculty

- *Many One Health supporters are junior faculty members who are ambitious and motivated but need additional support* applying what they have learned, engaging diverse stakeholders, and working within rigid hierarchies and bureaucracies. In addition, they often have very demanding teaching schedules and face considerable pressure to publish as a means for advancement. Developing, testing, and sharing successful One Health education models and materials among network faculty can provide publication opportunities for some while increasing the capacity and/or reducing the workload of others.

Expanding One Health Use

- *Encouraging participants to apply a One Health approach to other pressing health issues in their own communities* makes the approach more relevant to local needs while increasing local awareness and providing opportunities to apply One Health skills. Respondents identified the following threats in their countries that could benefit from a One Health approach: Emerging and re-emerging infectious diseases, zoonotic diseases, Avian Influenza (AI), Viral Hemorrhagic Fever (VHF), Rift Valley Fever, Dengue Fever, Leptospirosis, Ebola, Cholera, Anthrax, Jiggers, Indian bison deaths in Thailand. Others recommend the One Health approach for food safety, antimicrobial resistance, natural disaster management, and pollution control.