

ONE HEALTH SYSTEMS MAPPING AND ANALYSIS RESOURCE TOOLKIT



In Collaboration

University of Minnesota – United States with Indonesia One Health University – Network

Sponsored by

United States Department of Agriculture (USDA)

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INTRODUCTION

University of Minnesota and the United States Department of Agriculture has developed and tested a tool or method to analyze inter-system linkages between systems to solve the health problems of animals and humans (zoonosis), referred to as OH-SMART (One Health System Mapping and Resource Tool).

Indonesia One Health University Network and University of Minnesota are in collaboration to improve human resource capacity of integrated zoonosis control by conducting OH-SMAR experiment. OH-SMART can be used for two purposes, namely:

1. To analyze the interaction between the systems to handle an issue, or
2. As the means to strengthen the existing network in responding the public health issues that needs to be done cross-sectorally such as zoonosis.

OH SMART at a glance:

Though this mapping tool is originally developed to assist agencies to coordinate outbreak response planning, this tool also is also able to be used to analyze a variety of systems or processes. This tool allows across sectors network to map the agencies interaction and to analyze how existing collaboration is perceived in multi-agency network, how agencies collaboration actually work and how opportunities can be prioritized to fill gaps and build in best practices to strengthen collaboration and the approach OH within the existing framework.

OH-SMART TRAINING PROCESS

OH-SMART process is conducted through two processes, they are :

1. Training of Trainers Process as Workshop facilitators;
2. Workshop process with the involvement of many stakeholders in accordance with issues to be analyzed.

A. TOT process is carried out to prepare for facilitators to be able to facilitate the workshop participants in order to make analysis in accordance with OH-SMART stages (6 stages).

A.1. The Candidate facilitators are trained by master facilitators, which currently there are 5 (five) members, namely :

- 1). Prof. Dr. drh. I Wayan Artama, MSc (Faculty of Veterinary Medicine of Gajah Mada University);
- 2). Prof. Dr. dr. Agus Suwandono, MSc (Balitbangkes / Member of Expert Panel of National Commission of Zoonosis Control);
- 3). Dr. dr. I Nyoman Sri Budayanti, SpMK (Faculty of Veterinary Medicine of Udayana University);
- 4). Drh. Erinaldi Yulizar, MM (Head of Division of Animal Husbandry and Animal Health – West Sumatera Province)
- 5). Drh. Rama P.S Fauzi, M.Si (Head of Sub-Division of Zoonosis Disease of Kemenko PMK)

A.2. TOT is held for 2 (two) days using the methods of lecture, interactive discussions and practices. The materials provided for candidate facilitators are:

- 1). The concept of One Health to respond infectious disease threat;
- 2). The use of OH-SMART;
- 3). Systemic approach;
- 4). Participative leadership (self-awareness, an active listener and cultural adaptation)
- 5). Facilitation techniques (chaordic pathway, the groan zone, agreement, sectoral mapping, combining process Mapp, world cafe)

A.3. The output resulted from the TOT process is the facilitators understanding the analysis implementation using OH-SMART and is able to guide workshop participants to pass through six (6) OH-SMART analysis stages.

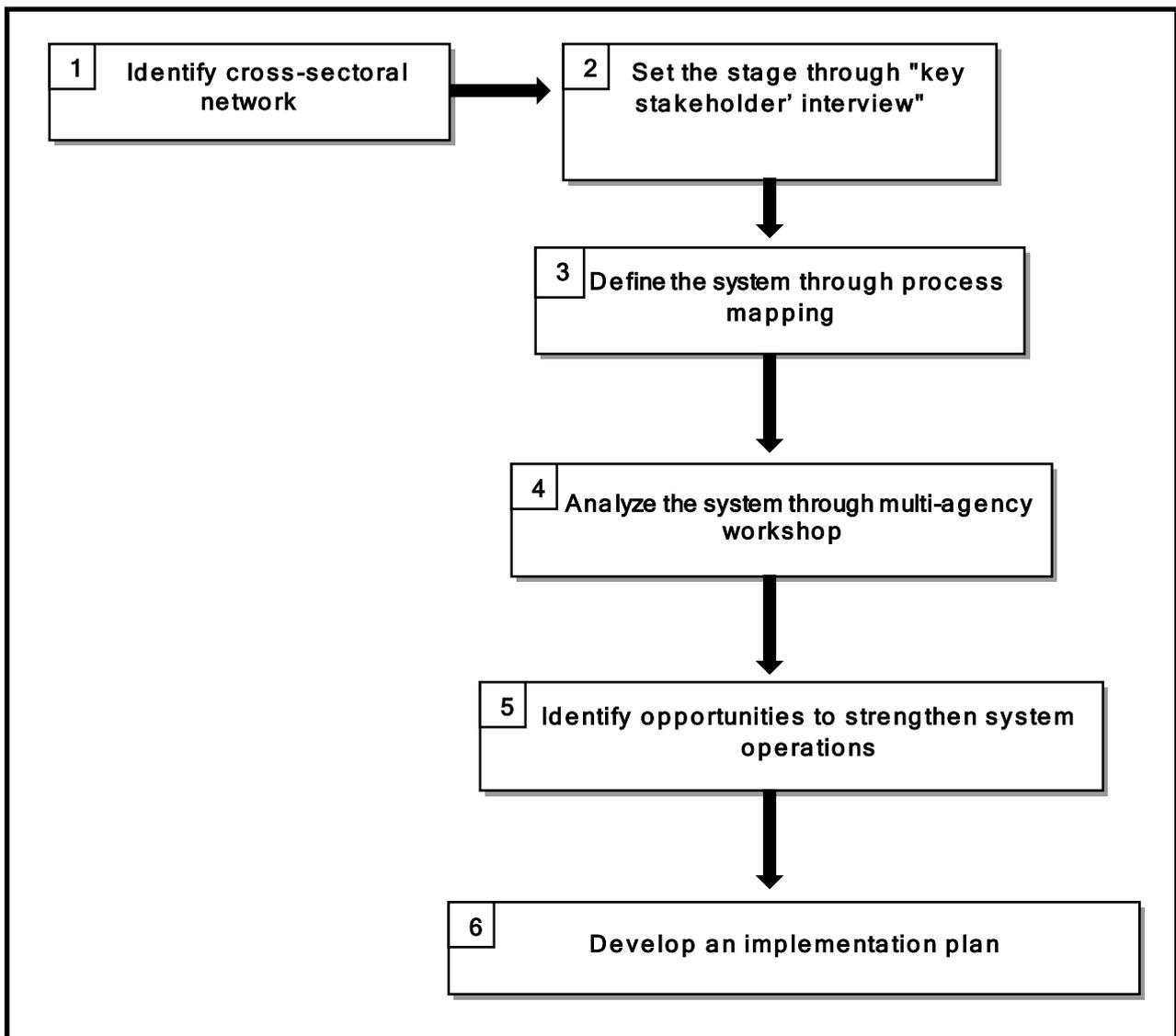
B. The workshop process is conducted to analyze and mapping a system using OH-SMART.

B.1. Workshop participant candidates are selected according to relation to the issues to be analyzed and the interactions between systems are mapped, with the following criteria:

- 1). The participants have a strong technical main duties and functions (tupoksi) that directly relate to solutions of the issues faced by the community;
- 2). The Participants have main duties and functions (tupoksi) supporting the success to solve the issues faced by the community;

- 3). The Participants have main duties and functions (tupoksi) of multi-agency coordination at various levels;
- B.2. Workshop is held for 2 (two) days with the main agendas:
- 1). One Health approach or Systems integration
 - 2). The introduction of OH-SMART
 - 3). participative leadership
 - 4). Implementation of the OH-SMART (stage 1 to 6) as Figure 1
- B.3. Output resulted from OH-SMART can be divided into two in accordance with the intended use, they are :
- 1). To analyze the inter-system interaction to solve problems, or
 - 2). As a way to strengthen existing network to respond a community health issue that shall be performed cross-sectorally like zoonosis.

Figure 1: OH-SMART Process



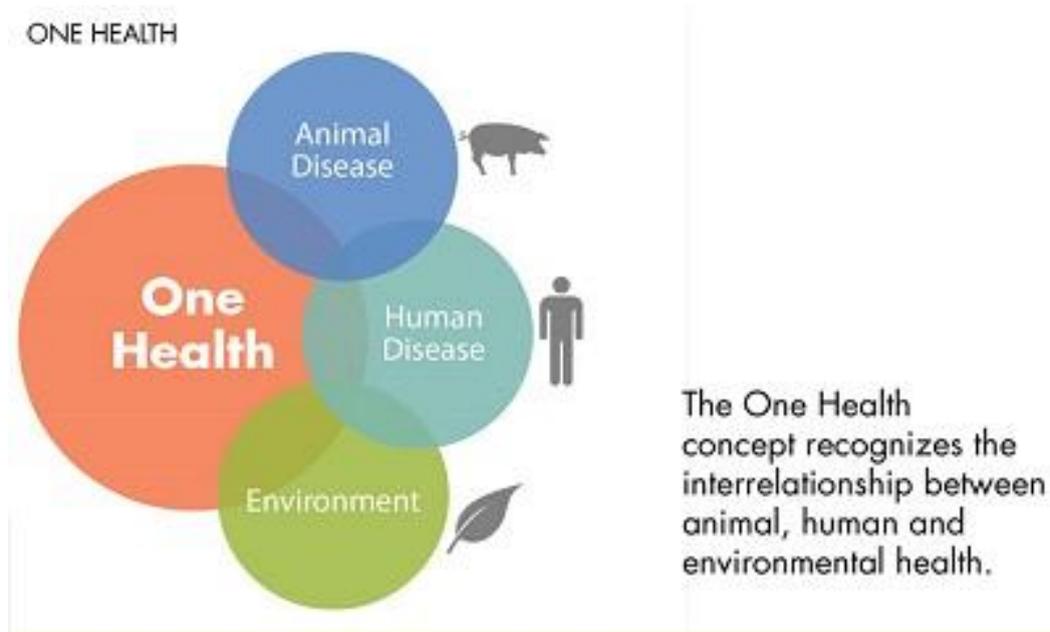
BRIEF DESCRIPTION OF OH-SMART TRAINING PROCESS

STAGE	OBJECTIVE	KEY MESSAGE	TOOLKIT
MATERIAL			
At a glance	Providing an overview on OH-SMART as a flexible method to identify, develop and plan a solution.	<ul style="list-style-type: none"> ○ OH-SMART can be used for two purposes: <ol style="list-style-type: none"> 1). To analyze inter-system interaction to answer one health challenge, or 2). As a way to strengthen the existing network to respond community health issue that is necessary to be done cross-sectorally such as zoonosis. ○ Adaptation of the best practices / extension of what has been done ○ OH-SMART will provide direction for the action plan and a implementable work 	Material for explaining about: <ol style="list-style-type: none"> a. Complexity of the future challenge b. Cross-sectoral approach c. OH - SMART Introduction
One Health Concept	Providing an explanation of one health concept to deal with challenges complexity due to the complexity of threats and zoonotic infectious diseases	<ul style="list-style-type: none"> ○ One Health is inter-system integration and interaction between to address the public health issue challenge ○ So far it was thought as a theory only, but in fact there are many of them 	Explanation on One Health



Material
One Health Concept and
Understanding

One Health Concepts and Understanding



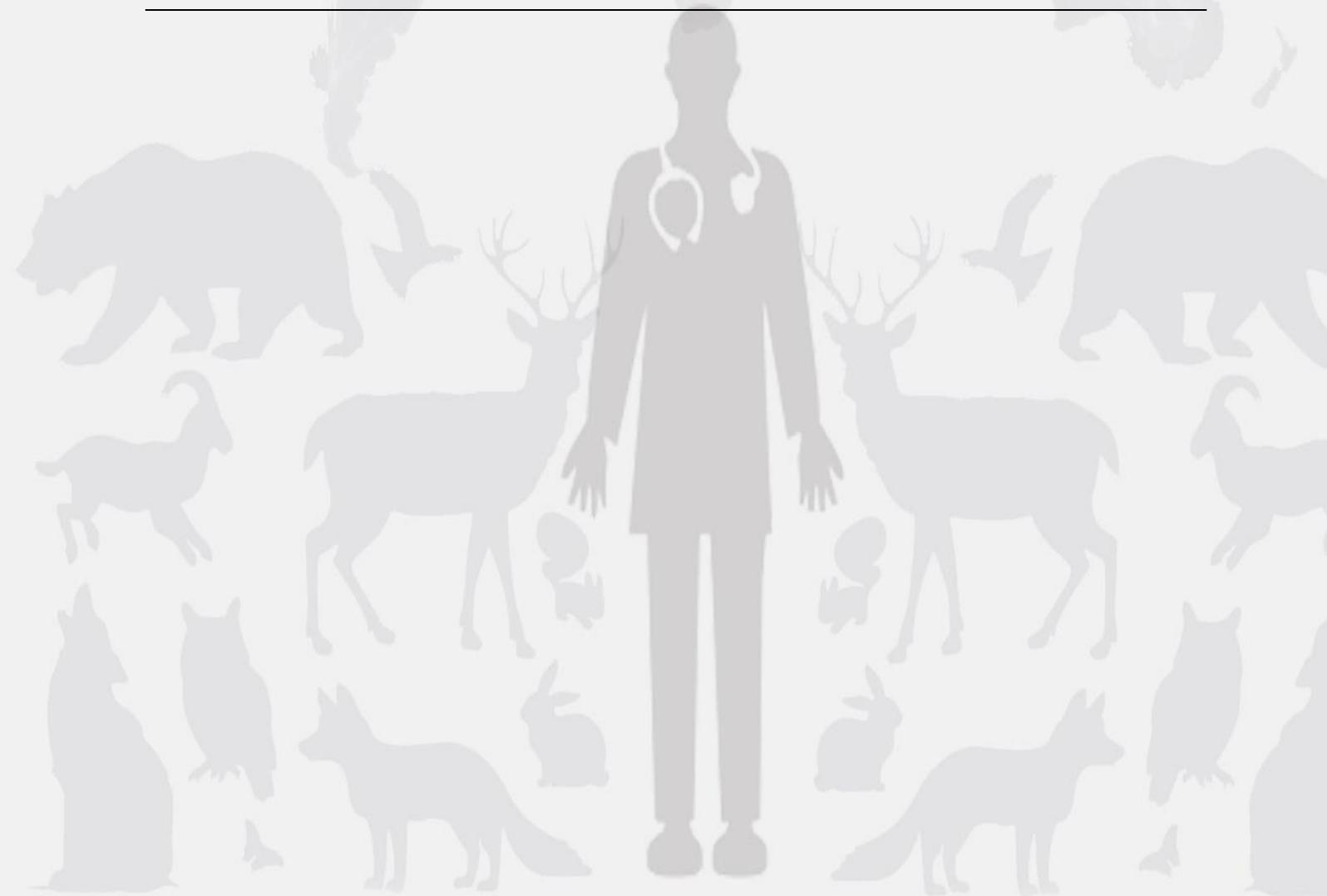
<http://www.chinafic.org/index.php?m=content&c=index&a=show&catid=21&id=29>

One Health is a human health (including mental health via the human-animal bond phenomenon), animal health and ecosystems health that are interrelated each other. One health was actually introduced as an approach to promote, improve and maintain the health and welfare of mankind and all creatures by increasing cooperation and collaboration between physicians, veterinarians, medical personnel and professionals in the field of environment by improving leadership and management ability (One Health Initiative).

Principally, One Health is an approach that is not change what we have done but rather how we do it. Although there are many One Health definitions used, but the general meaning of this approach is to set out collaboration between sectors to jointly solve the complex problems of zoonotic diseases. The cross-sector cooperation has either direct or indirect impact to health involving consideration, optimizing resources or joining cooperation inter-sectorally by respecting the autonomy of each discipline of various health stakeholders. To improve the effectiveness of the One Health approach, it is required a balance among sectors, groups and networks, especially among veterinarians and physicians, increasing the participation from ecologist and wildlife practitioners and bachelor of social science and team work. Interactions among human health, animal, and ecosystem health are the approach of a concept known as One Health.



OH – SMART
Introduction of Stages 1 dan 2





Main Summary

Stage 1 and 2	
OH-SMART Objectives	<p>Step 1</p> <ul style="list-style-type: none"> • Identify a network of cross-sectoral agencies or public-private-academic organizations (stakeholders) to be analyzed as part of the OH-SMART process. • Identify and record a contact person for all stakeholders within the network being analyzed. <p>Step 2</p> <ul style="list-style-type: none"> • Conduct the 'key-stakeholder' interview (Appendix 1) with 1-3 key personnel working with each stakeholder organization identified as part of the network in step 1. • Gather and record information from the interview and will add any additional stakeholder organizations to the network. • Conduct additional 'key-stakeholder' interviews with personnel from any other stakeholder organizations identified during this step 2 of the interview process.
Key Messages	<ul style="list-style-type: none"> • OH-SMART can be used for four purposes: <ol style="list-style-type: none"> 1. Map and analyze a network of stakeholders 2. Map and analyze a networks response to an existing problem 3. Adaptation of best practices or extension of what they already did 4. OH-SMART will provide direction to self-discovery, action plan and work plan they can begin • The provided interview form is a guide; interviewers need to be active listeners and modify the interview to pursue • Realization that individual sectors are rarely aware of the complete process and protocol for other sectors
Facilitator	In accordance with instructor schedule
Preparation	Set up OH-SMART PowerPoint presentation
Resource	<ul style="list-style-type: none"> • Key-stakeholder interview guide (Appendix 1) • Voice or video recording device to record interview for later reference.

Description



First stage: The first step in the OH-SMART process is to identify the cross-sectoral network to be analyzed in OH-SMART process. In this stage, identification is conducted either from government agencies dealing with human, animal, and environmental health, or public, private and academic organizations or even community health clinics. Using the OH-SMART process to strengthen a network can be challenging if there are tensions or limited cross-sectoral collaboration. However, this process is very important matter. In this case, a good approach is needed to identify problems that are considered as threats. It will help creating direct agreement that is able to move forward.

Note to facilitator:

Training

The main thing to discuss during the Training of Trainer Session is that the first step is initiated in various ways and reasons, thus it does not have to wait for 'call or authorized demand' to an agency. If a province or country knows that they will establish better collaboration or coordination but the relationship is strained, the best approach is to choose a problem that everyone sees as a threat thus it can be focused on the collaboration process. If there is anxiety about this step, ask the participants to think about and discuss recent or upcoming challenges that are faced by their province or country where such a process could help improve planning or future response.

Workshop

The first stage introduction is not provided in a separate activity, it will be discussed as a part of the introduction and then will be discussed again at the end of the workshop as participants discuss how they initiate or use OH-SMART process in their province or work area.

Guiding question

- How stakeholders interact when there are issues or events affecting human health, animal health and/or the environment?
- What incident or emergency in the past required cross-sectoral interactions? What stakeholders were involved in this interaction?
- Is there a recent or upcoming challenge that is of concern to your province, country or agency that could create a focus or motivation for the analysis?

Second stage: Once the network is established, the next stage is to gain information in a baseline level on how the different institutions perceive working across sectors and a baseline understanding of why and how they do. This is done through semi-structured 'key-stakeholder' interviews. This is a flexible interview and is able to be modified to extract the important information in the network system being analyzed and the questions are adjusted and expanded during the interview to follow relevant discussion points. The key to the interview process is to use the interview to delve into the motivators and actors involved in cross-sectoral interactions in your system. The interview questions are intended as a guide to

start the conversation, but any interesting or relevant discussion point should be followed up using open questions to prompt new and relevant information from the interviewee.



Exercise

Activity: Each participant will be grouped of two with the participant from a different sector and they will conduct 30 minute interviews each other. The goal to facilitate this portion of the workshop is to emphasize the semi-structured nature of the interviews. Training of Trainers will be conducted indoor and remind participants that they do not need to follow the guide and should, where possible, conduct a conversation that pursues the goals of the interview in whatever way that works best for them and the interviewee. They need to keep in mind the goal to understand how and why their interviewee works with other sectors, what drives these interactions personally and within their own organization and how they and their organization perceives these kind of collaborations.

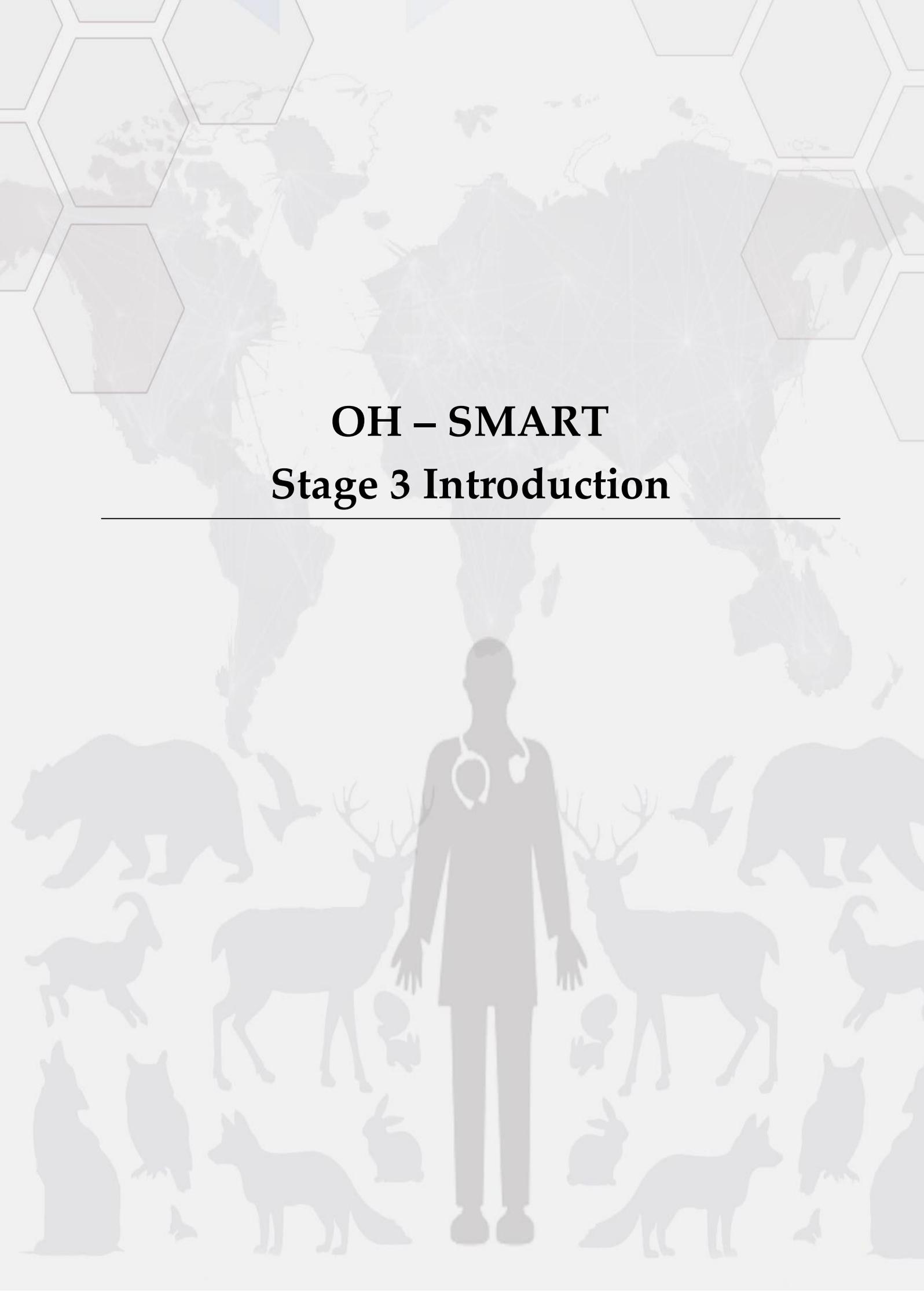
Note to facilitator:

Training

Training of Trainers will be conducted indoor and remind participants that they do not need to follow the guide and should, where possible, conduct a conversation that pursues the goals of the interview in whatever way that works best for them and the interviewee.

Workshops

- Assisting workshop participants to work in pairs (different sectors). One of them will be interviewer and the other is the interviewee;
- Assisting participants in finding pairs (pairs could be pre-assigned by matching numbers on the name tags);
- Directing the participants to conduct interviews for 30 minutes and is performed in rotation;
- Explaining the Participants that the interview is semi-structure in nature, that the Participants can understand how and why their interviewee works with other sectors, what drives these interactions personally and within their own organization and how they and their organization perceives these kind of collaborations; and
- Assist in time management.



OH – SMART
Stage 3 Introduction



Main Summary

Stage 3	
Purpose	<ul style="list-style-type: none"> • Identifying a complex scenario that requires interactions across the network. • Meeting personally the members of each stakeholder organization identified in the network (OH-SMART steps 1 and 2) and using a simple 'swim lane' style map (Appendix 2) and the guiding questions document (Appendix 3), they will map out the stakeholders interactions surrounding the complex scenario. • Using computer mapping software (Appendix 4) to combine all the individual stakeholder maps into one comprehensive multi-stakeholder map. • Marking any process steps that may not be clearly accepted (discrepancies or differences in responses noted) by all stakeholders.
Key Message	<ul style="list-style-type: none"> • Mapping of "current state" • Realizing that individual sectors are rarely aware of the complete process and protocol for other sectors • Identifying discrepancies / discussion points help move from "current" to "idealized" state
Facilitator	According to infrastructure schedule
Preparation	Logistics and sample mapping, powerpoint presentations
Resource	<ul style="list-style-type: none"> • Large meeting room (if group mapping by sector) • Roll paper or whiteboard to create 'swim lane' style maps • (Appendix 2) • Guiding questions document (Appendix 3) • Computer mapping software (Microsoft Excel template, Microsoft Visio, LucidChart, etc.) (Appendix 4)
Assignment sheet	
Note to facilitator during the session	



Description

Third stage: In this stage it conducted accurately map the existing system, e.g., the interactions between the organizations in the network. The main goal of this step is to map what actually happens with cross-sectoral interactions among the stakeholder organizations in the system being analyzed. To achieve this, each sector is first mapped individually and then a multi-agency combined maps are created and the multi-agency map highlights areas where the sectors agree that they are in collaboration well, and areas where there are discrepancies between sectors. These combined, highlighted maps then become the foundation for a facilitated analysis and discussion in stage 4, 5 and 6. Stakeholders in the system being analyzed. To achieve this, OH-SMART utilizes a 2 step mapping process, namely

- A. First, each sector is mapped individually.
- B. Second, a combined map is produced highlighting areas of cross-sectoral collaboration and areas where there are discrepancies between sectors in how they describe their interactions a

Note:

- Introduction to mapping using Excel (or Visio/Freeware)
- Show the video mapping tutorial
- Discussion of how MN had used it to map and improve foodborne outbreak response



Exercise

Individual sector specific mapping

Activity: Each person will map their own view of the process and which agencies are included. The goal of this exercise is to both allow participants some practice with the technique as well as to give them some experience in the kind of revelations that this exercise achieves. The matter that shall be noted in this process is to map what actually happens with cross-sectoral interaction between interests of the stakeholders in the system being analyzed, not what should happen. The revelations and review in the following step will be compromised if participants produce an ideal map rather than a map of existing interactions.

The role of the facilitator in this activity:

- Assisting participants to start with the simple map of each sector (Appendix 2);
- Using 'Sector level mapping', guiding questions' document (Appendix 3) to prompt; and
- Providing an example of an individual map created in the MN pilot process (Appendix 4)

Note to the facilitator:

Workshop

- The facilitator's role in mapping is to help guide the participants in thinking through their system. The facilitator facilitates each sector to create a specific map in accordance with the sectors on how they interact with other agency surrounding the scenario
- While mapping, the facilitator guide the process by asking questions such as: 'Now that this step has occurred, which stakeholder(s) would act/react next?' 'Would many stakeholders be involved at this point in the scenario?'
- The Facilitator should walk around during the individual mapping activity. The facilitator will assist to strengthen an impression on the mapping, mark what is not known by the participant and ensure that the mapping is created in accordance with actual condition not what shall exist.



Exercise

Study and group discussions on individual mapping

Activity:

- Each group will discuss findings and process of mapping from individual sector level mapping sessions
- Facilitators will walk around the room and assist group in discussions



Exercise

Creating comprehensive multi-agency maps

Activity: Discuss how to create comprehensive multi-agency maps.

Note to the facilitator:

Workshop

- Discuss the importance of identifying discrepancies and marking for later discussion
- MN Example



Exercise

Map consolidation and identification of discrepancies

Activity: After each map is create, the maps are combined into multi-agency system map. This stage is generally done by the initiator or facilitator. It is easier to combine the maps using a computer mapping program such as Microsoft Visio (details on computer mapping are in Appendix 4). It is important to map all steps reported by each individual agency in the combined, comprehensive map. Where steps in the scenario that don't align are found i.e. there are differences/discrepancies, mark these points for discussion later. It is important to include all reported steps that don't align. These discrepancies are a starting point for discussion in later steps.

Note to the faCilitator:

Workshop

- Providing an option to start mapping on Excel/Freeware/Visio as a group;
- Assisting each group to create make comprehensive multi-agency; and
- Using sticky notes to mark discrepancies for further discussion. Appendix 5 and 6 show examples.

Day 1 Review and rapid assessment

Wrap-up discussion from day 1 and Rapid Assessment

Rapid assessment questions can be found in Appendix 5.



OH – SMART

4 Stage Introduction





Main Summary

Stage 4	
Purpose	<ul style="list-style-type: none"> • Inviting one to three people to represent each stakeholder in the network and attend the multi-agency workshop. • Printing a large poster to be displayed during the meeting and will also project the computer version for review. • Walking the workshop participants through the combined map and will discuss where discrepancies/differences in responses were recorded and also where and why interactions work-and how they might be strengthened or institutionalized • Guiding the workshop attendees through the map and facilitate discussion around each step in the process. • Recording the groups consensus around what actually happens in the given scenario/ should happen, or identify gaps where they exist. • Recording ideas that come forward during the analysis of the map to better facilitate discussions that will occur in OH-SMART steps 5 and 6.
Key Messages	
Facilitator	In accordance with instructor schedule
Preparation	Powerpoint presentation
Resource	<ul style="list-style-type: none"> • Large meeting room • Screen projector • Large printed combined map with marked discrepancies
Assignment Sheet	
Note to facilitator during the session	When developing the list of attendees for the inter-agency meeting, it is best to include at least 1 or 2 people from the initial mapping process (OH-SMART step 3) and to invite someone from upper management within the agency. Every OH-SMART process will be somewhat different and the OH-SMART facilitator(s) will need to decide if the mapping analysis should be done in one or two separate interagency meetings

Description



Fourth stage: In this stage, it is held a multi-agency meeting to review and analyze information gathered through the ‘key-stakeholder’ interviews and multi-agency comprehensive mapping process. To maximize the success, several people from each agency represented on the map should attend. The main purpose of the meeting is to analyze the comprehensive map; critically review, discuss and address all areas of coordination including areas of strength as well as gaps and discrepancies; and identify opportunities to strengthen system implementation. Where things are working, the participants should review the success factors and if the interaction can be institutionalized or strengthened. Where there are discrepancies, discussion should focus on what should happen and how it might work most effectively. In this stage, it is important to encourage participants to have an open, positive discussion about all the differences and discrepancies and agree on what should be done in an ideal situation. It is also important to recognize best-practices and what has been working well in cross-agency communications and collaboration. These should be recognized and reinforced, and opportunities to make these even stronger should be discussed. Ultimately, the goal is to institutionalize cross-sectoral interactions to become integral part of the processes, policies, roles and responsibilities of all organizations and personnel outlined in the system analyzed.

Review of comprehensive maps and table discussion

In the workshop, steps 4, 5 and 6 are introduced to the participants together as a process of identification and prioritization of steps to progress from the ‘current process map’ to the ‘ideal map’ of cross-sectoral interactions. It is likely that only a few organizational units will actually have a full complement of sectors around which to create a combined map. Either the facilitators or the tables themselves need to decide which province / regional map they want to create as a combined map. For example, if a table is made up of different members of a larger district representing 5 different provinces, the map should be built for the province having the best representation from different sectors and the most information to map. Once decided, the facilitator needs to work with the table group to systematically create a combined map by walking step by step through the process from identification through all the stages and steps that the representative agencies would attend to in the scenario. Unlike in the OH-SMART process, this step will be done in groups to make sure workshop participants understand how to combine maps and identify discrepancies and best practices.



Exercise

Activity: The participants will review their comprehensive maps and talk through discrepancies, gaps identified and best practices. Facilitators will assist groups in discussions surrounding their discrepancies, gaps and best practices. Open ended questions are best and help the prompt a discussion of next steps. In places where participants begin to debate or question steps, these steps should be highlighted or asterisked to indicate that resolution is needed, and the mapping of steps continued without further discussion. Once the combined map is produced with highlighted sections, the map should be reviewed systematically by the group with the help of the facilitator. It will represent the process that the interagency workshop would take. Each step should be reviewed and the facilitator should question the group about why the step happens, whether the outlined process is the best one to take ideally, and if there are steps to take to institutionalize it. For example, do all the agency personnel have these roles as part of their job responsibilities or position descriptions? Should there be a Standard of Practice developed for the process? Are there agreements in place outlining the different agencies roles or responsibilities? As each best practice or improvement step is identified, they should be recorded on flip charts or computers to capture ideas for the implementation plan.

Note to facilitator:

Workshop

- The facilitator role is to assist the participants to understand their own process
- While facilitating the discussion around discrepancies and differences identified, the OH-SMART facilitator(s) can encourage the attendees to come to consensus on what happens, or discuss potential protocols that could make the step easier. What would make communication easier, faster or more comfortable in the future?
- Where possible, it is important to encourage a discussion of why interactions are working, and discussing how the successful interactions might be institutionalized. Are people interacting because it is part of their job responsibilities, because communication or coordination are regulated or required or because individuals are acting on their own initiative?



Exercise

Report-out

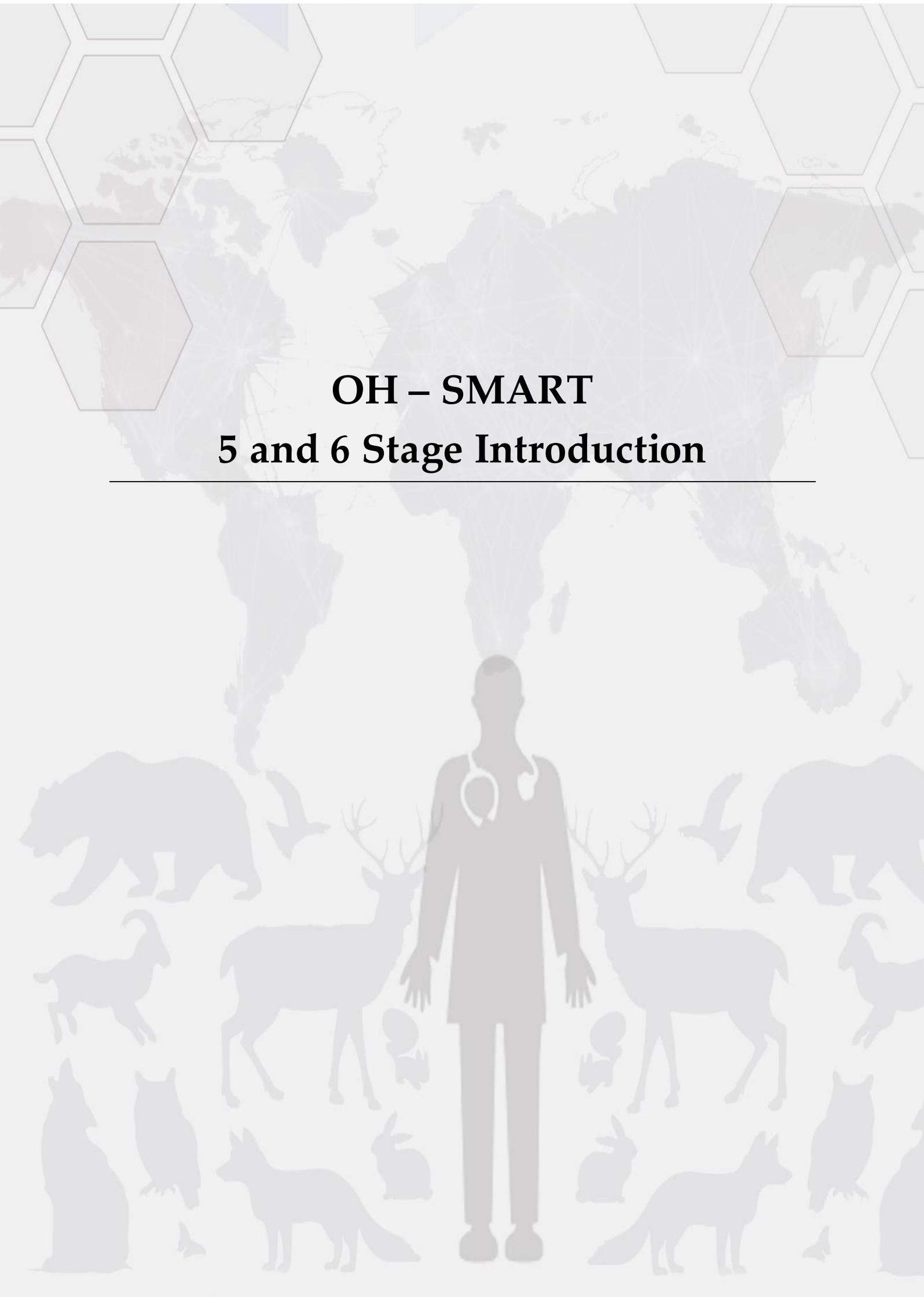
Activity: Each table will select a spokesperson to report out 2 identified discrepancies, gaps or best practices.



Exercise

Sharing of provincial models

Activity: Representatives from different States present about programs or initiatives they use to encourage or institutionalize cross-sectoral collaboration and One Health.



OH – SMART
5 and 6 Stage Introduction



Main summary

Stages 5 and 6	
Purpose	<p>Step 5</p> <ul style="list-style-type: none"> Utilizing computer mapping software to record information about multi-agency consensus on what should occur during each discrepancy identified. Sending updated maps to all stakeholders involved. This can be done via email or in person at another inter-agency workshop <p>Step 6</p> <ul style="list-style-type: none"> Assisting attendees of the multi-agency meeting to develop an implementation plan that accurately identifies gaps, details the consensus reached on discrepancies and differences and reports on best practices. Attendees should establish an implementation plan of action items that will build upon the existing framework mapped.
Key messages	How will participants evaluate their use of the OH-SMART process
Facilitator	According to instructor schedule
Preparation	Powerpoint presentation
Resource	<ul style="list-style-type: none"> Computer mapping software (Microsoft Excel, Microsoft Visio, LucidChart, etc.) (Appendix 4)
Tool and Media	
Note to facilitator during the session	<ul style="list-style-type: none"> It is very important to accurately record the consensus reached during the multi-agency workshop (OH-SMART step 4) and to create a map that accurately details the ideal process agreed upon. This may require that versions on the map are shared with meeting attendees through online communication or another in person meeting. It is important to help the participants pick implementation goals that are short, medium and long term, and create opportunities for them to check-in on their progress.

Description



Fifth stage: Following the multi-agency meeting, the map should be re-formatted to reflect the solutions to gaps and discrepancies and any agreed to institutionalizing steps. This 'ideal' map will highlight how a multi-agency outbreak response (or other process) should occur in the future. By establishing what should happen, agencies are able to prioritize next steps and best practices that will help them build upon and improve their existing system. Furthermore, this process can be used to discern which items to prioritize for funding and may be used for future employee training and orientation.

Once the combined maps are developed and reviewed, participants are asked to discuss how the whole system could be improved, discrepancies resolved and cross-sectoral collaboration institutionalized. Key to facilitating this step is to make sure participants understand that these steps in the process could be implemented during the cross-sectoral workshop or as a second or series of meetings to discuss the finalized 'ideal' map and how the existing interactions could be strengthened or modified to reach the ideal system.

Sixth stage: An implementation plan should be created that outlines the agreed-upon best practices and next steps following the OH-SMART process. All stakeholders involved in the OH-SMART process should contribute to a collective plan and have deliverables and action items. Ideally the implementation plan should have immediate, medium and long-term actions steps to improve the system. Action items should be identified that can be incorporated into agency financial planning and funding request mechanisms. The items should also include immediate steps that do not necessarily require new sources of funding to implement.

In the workshop, steps 5 and 6 are introduced to the participants together as a process of identification and prioritization of steps to take in moving from 'the current map' to the 'ideal map' of cross-sectoral interactions. In the workshop it is unlikely that a combined map and implementation plan will be created that represents every sector in the entire stakeholder group. These implementation plans, therefore, should be created to the best of everyone's ability and the need for further engagement of key stakeholders in the OH-SMART process is needed once the participants get back to their home state or region. The overarching goal is to show the power of creating a specific plan of action that follows from a detailed review the system as it stands and discussion of how it should be.



Excercise

Developing the implementation plan

Activity: Plan for Implementing Ideal Map – how to implement ideal map and recommendations in short, medium and long term.

Note to faCilitator:

Workshop

- Things they already did (e.g., successes already achieved, best practices already in place);
- Tools and “valuation”;
- Tools needed for the future;
- How OH-SMART can be applied; and
- Sustainability and accountability of implementing the plan



Excercise

Table report-outs

- Each table will select a spokesperson to identify 2 actionable steps they have identified as part of their implementation plan.
- Group discussion on the use/implementation of the tool and conclusion of the workshop

Wrap-up, final remarks and final workshop assessment

- Wrap-up discussion from day 2, final remarks and final OH-SMART workshop assessment (Appendix 6)
- Pass out and collect evaluations
- Pictures of flip charts

Case Study

Minnesota, USA

Step	Details
1	The OH-SMART process was piloted in the State of Minnesota to analyze the cross sectoral network of State health agencies. The initial network included the Department of Health, the Department of Agriculture, and the Board of Animal Health.
2	<p>In the State of Minnesota, the 'key-stakeholder' interview (Appendix 1) was pivotal in determining what other agencies should be included in the analysis. Following the original interviews, the Department of Natural Resources, the U.S. Department of Agriculture and the U.S. Centers for Disease Control were included in the network.</p> <p>We also identified that in Minnesota, the success in working across agencies was largely cultural and attributable to some key personnel who worked well together and actively sought to collaborate.</p>
3	<p>In the State of Minnesota 1-2 hour mapping sessions were held with each agency identified as part of the network. Maps were created detailing an outbreak of tuberculosis in dairy cattle. Guiding questions (Appendix 3) helped walk each agency through an outbreak scenario. While conducting individual mapping sessions, another group was identified in the network-- the University of Minnesota Veterinary Diagnostic Lab. All mapping sessions were conducted on large sheets of poster paper and were later converted to digital maps using computerized mapping software. Figure 2 is an image of an individual map of how the Veterinary Diagnostic Lab at the University of Minnesota views their interactions with the network during an outbreak of tuberculosis in dairy cattle.</p> <p>In Minnesota all discrepancies were marked with an asterisk in the combined, comprehensive map so they could be discussed later at the inter-agency meeting. Minnesota utilized Microsoft Visio software to create the comprehensive multi-agency (10 agencies total) outbreak response to tuberculosis in dairy cattle. We identified over nine discrepancies/differences when combining each individual agency response map. The final comprehensive map is visualized in Figure 3.</p>
4	<p>In Minnesota, two multi-agency analysis workshops were held. The first workshop focused around the gaps and discrepancies. All agency-wide participants discussed what should actually happen in the event of the outbreak, and what steps they could take to mitigate any confusion in the future. Best practices were also identified and clearly noted. Following the first meeting, a comprehensive 'ideal' map was created that highlighted the desired process in the event of future outbreaks. The second multiagency meeting was held to conduct a final review of the ideal map and to highlight next steps for the State of Minnesota. As an example, Minnesota now conducts quarterly multi-agency meetings to discuss current work within agencies and how they can work more effectively together.</p>

Figure 2: An example of individual process map: Veterinary Diagnostic Lab involvement and interaction during an outbreak of tuberculosis in dairy cattle

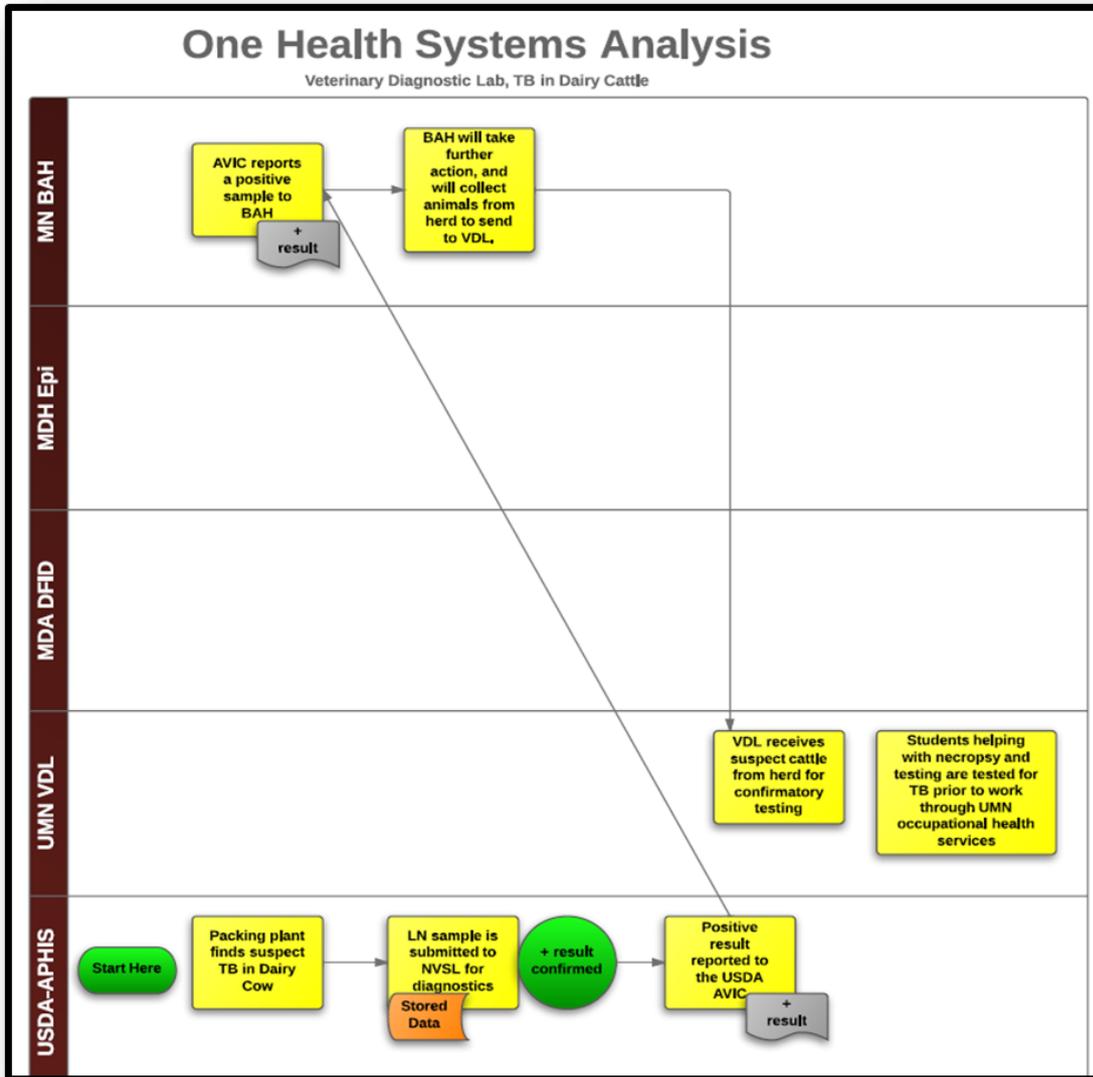
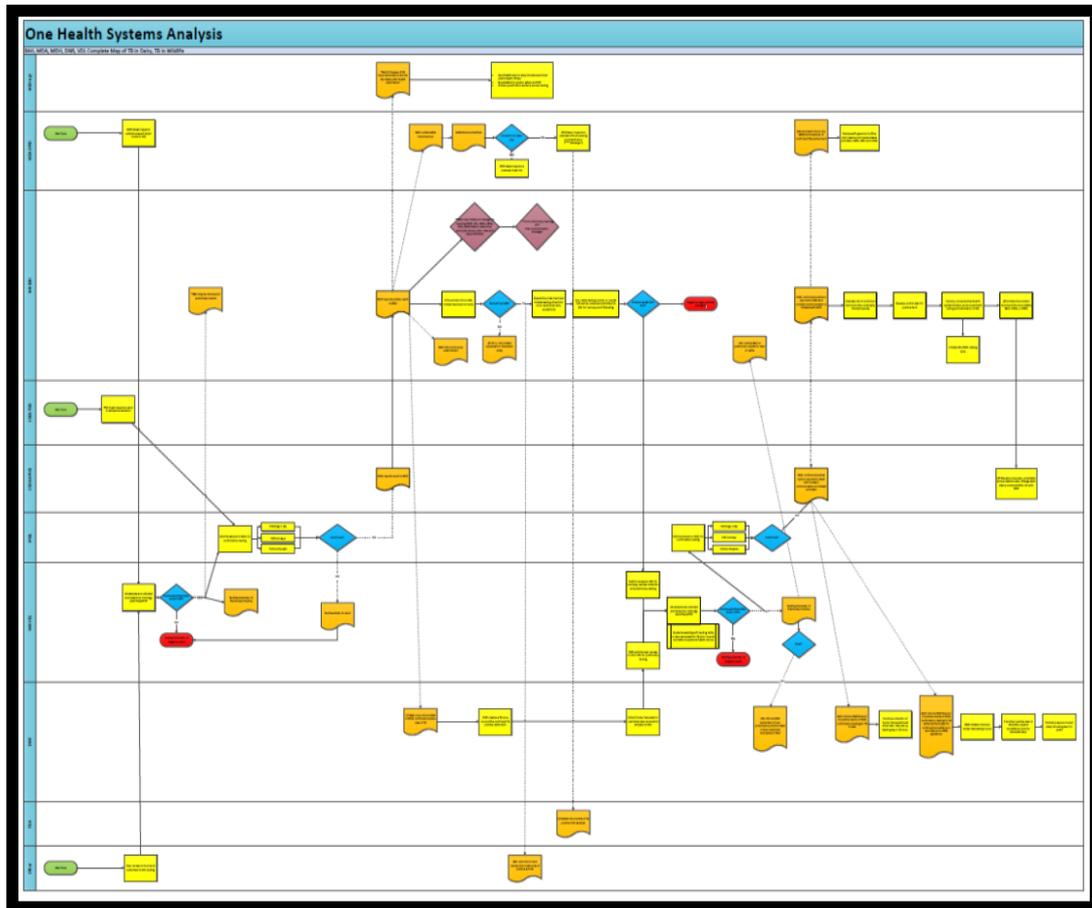


Figure 3: An example of comprehensive stakeholder response map: Involvement and interaction in an outbreak of tuberculosis in dairy cattle



Appendix

Appendix 1

One Health Systems Analysis Key Stakeholder Interview used in the Minnesota OH-SMART pilot 2013

One Health Key Stakeholder Interview:

Introduction

This interview is designed to evaluate the current level of cross-sectoral collaboration within your state. You may also know this type of collaboration as One Health, where multiple disciplines work together to attain optimal health for people, animals, and the environment.

1. Were you previously familiar with the term 'One Health'?
 - a. Do you think the One Health approach has relevance to the work of your agency?
 - i. If yes, how?
 - ii. If not, why?

Collaboration among agencies

Now, I'd like to ask you about ways in which your agency collaborates with other state agencies.

2. Are you aware of cross-disciplinary and/or cross-sectoral collaborations in your agency?
 - a. If yes, could you give some examples?
 - i. How common would you say it is?
 - ii. Where do you most often see these types collaborations (between which sectors)?
 - iii. When or for what purpose do they tend to collaborate?
 - b. If not, why not?
3. Who in your agency or other agencies tend to collaborate? Is there someone or some group that are 'go to' people for collaboration?
 - a. Probes: What is that person's role? What kind of collaborations? With which agencies?
4. Do you interact with agencies/institutions outside of your own?
 - a. Why, or for what purpose, do you interact with them?
 - b. Who do you contact? What is his/her role?
 - c. How did you initially come into contact with this individual?
 - d. How do you communicate with him/her? (phone, email, meetings, etc.)
 - e. How often does this interaction take place?
5. Are there agencies/institutions that you would like to have more regular interactions with?
 - a. Which agencies?
 - b. Are they at the state, regional or national level?
 - c. What prevents you from having regular interactions with these agencies?
 - d. Probes: Which ones? For what purpose?

Impact of existing (if any) cross-sectoral collaboration in your state

For the next set of questions, I would like to ask you how inter-agency collaboration impacts your work.

6. How have your collaborations with outside agencies/institutions affected?
 - a. Your own work?
 - b. Your organization as a whole?
7. Do you have an example of a successful cross-disciplinary or cross-sectoral collaborative One Health (OH) project?
 - a. What did it look like?
 - b. How did it work?

- c. What made it successful?
 - d. Were there challenges to making it work? Were they overcome? How?
8. Do you have an example of a failed collaborative project?
- a. What did it look like?
 - b. Why did it not work?
 - c. What did you learn from this experience? OR What would you do differently the next time?

Policy and procedures that impact One Health

For the final set of questions we would like to evaluate how your agency manages cross-sectoral or One Health collaborations. That is, we are interested in the agency work culture and procedures that influence these collaborations.

- 9. If you collaborate with other agencies, what motivates you to collaborate?
 - a. Is this a result of organizational policies or individual employee efforts?
- 10. If your agency collaborates with other agencies, what drives these collaborations?
 - a. What existing policies or practices support those collaborations?
 - b. What additional policies would be helpful to support them?
- 11. In your opinion what are some agency barriers to cross-sectoral collaboration?
 - a. What improvements could be made?
- 12. Is there anything you find surprising or fascinating about the way agencies collaborate in the state?

Appendix 2

Basic 'swim lane' map that can be used to map each *individual* agency response to the complex problem selected

Individual / sector / institution System Mapping..... Complex Problem

Institution	Complex Problem Process
Institution A	
Institution B	
Institution C	
Institution D	

Appendix 3

Individual sector level mapping, guiding questions: example of infectious disease response

1. Suspect case/sample of _____ disease in *animal*.
 - a. How does your agency first hear of a suspect case/sample?
 - b. Who delivered this information to your agency? Who is contacted within your agency?
 - c. Once you have the information about a suspect case, what is the next step?
 - d. Does your agency contact and alert other agencies?
 - e. How long will you wait for the next step?
2. The sample is confirmed positive for _____ disease in *animal*.
 - a. How is your agency informed of a confirmed positive sample?
 - b. What is the next step for you or your agency?
 - c. What other state or federal agencies should be involved at this time?
 - d. Do you or anyone in your agency communicate with other agencies that may be involved with the suspect case? If so, who initiates this communication? How do you communicate?
 - e. What are those other agencies responsible for?
 - f. Who will facilitate continued testing?
3. Multiple cases are confirmed positive for _____ disease in *herd of animals*.
 - a. What is the next step for your agency in this larger outbreak?
 - b. Who will manage this larger outbreak?
 - c. What agencies will become more involved?
 - d. Is this managed at the state level? Or are the federal agencies involved? Which agencies would be involved at the federal level?
4. A *wildlife* case of _____ disease is reported and confirmed positive.
 - a. How are wildlife cases diagnosed?
 - b. How and when are wildlife officials notified/engaged?
 - c. Is your agency notified, and if so, who is specifically alerted?
 - d. How do sectors interact once the wildlife cases are identified?
 - e. Are there any next steps for your agency?
 - f. Are any federal agencies involved at this point?
5. A *human* case of _____ disease is reported and confirmed positive.
 - a. Is your agency notified, and if so, who is specifically alerted?
 - b. Are there any next steps for your agency?
 - c. Is there any follow-up with media sources?
 - d. Are any federal agencies alerted at this point?
6. You receive word that _____ disease has been confirmed in *animals and/or humans* in a neighboring state.
 - a. Is your agency notified, and if so, who is specifically alerted?
 - b. Will you or your agency connect specifically with other agencies in neighboring state?
 - c. Are there any next steps for your agency?
 - d. Who will lead this large multi-state outbreak response?
 - e. What federal agencies are involved?

Appendix 4

1. Computer Mapping Software:

Computer mapping Software



Microsoft Visio  Visio

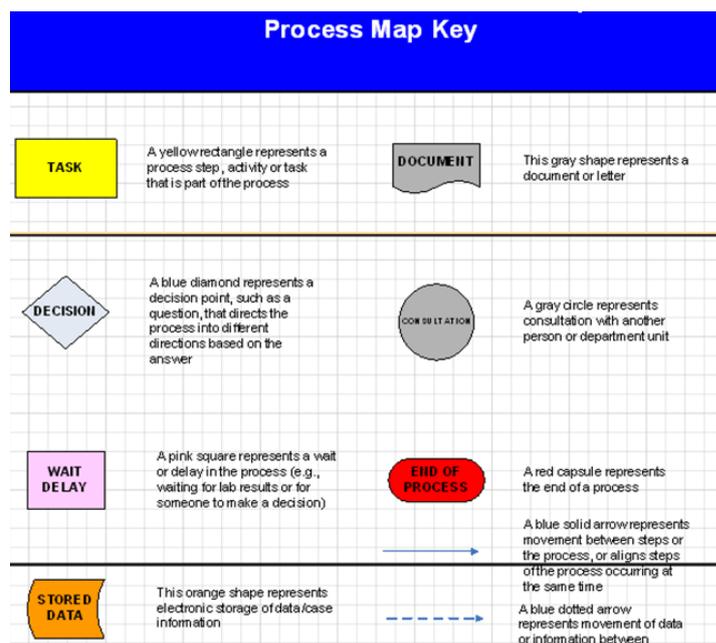
Multiple options for free-ware

Lucidchart (30 days free)  Lucidchart

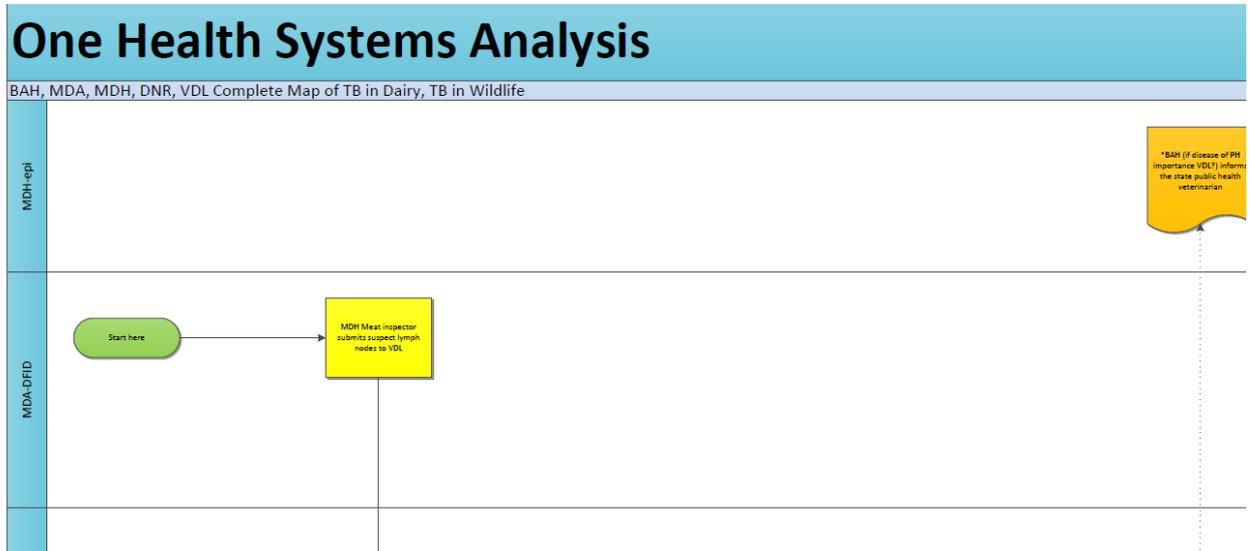
Gliffy (limited version free)  gliffy

Microsoft Excel may also be used

2. Create a mapping key that suits your process:



3. Example of section map



Appendix 5

Rapid Assessment Questions

Hand out 3x5 cards at the end of the day

Day 1:

On the front of the card, please tell us:

Q1. What did you find most useful regarding today's workshop?

On the back of the card:

Q2: What is one thing that could be improved or one thing you would like to learn more about?

Day 2:

Please tell us:

Q3: Think about lessons learned on mapping... How might you apply this to improve cross-sectoral collaboration in your state/jurisdiction?

Q4: What is one thing that could improve in how we teach this method?

Appendix 6

Workshop Assessment Form

Please indicate your proficiency performing the following activities BEFORE and AFTER this training.

Key: 0= Not at all proficient; 7= extremely proficient

Skill	Proficiency BEFORE this training	Proficiency AFTER this training
	<i>Not at all proficient ☹️-😊 Extremely proficient</i>	<i>Not at all proficient ☹️-😊 Extremely proficient</i>
Conducting semi-formal interviews	0 1 2 3 4 5 6 7 Not Sure	0 1 2 3 4 5 6 7 Not Sure
Developing process maps	0 1 2 3 4 5 6 7 Not Sure	0 1 2 3 4 5 6 7 Not Sure
Combining and Analyzing process maps	0 1 2 3 4 5 6 7 Not Sure	0 1 2 3 4 5 6 7 Not Sure
Identifying stakeholders and their perspectives	0 1 2 3 4 5 6 7 Not Sure	0 1 2 3 4 5 6 7 Not Sure
Negotiating conflict and finding collaborative solutions	0 1 2 3 4 5 6 7 Not Sure	0 1 2 3 4 5 6 7 Not Sure
Ability to evaluate a process map in collaboration with others, and propose actions to address gaps	0 1 2 3 4 5 6 7 Not Sure	0 1 2 3 4 5 6 7 Not Sure

	<i>Very Low</i>	<i>Low</i>	<i>Moderate</i>	<i>High</i>	<i>Very High</i>
Degree to which course objectives were met	<input type="checkbox"/>				
Relevance of subject matter to your position or	<input type="checkbox"/>				
The overall value of the course for you	<input type="checkbox"/>				

How do you foresee the OH-SMART tools being applied to address One Health challenges faced by your department / agency / organization?

Other comments:
