AeHIN GIS Lab pre-conference workshop

Digital Health Conference
Naypyitaw, 7 March 2017

EXECUTIVE SUMMARY

I. Background and Objectives of the workshop

In the continuity of the first workshop organized before the 4th AeHIN General Meeting in Bali (29-30 October 2015), the AeHIN GIS Lab held a half day workshop prior to the Digital Health Conference on 7th March 2017.

The workshop's main objectives were for countries to:

- Share experiences, challenges, and successes
- Identify current needs/gaps when it comes to geo-enabling the Health Information System (HIS) in countries
- Identify potential and long term solutions to address the identified gaps

II. Agenda of the Workshop:

The workshop agenda (Annex 1) has been designed to reach the objectives described here above.

III. Participants Profile:

A total of 41 participants attended the workshop, representing the Ministries of Health, NGOs, development partners and other organizations from 14 different countries (Annex 2).

IV. Meeting Summary

A. Welcome and introduction

Dr Steeve Ebener welcomed the participants to the workshop and invited everyone to introduce themselves as well as indicate their major expectations from the workshop.

The expectations expressed by the participants can be grouped into three major themes, which were to learn about:

- How GIS is being used by the health sector in other countries
- How certain technical issues (confidentiality for example) can be handled when using GIS
- The AeHIN GIS Lab and the support it can provide to countries

After the round of introductions, Dr Ebener presented the agenda of the workshop and proceeded to the first session.

The background slides used during the different sessions of the workshop can be downloaded from here: https://www.healthgeolab.net/MEETINGS/NPT_2017/GIS_pre-conference_workshop_slides_070317.pdf

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B. Session 1 - Country level experience, challenges and successes in using GIS

During this session, representatives from the Ministry of Health of Cambodia, Myanmar, and Malaysia kindly shared their experience, challenges and successes in using GIS with the participants of the workshop.

Mr Sek Sokna, IT Officer from the Department of Planning and Health Information (DPHI) of the Ministry of Health of Cambodia started his presentation by providing a summary of the previous GIS experience in the Ministry which included several projects aimed at introducing and using GIS. He then explained that the main challenges encountered over the past years have been the update of the data, starting with the location of health facilities, as well as the lack of recent GIS training for the staffs of the Department. He continued by presenting the new capacity building project to be implemented within the DIPH with the support of ADB and the AeHIN GIS Lab. This project aims at developing the different elements needed for the MOH to geo-enable its health information system as part of the HIS master plan 2016-2020. Mr Sokna's presentation can be downloaded from here: https://www.healthgeolab.net/MEETINGS/NPT_2017/Cambodia_GIS_pre_conference_workshop_070317.pdf

Dr Maung Maung Htay Zaw, Deputy Director of the Planning Department of the Ministry of Health and Sports (MOHS) of Myanmar presented their journey towards the geo-enabling of their Health Information System (HIS). Using a story map, Dr Htay Zaw explained how a pilot project conducted over the Region of Magway and covering three different programs (planning, disease surveillance and monitoring, emergency management) has been used to demonstrate the benefits of geo-enabling the HIS as part of the implementation of the National Health Plan 2017-2021. The results of the pilot project will now used to get the necessary commitment and support from the Ministry of Health and Sports to institutionalize what has been developed, establish a Technical Working Group on geospatial data management and GIS through the HIS policy and engage all the key stakeholders in the process to also get their commitment and support and reach a more collaborative and coordinated approach to geospatial data management and GIS in the health sector in Myanmar. The story map presented by Dr Htay Zaw can be visualized here: http://arcg.is/2lzRrL4

Dr Khadzir bin Sheikh Hj Ahmad, Head of the Health Informatics Centre from the Ministry of Health of Malaysia and his team started their presentation by giving a live demonstration of the Malaysian Health Data Warehouse (MyHDW). This online platform developed by MIMOS, an agency under the Ministry of Science, Technology & Innovation has the ability to store and visualize geospatial data as well as perform basic spatial analyses. The group then presented an overview of Malaysia's MOH Information and Communication Technology (ICT) Strategic Plan 2016-2020. This plan includes the establishment of the MyHDW as one of its 7 strategic outcomes and in which GIS is a major component. They also discussed the importance of data and information governance particularly as it pertains to the security of sensitive data within the system and the measures they are implementing to assure such security and privacy. The group went back to MyHDW to further show its different components and functionalities and processes before ending by presenting the way forward with this platform. Dr Sheikh Hj Ahmad's presentation can be downloaded from here: https://www.healthgeolab.net/MEETINGS/NPT_2017/Malaysia_GIS_pre_conference_workshop_070317.pdf

The above presentations demonstrated the different levels of development observed in the region when it comes to the use of geospatial data and GIS, levels that were confirmed by the interventions of the other countries represented in the audience during the discussion that followed.

This discussion also allowed presenters to answer questions as well as touch upon other topics of interest to the participants such as data collection process and validation, project sustainability, and data security.

C. Session 2 - Country needs to geo-enable their HIS

The second session had for objective to list the needs from the Ministries of Health as well as development partners attending the workshop when it comes to the geo-enabling of their respective HIS.

To start the discussion, Dr Ebener presented the 8 components considered by the AeHIN GIS Lab as being necessary to reach such geo-enabling, namely:

1. A clear **vision** and **needs** (data, human, and financial resources) as well as a **strategy** and **plan** to reach them have been defined;
2. A **governance** structure and a minimum **technical capacity** have been established;
3. Geospatial data **specifications, standards and protocols** have been defined and are being implemented to ensure the availability, quality (completeness, uniqueness, timeliness, validity, accuracy and consistency), and compatibility of geospatial information across the whole data life cycle;
4. Key **registries** (at least: administrative divisions, villages, and health facilities) have been developed and an updating mechanism is put in place for each of them;
5. The appropriate **Geospatial technology(ies)** has/have been identified and is/are being used in accordance to good geospatial data management practices;
6. Geography and geospatial technologies are **used** to support the implementation of programs towards reaching SDG 3 and improving Universal Health Coverage in countries;
7. **Policies** supporting and enforcing all of the above as well as geospatial data accessibility have been released;
8. The necessary **resources** to ensure sustainability on the long term have been identified and secured.

Dr Ebener then briefly presented the results of the quick HIS geo-enabling assessment survey that the AeHIN GIS Lab conducted in January-February 2017 to get a quick picture of the situation in Asia and the Pacific when it comes to the geo-enabling of their Health Information System (HIS).

The summary table presented by Dr Ebener (Figure 1) clearly shows that while all the MOH who participates do have a GIS capacity and are using GIS, important gaps remains when it comes to the other 6 components supporting HIS geo-enabling.

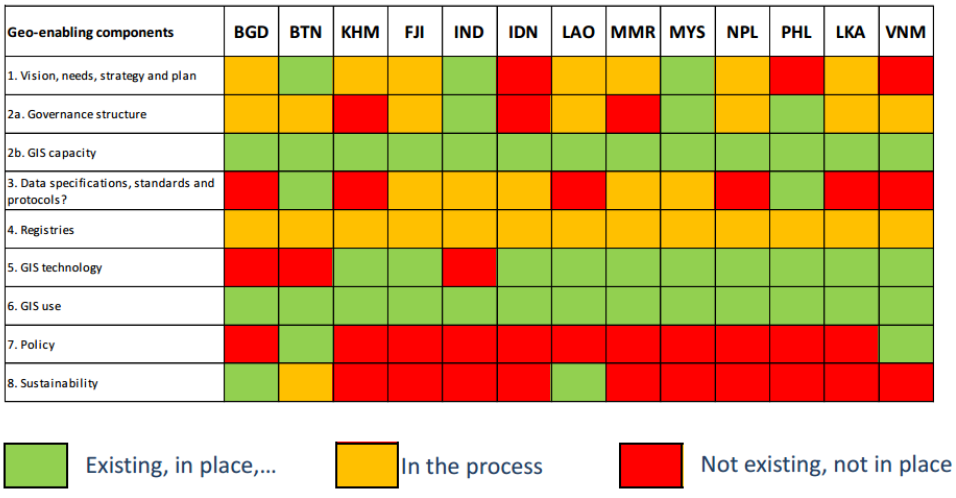

Figure 1 - Summary table for the quick HIS geo-enabling assessment survey

The complete results of the survey (13 countries) can be consulted from the following links:

- PowerPoint summary
- Detailed answers

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The floor was then open for participants to express their own respective needs. This exercise resulted in the following list which is being organized according to the 8 elements considered by the AeHIN GIS Lab:

- Capacity building:
  - Training on spatial analysis and modeling
  - Facilitate access to geospatial technologies (including reducing cost)
- Specifications, standards and protocols:
  - Develop minimum data specifications, standards and protocols for geospatial data and GIS in HIS and have a model to follow
  - Data collection methods for hard to reach areas (including conflict areas)
- Registries:
  - Align the registries from the Ministry of Health with those from the concerned governmental entities for villages and administrative divisions;
  - Resources, equipment and technical assistance to complete the health facility registry and improve the geographic coordinates accuracy
- GIS use:
  - Best practices and strategy for integrating statistical with geospatial data
- Policy
  - Support for developing policies, strategies and plans supporting the geo-enabling of the HIS
- Resource mobilization and advocacy
  - Demonstration how a geo-enabled HIS influences interventions as well as service delivery for health system efficiency
  - More marketing material on GIS benefits for the health sector
  - Support for proposal writing as well as access to donors supporting HIS geo-enabling
- Others:
  - A « place » and a regional group/network to learn and share from other countries
  - Improve collaboration among Ministries and development partners when it comes to geospatial data management and GIS

D. Session 3 - Short and long term solutions to address the gaps

The third, and last, session of the day had for objective to look at potential short and long terms solutions to address the needs identified during the second session.

Dr Ebener started the session by introducing the AeHIN GIS Lab to the participants as a common regional resource that has been established to help the health sector in countries (governments and partners) to fully benefit from the power of geography and Geographic Information Systems (GIS) through the geo-enabling of their Health Information System (HIS). He presented the AeHIN GIS Lab's current approach which emphasizes on long-term capacity building/strengthening before mentioning the Lab's resources that are currently available to countries and those to come (complete list available in the workshop presentation: https://www.healthgeolab.net/MEETINGS/NPT_2017/GIS_pre-conference_workshop_slides_070317.pdf).

The participants to the workshop were then invited to indicate other resources also available to countries. The following was mentioned:

- Esri:
  - Their online classes have been open sourced for those having an official esri license
  - An important number of their courses and technical sessions cans be found on

youtube
    - They are ready to work with customers to develop marketing material and give them a professional and polished look
    - Sector specific templates are available
    - They can provide additional support on demand
- InSTEDD
    - They have developed Open source applications that can support the geo-enabling
- RHIS group
    - They have an extensive network in place that could also be used to share experience and knowledge regarding HIS geo-enabling
    - The webinar they are regularly conducting could also be used as a conduit for such sharing

Comparing the list of resources currently available or to come with the needs expressed during the 2nd session there is a need to work on:

1. Best practices and strategy for integrating statistical with geospatial data;
2. Supporting the development of policies, strategies and plans supporting the geo-enabling of the HIS
3. Demonstrating how a geo-enabled HIS influences interventions as well as service delivery for health system efficiency
4. Developing more marketing material on GIS benefits for the health sector
5. Supporting proposal writing as well as access to donors supporting HIS geo-enabling

The AeHIN GIS Lab will look at finding ways to address these needs over 2017.

V. Conclusion and Adjournment

Dr Ebener concluded the workshop by thanking everyone for their active participation, hoping that their major expectations were met.

He also invited everyone to join the AeHIN GIS Lab's LinkedIn Group (https://www.linkedin.com/groups/10311235) to stay connected with each other, continue the discussions started during the workshop and share any information they would think relevant to the group.

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Annex 1 - Agenda of the AeHIN GIS Lab pre-conference workshop

13:00 Registration

13:30 Round of introduction and expectations from the participants

14:00 Session 1: Country level experience, challenges and successes in using GIS

- Presentation from the Ministry of Health of Malaysia, Cambodia and Myanmar regarding their current use of GIS, the steps they went through, the challenges they faced and the successes they reach
- Open discussion to answer questions and hear from representatives of other countries in the audience

15:15 Break

15:30 Session 2: Country needs to geo-enable their HIS

- Presentation: What is a geo-enabled HIS?
- Open discussion: Quick need assessment for the countries and partners represented during the workshop

16:15 Session 3: Short and long term solutions to address the gaps

- Presentation: Capacities and resources accessible through the AeHIN GIS Lab
- Open discussion: What else needs to happen for the Ministries of Health in the Region to fully benefit from the power of geography and GIS?

17:00 End of the workshop

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Annex 2 - List of participants

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