

HRIS Development in Lao PDR

Session 5:

Country presentations: focus on situation of HRH information system and management, how to use data for formulating HRH policies, challenges, and way forward (examples of countries that are starting to develop until continuing develop)

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HRIS : Human Resources Information Systems

- *“Widespread recognition of the need for accurate, timely and effective human resources for health data to inform the development of policies on HRH in countries.”*

(Country Assessment Tool on the uses and sources for HRH data , WHO 2012)

- Up-to-date, complete and accurate HRH data help countries to monitor HRH distribution situation and further plan health personnel capacity development, deployment and retention for leaders and managers.
- “The reporting system for HRH is able to provided information on the quantity, skills and allocation of health workforce to extend that it will provide evidence for rationalizing quota as well as skills needs by location”. Health sector reform
- In Lao, HRIS is called as HPIMS : Health Personnel Information Management System

History of development of HPIMS in Lao PDR

Period		2006	2007-2011	2011-2016	on going
System name	Spread Sheet	PIMS	HPIMS	In-house HPIMS	On line HPIMS
Managed by	MoH	PACSA *	MoH	MoH	MOH
Programming done by	Information of staff by professional category collected using spread sheet.	private software development company	private software development company	IT staff, Department of Health Personnel, MoH	private software development company
Software used		Free and Open Source Software	PHP	Microsoft Visual Studio, Microsoft Access	SQL server**
On-line/Off-line	Off-line	On-line	Off-line	Off-line	On-line
** Transfer HRH information to new server which link with PASA					

* PACSA: Public Administration and Civil Service Authority now become Ministry of home affair

Figure 1: history of personnel information management system

History of development of HPIMS in Lao PDR

Problems/Challenges encountered by **PIMS** managed by PACSA

- limited application to the health sector, i.e. no info by health professional categories, by health centre, or by unit.



Challenges encountered by **HPIMS** developed by company

- Inadequate documentation and system design (ex. database structure)
- Web-based design (inadequate in-country Internet environment)
- Immature IT software development industry in country
- No local support for further customization



Development of **in-house HPIMS** by MOH

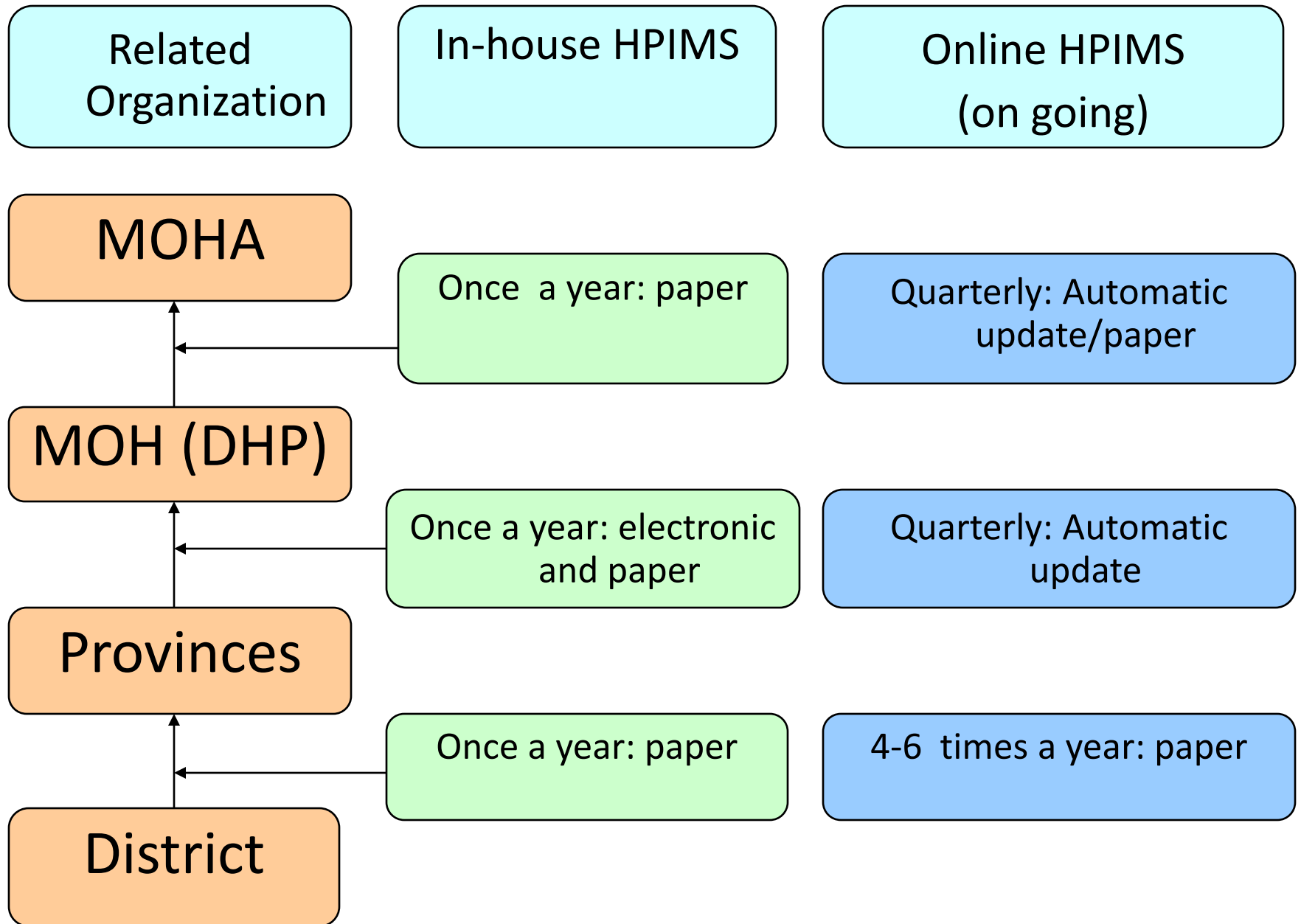
- Stand alone system, difficult to update information from various sites
- Can not link directly with **PIMS**



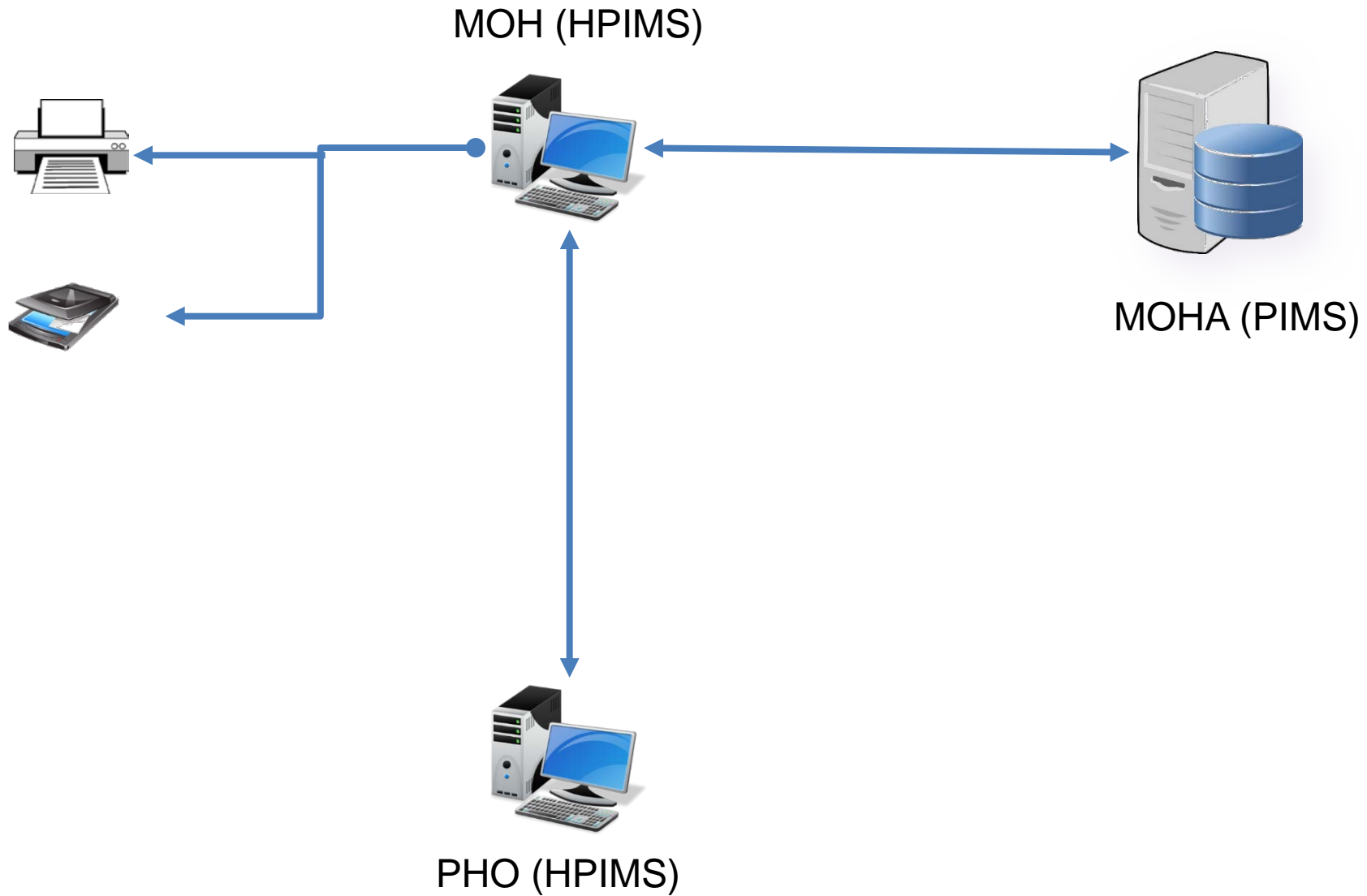
Development of **online HPIMS** by IT of MOHA

- Online system, with link directly with **PIMS (MOHA)**

Flow of information



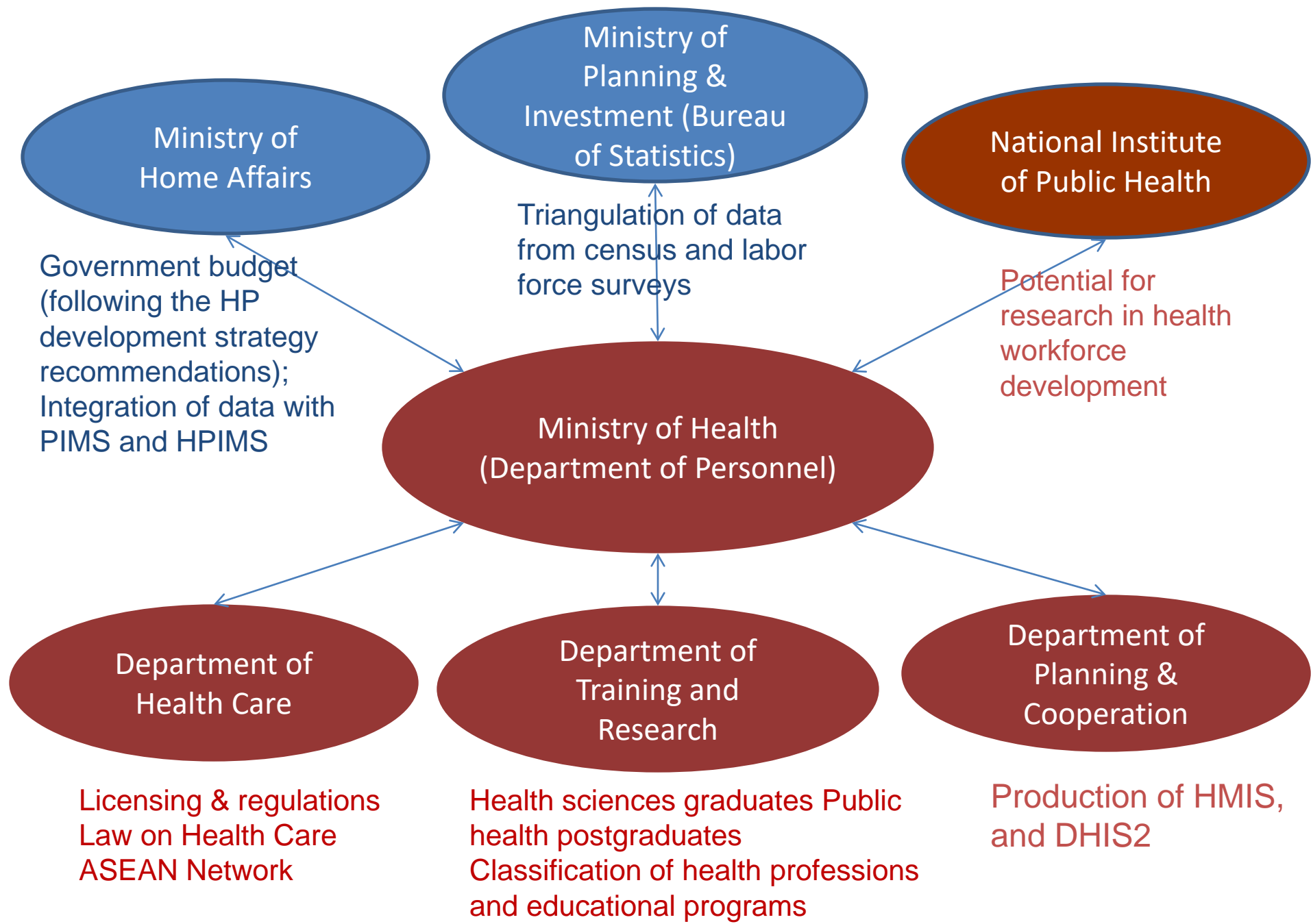
Data system



HPIMS : details

- **Data coverage:**
 - Public sector includes: permanent all working for the public health sector
 - 18 provinces, 148 districts, 993 HCs
 - 20,048 Health workers
- **Data fields:** (staff ID, staff name, sex, DOB, education, salary level and grade etc.)
- **Disaggregation** by – professional category, gender, age group, level of deployment in the health system, status in the workforce, educational, etc.)

Information use



Utilising HPIMS information

- Principal users of the data: MOH
- HPIMS data are used
 - by Department of Health Personnel (DHP) for Staffing Projection Tool (once a year)
 - Pilot used in 3 province with Health Center staff availability and productivity tool
 - by Statistics Division for production of Health Management Information System-HMIS, DHIS2 and other statistics (once a year)
- Visualizing HRH data – GIS application
- Data from HPIMS are provided to relevant MOH departments, other ministries, DPs, NGOs, and researchers upon request

Example 1: Utilising HPIMS information

1. For Staffing Project Tool (SPT)
 - HPIMS data, such as current number of staff by health professional category, by level of the health system (central/province/district/health centre level), are used for SPT
 - The tool provides information on annual target of health profession production and recruitment, estimated cost for training and deployment, and incentive provision.

No	Cadre of staff	2015	2025	2015	to	2025
		Total existing staff at H facilities	Total Need	Total Gap	Total Attrition for entire period	Total recruitment requirements
1	Pediatric sp	76	192	-116	33	150
2	OBGY	50	210	-160	23	182
3	Surgeon	67	149	-82	41	124
4	Internal Medicine	185	161	24	62	38
5	Anesthesist	50	88	-38	20	58
6	Tropical medicine	71	79	-8	29	36
7	Family medicine	82	161	-79	5	84
8	MD	2106	1,741	365	485	120
9	MA high	642	1,104	-462	44	507
10	PHC (Mid and low level)	500	62	438	12	0
11	MA	1088	496	592	399	0
12	Pharmacist	914	1,146	-232	97	329
13	Pharmacist Ass	846	2,174	-1,328	79	1,406
14	Dentist	444	561	-117	55	172
15	Dentist ass	85	522	-437	45	482
16	Registered Nurse	592	629	-37	42	79
17	Technical nurse	4123	7,287	-3,164	149	3,313
18	MW/CMW	1162	1,751	-589	37	626
19	Auxiliary nurse	2527	736	1,791	649	0
20	MPH	232	408	-176	110	286
21	Public health	120	261	-141	26	167
22	Labolatory	123	360	-237	21	258
23	Lab ass	692	1,782	-1,090	85	1,175
24	Physiotherapist	395	478	-83	63	147
25	X-ray and image	44	287	-243	16	259
26	Hygienist	627	1,697	-1,070	23	1,093
27	IT	36	276	-240	5	245
28	Accountant	700	766	-66	81	147
29	VHW	0	0	0	0	0
30	others	1325	2,256	-931	242	1,173
	Total	19,904	27,820	-7,916	2,979	12,656

Number and ratio of HW per 1,000 pop

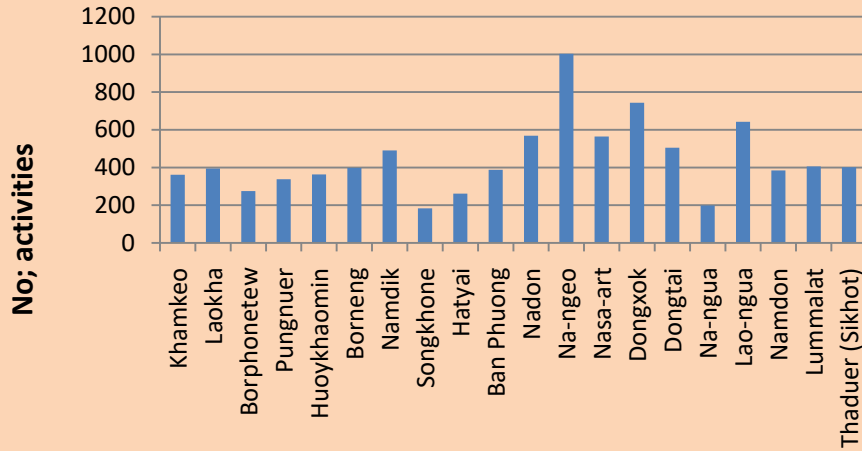
Year	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Total	19,904	20,696	21,487	22,279	23,070	23,862	24,653	25,445	26,237	27,028	27,820
Ratio per 1000 pop	3.07	3.14	3.22	3.29	3.36	3.43	3.49	3.56	3.62	3.67	3.73
MHW	12,865	13,086	13,306	13,527	13,747	13,968	14,189	14,409	14,630	14,850	15,071
Ratio per 1000 pop	1.98	1.99	1.99	2.00	2.00	2.01	2.01	2.01	2.02	2.02	2.02
MHW _h	10,338	10,738	11,137	11,537	11,937	12,337	12,736	13,136	13,536	13,935	14,335
Ratio per 1000 pop	1.59	1.63	1.67	1.70	1.74	1.77	1.80	1.84	1.87	1.89	1.92
MHW _h at HF (90% of total)	9,305	9,664	10,024	10,384	10,744	11,103	11,463	11,823	12,183	12,542	12,902
Ratio per 1000 pop	1.43	1.47	1.50	1.53	1.57	1.60	1.62	1.65	1.68	1.70	1.73

Example 1: Utilising HPIMS information

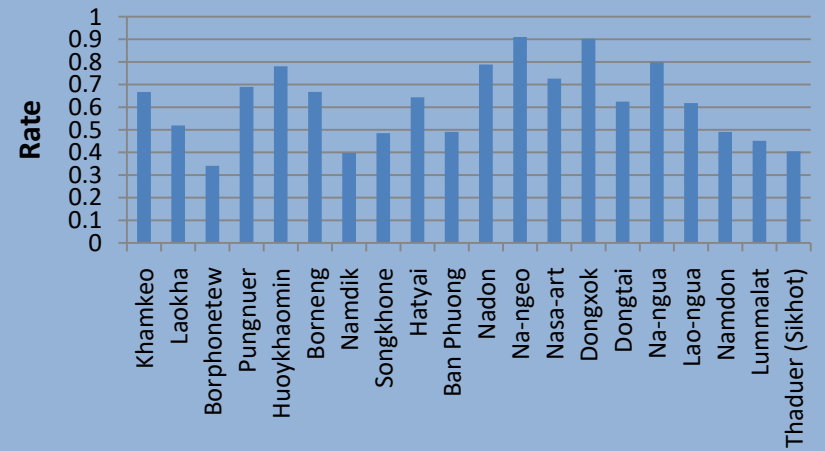
2. For Health Center Staff availability and productivity Tool
 - HPIMS data, such as current number of staff by health professional category at health center level are used
 - The tool provides information on need and gap at each HC, estimated service index per staff, service index per coverage population, HW ratio per 1,000 pop and productivity rate.
 - It provide information for discussion among district and provincial managers to solution HRH issue

Example of Health center staff performance and productivity

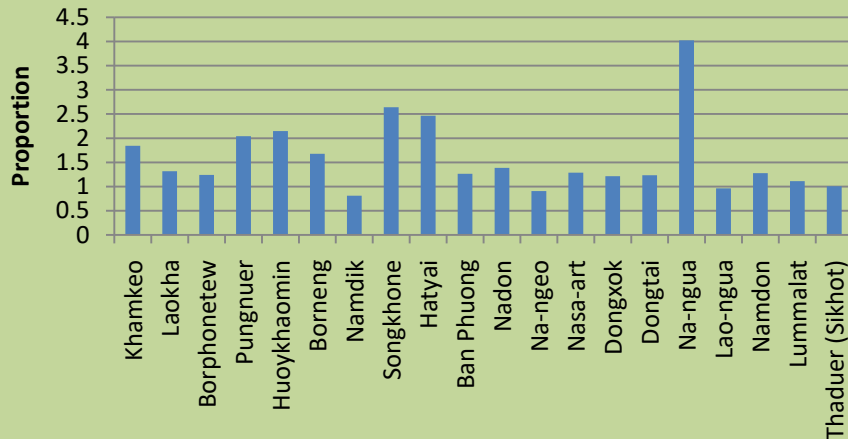
Average activities per staff



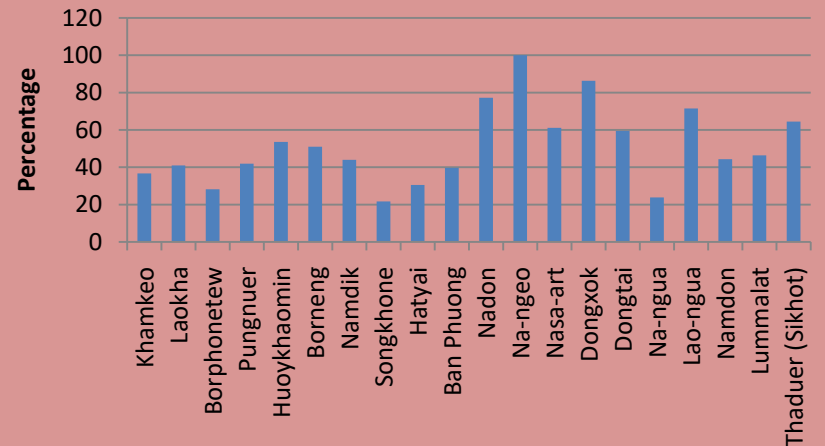
Utilization rate to population



Proportion of staff per 1000 population



Productivity

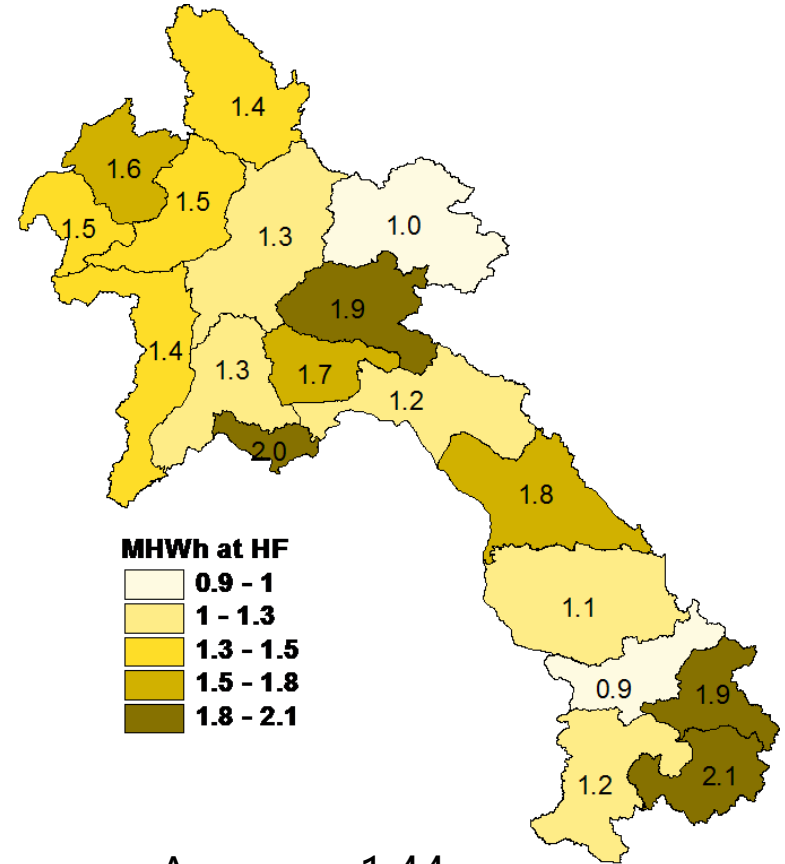
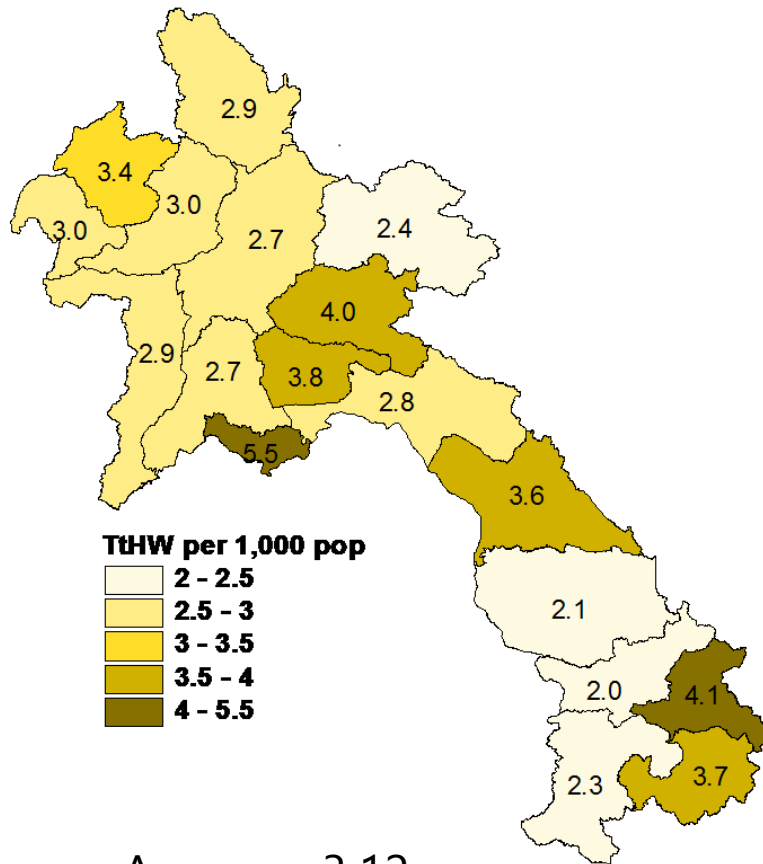


Example 2: Utilising HPIMS information

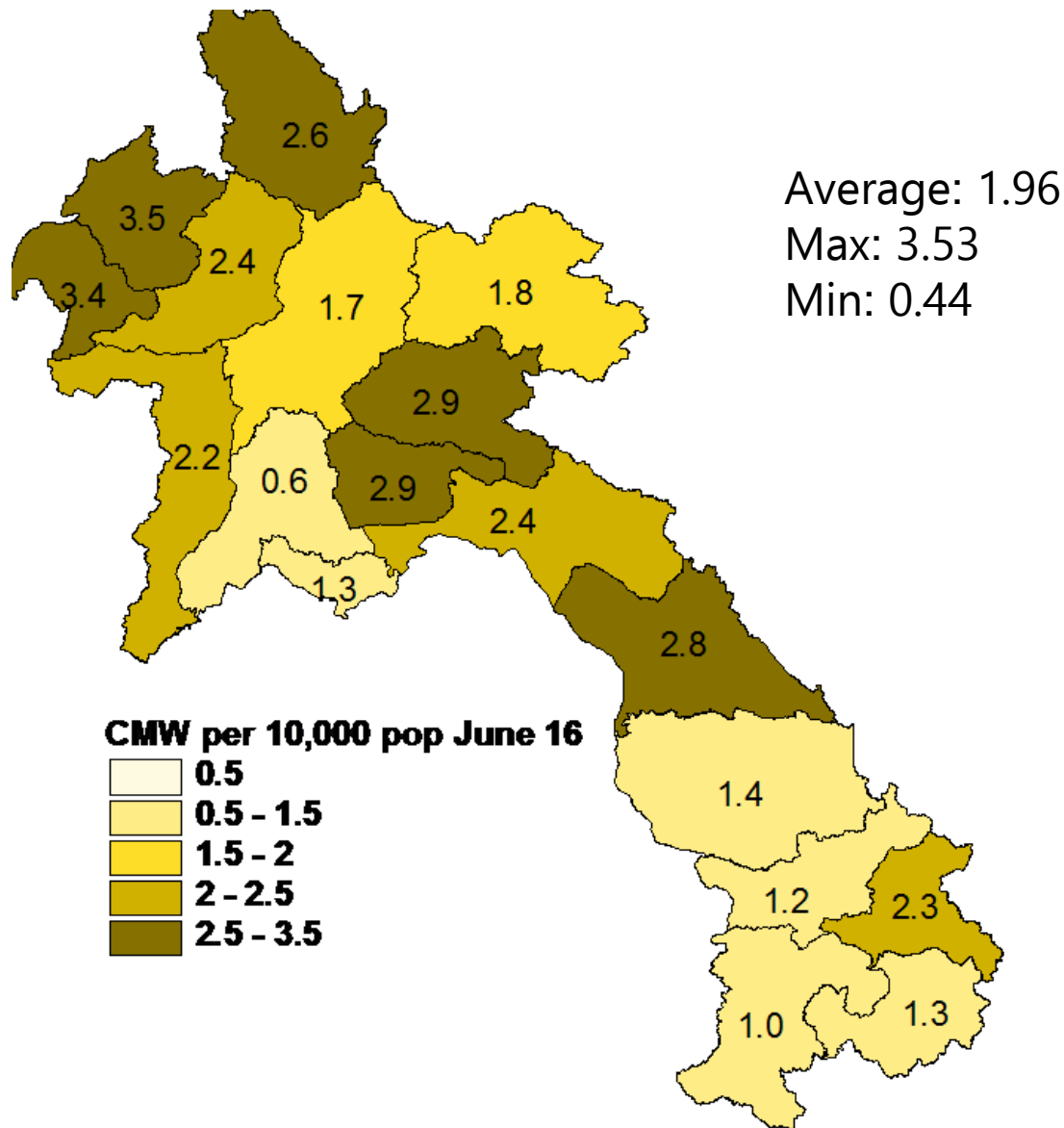
2. Visualising HRH data – GIS application

- Data from HPIMS are now displayed visually on the map of Laos using GIS software (ArcView)

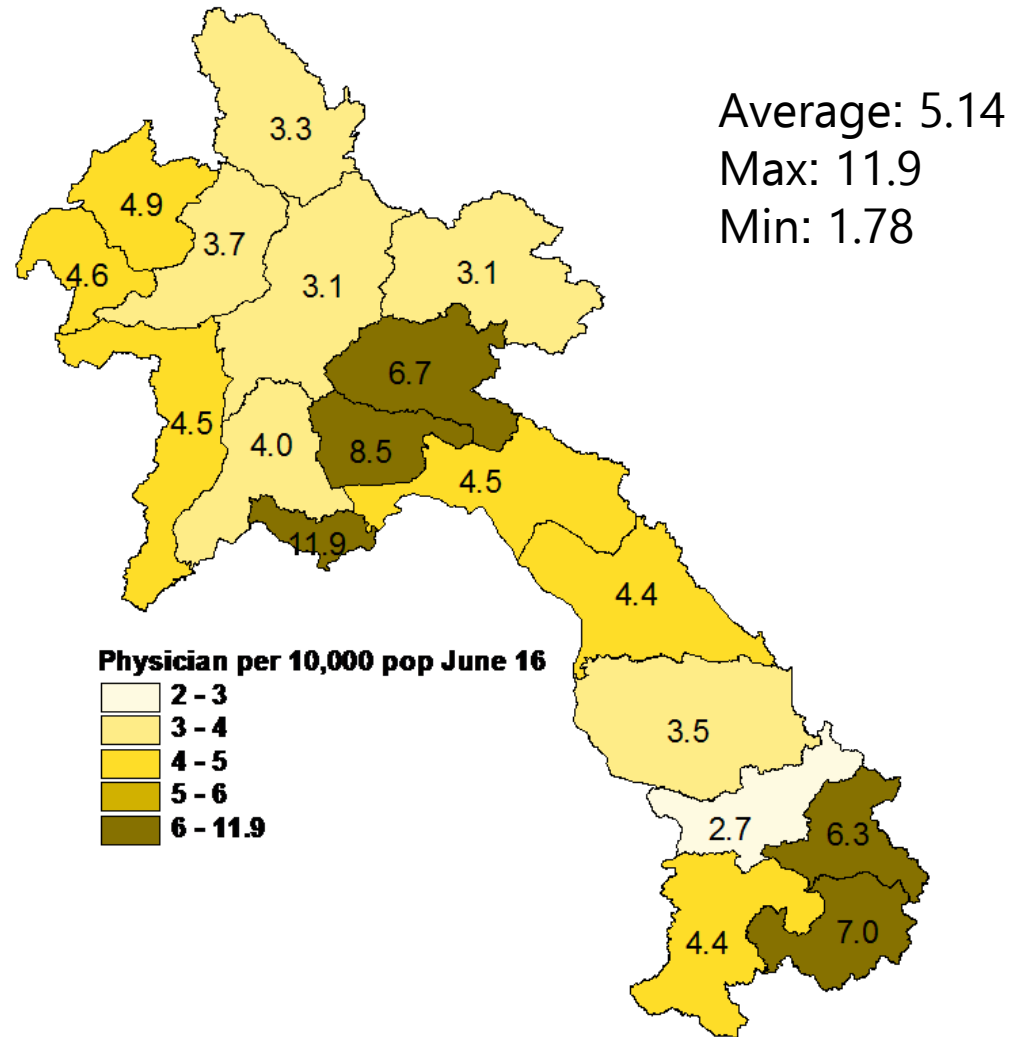
Ratio of HW per 1,000 pop



Ratio of CMW/MW per 10,000 pop



Ratio of physician per 10,000 pop



Next Step : Utilization and Strengthening HPIMS -1

- HPIMS data is useful for better management of HRH : monitoring HRH situation (tool for monitoring HRH indicators), allocation of new staff, improve staff mal-distribution, improve equity and equality
- HPIMS should be fully established, understood, and rooted at all levels in the MOH – additional training is needed for certain provinces. In future, HPIMS data collection and input can be done at the district staff as their routine work.

Next Step : Utilization and Strengthening HPIMS-2

Improve accuracy, reliability, and timeliness

- Data in the system to be double checked by the primary source (by provinces) to improve accuracy.
- Disaggregated data of contracting staff and volunteers
- HPIMS can take additional fields required by the MOH (system changes can be done in-house) to accommodate MOH's future needs and link with central government (MOHA)

Conclusion – what are the critical success factors to build and maintain HPIMS?

- Ownership and commitment by designated officers who have clear understanding of the requirements and the actual and potential use of information.
- Leadership by MOH and sustained investment to develop HPIMS
- Capacity building of staff and recruitment of well-trained staff at the entry level (provinces) and processing level (central)
- Software that can be handled by MOH staff with support by IT of MOHA



Sabaidee and Thank you