Quantitative Inequality Assessments of CRVS Systems

The Meeting of civil registrars in South-East Asia
Manila, Philippines, 7-9 February 2023

Present by: Lao PDR
Why do Inequality Assessments in Lao PDR

Identify population groups at risk of not being included in the CRVS system in Lao PDR to improve completeness and coverage of vital event registration and to allow production of vital statistics

Project timeframe: March - December 2022
Key stakeholders

**Government**

1. Lao Statistics Bureau (LSB)
2. Ministry of Home Affairs (MOHA)
3. Ministry of Foreign Affairs (MOFA)
4. Ministry of Education and Sport (MOES)
5. Ministry of Health (MOH)
7. Ministry of Public Security (MOPS)
8. Ministry of Justice (MOJ)

**Development Partners**

1. UNESCAP
2. UNFPA
3. UNICEF
Objectives

- To produce the first inequality assessment of CRVS systems in Lao PDR and provide the recommendations for improving CRVS system to make it universal.

- Provide technical support and strengthen the necessary capacities and skills required by government officials to carry out such inequality assessments in the future.
Key Activities of the Project

Inception Workshop, 11 March 2022

Aims:

➢ provide an overview of the project (objectives, activities and results to be achieved)

➢ Develop relationships among relevant stakeholders (data providers, data users, and policy makers)

➢ Learn from each stakeholder on possible challenges, such as data access, data sharing and demographic analysis capacities, and how they can be addressed.

➢ Collaboratively develop a plan for progressing the inequality assessment.
Key Activities of the Project (Cont.)

1st National Capacity Building Workshop, 17-19 August 2022

2nd National Capacity Building Workshop, 24-28 October 2022
Key Activities of the Project (Cont.)

National Closing Workshop 27-28/12/2022

- To provide stakeholders an opportunity to discuss the findings on the CRVS inequality assessment report
- To jointly develop an agreed action plan to address identified inequalities and further analyses required
The main report highlights the inequalities which can be measured through available data and the challenges faced by Lao PDR in producing inequality assessments, including limited access to data sources, lack of capacities and skills, and the absence of clear guidance on how to perform assessments.
Available data sources – Births

1. Lao Social Indicator Survey 2012, and 2017
3. Population Projections 2015-2045
4. Paper-based summaries of registered births by MOHA 2014 to 2021
5. MOH Health facilities data (District Health information System (DHIS2))
6. Estimates from UN’s World Population Prospects
The civil registration system (MOHA) captures fewer live births than DHIS 2 for the 2017-2021 period.

Since 2020, birth registration (MOHA) has declined, increasing the difference in completeness between birth notification (DHIS 2) and birth registration (MOHA) – might be effected from COVID-19.

Gap in the number of births notified in the DHIS 2 and births issued with a birth notification.

Number of births captures in the 2015 census significantly lower than the immediate projected number of births.
Methods for estimating birth registration completeness

- **Data source**: two most recent Lao Social Indicators Surveys, LSISI and LSISII
- **Variables**:
  - Number of children whose births were registered: Self reported data from the Questionnaire for Children under 5. In the analysis, children whose mothers or caretakers have reported to own a birth certificate, regardless of whether the documentation is physically presented, are considered as having birth registration.
  - In both surveys, approximately half of children who reported to be registered have presented their birth certificate to the interviewer.
  - Total number of children in the corresponding age/year
- **Analysis**:
  - Two indicators: (1) the completeness among children under the age of five and (2) the completeness of birth registration within one year of birth
  - All analyses are weighted by sample weights to yield nationally representative estimates.
  - 95% confidence interval also calculated
% Birth registration completeness among children under 5

\[
\text{% Birth registration completeness} = \frac{\text{Number of children aged 0–59 months who have birth registration}}{\text{Total number of children aged 0–59 months in the survey}} \times 100
\]

Survey year:
- 2011-12: 33
- 2017: 55
% Birth registration completeness among children under 5 by selected characteristics

### LSISI (2011-12)

<table>
<thead>
<tr>
<th>Sex</th>
<th>Urban</th>
<th>Rural</th>
<th>North</th>
<th>Central Region</th>
<th>South</th>
<th>Q1</th>
<th>Q2</th>
<th>Q3</th>
<th>Q4</th>
<th>Q5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boy</td>
<td>34</td>
<td>26</td>
<td>25</td>
<td>41</td>
<td>28</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Girl</td>
<td>32</td>
<td>26</td>
<td>25</td>
<td>41</td>
<td>28</td>
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### LSISII (2017)

<table>
<thead>
<tr>
<th>Sex</th>
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<th>Q1</th>
<th>Q2</th>
<th>Q3</th>
<th>Q4</th>
<th>Q5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boy</td>
<td>55</td>
<td>46</td>
<td>57</td>
<td>60</td>
<td>41</td>
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<td></td>
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<tr>
<td>Girl</td>
<td>55</td>
<td>46</td>
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</table>

Wealth index:
- Q1: 29
- Q2: 45
- Q3: 54
- Q4: 73
- Q5: 88
% Birth registration completeness of children born within 1 year prior to the survey

\[
\% \text{ Birth registration completeness} = \frac{\text{Number of children born within 1 year prior to the survey who have birth registration}}{\text{Total number of children born within 1 year prior to the survey}} \times 100
\]

<table>
<thead>
<tr>
<th>Date of birth</th>
<th>Number of children born within 1 year prior to the survey</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sep 2010 - Dec 2011</td>
<td>37</td>
</tr>
<tr>
<td>July 2016 - Sep 2017</td>
<td>54</td>
</tr>
</tbody>
</table>
% completeness among children born within 1 year prior to the survey by selected characteristics

LSISI (2011-12)

<table>
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</tr>
</thead>
<tbody>
<tr>
<td>Boy</td>
<td>38</td>
<td>28</td>
<td>26</td>
<td>31</td>
<td>23</td>
<td>30</td>
</tr>
<tr>
<td>Girl</td>
<td>35</td>
<td>26</td>
<td>31</td>
<td>30</td>
<td>28</td>
<td>30</td>
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LSISII (2017)

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<th>South</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Boy</td>
<td>53</td>
<td>45</td>
<td>53</td>
<td>60</td>
<td>42</td>
<td>53</td>
</tr>
<tr>
<td>Girl</td>
<td>54</td>
<td>53</td>
<td>60</td>
<td>42</td>
<td>28</td>
<td>53</td>
</tr>
</tbody>
</table>

Q1  | Q2  | Q3  | Q4  | Q5
Available data sources - Deaths

1. Lao Social Indicator Survey 2012, and 2017
2. Population and Housing Census 2015
3. Population Projections 2015-2045
4. Paper-based summaries of registered deaths by MOHA 2014 to 2021
5. MOH’s DHIS 2
6. Estimates from UN’s WPP
The absolute number and sex ratio of deaths by data source

The absolute number of deaths by data source

Sex ratio of deaths by data source
Methods for estimating death registration completeness

- **Data sources**: Civil registration and LSISII
- **Variables**:
  - Annual registered deaths from 2015 to 2020 are from MOHA. We assumed that the occurrence of a death and the registration take place within the same year.
  - Infant and child mortality are derived from Historical data of births in the LSISII’s Women’s Questionnaire. Infant mortality (1q0) is defined as the probability of dying between 0-1 years old. Child mortality (4q1) is defined as the probability of dying between 1-4 years old.
- **Analysis**:

  1. Derive infant and child mortality
  2. Identify the most suitable model life tables (MLTs) to get the age mortality pattern
  3. Apply the selected MLTs to the UNWPP estimates of Lao population
  4. Calculate the expected total number of deaths for 2016-2020
Age specific mortality patterns for Lao PDR

Selected mortality pattern from Coale-Demeny’s and UN’s model life tables for Lao PDR

A. Male

- CD West - 62.5
- CD West - 65
- UN General - 65
- UN General - 67.5

B. Female

- CD West - 70
- CD West - 72.5
- UN General - 72.5
- UN General - 75
Mortality indices for Lao PDR

Infant mortality (1q0) and child mortality (4q1) by sex for one-year period preceding the survey

<table>
<thead>
<tr>
<th></th>
<th>Males</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>1q0</td>
<td>0.04976</td>
<td>0.02452</td>
</tr>
<tr>
<td>4q1</td>
<td>0.01312</td>
<td>0.01727</td>
</tr>
</tbody>
</table>

Life expectancy by sex for Lao PDR, 2012-2020

Source: UNWPP, 2022.
% death registration completeness for males and females

\[
\text{Completeness} = \frac{\text{The number of deaths registered with civil authorities in a given year}}{\text{Total number of deaths in the same year}} \times 100
\]
Lessons learnt from the inequality assessment

• The CRVS system in Lao PDR should be continuously developed to cover the entire population.

• The Citizen Management Inter-ministerial Coordinating Committee should intensify its efforts to establish and secure a sustainable data-sharing system and culture (such as data sharing, quarterly consultation meeting of steering committee, workshop and so on).

• A dataset containing essential information on key vital events should be made available to enable further analyses and use for policy-making as well as for monitoring the progress of achieving the SDGs.

• Lao PDR should continue implementing the inequality assessment for the CRVS system and ensure the sustainability of the initiative until the targeted coverage of civil registration can be achieved.
Way forward 2023-2025

2023
- MOHA is developing the Civil Management Information System (CMIS) and CMIS set up at all provinces;
- Case study to explore why people decided not to register;
- Establish a mobile registration unit to provide services to people in the remote areas and outreach;
- Pilot data sharing with MOHA and relevant organizations;
- Capacity Building on data analysis using the data from CRVS system;
- Conduct Social Indicator Survey 2023 (LSIS).

2024
- Data sharing with MOHA and relevant organizations;
- Annual report of vital statistics from CRVS systems;
- Conduct inequality assessment of the CRVS system

2025
- Conduct Population and Housing Census 2025;
- Annually report of vital statistics
Thank you