PROGRAM IMPACT ASSESSMENT

A. Background and introduction

1. The Asian Development Bank (ADB) is supporting Lao PDR to overcome major developmental challenges in the health sector and reach the key Sustainable Development Goal (SDG) targets as well as graduation from its least developed country (LDC) status. ADB does this through the Lao Health Sector Governance Program (HSGP, the program), which is aligned with the Health Sector Reform Strategy (HSRS) 2013–2025, approved by the National Assembly in 2013. The HSRS aims to provide affordable, reliable, and accessible health services for all. Key objectives of the HSRS are to improve social protection for the poor, mothers, and children and health service delivery. HSRS has identified a range reforms to improve health sector performance under five priority areas: (i) health financing; (ii) human resources for health; (iii) governance, organization and management; (iv) health service delivery, with an emphasis on maternal and child care; and (v) information, monitoring, and evaluation.

2. HSGP comprises two subprograms. Under subprogram 1, a loan of $17 million was released in 2015, and a supporting technical assistance (TA) loan ($6 million) for capacity development, is still under implementation.[1] Subprogram 2 is now being processed with a view to releasing a $30 million grant based on an agreed policy matrix related to key health governance reforms and sector priorities. Additionally, a capacity development TA,[2] funded by the Japan Fund for Poverty Reduction, plays a significant role in supporting the goals and aims of the HSGP and achieving the program triggers.

3. This Program Impact Assessment (PIA) will help justify the release of the subprogram 2 grant by assessing the benefits of both subprograms and the TA loan. A PIA is required under ADB's Staff Operations Manual to take an economic perspective when systematically analyzing the suggested grant[3] and to justify the loan amount suggested. It describes the development problem, identifies the intended impact and outcome, and the approach and results to estimate the potential benefits and costs and financing under subprogram 2; it does this by also reflecting on achievements under subprogram 1, and the associated TA loan.

4. In line with best international practices and prior PIAs, the PIA is organized as follows: the developmental problem and rationale for the ADB program (Section B); an overview of ADB's HSGP including its intended impact and outcome (Section C); the impact analysis, where benefits (including effects on gender mainstreaming and poverty) and costs are assessed, and risks analyzed (Section D); and the conclusion and recommendations for future planning (Section E).

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[1] ADB. Lao People's Democratic Republic: Health Sector Governance Program. https://www.adb.org/projects/ 47137-003/main.

[2] ADB. 2016. *Technical Assistance to Lao People's Democratic Republic for Strengthening Capacity for Health Sector Governance Reforms*. Manila.

[3] Dole D. 2005. *Assessing Aid for a Sector Development Plan: Economic Analysis of a Sector Loan. ERD Technical Note No. 14*. Manila: ADB, p. 4. The Health Sector Governance Program is a policy-based loan and thus not required to have a full economic analysis; according to the Operations Manual (OM) of ADB (OM Section D4/BP Issued on 8 August 2016) there is no specific format provided for the PIA of a policy-based loan. ADB's 2017 Guidelines for the economic analysis of projects state*: "Regardless of funding modality, where* ***tangible and measurable outputs*** *and associated cost streams can be identified and attributed to a specific project, project economic analysis should be carried out. The analysis can be applied to the entire project, or a specific component of the project. However, the guidelines do* ***not*** *apply to ADB's policy-based lending that focuses on policy and institutional reforms, and the countercyclical support facility that provides budget support." (p. 9, emphasis added)*]

B. Developmental problem and rationale for the ADB program

5. **Macroeconomic context and poverty reduction.** The socioeconomic development of Lao PDR is characterized by an uneven distribution of the benefits of economic growth. Despite robust growth (6.8% in 2017), large disparities remain, especially between urban and rural areas. Gross domestic product (GDP) has grown significantly in recent years, increasing from $8.1 billion (2011) to a projected $14 billion in 2017,[4] resulting in a GDP per capita of about $2,579 per year. This growth was driven by investments in mining and hydro-electricity [5] and small-scale manufacturing mostly from foreign investment in economic zones, but agriculture remains the mainstay of livelihoods in the economy for over two thirds of the population where low productivity and income levels prevail. While poverty levels have fallen impressively - from 46% in 1992–1993 to 23.2% in 2012–2013 - it remains significant, and is predominately a rural problem[6] (28.6% poverty rate versus 10% in urban areas according to the latest Lao Expenditure and Consumption Survey in 2012/13 and higher among ethnic communities). The Gini coefficient of inequality has marginally increased from 35.0 to 36.2 between 2007/8 and 2012/13. Fiscal deficit stands at around 6.2% of GDP in 2017 and public debt was 68% of GDP in 2016.[7]

6. **Institutional constraints.** Key governance challenges are the consequence of historically weak administrative structures and only partially developed core governance and public-sector management systems, increased by the prolonged period of conflict-associated loss of skilled population in the 1970s.[8] Institutionally fragmented budget processes exacerbate weaknesses in expenditure management. However, a recent review[9] finds that public financial management in the health sector has markedly improved over the past decade and an indicative medium-term expenditure framework has been prepared reflecting the economic and fiscal targets outlined in the 8th National Socio-Economic Development Plan (NSEDP).

7. **Health status and burden of disease**. Lao PDR is facing the triple burden of disease – communicable diseases, non-communicable diseases, and rising numbers of accidents and injuries. While the incidence of communicable diseases has decreased, they remain a substantial health challenge contributing to low productivity and nutrition problems. Continuous public health efforts are required to manage emerging diseases, endemic infections, fake drugs and drug resistance. Non-communicable diseases (cardiovascular diseases, diabetes, cancers) are rapidly growing and the expansion of private motor bike and vehicle ownership has contributed to more road accidents and injuries.[10] Further, given its geographical location at the heart of the Mekong region, Lao PDR will feature in the Chinese Belt and Road project rail line, greatly increasing migratory traffic through the country. Increasing migration is often associated with increases in communicable diseases. In particular, the Lao PDR is in danger of a protracted HIV epidemic. At

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4 Lao PDR Country Economic Indicators (accessible from the list of linked documents in Appendix 2 of the RRP).
5 J. Menon and P. Warr. 2013. The Lao Economy: Capitalizing on Natural Resource Exports. ADB Economics Working paper Series. No. 330.
6 Lao Statistics Bureau and World Bank. 2014. *Poverty in Lao PDR: Poverty Report for the Lao Consumption and Expenditure Survey (LECSV) 2012–2013*. Vientiane.
7 Lao PDR Country Economic Indicators (accessible from the list of linked documents in Appendix 2 of the RRP) and https://www.imf.org/en/News/Articles/2017/02/15/PR1750-Lao-IMF-Executive-Board-Concludes-2016-Article-IV-Consultation.
8 ADB. 2014. *Report and Recommendation of the President to the Board of Directors: Proposed Loan to Lao People's Democratic Republic for Governance and Capacity Development in Public Sector Management Program Subprogram 2*. Manila. Project Impact Assessment (accessible from the list of linked documents in Appendix 2).
9 J. Hennicot. Financial Flows and Budgeting in the Health Sector in Lao PDR. A desk review. Vientiane; WHO, March 2017.
10 K. Akkhavong K et al. *The Lao People's Democratic Republic Health System Review (Health Systems in Transition, Vol. 4 No. 1 2014)*. Manila: WHO.

present, there are about 11,000 people who are confirmed HIV positive and antiretroviral treatment coverage rate stands at 42% (of identified HIV positive people).[11]

8. **Maternal and child outcomes**. Maternal and child health outcomes have significantly improved since 1995, and most Millennium Development Goal (MDG) targets were met: between 1995 and 2015, the maternal mortality ratio decreased from 905 to 206 deaths per 100,000 live births (target 260);[12] under 5 mortality rate reduced from 162 to 86 deaths per 1,000 live births (target 70) and infant mortality rate stood at 48.9/1,000 infants (target 45).[13] However, ante-natal care services are inadequate: only 37% of pregnant mothers complete 4 ante-natal care visits. Further, only 41.5% have a skilled birth attendant at birth.[14] Nutritional issues across the country remain critical. The overall prevalence of underweight and stunting in children under five has decreased from 44% and 48% in 1995 respectively, to 27% and 38% in 2010, but this is still far from the MDG target of 20%.[15] With the 8th NSEDP the government aims to achieve the unfinished MDGs and deliver SDGs early.[16] The NSEDP's Monitoring and Evaluation Framework links national indicators to the SDGs regarding maternal and child health and nutrition (including unexploded ordinance impact reduction) and food security.[17]

9. **Health service delivery**. Health services are provided through a network of health centers and district, provincial and central hospitals. Many areas of the country still lack services, particularly in areas of relative low population density. At least 75.1% of health centers now have a midwife but outpatient care utilization per capita per year is low by international standards with 0.55; 0.6; 0.63 visits in 2014, 2015, and 2016 respectively.[18] There are many reasons for low utilization: poor geographical access, poor acceptance of (and hence demand for) primary health care which provides poor quality services, and significant financial barriers due to high out-of-pocket (OOP) payments. Lack of equipment and run-down facilities are also common. Cost of pharmaceuticals are high, and stock-outs of essential drugs and medical supplies are frequent.[19]

10. **Under-funded health sector**. The health sector remains underfunded despite significant increases in government allocations and expenditures on health over the last three years. Health sector budget from local sources increased by 33% between fiscal years 2014/15 and 2017.[20] General government expenditure on health (including official development assistance and technical revenue) as a percentage of general government expenditures increased from 3.7% in

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[11] http://www.aidsdatahub.org/Country-Profiles/Lao-PDR, (accessed 22 October 2017).
[12] MOH. 2016. National Health Statistics Report FY 2015–2016.
[13] All figures from World Development Indicators: http://siteresources.worldbank.org/INTPRH/Resources/376374-1303736328719/LAOhealth41811web.pdf (accessed 1 December 2017) and Government of the Lao PDR, MOH. 2016. *National Health Statistics Report, FY 2015–2016*. Vientiane.
[14] Lao Statistic Bureau. 2012. *Lao Social Indicator Survey (LSIS) 2011*. Vientiane.
[15] World Development Indicators and also Lao PDR WHO Statistical Profile http://www.who.int/ gho/ countries/ lao.pdf?ua=1.
[16] ADB. 2017. *ADB's Country Partnership Strategy: Lao People's Democratic Republic, 2017–2020—More Inclusive and Sustainable Economic Growth*. Manila. paragraph 18.
[17] WHO-WPRO. 2015. *MDG Progress Report 2015. Progress and Transition of Health-related MDGs to SDGs in Lao PDR*. Manila.
[18] According to the National Statistic Report / DHIS2 annual health statistics report.
[19] Syhakhang L and Keohavong B: Lao PDR Medicine prices, availability, affordability and price components. Vientiane: MOH, no year [2014]; available at: http://www.fdd.gov.la/download/contents_documents/1411701061Laos% 20summary%20report%20drug%20price_capability_component_English%20version.pdf.
[20] Including an 'in-year' budget adjustment (permitted by the State Budget Law) applied by the Ministry of Finance, which increased the original budget by 10.4%.

2010–2011 to 5.9% in 2015–2016.[21] These increases, however, remain below the target of 9% recommended by the HSRS and approved by the National Assembly and the projected budget requirement of 11% (Department of Planning and International Cooperation MOH). Total expenditures on health (THE) in 2015–6 stood at $59 per capita. Development partners finance about 17.7% of THE, government about 30.6%, while OOP expenses (36% of which are for pharmaceuticals) currently total around 45.1% of THE.[22] These high OOP expenses constitute a significant financial barrier, particularly for the poor, near poor, and mothers and children, due to their need for frequent contact with the system.

11. **Human resources for health**. The government recognizes that the quantity and quality of human resources in the health sector is critical to deliver effective services. After decades of stagnation in hiring, in 2014, the number of health care staff was increased from 15,000 to about 19,000 – mainly (70%) by regularizing contract workers. The key challenges now include: significant skill gaps due to shortages and mismatches between training programs and the demand by provincial health authorities (e.g., specialists and skilled staff with birthing skills); and improving health worker skills through pre-service training programs and continuing medical education. The program has supported provincial planning of training needs / human resource plans to identify human resource priorities. It is also observed that many health professional training institutions do not achieve quality standards and that there is no well-functioning regulatory system for the licensing and the registration of health professionals.

12. **National Health Insurance**. In 2015, the government decided to establish national health insurance (NHI) and signed a Decree that led to the establishment of the National Health Insurance Bureau (NHIB) as an independent financial agency (although it is a department within MOH). NHIB is tasked to merge existing schemes (community-based health insurance schemes, free maternal, newborn and child health (FMNCH), health equity funds (HEF), formal sector National Social Security Funds, among others) and automatically cover those not currently under a scheme. A co-payment at the facility, ranging from LAK5,000 at health centers to LAK30,000 at hospitals, is charged at the point of use (exemptions are made for mothers, the poor and children under 5). A recent review[23] indicates that utilization has increased significantly as predictability of costs borne by patients has risen. The NHIB is working on various technical details (such as payment rates, calculation of rates) to make NHI more effective, and addressing issues related to technical capacity, autonomy and the relationship of the NHIB towards the different levels of government in the health sector.

13. **Health care reform**. There is sustained high-level political commitment to the relevant development goals concerning health, primarily the SDGs and universal health coverage (UHC), with the goal of LDC exit. However, these commitments only partly translate into funding and sufficient health budget. The restricted budget allocation to the health sector - and at times non-timely cash releases / authority to incur expenditures from the MOF, coupled with public financial management constraints - has led to insufficient information on financing sources, budget and expenditure at the MOH. Currently, technical and planning departments plan according to programs, while finance departments plan according to budget line items (chart of accounts) and there is no alignment between the two: expenditures are not tracked according to programs and

[21] Lao PDR, MOH. 2017. National Health Accounts Report 2012–2016. Vientiane, p. 2. In comparison, total government expenditure on health as a percentage of total government expenditures for neighboring countries are 14.5% (Thailand); 9.4% (Viet Nam); and 6.3% (Cambodia) from World Bank figures for FY2011.

[22] Lao PDR, MOH. 2017. National Health Accounts Report 2012–2016. Vientiane.

[23] E. Banzon, A. Dela Cruz, M. Mailfert. 2017. *Financial Management Assessment. A Rapid Assessment of the Financial Management of the National Health Insurance Scheme of Lao PDR*. Manila: Asian Development Bank.

budgets prepared by finance are not based on programmatic needs.[24] There remains a need to rationalize the health sector budget and improve financial capacity at the MOH.

14. **Limited fiscal space and debt situation**. The International Monetary Fund (IMF), in its Article IV report of February 2017, observed: "*Public-and-publicly-guaranteed debt (excluding arrears) is projected at 68 percent of GDP in nominal terms (56 percent of GDP in present value terms) at end-2016, a level which elevates the risk of debt distress from medium to high. […] Risks are on the downside*." At the same time, the report noted that "*improvements in education and health infrastructure were encouraged*." This holds true even more so now, as there are currently few buffers to address shocks and the economy remains unstable. In this context, the use of a policy-based grant alleviates some of this macroeconomic burden,[25] while aligning with the government's reform agenda. The disbursement of the policy-based grant is contingent on the achievement of policy actions, which include robust policies and strategies for health and finance. Further, the government recognizes that equitable and inclusive growth requires targeted policy interventions for vulnerable groups. Thus, the National Socioeconomic Development Plan commits sustained investment to improve access to, and quality of, basic social services such as health care, with a view to improving health outcomes especially for the poor, women and children. The government has also introduced several disciplinary measures on revenue collection and expenditure to address fiscal deficit, including increasing value added and profit taxes and limiting salary increases. Functioning social protection schemes can act as "automatic stabilizers" in such a situation. The government budget plan for 2017 foresees a decrease in government general expenditures from 25.2% (2016) to 23.3% (2017) of GDP. Revenues for 2017 are estimated at 18.6% of GDP and the fiscal deficit is expected to be 4.7% of GDP (down from 6% in 2016).[26]

15. Given this situation described by the IMF, there is a clear rationale to support a coherent sector-wide strategic approach in health while at the same time funding concrete activities that improve access to quality care for the population. At present, the Lao PDR lacks the resources to appropriately address the needs described above.

C. ADB's Lao Health Sector Governance Program

16. The expected impact of the HSGP is UHC achieved by 2025. The outcome will be health service coverage, particularly for the poor, mothers, and children, improved. The program is based on the Health Sector Reform Strategy (HSRS) 2013–2025, the foundational document for the direction and phasing of health sector reforms. Subprogram 2 continues and deepens reforms started by subprogram 1 and contains 11 policy triggers and 6 milestones. The four reform areas of the program include (i) health sector reform process improved; (ii) implementation of free health care for the poor, mothers and children improved; (iii) health human resources management capacity strengthened; and (iv) health sector financial management system strengthened.

17. The program achieves at least three important socio-economic impacts. Firstly, improvement in access to health care for the poor and alleviating financial hardship when seeking care. Secondly, improvement in public financial management to maximize allocative efficiency. Thirdly, improvement in human resources management to contribute to better quality of health services. The HSGP is in line with *Outcome 2, Output 4 – Universal Access to Quality Health*

[24] JP Dumas. 2014. A MTEF for the MOH, Lao PDR. Vientiane.
[25] ADB has been in continuous policy dialogue with the International Monetary Fund, working on broader macroeconomic analysis and fiscal projections
[26] J.C. Hennicot. 2017. Financial Flows and Budgeting in the Health Sector in Lao PDR. Vientiane; World Health Organization.

Care Services and *Outcome 2, Output 5: Improvement of and Access to Social Protection,* as described in the 8th NSEDP. It is also closely linked to activities by IMF, the World Bank and other development partners who support health sector reform and public financial management.

18. Descriptions of the four reform areas of subprogram 2 are given below:

(i) Health sector reform process improved:
- supporting the National Commission on Health Sector Reform designed to assist the Prime Minister and Minister of Health with HSRS oversight and which has responsibility for approval and monitoring of annual implementation plans
- supporting HSR planning, coordination and monitoring to improve sector governance and quality of services.

(ii) Implementation of free health care for the poor, mothers and children improved:
- increasing NHI funds for FMNCH and services for the poor
- ensuring appropriate staffing level of health facilities with emphasis on deployment of staff in remote and hard to reach areas

(iii) Human resource management capacity strengthened:
- rolling out a computerized national personnel management information system
- developing a system of provincial-based human resource planning to identify key skill constraints
- registration and licensing of health professionals and accreditation of education institutions in the health sector

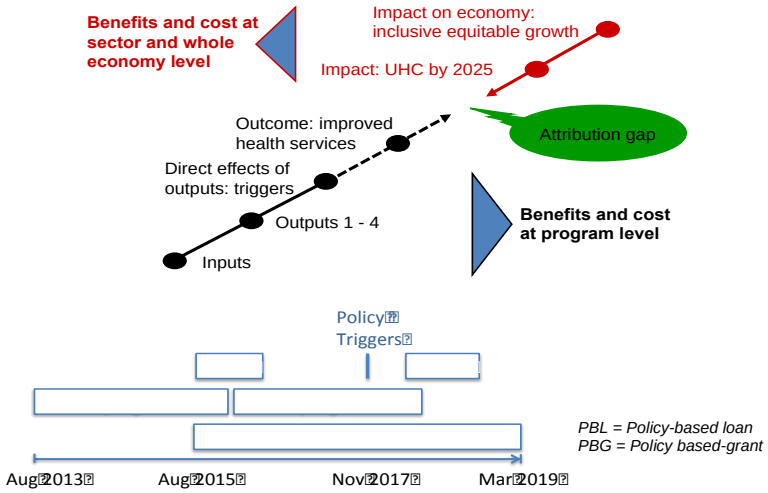
(iv) Health sector financial management system strengthened:
- enhancing provincial annual operational planning and budget process covering total resources allocated at the provincial and district level (domestic and aid financed) which also lays the foundation for multi-year budgeting when its implementation is mandated by the MOF as part of the implementation of the Budget Law
- setting up a budget and expenditure reporting process for the development budget which uses the agreed national chart of accounts and covers all aid financed projects as a key input for national health planning and harmonization of health sector aid financing
- establishing a system of quarterly and annual reporting of health budget expenditures and disbursements to finance the planned expenditures
- establishing a system for documenting the sources and application of funds (including collected OOP expenses) at the health facility in compliance with the Budget Law provisions on technical revenues and Prime Minister's decree 349 on the collection and use of technical revenues at the health facility level
- institutionalizing the national health accounts system within the MOH finance department
- enhancing the NHI fund flow mechanism between Ministry of Finance (MOF) and MOH

19. The program was designed based on the experience that health sector reforms in transitioning countries have a demanding agenda,[27] and draws upon the considerable experience of ADB in the Lao PDR health sector. HSGP draws from international best practices in improving governance and public sector management.[28] The HSGP mainly works on governance, financing and human resources (three out of WHO's six health system building blocks)[29] thus covering a large proportion of the health system's inputs and processes. The overall reform supports the government's agenda and is a logical and effective continuation of both ADB and the government's work.

D. Impact analysis: Measuring benefits and costs

20. **The attribution challenge**. Any development program must carefully consider how best to quantify costs and benefits. Measuring cost (for ADB) is mostly straightforward but additionally requires costing on time spent (i.e., the cost for national counterparts) and the downstream cost of specific policy actions. In measuring benefits, there are at least three challenges: (i) agreeing on what should be measured, especially in a program like the HSGP which includes changing attitude, processes and responsibilities; (ii) defining the time horizon, which may range from almost immediate to many years before a program bears fruit; and (iii) differentiating the impact of the program, versus endogenous changes due to general socioeconomic development, technology and personnel, among other factors. In addition, these challenges are compounded by the sub-optimal availability of reliable and timely data. Here, the policy matrix of the Report and Recommendation of the President and design and monitoring framework on policy actions initiated and tangible results achieved was used as the basis for qualitatively estimating the benefits and costs, comparing likely effects with the counterfactual (i.e., no program). Quantification, however, remains difficult. Whereas intended reform areas and policy triggers can mostly be measured, the overall impact of improved regulations or better human resource planning is intuitively appealing, but assigning monetary figures to such impacts is fraught with unrealistic assumptions.

Figure 1: Relation between reform areas, outcome, and impact



[27] ADB. 2000. *Handbook for the Economic Analysis of Health Sector Projects*. Manila. p. 79.
[28] Ministry of Health. 2013. *Sector Reform Framework Lao PDR to 2025*. Vientiane.
[29] These six building blocks are: (i) Leadership / Governance; (ii) Health Care Financing; (iii) Health Workforce, (iv) Medical Products/Technologies, (v) Information and Research; and (vi) Health Service Delivery. http://www.wpro.who.int/health_services/health_systems_framework/en/.

Program benefits

21. **Potential benefits**. The program directly strengthens governance and public-sector management, including human resource and financial management which is linked to better health care and outcomes for the population. Given support to strengthen health sector financial management, facilities are expected to receive funding more timely and predictably, and possibly enhance their non-salary budget. In addition, facilities will have better quality and more relevant staff, and there are likely to be positive externalities leading to a change in the kind of care provided (e.g., an expansion in the type of services for mothers and children) and potential productivity gains resulting from improved staff morale. Such changes will allow facilities to provide more (and better) services and will thus attract increased usage. Increased utilization of health services, in turn, is likely to result in improved health outcomes. At a macro level, allocative efficiency gains could be expected via (i) an increased government budget for health which has been shown to deliver higher rates of socioeconomic return[30] than in many other sectors, and (ii) by developing and implementing annual operational plans at the province and district level, which might lead to more efficient budgetary allocations, consistent with the "three builds" (*Sam Sang*) decentralization strategy. Health is not only a direct source of individual welfare, but also an input factor for economic growth; having a higher proportion of the population involved in productive economic activities boosts growth and reduces poverty.[31]

22. **Specific and measurable benefits**. Over the next five years, with the roll-out of the NHI including FMNCH, it is expected that utilization of health facilities by the NHI eligible population will significantly increase. The delivery rate in facilities is expected to increase from 45% to 70%, as well as the frequency of children under five using outpatient departments (from 0.62 contacts annually[32] to about one contact per year). Public financial management mechanisms will be significantly improved, including monitoring sources and uses of funds (including from OOP) at the health facility level. Future benefits based on human resource planning at the provincial level include staff allocations aligned with regional and local needs, leading to a recognizable impact at all levels of care. It is assumed that the timeframe for these policies to be implemented and becoming effective will be about 3 to 5 years, possibly up to 10 years.

23. **Contribution to poverty reduction.** The program has a very strong poverty reduction focus by: (i) contributing to the health-related SDGs, particularly for mothers and children; (ii) working towards the reduction of financial barriers which currently discourages mothers, children and the poor from accessing health services through the establishment of the nationwide NHI program which exempts the mothers, children and the poor from co-payments; and (iii) ensuring adequate numbers of health staff with the appropriate skills are located in health facilities across provinces and districts, in particular in hard-to-reach areas with underserved populations. Finally, good public financial management practices will help to better understand how and where budgets are spent and their potential impact on the poor population. All these reform elements are expected to lower the incidence of poverty, particularly among women and children.

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[30] SM Piabuo, and JC Tieguhong. 2017. *Health expenditure and economic growth - a review of the literature and an analysis between the economic community for central African states (CEMAC) and selected African countries. Health Economic Review 2017*; 7: 23.

[31] IMF Article IV report, February 2017, para 23) and the IMF – World Bank Collaboration states that *"[u]pgrading health and education infrastructure will raise the growth potential and help reduce inequality*". Bloom DE, Canning D. 2008. Population Health and Economic Growth. Commission on Growth and Development, Working Paper 24. Washington: The World Bank.

[32] 2016 estimate, PRIMEX: Revised subsector analysis report of the health sector, Manila: August 2017. p. 5

24. **Contribution to gender and ethnic mainstreaming**. The IMF, in Article IV report of February 2017, noted that poverty had fallen, but inequality had risen, and financial inclusion remained low, and that despite a high labor participation rate, the Lao PDR still had a large unpaid work force. Promoting gender equity and ensuring positive impact on ethnic groups (EGs) from program actions is central to subprogram 2[33] in several ways. First, there is a clear focus on mothers and safe delivery by targeting community midwife availability, thus reducing the risks from childbearing and reducing financial barriers to maternal, newborn, and child healthcare services. Second, skills improvement, especially for midwives, will enable professionals to gain acceptance, become more confident in their role and improve their professional standing. Third, enrolling more females and EGs in medical schools and promoting gender equality will help to redress the current imbalance in medical students and in the long run, provide a more balanced medical workforce. Fourth, workforce plans contain action points for incentivizing females and EGs to work in remote areas, which may decrease attrition and increase recruitment which in turn may encourage increased facility utilization of these groups. Fifth, awareness raising activities on NHI benefits including gender and EG sensitive materials will increase utilization of health services by women and EG. Lastly, all data in the health personnel management information systems and reports compiled under the program will be disaggregated by sex and ethnicity to measure and monitor impact on women and EGs.

Estimating the costs

25. **Administrative costs of reforms.** Policy actions have downstream costs and benefits including mitigation measures for potential risks and enhancement measures to maximize impact. The costs of government administering and enforcing reforms include:

- the operational costs of the National Commission on Health Reform;
- ongoing review, and design and implementation staffing at MOH and provincial levels;
- verification/audit costs, design, rollout costs and on-going operational costs for the computerized health personnel management information system in provinces and districts;
- costs for the management of health professional boards responsible for registration of health professionals and authorities responsible for setting quality standards for the training of health professionals;
- costs for running a health facility based system to document the sources and application of funds and to monitor health expenditures and disbursements across all provinces, districts and central departments of MOH; and
- the staffing and operational costs for institutionalizing the production of annual National Health Accounts.

26. Operational costs of reform include costs of subsidizing NHI contributions as it is rolled out nationally, costs to employ and train key staff across the health system based on workforce plans and the costs of reforms related to governance and public-sector management reforms at central management and health facility levels. The government has committed to ensure the budget allocation for the health sector is not less than 9% of total government expenditure. Given current health expenditure is about 5.9% of total government expenditures, this entails a substantial increase in health sector resources.

27. **Current sector financing patterns**. The direct costs are those incurred by ADB (which are also reflected in the TA loan) and the costs incurred by the government of the Lao PDR in planning, rolling out and monitoring policy actions. It is suggested to relate the overall loan sum

[33] The program is classified as gender equity.

of the program to current spending patterns in Lao PDR's health sector. According to the latest National Health Accounts (2015–6),[34] THE is $395 million based on a population of 6.7 million (about $59 per capita). About 30.6% of this total is paid for by government, while much of the rest is financed through OOP expenditures and aid. The state budget for the entire public health sector for 2017 is $207 million (40% going to central MOH), making it the second largest sector after Education and Sports.[35] The 8th NSEDP (p.166) states that between 2016 and 2020, capital requirements for development will be LAK223 trillion, of which 21–27 % is estimated to come from government (9–11% is from the state budget and 12–16 % from grants and loans). This would translate into LAK46.8 to LAK60.2 trillion, equivalent to $5.7 to $7.3 billion. Assuming the level of investment going into the health sector is the same as the government budget expenditure on health (5.9%), this would amount to capital requirements of $336–$431 million over five years, or $67.2 to $86.2 million annually (this could be considered the downstream cost of all policy implementation cost as well as capital investments).

28. **Assessing the loan size**.[36] The total funding of the HSGP is $17 million (policy-based loan) + $6 million (TA loan) in subprogram 1 and $30 million (policy-based grant) in subprogram 2. This sums to $53 million over 6 years (subprogram 1 from 2013–2015, subprogram 2 from 2015–2018), resulting in program support of $8.83 million per year. Thus, assuming all HSGP spending should count as development (and not supporting recurrent spending or used elsewhere by the MOF), it would cover a significant portion (between 10.2% and 13.1%)[37] of total financing required for developing the health sector.

Risks and assumptions

29. Significant general risks include macroeconomic changes affecting the national health budget, overall poor public financial management and accountability leading to insufficient and delayed transfer of funds, limited capacity for public procurement and trainings, and corruption. In addition, there are overlapping responsibilities between national and provincial health departments and there is limited capacity at the MOH to fully implement the reforms at all levels, including capacity to prepare budgets which link closely with potential available resources. The government and the MOH, however, have shown clear commitment to reform and an ADB-funded technical assistance project supports the MOF and other line ministries in budget planning and improving intergovernmental fiscal transfer systems.[38]

30. The main risks directly related to the HSGP are those associated with public financial management, potential corruption and any change (reduction) in political will to implement reform. However, the achievement of subprogram 1 policy actions and the continued high interest in subprogram 2 indicate that the government of Lao PDR remains committed to the reforms. The policy goals of the 8th NSEDP and the approach to formally monitor and track the implementation

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[34] Government of Lao PDR. Ministry of Health. 2017. National Health Accounts Report 2012–2016. Vientiane.

[35] Government of Lao PDR. Ministry of Finance. 2016. *State Budget Plan For The Fiscal Year 2017*. Vientiane: November 2016.

[36] The OM states (p.11, para 34): *The overall loan size for stand-alone policy-based lending and programmatic budget support should be determined by the development financing needs of the country at the broad macroeconomic level. […] A clear basis for determining the loan amount based on the overall and sector-specific requirement of the DMC should be presented.* This is in line with suggestions from the academic literature, see for example Abonyi G. Toward a political economy approach to policy-based lending. International Public Management Journal 7(2004), pages 101–131.

[37] This percentage comes from $8.83 million divided by the required $67.2 to $86.2 million annually.

[38] ADB. Lao People's Democratic Republic: Governance and Capacity Development in Public Sector Management Project. https://www.adb.org/projects/46059-001/main#project-overview; ADB. 2015. *Technical Assistance to Lao People's Democratic Republic for Support for Governance and Capacity Development.* Manila.

of priority recommendations of the HSRS[39] provide further evidence of the government's commitment. Table 1 below provides a modified impact assessment matrix including risks, safeguards and mitigating measures.[40] A more detailed analysis of risks and mitigation measures can be found in the risk assessment.[41]

31. It is assumed that ministry staff will translate policies into tangible and workable processes at national, regional and local levels. These personnel will be crucial in determining the true outcome of all the reform efforts, especially as lessons from prior ADB engagement indicate that a focus on key health system constraints is more important than developing stand-alone projects. Under subprogram 2, the government will ensure that the National Commission on Health Sector Reform is fully resourced and continues to oversee and monitor HSRS implementation.

[39] MOH. 2014. *The Lao People's Democratic Republic: Health Sector Reform 2013–2025*. Vientiane; JICA and WHO.

[40] This is also in line with the approach suggested in ADB.2012. *Handbook on Poverty and Social Analysis.* Manila, p. 52; and also the focus on the poor and on women in all ADB PIAs as described in G. Sugiyarto. 2007: *Poverty Impact Analysis Selected Tools and Applications*. Manila: ADB, p. 5. The PIA matrix is described in detail in Bolt B. et al. 2004. *Economic Analysis of Policy-Based Operations: Key Dimensions.* Manila: ADB, p. 57ff.

[41] Risk assessment and risk management plan (accessible from the list of linked documents in Appendix 2 of the RRP).

Table 1: Program Impact Assessment Matrix including Possible Effects, Channels, Risks, and Mitigating Measures[42]

	Possible general public effects and channels	**Possible specific effects on women / poor / ethnic groups and channels**	**Possible effects on other stakeholders and channels**	**Risks of not realizing positive impact or negative impact (in line with Risk Assessment and Management Plan)**[a]	**Mitigation / enhancement measures**
Overall Program and TA Effects					
Program Financing	May generate political commitment to enhance sector financing.	May specifically trigger more political support for free health care.	Budget support may keep MOF interested in health sector.	The amount is small compared to reform costs.	Engage MOF, MOH, MPI in reform process. Engage partners for co-financing reforms.
Capacity Building and Monitoring	May generate political commitment and technical know-how to enhance sector financing.	May specifically trigger more political support and generate know-how for free health care.	Improved MOH performance may motivate MOF to improve sector financing.	Institutional and human resource capacity constraints for planning, management, coordination, and problem solving at MOH and subnational level as well as in newly established institutions e.g., NHIB). This is exacerbated by an ambitious reform agenda and insufficient donor coordination. Even while access to services is strongly promoted, weak capacity for good quality services	Realistic phasing of HSR reforms and provision of simple and practical solutions required given capacity constraints. Strengthen MOH management capacity and leadership role. Sustain sector coordination in line with Vientiane Declaration on Aid Effectiveness under HSR reforms. Possible impact should be assessed on continuous basis. Provide practical and simple solutions.

[42] Modified after Bolt et al. 2004. *Economic Analysis of Policy-Based Operations: Key Dimensions.* Manila; ADB, p.65

	Possible general public effects and channels	Possible specific effects on women / poor / ethnic groups and channels	Possible effects on other stakeholders and channels	Risks of not realizing positive impact or negative impact (in line with Risk Assessment and Management Plan)[a]	Mitigation / enhancement measures
				undermines these efforts.	Support utilization of information systems for planning and management.
Subprogram 2 Policy Actions (PA) (triggers only)					
PA 1.1 The National Commission has approved the 2018 HSR implementation plan, as part of MOH's implementation plan. PA 1.2 To enhance monitoring of reforms for 2015-2025, MOH has approved the roadmap for reforms in strengthening health human resources and health system financial management.	Roll out of HSR should result in committed and competent sector governance, which in turn should result in improved sector performance in terms of access, quality, affordability, efficiency, and sustainability.	Short-term: Recognizing their needs and prioritizing services for these vulnerable groups. Medium/long-term: gradual improvements in the health system, better alignments with needs.	MOH: Streamlined processes, increased capacity; strengthened role vis-à-vis MOF. Provinces: Improved relations to central MOH, delineation of respective roles in health policy, planning and financing. Clarity on way forward in HRH and Finance reforms	Lack of competent MOH staff to build MOH capacity. Lack of commitment of provinces to prioritize HSR. Multiple problems facing roll out. Including sector financing shortfall due to competing priorities and economic constraints.	Government recognizes the importance of access for vulnerable groups and quality improvement to achieve LDC exit and SDGs, and is committed to HSR and improving sector financing despite economic constraints Strong MOH leadership and support of NA and MOF is required to roll out HSR.
PA 2.1 The government increased financial resources from 22 billion kip in 2014/5 to 183 billion kip in 2017 to deliver free of charge health services for the poor, mothers and children under 5 in at least 131 districts, in line with the NHI guidelines. PA 2.3 To ensure sufficient and timely reimbursement to health	These policy actions should help improve financial access to services. Whether it will improve quality will depend on overall sector financing, as technical revenue will decline. Efficiency and sustainability are	Short-term: better access to care, reduced financial risk. Medium/long-term: improved services due to better funding.	NHIB: Improved capacity at all levels (medium to long term). Better understanding about quantity and quality of supply side. Health facilities: Increased and	Weak capacity and insufficient knowledge of NHI at central provincial and district level and health facility staff at all levels. Sustainability of NHI financing; anecdotal evidence of corruption; potential	Policy actions under HSGP subprogram 2 will contribute to improving efficiency of the health sector to maximize available resources for affordable, quality and accessible health services.

	Possible general public effects and channels	Possible specific effects on women / poor / ethnic groups and channels	Possible effects on other stakeholders and channels	Risks of not realizing positive impact or negative impact (in line with Risk Assessment and Management Plan)[a]	Mitigation / enhancement measures
facilities, MOH assessed financial management, monitoring and health provider payment mechanisms and approved recommendations to improve relevant implementation guidelines.	also likely to improve.		potentially more reliable funding; aligning reimbursement rates with actual cost.	brain drain, significantly overlapping structures between the different health care institutions and the NHIB. Delayed reimbursements and insufficient payment rates (as compared to actual costs) especially at hospitals. Reforms intended to address quality of care do at present not receive as much attention as those addressing quantity of care.	Capacity development of NHI and facility staff to ensure a clear understanding of the new scheme including refresher training courses and follow up visits. Enforce a maximum turnaround time for the payment process in the operational guidelines, and carry out a review of payment rates based on costing of services. Initiate quality improvement discussion as well as concrete measures during SP2.
PA 3.2 To ensure appropriate staffing level of health facilities with emphasis on deployment of staff in remote and hard to reach areas, at least 12 provincial health offices have approved their workforce plan (including action points on gender and equity policies and appropriate staff incentives).	These actions will improve access to quality health services and thereby improve efficiency and impact. Uncertain if these policy actions are sustainable.	Short-term: more, better fit of staff available for poor, women's health. Medium/long-term: higher quality of staff, more professional options for women / ethnic groups.	Provinces: Improved planning. Health facilities: Better fit between needs and staff. Health professionals: Better work environment, higher appreciation of service quality	Lack of sufficient resources and capacity for continuing education and professional development (including scholarships for training specialists and upgrade staff) may impede efforts to	MOH has recognized need for development of continuing education as a foundation of licensing and education of health personnel and is currently preparing an inventory for continuing education.

	Possible general public effects and channels	Possible specific effects on women / poor / ethnic groups and channels	Possible effects on other stakeholders and channels	Risks of not realizing positive impact or negative impact (in line with Risk Assessment and Management Plan)[a]	Mitigation / enhancement measures
PA 3.3 To enhance safe delivery, the MOH gradually increased the deployment of midwives to ensure that 75% of health centers are staffed with at least one community midwife, up from 52% in 2015. PA 3.5. To further enhance skills and qualification of health care professionals, MOH approved certification standards, accreditation, licensing, and registration system for health professionals.			and individual efforts leading to increased staff morale.	improve performance of existing staff. HR reforms to improve quality of health workforce could be undermined by unfair and un-transparent licensing and registration and national examination systems.	The Health Professional Council is aware and provides general oversight, and is taking measures to ensure integrity of licensing and examination practices. Medical and nursing boards provide oversight.
PA 4.1 In FY2017, the Government increased health budget allocation by 20% compared to the FY2014/15 budget allocation. PA 4.2 To enhance monitoring of public finances for health, MOH applied the Accounting Handbook for State Agencies and implemented MOF's double entry system to account for sources and uses of funds in health facilities. PA 4.5 To improve budget planning and execution, MOH published approved disbursement figures in the Central Budget Units Annual	Increased recurrent sector budget will improve quality and affordability of services (less out of pocket payment), and through increased use will improve efficiency. Likely to be sustainability in the medium to long term, as sector spending is low.	Short-term: no need for informal payments (assumed). Medium/long-term: better funding of facilities, leading to better care and availability of medicines and equipment.	Health facilities: More and better targeted financial support. MOH / MOF: understanding financial flows, timely management possible.	Inadequate budget allocation and slow disbursement of funds by MOF and provincial treasuries (including allocative readjustments) creates funding shortages in the health sector.	The program supports improvement of overall sector financial management. MOH has adopted the MOF double entry accounting and reporting system. The MOH and MOF will also agree on a fund flow mechanism under one of the policy triggers.

	Possible general public effects and channels	Possible specific effects on women / poor / ethnic groups and channels	Possible effects on other stakeholders and channels	Risks of not realizing positive impact or negative impact (in line with Risk Assessment and Management Plan)[a]	Mitigation / enhancement measures
Report for 2015-2016, Central Budget Units 6-month report for 2017, Provincial Health Office Annual Reports for 2015-2016 and Provincial Health Office 6-month reports for 2017. PA 4.7 To ensure adequate and timely funding for free health services for the poor, mothers and children under 5 and improve financial sustainability of health sector operations, MOH and MOF agreed on a fund flow mechanism.					

HR = human resource, HSGP = Health Sector Governance Program, HSR = Health Sector reform, LDC = least developing countries, MNCH = maternal, newborn, and child healthcare, MOF = Ministry of Finance, MOH = Ministry of Health, MPI = Ministry of Planning and Investment, NHI = National Health Insurance, NHIB = National Health Insurance Bureau, SDG = Sustainable Development Goals, SP2 = sub program 2

[a] Risk Assessment and Mitigation Plan (accessible from the list of linked documents in Appendix 2 of the RRP)

E. Conclusion and suggestions for the program

32. **Justification for the program**. The size of subprogram 2 reflects the government's financing needs, the strength of and commitment to the reform program, and the development expenditure arising from the reform program. The policy-based grant considers the International Monetary Fund's assessment of the Lao PDR's macroeconomic constraints, including a large current account deficit and high external debt stock.[43] The approach of combining budget support with a TA loan supporting technical operations and contributing to capacity development is in line with ADB's Operations Manual which recognizes the inherent complexity of structural reforms and recommends a flexible approach.[44] The overall program is expected to provide financing of $53 million for 2013–2018. This translates into $8.83 million annually and will significantly help narrow the estimated development financing need of $67.2–$86.2 million in the health sector.

33. Although benefits cannot be reliably quantified, the anticipated economic and social benefits in the short, medium and long term are likely to be significant and the government will also value the program's important contribution towards LDC graduation. The identified lever for reforms are at the (financial) management, health care financing, and human resource levels – currently widely perceived as the key bottlenecks for substantially improving quality, efficiency and equity in health care. At present, processes at the MOH are repetitive and normalized administrative and policy-making processes – implementing change and improvement beyond these regular processes requires additional funding and support. It remains to be seen whether the anticipated changes will materialize, but clearly, without funding little improvement can be expected. Furthermore, external technical support, (although in monetary terms significantly less than the loan and grant), complements the program appropriately and leads to greater financial gains than providing financial assistance alone.

34. This financial assessment does not look at the potentially significant human and macroeconomic benefits of improved health services due to the attribution gap in the impact chain (figure 1). Apart from sustaining the policy and implementation support and the development of a simple and effective monitoring system, it would be extremely helpful for future analyses and policy decisions if the country undertook further data analysis and gained health economic expertise at the MOH and the NHIB (e.g., on health statistics, national health accounts, burden of disease, health technology assessment). This might in the future lead to a more astute and rational use of HMIS and budget data, whereby financial data would be coupled with the key process and outcome indicators and additional access, spending and health status data.[45]

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[43] The Lao PDR has a current account deficit of –14.1% of GDP in 2016, fiscal deficit of 6.2% of GDP in 2016, and public debt of 68% of GDP in 2017. Country Economic Indicators (accessible from the list of linked documents in Appendix 2); and IMF. 2018. IMF Executive Board Completes the 2017 Article IV Consultation with the Lao People's Democratic Republic. News release. 12 March 2018. https://www.imf.org/en/News/Articles/2017/02/15/PR1750-Lao-IMF-Executive-Board-Concludes-2016-Article-IV-Consultation.

[44] ADB. 2013. Policy-based Lending. *Operations Manual*. OM Section D4/BP.

[45] Such an approach would also allow to include a quantitative analysis as suggested by J. Holland: *Tools for Institutional, Political, and Social Analysis of Policy Reform: A Sourcebook for Development Practitioners.* Washington: The World Bank, 2007.