DATA COLLECTION SURVEY ON HEALTH SECTOR IN LAO PEOPLE'S DEMOCRATIC REPUBLIC

FINAL REPORT

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JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) SYSTEM SCIENCE CONSULTANTS INC.



SUMMARY

1. Project Outline

(1) Objectives of the project

Based on the concept of Universal Health Coverage (UHC), which is advocated as the Japan's Strategy on Global Health Diplomacy, the project aims to clarify the current situation and priorities concerning the future development of facilities and equipment as well as community intervention in the health sector of Laos and collect necessary information to study the future direction of cooperation and assistance measures.

(2) Target issues of the survey

This survey addresses the following three subjects as tasks:

- 1) Improvement of current health care service functions and making proposals for new assistance projects with respect to central hospitals
- 2) Improvement of current functions, creation of facility inventory list and making proposals for new assistance projects with respect to provincial hospitals in the four southern provinces
- 3) Making proposals for removing the barriers for accessing health services in communities

(3) Survey method

With regard to 1) and 2) above, the Survey Team members traveled directly to the survey sites in Laos. The Team gathered information on the top three referral hospitals in the Vientiane capital city and the provincial hospitals district hospitals in the southern provinces from the provincial/district health offices and health care facilities. The hospitals were analyzed on the basis of the collected primary information obtained from the responsible person at each hospital based on internal statistical data and a questionnaire, and the new projects were proposed. With regard to 3), after listing of the respective best practices through discussions with the development partners, the target villages for the survey were identified and information was gathered through interviews with village representatives in a commissioned survey.

2. Development of Central Hospitals (Setthathirath Hospital, Mahosot Hospital, Mittaphab Hospital)(1) Issues and challenges about the current situation of three central hospitals

In Vientiane City, emergency care is mainly provided by Mahosot Hospital for internal medicine and Mittaphab Hospital for surgery. Involvement in emergency care has an important meaning for Setthathirath Hospital too. However, as this hospital transfers serious cases of injury to Mittaphab Hospital, it is presumed that external injuries treated by Setthathirath Hospital are mild to moderate cases, such as non-open fracture and soft tissue injury. Likewise, for emergency care in internal medicine, as this hospital is not able to carry out CT examination at present, serious cases need to be transferred to Mahosot Hospital, and as such, it is presumed that the hospital treats mild to moderate cases.

With respect to general practice, Setthathirath Hospital has more cancer outpatients and inpatients than the other two hospitals. On the other hand, Mahosot Hospital is in charge of internal medicine and abdominal surgery and Mittaphab Hospital is in charge of external injury treatment, orthopedics, neurosurgery and renal dialysis. Delivery and maternal, neonatal and child health care are mainly handled by the Mother and Child Health Hospital, but the three central hospital facilities also provide the services in these fields.

With respect to existing equipment, the equipment of Mittaphab Hospital and Mahosot Hospital has been replaced as appropriate after 2010. On the other hand, Setthathirath Hospital uses the health care equipment procured in the Japanese grant aid cooperation project in the early 2000s and as such, it is of concern that the equipment may have deteriorated. Although the ultrasound unit and general X-ray unit have recently been replaced, on the whole, the equipment has not been replaced in a timely manner.

The hospital has no maintenance staff dedicated to medical equipment, but if any of the equipment fails, the hospital directly contacts the medical equipment supplier in Vientiane or the supplier in Thailand, Vietnam, etc. to have it repaired.

In terms of finance, while Mahosot Hospital and Mittaphab Hospital are in the black, Setthathirath Hospital is in the red or at a breakeven point. The percentage of the personnel cost to the total expenditure is larger at Setthathirath Hospital than at the other two central hospitals. This gap is mainly because of the low revenue of the hospital, which is unable to demonstrate high-quality hospital functions.

Improvement in clinical infrastructure, medical record preparation and other business practices can be seen at Setthathirath Hospital as a result of JICA technical cooperation, but management problems remain. If these deficiencies are solved, it will bear a major benefit for the education and training of health care providers in Laos and the hospital will be able to perform the duties of a more advanced teaching hospital. However, deterioration of the various existing equipment, including the diagnostic apparatus, is conspicuous. Moreover, the internal structure of the hospital, which has been complicated by repeated expansions, significantly obstructs the efficiency and effectiveness of daily clinical services as well as human resources development.

(2) Future prediction and projection

The current division of responsibilities by the hospitals is generally in accordance with the predicted disease structure of Laos and it clearly allows each hospital to concentrate on its core competence. Considering the future direction based on the current situation, the following four points are identified as the priority issues in the development of the central hospitals.

- In regard to emergency diseases, provision of care to emergency patients of low and medium severity who make up the majority of the patients.
- To make progress in surgical operations, accumulation of experience in handling emergency diseases, which serves as the foundation.
- With respect to cancer treatment that will be needed in the future, specialization of operative treatment and chemotherapy.
- A central facility to handle non-communicable diseases (NCD) and other internal diseases that will rapidly increase in the future and to control Class 1 infectious diseases

(3) Proposals on grant aid to Setthathirath Hospital

With respect to the three central hospital facilities, it is urgently required to address the issues of Setthathirath Hospital as a top referral hospital, which are declining quality of health care services (both in terms of a need for improvement of medical technology and development of health care human resources) as a top referral hospital and a financial structure that needs to be improved. Most importantly, it is necessary to drastically improve the deteriorated hospital equipment and inefficient line of flow of patients, which are major causes of these issues. To respond to this situation, the appropriate development of the hospital facility and procurement of equipment through a grant aid project are required.

1) Direction of Improvement of hospital facilities and equipment functions

- Provision of initial treatment to low to medium-severity emergency patients, who are the majority of emergency patients
- Provision of advanced treatment in internal medicine as a center for the control of NCD, which are expected to rapidly increase in the future, as well as Class 1 infectious diseases
- Improvement of the environment as a venue of the practical training in clinical medicine essential for the human resource development to provide above-mentioned treatments

2) Outline of proposed assistance

- ① Improvement of the line of flow within the existing building, and installation of medical equipment
- ^② Construction of new outpatient building, and installation of medical equipment
- 3 Renewal of medical equipment

3) Expected financial benefits provided by proposed grant aid project

- Securing new patients by improved diagnostic functions
- Increase in the average hospitalization days and bed occupancy rate with patients of "slightly high severity"
- Securing annual revenue of 800 900 million yen as the total revenue and 500 600 million yen as the revolving fund (RF) revenue
- Securing the technology, methods and budget for the maintenance of the equipment to be newly installed

3. Development of Health Care Facilities and Equipment in the Southern Provinces

(1) Analysis of current status

1) Characteristics of provincial and district hospitals

- There is a large difference in both the numbers of inpatients and outpatients between Champasak Provincial Hospital and other three provincial hospitals:
 - Champasak Provincial Hospital puts emphasis on impatient treatment and other provincial hospitals have emphasis on outpatient treatment.
- When comparing these four provincial hospitals in terms of the number of inpatients per bed:
- > The number for Salavan Provincial Hospital is small and Attapeu Provincial Hospital has a surplus.
- There is a large difference among district hospitals in terms of past records.
- A comparison of the number of inpatients per bed shows there are some district hospitals putting emphasis on outpatient treatment and other district hospitals putting emphasis on inpatient treatment.

2) Current status of referral system in the four southern provinces

Patients of district hospitals are referred to Champasak Provincial Hospital by way of the provincial hospital of each province. Common reasons for referral found are external injury and difficult childbirth delivery and in many cases, patients are transported from a hospital to another accompanied by health care staff in an ambulance owned by the provincial hospital. On the other hand, depending on the road accessibility, patients are directly transported from district hospitals located in other provinces to Champasak Provincial Hospital. Considering the actuality of the referral system as such, Champasak Provincial Hospital is can be said to have already taken on the responsibility of a regional hospital (RH).

The total number of patients referred to Champasak Provincial Hospital was 3,449 and 94% of which were referred from district hospitals/health centers (FY2013/2014). The similar tendency was shown in the flow of patients in FY2014/2015. According to an interview survey made to Champasak Provincial Hospital, however, it is known that patients with serious external injury are transported to an adjacent city, Ubon Ratchathani in Thailand for receiving examination and initial treatment.

3) Financial status of hospitals in four southern provinces

Champasak Provincial Hospital is the receiver of the largest government subsidy and revolving funds, which is almost at the same level of one of central hospitals, Setthathirath Hospital. All the four provincial hospitals are highly dependent on the government subsidy.

(2) Future prediction and projection

1) Future prediction

(1) Future projection of provincial hospitals

As Champasak Provincial Hospital will be the core facility of the southern provinces as a regional hospital, development of the following scale and functions is expected of the provincial and district hospitals in the southern provinces.

- Number of beds
 - About twice as many beds as there are at present may need to exist in the southern provinces.
- Hospital functions
 - Champasak Provincial Hospital shall provide appropriate diagnosis and advanced treatment on external injuries and internal-medicine emergency disorders and appropriate diagnosis on malignant neoplasms.
 - Provincial hospitals and some district hospitals shall be able to provide primary care to injured patients.
- System for assistance
 - Other three provincial hospitals and some district hospitals shall be able to complement the functions of Champasak Provincial Hospital.
- Functional enhancement of Champasak Provincial Hospital
 - Capability to provide appropriate diagnosis and advanced treatment on external injuries and internal-medicine emergency disorders and appropriate diagnosis on malignant neoplasms
- Functional enhancement of other three provincial hospitals
 - > Capability to provide primary care to injured patients
 - > Capability to provide treatment to internal-medicine emergency disorders
 - Constant increase of hospital beds
- Functional enhancement of district hospitals
 - > Capability to provide primary care to internal-medicine emergency disorders
 - > Temporary increase of hospital beds

(2) Future projection of district hospitals

When planning the functional enhancement of district hospitals, it is necessary to give sufficient consideration to the geographical factors. The strategic layout of district hospitals in view of time distance aspects with Champasak Provincial Hospital and other three provincial hospitals will be more important in the future. In the functional enhancement of district hospitals, it is essential to consider the situation of each individual hospital and the assistance should not be provided uniformly in accordance with the standard equipment list or the like.

(3) Proposals of new projects (grant aid cooperation projects)

In the southern provinces, it is necessary to construct a solid referral system. It is effective to present more realistic recommendations and an assistance project, since community hospitals and small hospitals are still in the conceptual phase. It is considered more effective to use an approach of reviewing the system of health care provision including reorganization of some of the existing district hospitals and health centers than simply upgrading them for the establishment of community and small hospitals.

By obtaining means of transportation and information, citizens start moving beyond their own administrative area and seeking for better health care. Since such movement, however, is not unlimited, it is desirable to have optimized allocation of health care facilities, by considering realistic time and distance for transportation as well as time necessary for life sustaining in emergency cases. For optimizing such allocation, it is important to have an idea of "selection and concentration," while, it is considered desirable to make efforts to have an optimization based on necessary time, for example, considering "optimization through a process of reinforcement and culling-out" by looking at the past history and actual state of health care provision.

When allocating health care facilities, it is indispensable to select and reinforce health care service functions in the relevant area as a whole, taking important points of traffic and movement of users into account. Assistance ranking at the top in the priority list of the southern region is the reinforcement of a system by strengthening support for Champasak and Salavan Provincial Hospitals, developing a solid base to receive referred patients and reinforcing Sekong Provincial Hospital and Tha Teng District Hospital which are supposed to support the former two elements. The next assistance to be given is the development of district hospitals that can conversely accept referred patients from Champasak Provincial Hospital and efforts to add life support functions to small hospitals as part of assistance for small hospital development so that district hospitals located near the border where traffic conditions are poor can have more time to maintain patients' life in emergency.

Through such assistance as above, it is considered, definition of each of regional, community and small hospitals will be clearly made in terms of their functions based on the conditions in areas they are located.

Tanking into considerations the above-mentioned points, the following proposals shall be made on the Japanese grant aid cooperation in the assistance for the southern provinces.

- 1) Functional enhancement of Champasak Provincial Hospital
- 2) Functional enhancement of other three provincial hospitals
- 3) Functional enhancement of district hospitals
 - (1) Upgrading Tha Teng District Hospital (15-04) in Sekong Province to a community hospital
 - 2 Strategic development of district hospitals near the national border
 - Improvement of district hospitals as community hospitals
 - Reorganization of district hospitals to small hospitals

(4) Points of note in the proposed new projects

1) Development of regional hospitals

Since the southern region is geographically far from the central hospitals, in actuality, the residents do not have access to tertiary health care facilities. For this reason, the regional hospital concept, that is, to upgrade the conventional provincial hospitals to regional hospitals to be in charge of several neighboring provinces and equip them with upgraded health care functions, has been studied. Although the definition of regional hospital is not determined at present, the Team considers that it is beneficial to make recommendations and study development plans based on the knowledge and experience of Japan in which a well-developed health care plan is already in practice. A synergy effect can be expected by linking the development of regional hospitals. In other words, with respect to the assistance to the hospitals with the same clinical departments as the central and national hospitals, it is desirable to combine short-term assistance by facility construction and equipment provision with long-term assistance by human resource development and organizational improvement.

By providing Champasak Provincial Hospital with image diagnosis equipment or endoscopic examination and pathological diagnosis equipment with the same standard as a central hospital, doctors in southern area who completed the required three-year duty at rural hospitals or health centers after graduation would consider selecting the familiar Champasak Provincial Hospital as a place for them to be trained as residents. If there is a system for them to continue to receive instruction in the southern region even without need to go to Vientiane Capital City, a foundation will be gradually established where clinical health care education can develop there. In order to provide high-quality health care, it is important that there are health care personnel who take root in the region and, to this end, there should be regional hospitals that attract younger doctors and make them remain in the region. If such regional hospitals have quality health care equipment and operational system, it will be one of attractions for those doctors.

2) Securing of financial soundness at hospitals in the southern provinces

Champasak Provincial Hospital, which is a top referral hospital in the southern provinces, is expected to function as a regional hospital. If the hospital's function is improved, it will financially follow the footsteps of Setthathirath Hospital. It is necessary, however, to obtain funds for operation and maintenance of newly introduced health care equipment from the government subsidy until income from insurance increases as middle and high-income earners increase in the southern region where the economy has been growing. In addition, for achieving universal health coverage (UHC), it is indispensable to create a regional health service network with an aim at improving the referral system in the southern region. As the network improves, it is considered, various health insurance systems including those for the poor will be further expand and revolving fund income of district hospitals will gradually increase. It is important to reduce the portion funded from the government subsidy gradually, as the formation of the regional network advances and insurance systems become widespread.

4. Community Interventions including Multi-sectoral Approach in Removing Barriers regarding Health Seeking Behaviors, Medical Security and Accessing Health Services among Community People (especially Mothers and Children)

4.1 Alliance with Major Policies Relating to Community Health

- ➢ "3 Builds" Policy
- Model Healthy Village (MHV)
- Policy on Primary Health Care (PHC): 2000
- > National Policy on Health Communication: 2000
- National Reproductive, Health-Maternal, Newborn and Child Health Strategy and Action Plan 2016 - 2020
- National Nutrition Strategy to 2025 and Plan of Action 2016 2020
- National Immunization Programme Comprehensive National Multi-Year Plan: 2016 2020 (under development)

4.2 Barriers to Access Health Services and Measures for Removing These Barriers

Based on the review of the existing literature, information and experiences of development partners, the barriers to access health services are: i) Economic factors (high out-of-pocket payment rate of health care expenses, low participation rate of health care insurance), ii) physical factors (geographical access to health care facilities [low availability of roads and transportation and communication facilities and means of communication], shortage and uneven allocation of health care providers, low quality of health care providers, shortage of drugs and health care equipment, shortage of means of emergency transport, difficult access to water and sanitation), and iii) socio-cultural factors (lack of knowledge and understanding of health, existence of social custom and taboo, low status and lack of decision-making right of women, low educational level (minorities, women), low reliability of health care services, low availability of communication).

In addition, underlying the above 3 aspects of the barriers to access health services, the quality of services provided in the health system, especially in the primary health care system poses a critical challenge, leading to the level of trust by the people towards the public health care services. Furthermore, such factors as poverty, basic infrastructure for public services, education, agricultural, livestock and fishery production and food security in relation to health and nutrition are closely linked with the health status of community people. Thus, towards the achievement of UHC, multi-sectoral approach becomes indispensable since one single measure could not be effective in resolving these barriers.

With respect to the villages selected under the current community survey, which have provided good practices in the community interventions with the assistance of development partners, the Team found that results were gradually achieved through measures in resolving these three aspects of barriers to access health services in alliance with the national policies (e.g. "3 Builds" Policy and MHV). On the other hand, a case study of the villages that have not been supported by the national policy found that no multi-sectoral approach has been taken nor the benefit of such approach has been observed because of inadequate development of the structure to eliminate the barriers to access health services.

Aside from the above, it should be pointed out that among the villages with good practices towards removing barriers, there exists a solid community organization actively involved in community activities, utilizing their community knowledge and resources and setting up and operating a community development fund necessary for their activities. Development and effective utilization of existing community structures and resources that are the mainstays of the community intervention in the rural areas are also a cause of their success.

Also, with respect to nutrition, both the central and local governments now promote the coordination of activities among relevant sectors and sharing of monitoring and assessment results, taking a multi-sectoral approach. The Team noted the case in the local situation that through the coordination and joint monitoring among concerned sectors under the multi-sectoral approach, nutrition-related activities are carried out by making an effective use of the resources (human resources, facilities and equipment, funds) of each sector linking conventional vertical lines of structure to enhance the efficiency of resource utilization. This indicates that rather than integrating all the activities, each organization by sector is allowed to tackle the activities in

a way that is easy for them under the existing administrative structure. To be more specific, the local health office directly guides the villagers through close connections established with them in collaboration with the village organization, Village Health Committee (VHC), VHV and LWU at the timing of periodic immunization and provision of outreach services by the health center among others. The local education office provides health education through teachers and children's organizations, which are resources within the school, in the field of school education (including preschool children and primary and secondary school children) and the local agricultural office gives appropriate guidance in agricultural technology and provides community support through farmers or farmer's organizations for the purposes of income generation and nutritional improvement. These activities undertaken using expertise in each sector in a coordinated and comprehensive manner would contribute to removing the existing barriers for access and utilization of health services.

4.3 Contributing Factors to Community Health Promotion and the Use of Health Services

The factors mentioned below are considered as the major contributing factors to promote community health and the use of health services.

- Improvement of the physical accessibility to the health care services with the improvement of roads and the establishment of health centers
- Leadership of village chiefs, village management organizations and Village Health Committee
- Establishment of good cooperative relationship among concerned organizations at the village level including village organizations, Village Health Volunteers, Lao Women's Union and other organizations concerned; especially through the capacity development with the support from development partners, the establishment of a mechanism of inter-sectoral cooperation and strengthening of multi-sectoral collaboration particularly in the pilot areas of the "3 Builds" policy from the point of rural development
- Establishment of a system of health care service provision (including outreach programs and health education) in a community based on close communication and trust between the health workers at District Health Offices/health centers and residents, building up a good relationship between them
- Effective management and use of community resources including Village Development Fund (VDF) (utilization for the support of medical expenditure in case of emergency and construction/maintenance of public facilities such as water and sanitation)

5. Direction of Future Cooperation

5.1 Development of Setthathirath Hospital

(1) Significance of grant aid cooperation to Setthathirath Hospital

1) Necessity and urgency of strengthening top referral function

As described in 2 above, with respect to the three central hospitals, it is urgently required to address the issues of the declining quality of the health care services at Setthathirath Hospital and the need for improvement of the financial structure, and it is necessary to expedite the enhancement of the hospital facilities and equipment through the grant aid cooperation project.

2) A realistic operational system of the top referral hospital

In order to establish a stable hospital management structure, it is essential to construct a simple hospital accounting system that can be continuously operated. Application of the financial model of this central hospital to the operation of hospitals around the country will enable the sound management of top referral hospitals in Laos. It is considered worthwhile to explore the possibility of assistance in the soft aspect, such as providing training in Japan in hospital management and finance.

(2) Measures to strengthen operation and maintenance of health care equipment at Setthathirath Hospital

1) Effective use of health care equipment and improvement of operation and maintenance techniques of such equipment

1 Use of equipment

Since the doctors of Setthathirath Central Hospital use the existing equipment for examination, diagnosis and treatment in an efficient and effective manner, the Team determines that there should be no problem in the use of the newly-installed equipment. However, with respect to the X-ray unit and CT apparatus, as the operating method may be different, the Team recommends that technology transfer in the terms of training be incorporated into the soft component accompanying the grant aid cooperation project.

2 Operation and maintenance of equipment

Periodic checking of the installed equipment enables early detection of failures and problems, thereby preventing major damage relating to health care services. However, with respect to the X-ray unit and CT apparatus, it is effective to conclude a maintenance contract or the like with the instrument manufacturer or the agent to ensure the long-term use of these instruments.

2) Obtaining funds to cover operation and maintenance cost

The issue concerning how to obtain funds for operation and maintenance can be solved by enhancing three elements, that is, "health care service," "hospital operation and financial affairs" and "development of hospital facilities and equipment.

Making an improvement about the causes of low clinical capabilities by providing assistance and increasing the patients of "slightly high severity" will increase the average hospitalization days and the number of inpatients and improve the bed occupancy rate. Improvement of the efficiency of the financial management with the appropriate personnel assignment and the improvement of financial transparency will improve the financial structure further. The Team presumes that the increase in the maintenance cost can be absorbed by the growth of RF revenue resulting from the increase in the medical practice revenue accompanying the improvement of the clinical functions.

Meanwhile, Decree No.349 (published in December 2013 that states, "85% of RF shall be used for the maintenance, improvement and smooth operation of the clinical functions") has made it possible for the hospital to generate an operating fund that it can use on its own discretion since FY2013/14. No drastic

change has been observed in the hospital so far because the decree has been in effect only for one and half years. However, it has definitely increased the incentive to the managers and staff of the hospital. It is highly possible for the hospital to pay for the increase in the equipment maintenance cost resulting from the new investment by increasing the revenue and increasing the percentage of the budgetary allocation to the maintenance.

(3) Assistance for education

In order to respond to the changing disease structure in the future, it is essential to improve the capabilities of the health care human resources in addition to the installation of equipment and construction of facilities. In planning the assistance to the central/national hospitals, it is necessary to consider two perspectives; one is the assistance for the provision of health care and the other is the assistance to develop future health care providers. The cooperation will have an important meaning from the viewpoint of clinical health care education, which will be an important field in the development of health care in Laos in the future.

The graduates of the University of Health Sciences, Laos are obligated to work in the rural area for three years immediately after graduation. As such, they have to work as health care providers despite the lack of proper structure for guidance. In this respect, it is all the more important to provide clinical health care education to the students in the central/national hospitals. Moreover, the hospitals also play an important role as a place for training to acquire advanced clinical skills and wide experience during the five-year resident period after working in the rural area.

In order to get ready for future changes in the disease structure, it is important for central/national hospitals to share their roles so that they can meet the needs of the whole nation, by, on one hand, enhancing specialty of each central/national hospital and, on the other hand, strengthening collaboration with regional hospitals. Japan can play a role in the area of education to further develop specialty of central/national hospitals. In addition, it is considered Japan will be able to provide highly effective assistance if it invites a team of personnel including both doctors and nurses/technicians from an appropriate hospital to transfer not only technology but also organizational culture including medical ethics.

5.2 Development of Health Care Facilities/Equipment in the Southern Provinces

In the southern region, gaps between functional standards and the actual state of health care facilities/equipment were confirmed and recommendations were made concerning a favorable application of functional standards in the region and a grant aid cooperation project proper to current needs. In addition, it was proposed to form the project to meet changes in the disease structure projected to occur following the case of Vientiane Capital City, since it was expected that in the southern provinces there would be a need among people for health care for injuries from traffic accidents and work-related accidents, myocardial infarction, strokes and malignant neoplasm.

As for the top referral hospitals in the southern region, a potentially highly efficient and highly effective

regional health care network will be built by upgrading the functions of Champasak Provincial Hospital to a regional hospital and creating a referral structure commensurate with patient trends in the southern region and the needs of a human resources training hospital in the provinces.

Meanwhile, as the Ministry of Health has a policy of improving health care services in poverty-stricken areas and remote areas, there seems to be certain significance in implementing a project in which a hospital to be improved preferentially is selected in each province and projects to be implemented at the selected hospitals are to be considered policy models and implemented in an integrated fashion, in addition to the building of the above-mentioned regional health care network based on selection and concentration.

5.3 Community Interventions including Multi-sectoral Assistance in Removing Barriers regarding Health Seeking Behaviors, Medical Security and Accessing Health Services among Community People

(1) Relevance to the Policy of the Ministry of Health

Department of Hygiene & Health Promotion (DHHP) of the Ministry of Health recognizes the importance of the development of guidelines for comprehensive integrated approaches for the promotion of primary health care (PHC) and reproductive maternal newborn and child health (RMNCH) at the community level, and in addressing the physical access to health services, it plans the establishment of as many health centers as possible in villages in poor remote areas. It also emphasizes; 1) strengthening of community organizations (including Village Development Committees and Village Health Committees), 2) training and retention of staff of health centers, Village Health Volunteers (VHV) and Village Health Workers (VHW); and 3) establishment of community funds to provide financial resources, whether the village has a health center or not. This policy direction is in accordance with the result of the community survey conducted in the villages where the community interventions have provided good practices. The DHHP policy direction on community interventions also corresponds with the findings of this survey, which noted the importance for the effective utilization of the existing resources and implementation structures involving various sectors concerned, and the need for multi-sectoral approach addressing three aspects of the barriers to achieve UHC.

(2) Cooperation among relevant domestic organizations

It is desirable to take a multi-sectoral approach centered on the Ministry of Health, based on the formation of a consensus among the relevant domestic organizations.

(3) International cooperation

It is desirable that various development partners working in Laos including international NGOs will strengthen mutual cooperation effectively based on each one's experience and specialty.

(4) Direction of assistance to community interventions based on the multi-sectoral approach

1) Objectives and scale of assistance to community interventions

Future cooperation should be directed to community interventions based on the multi-sectoral approach,

aiming to resolving "three barriers to access to health services (from physical, economic and sociocultural aspects)", which would contribute to UHC, the overall objective of the health sector.

2) System for implementing assistance to community interventions

At the central level, the counterpart will be the Ministry of Health and a joint coordinating committee (JCC) will be established consisting of concerned government ministries and agencies. At regional level, a local coordinating committee (LCC) will be established centering on provincial health offices. LCC will be composed of members who are representatives of offices in charge of concerned sectors in each province. In implementing detailed activities, a task team will be established to achieve planned project outcomes. The task team will be in charge of development of a multi-sectoral model as well as monitoring and evaluation of the model. The task team will respect the existing vertically organized sector system and be composed of sector-based teams. Respective works will be undertaken in a method suitable to each sector.

3) Development of models for success

The main factors contributing to the success of assistance towards community interventions by development partners and the government are: 1) the leadership of a village chief in the development of his/her village and existence of a community organization in which representatives of villagers participate, 2) the availability of human resources including staff of health centers, Village Health Volunteers/Village Health Workers, and 3) the availability of funds required for the assistance and community activities (VDF, etc.). A multi-sectoral approach is an appropriate means to supplement the shortfall of such assistance and resources of communities and to improve efficiency and effectiveness of the activities.

The Team recommends the development of a model for each of the villages in different physical, economic and social conditions concerning the access to health care services selected from the villages designated as revolutionary development centers by the government (in the policies such as the 3 Builds Policy and MHV Policy). The major components to be incorporated in these models are mentioned below. The Team recommends that components of the assistance project should be selected from the sectors mentioned below when the decision has been made on the goals of and strategy for the implementation of assistance to community interventions. The components consist of: A. Health sector (1) Ministry of Health [primary health care, and reproductive, maternal, neonatal and child health], (2) Nutrition, (3) Water and sanitation, (4) Social Protection (Health insurance); B. Agricultural sector; C. Education sector; and D. Related infrastructure sector.

Foreign currency exchange rate Proposed projects: USD1.00 = JPY122.85 Average for December 2015 Finance related: USD1.00 = JPY120.00 USD1.00 = LAK8,000

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ABBREVIATIONS

Abbreviation	Standard Nomenclature
3 Builds	Building Provinces into Strategic Units, Building Districts into Strong Integrated Units, and Building Villages into Development Units (policy)
ADB	Asia Development Bank
ANC	Antenatal Care
CBD	Community-Based Distributers
СВНІ	Community-Based Health Insurance
CCL	Comite de Cooperation avec le Laos
CIEH	Center for Information and Education for Health
СМ	Community Mobilization
CEmOC	Comprehensive Emergency Obstetric Care
CRVS	Civil Registration and Vital Statistics
CSS	Civil Servant Scheme
СТ	Computed Tomography
DALY	Disability-adjusted life year
DDF	District Development Fund
DF/R	Draft Final Report
DH	District Hospital(s)
DHHP	Department of Hygiene & Health Promotion
DHIS2	District Health Information System 2
DPs	Developing Partners
DTP	Diptheria, tetanus toxoids and pertussis (vaccine)
EENC	Early Essential Newborn Care
EmOC	Emergency Obstetric Care
ENT	Ear, Nose and Throat
EPI	The Expanded Programme on Immunization
ER	Emergency
Etc.	Etcetera
EU	European Union
FDG	Focus Group Discussion
FP	Family Planning
F/R	Final Report
GDP	Gross Domestic Product
The Global Fund	The Global Fund to Fight AIDS, Tuberculosis and Malaria
GGE	General government expenditure
HEF	Heath Equity Fund

Abbreviation	Standard Nomenclature	
НерВ	Hepatitis B	
HIV	Human Immunodeficiency Virus	
Hib3	Third dose of Haemophilus influenzae type B (vaccine)	
HMIS	Health management information system	
HSDP	Health Sector Development Plan	
IC/R	Inception Report	
ICD	International Statistical Classification of Diseases and Related Health Problems	
ICU	Intensive Care Unit	
IDA	The International Development Association	
IFAD	International Fund for Agricultural Development	
IMCI	Integrated Management of Childhood Illness	
INGO	International non-governmental organization	
IYCF	Infant and young child feeding	
IPD	In-Patient	
IT/R	Interim Report	
JCC	Joint Coordinating Committee	
ЛСА	Japan International Cooperation Agency	
JFPR	Japan Fund for Poverty Reduction	
JOCV	Japan overseas cooperation volunteer	
КІІ	Key Informant Interview	
KOICA	The Korea International Cooperation Agency	
KOFIH	The Korea Foundation for International Healthcare	
LANN	Linking Agriculture, Natural Resource and Nutrition	
LCC	Local Coordinating Committee	
LMICs	Lower Middle Income Countries	
LED	Light emitting diode	
Lux-Dev	Luxembourg Development Agency (Lux-Development)	
LWU	Lao Women's Union	
LYU	Lao Youth Union	
МСН	Maternal and Child Health	
MDSR	Maternal Death Surveillance and Response	
MHV	Model Healthy Village	
mln	million	
МОН	Ministry of Health	
MOFA	Ministry of Foreign Affairs	
MLSW	Ministry of Labour and Social Welfare:	

Abbreviation	Standard Nomenclature	
Med.	Medicine	
MRI	Magnetic Resonance Imaging	
NCD	Non Communicable Disease	
NCMC	National Commision for Mothers and Children	
NGO	Non-Governmental Organization	
NHIB	National Health Insurance Bureau	
NICU	Neonatal Intensive Care Unit	
NIOPH	National Institute of Public Health	
NNC	National Nutrition Commission	
NRSC	Lao National Road Safety Committee	
OBGY	Obstetrics and Gynaecology	
ODA	Official Development Assistance	
OOP	Out of pocket payment	
Op.	Operation	
OPD	Out-Patient Department	
ORS	Oral Rehydration Solution Oral Rehydration Solution	
PDR	People's democratic republic	
PNC	Postnatal Care	
RF	Revolving Funds	
RH	Reproductive Health	
RH (table)	Regional Hospital (s)	
РНС	Primary Health Care	
РН	Provincial Hospital(s)	
RMNCH	Reproductive Maternal Newborn Child Health	
SARS	Severe Acute Respiratory Syndrome	
SASS	State Authority for Social Security	
SDG	Sustainable Development Goals	
SO	Strategic Objectives	
SSO	Social Security Office	
SSS	Social Security Insurance Scheme	
Sur.	Surgical	
SUN	Lao SUN Civil Society Alliance	
SWC	Swiss Red Cross	
SWG	Sector Working Group	
TT2	Two doses of tetanus-toxoidvaccine	
TWG	Technical Working Group	

Abbreviation	Standard Nomenclature	
UHC	Jniversal Health Coverage	
UN	United Nations	
UNDP	United Nations Development Programme	
UNFPA	United Nations Population Fund	
UNICEF	United Nations Children's Fund	
US	United States	
VDC	Village Development Committee	
VEDC	Village Education Development Committee	
VDF	Village Development Fund	
VHC	Village Health Committee	
VHV	Village Health Volunteer	
VHW	Village Health Worker	
VitA	Vitamin A	
WASH	Water supply, sanitation and hygiene promotion	
WB	World Bank	
WFP	World Food Programme	
WHO	World Health Organization	
YLD	Years Lost due to Disability	
YLL	Years of Life Lost	
Yr	Year	

Chapter 1 Overview of Health Care in the Country

1.1 Socio-economic Overview of the Country

The Lao People's Democratic Republic (Laos) is the only landlocked country in Southeast Asia, surrounded by Myanmar, China, Vietnam, Thailand and Cambodia. The land area is 240,000km² and according to the 2015 Census, the total population reached 6,472,400. The population of three provinces and one special city, namely, Savannakhet Province, Vientiane Capital City, Champasak Province and Luan Prabang Province combined accounts for 46% of the total (1). Geographically, the country is divided into three regions; the northern, the central and the southern regions (2). With respect to the administrative division, under the one-party state, one special city (Vientiane Capital City) and 17 provinces are established and under the provinces there are 145 districts, under which there are 10,473 villages (3).

Although the economy of Laos is growing at a remarkable rate of 7.5%, the GDP is only 13 billion USD, according to the estimate in 2015 (4), and a quarter of the population is still in a state of poverty (living on less than 1.25 USD per day). The poverty rate in the rural area is about twice as high as that in the urban area and the poverty of the residents in the mountain areas and highlands is particularly serious. Also, although it is said that Laos currently has 49 ethnic groups, even the Lao group, which is the largest in terms of population, accounts for less than a half of the total population and the language used varies among the people. Issues of relations between the ethnic groups and the ethnic group identity make it difficult for administrative measures to spread across the country in every aspect. Diffusion of the Lao language, which is the official language, is also limited.

In the 7th 5-Year National Socio-Economic Develop estimate in 2015, ment Plan (2011 – 2015; NSEDP), Laos has put forward sustainable economic growth and poverty reduction as two major goals and achievement of several prioritized areas, such as macroeconomic growth, reduction of economic disparity between the urban and rural areas, human resource development covering the health and sanitary improvement, utilization of natural resources. In particular, in the efforts to pursue poverty reduction, Sam Sang (3 Builds) decentralization policy was implemented to improve the situation in the rural area and a certain level of success was achieved. The Sam Sang (3 Builds) policy is an initiative to distribute the responsibilities of strategy formulation, overall strengthening and field implementation of project to each administrative level by designating the province level as the strategic unit, the district level as the comprehensive strengthening unit and the village as the development unit, thereby driving diverse activities, such as the improvement of education and public health, creation of employment and installation of village council. This policy was implemented in 51 districts and 108 rural villages and as a result, it is estimated that the poverty rate will decline to around 20% of the nation by the end of 2015. However, as this percentage is still far from the target of 10%, it was decided that the 5-Year Plan from the next fiscal year should also tackle measures against poverty as a major challenge. Also, the final assessment of the 7th NSEDP (2011 - 2015)has determined that health indices have improved along with the economic growth and that most of the eight

indices under the Millennium Development Goals have achieved the target. On the other hand, it has also pointed out the disparity between the urban and rural areas, malnutrition, completion of primary education, etc., as remaining issues (2).

In view of these backgrounds, the 8th 5-Year National Socio-Economic Development Plan (2016 – 2020; 8th NSEDP), of which the draft has been formulated, incorporates political stabilization, measures against poverty, utilization of natural resources, etc., aiming to implement measures for multiple ethnic groups and growing population, achieve sustainable development and leave the list of least developed countries. With respect to the health sector (access to health care and preventive medicine), the concept of universal health coverage (UHC) based on the provision of access to quality health services and to all people through the development and improvement of basic health infrastructure in remote areas, is shown as a policy. Also, with respect to the goals by administrative region (northern, central and southern regions), the northern region focuses on the improvement of health care services and the southern region on the road development. As for health care services, with the objective of enabling the residents of rural areas to access health care services, strengthening of the health insurance scheme is cited as part of the measures for the development of social security and the following six items are referred to as priority projects (5).

The 8th 5-year National Socio-Economic Development Plan (2016 – 2020) Priority projects in the health sector

- Improve and establish health centers in appropriate areas, upgrade the capacity of district hospitals to carry out minor surgery, upgrade provincial and regional hospitals to increase trust in healthcare services.
 Build and train field medical staff in remote areas and send more medical graduates to the provinces for internships.
- 3. Broadly expand private and community health insurance.
- 4. Continue establishing more health model villages.
- 5. Continue efforts to improve food quality and inspection of medicines and take appropriate measures against law violations.
- 6. Improve the health information system to be accurate, fast and up to date.

In recent years, Laos has been focusing on the use of IT and media in relation to the improvement of health information system listed above. On one of the two channels for national TV broadcast, advice on disease prevention is broadcasted. Also, trial use of the District Health Imformation System (DHIS) and other online systems for the entry of health indices as the national system has started and accordingly, the use of computers has spread not only to the central government but also to the health offices of provinces and districts. Fig. 1-1 shows the trend of telephone diffusion in Laos. Telephones used by households have rapidly increased in the last five years or so and the number of mobile phone subscriptions per population of 100 is nearly 70 (6, 7). Considering the bell-shaped population pyramid of the country that about a half of the population is aged





Fig. 1-1 Trend of Telephone Diffusion in Laos (2000-2014) Source: Prepared by the Survey Team based on the ITU statistics http://www.itu.int/en/ITU-D/Statistics/Pages/stat/default.aspx

The fiscal year of Laos is a one-year period from October until September of the following year. The total revenue in the 2013 – 2014 fiscal year is 22,470 billion kip (2,808,750,000 USD if one US dollar is converted to 8000 kip and 337,050 million yen if one US dollar is converted to 120 yen), of which the domestic revenue is reported to be 17,237 billion kip and the grant is reported to be 5,197 billion kip (8). About 23% of the total revenue comes from external funds.

Also, according to the 7th 5-Year National Socio-Economic Development Plan (2011 - 2015; 7th NSEDP), poverty reduction still remains as a major goal of the whole country. However, Vientiane Capital City and Champasak Province in the southern region are specially noted as the areas with well-developed infrastructure and the lowest poverty rate (2), which suggest that these areas have the potential of transitioning from the pattern of urbanization ahead of other provinces in the future.

1.2 Overview of Health Care in the Country

The average life expectancy of Laos is 66 years and the average health life expectancy is 57 years. Both of them are low in comparison with those of neighboring countries. Major causes of death are respiratory diseases, infectious diseases, such as dengue fever and diarrhea, and cardiovascular diseases as well as neonatal asphyxia, trauma and complications due to premature delivery (9). In the urban area, increase in trauma accompanying the increase in traffic accidents and increase in non-communicable diseases (NCD), such as hypertension and diabetes, have been perceived as social issues in recent years. Accordingly, increased needs for treatment of chronic diseases and emergency care, bypass phenomenon of the rich and the middle-income people visiting hospitals in Thailand, a neighboring country, seeking health care services of higher quality, and establishment of private clinics have been observed in the urban area. In the rural area, problems of maternal, neonatal and child health are still conspicuous (10). The year 2015 was the final year for the Millennium Development Goals (MDGs) and the assessment report of 2015 (11) pointed out that although most of the goals relating to health had generally been achieved, problems of high maternal mortality ratio and malnutrition of infants aged less than five still remained (12).

Figure 1-2 shows the disability-adjusted life (DALY) year in Laos¹. By this index, we can see that factors causing heavy burdens on health in Laos are infectious diseases, maternal, neonatal and child health, and nutrition. Following them, NCD represented by cardiovascular diseases and diabetes are also common. This proves that in addition to the problems of infectious diseases, maternal, neonatal and child health, and nutrition, problems of NCD are beginning to lurk in Laos(9).

In order to understand the current situation of the health care services in Laos, the Team attempted to classify the reasons of hospitalization (in-patient) based on the national statistics report.



Fig. 1-2 Disability-Adjusted Life Year (DALY) in Laos 2012

Source: WHO World Health Statistics 2015

^aThe disability-adjusted life year (DALY) is calculated from the years of life lost (YLL) and the years lost due to disability (YLD), and a highly reliable health index that shows the degree of health burden in accordance with the years lost due to disability and disease.



As for the major reasons for hospitalization, the recent reports (2013-2014) applies 41 categories. However, same report issued five years ago (National Health Statistics Report 2009-2010) uses categorization different from that of this report, which is fewer categories of 25, and therefore, changes in the disease structure in these five years cannot be simply evaluated. Therefore, the 14 categories existed in both reports was used to consider a rough trend (Figure 1-4). The results showed that the number of patients are increasing at every category, overall. Considering a few items which both reports included with same definition can be subject to comparison, such as, external injury (traffic injury, workplace accident injury, etc.), hypertension and diabetes, which are NCD, and neurology diseases, have all increased about 1.5 times. However the number of patients of OBGY and cardiovascular diseases are reported as 0 which is considered as very much unrealistic. Therefore these results of assessment should be taken as a reference only.



Figure 1-4 Trend of Disease Structure of in-Patients in Laos (5 years) Source: Prepared based on the National Health Statistics Report 2013 – 2014 Next, by utilizing the most recent report of 2013-2014, distribution of reasons for hospitalization was calculated in percentage in order to evaluated the trend of disease structure (Figure 1-5).



Figure 1-5 Disease Structure of in-Patients in Laos, 2013 – 2014 Note: The categories "All other cases and diseases" and "others" in the reports were re-classified to internal medicine. Source: Prepared based on the National Health Statistics Report 2013 – 2014

With respect to NCD, it of concern that patients of diabetes, hypertension, cardiovascular diseases and obesity, which are typical NCDs, may rapidly increase in the future and as such, it is urgently required to improve and develop the health care services, considering the future incidence and prevalence of the diseases .

General government xpenditure on health % GGE	General government expenditure on health % GDP
Solomon Islands	Micronesia (Federated States of)
Micronesia (Federated States of)	Kiribati
Papua New Guinea	Solomon Islands
Vanuatu	Samoa
Samoa	Papua New Guinea
Philippines	Mongolia
Kiribati	Vanuatu
Viet Nam	Viet Nam
Mongolia	Philippines
Lao People's Democratic Republ	ao People's Democratic Republi
0% 5% 10% 15% 20% 25%	0% 2% 4% 6% 8% 10% 12% 14%

Fig. 1-6 Percentage of Expenditure on Health Sector in Government Budget in Laos Source: WHO Global Health Expenditure Atlas 2014
Figure 1-6 suggests the percentage of expenditure on Health in Lao PDR. Despite the annual increase in the health care expenses, the percentage of expenditure to the health sector in the general government expenditure (GGE) has never exceeded 8%, which is the lowest of the countries in the Asia-Pacific region, according to the regional classification of WHO. This means that the health sector of Laos has been operating with a very limited budget (14).



Government resources allocated to health

In Laos, health care expenditure, even after combining the public payment and the out-of-pocket payment, is very low, amounting to about 36 USD (4,300 yen) annually (15). For many years, the percentage of out-ofpocket payment had been higher than that of the public payment. Although this trend has recently reversed, the percentage of out-of-pocket payment remains high. According to the estimation by World Bank, the situation in which the people pay their own health care expenses has arisen and the percentage of out-ofpocket payment is estimated to be 46% (16), which suggests that receiving health and medical services itself is a heavy burden on the people. At present, six public social security systems, which consist of three types of medical insurance schemes (1)SASS, (2)SSO/SSS, (3)CBHI), free provision of maternal, neonatal and child health services (Free MCH) and health equity fund (HEF) for people living under poverty line, exist as public system in Laos. The insurance scheme for civil servants, formerly called as the CSS (Civil Servant Scheme), has been expanded to include pension in addition to insurance as the scheme of the State Authority for Social Security (SASS). This scheme also covers police officers in a broad sense of civil servants and including the dependents, 15% of the total population is subject to this scheme (as of 2013). The next one is the social security scheme for employees(SSS), which is operated by the Social Security Office (SSO). This scheme covers regular employees of private companies, etc. and their family, which account for 6% of the total population (as of 2013). These two insurance schemes are under the jurisdiction of the Ministry of Labour and Social Welfare (MOLSW). With the premium borne by both the employer and the employee, as a rule, a full package of services including compensation for sick leave, maternity leave and industrial accident as well as life insurance and pension is provided and the health insurance is a part of this package (15). The insurance scheme for the remaining 80% of the population is under the jurisdiction of the Ministry of Health. The CBHI, which is (3) above, is called the community-based health insurance and it is supposed

to cover all the people except for those covered by the two insurance schemes under the MOLSW. These

insurance schemes cover a part or the whole of the healthand medical expenses of the inpatients and outpatients of designated health care institutions except for those suffering from traffic accident injury (17). These three health insurance schemehey are operated under the jurisdiction of the Ministry of Health or the Ministry of Labour and Social Welfare. Efforts for the integration of these systems have started with an aim of achieving universal health coverage (UHC) by 2025.

With regards to the schemes which can cover health and medical expense, there are free systems such as Health Equity Fund (HEF) and free provision of maternal, neonatal and child health care (Free MCH) as stated previously. In the scheme for the poor (HEF), expenses of treatment and transportation as well as expenses for hospitalization, such meal expense and expense of blankets and other articles, are subject to public payment. In addition, for pregnant women and children under 5 years old, free provision of maternal, neonatal and child health care (Free MCH) is available. However, with respect to these schemes under the Ministry of Health, diffusion is one of the big the challenges as they have been implemented only in some areas.

Another issue about the insurance schemes in Laos is that the actual participation rate is low as compared to the population to be covered. The graph to the right shows the target population in orange and the participating population in blue. The CBHI, of which the target population is more than a half of the people, is a voluntary scheme. Since many of the residents in the rural area are engaged in self-sufficient farming in Laos, the participation rate is low, followed by the HEFs and free MCH in ascending order. Those who do not participate in the insurance schemes are obligated to make a complete out-of-pocket payment of health care expenses, but this requires further scrutiny as the actual situation may differ between the regions.



Fig. 1-8 Target Population and Participants of Public Health Insurances in Laos

Source: Health Insurance Department, MOH, Laos

1.3 National Health Policy and System

1.3.1 Health Sector Development Plan

Since 2000, Laos has been implementing a 20-year long-term health strategy with the objective of "Free the country from the state of undevelopment by the year 2020 and ensure that all Lao People have access to heath

care services", designating the six items in the table to the right as priority areas in the health sector (18). In the 7th 5-Year Health Sector Development Plan (2011 – 2015), which provides medium-term health policies and plans from 2011 to 2015, specific projects have been formulated in accordance with these priority items, placing a special emphasis on maternal, neonatal and child health, water and sanitation, infection control, etc., in relation to disease prevention and health promotion. With respect to the 7th HSDP Plan, in particular, since this Plan was to complete in 2015, which coincides with the final year of the Millennium Development Goals (MDGs), and many of the improvement targets of MDGs in Laos were relevant to the health sector, most of the health indices for improvement set by this Plan were linked with the MDG targets. For the

Health Strategy 2020 Priority areas
1 Health prevention and promotion strategies
2 Currative and rehabilitation startegies
3 Consumer protection strategies
4 Human resource developmentfor heatlh
strategies
5 Health's operational research and health's
legislation
6 Health administration strategies(planning,
control, management)
Source: Health Strategy up to the Year 2020, MOH Laos, 2000

improvement of each village to promote grass-roots improvement, efforts were focused on the expansion of the Model Healthy Village Project, and a certain level of achievement was made. In Laos, the village is the smallest administrative unit and in the Model Healthy Village Project, villages conforming to several criteria relating to infrastructure, sanitation, etc. are certified by the national government as Model Villages. The certification criteria have been formulated as described below in accordance with the eight elements of Primary Health Care (health education, food supply and nutrition, water and sanitation, maternal, neonatal and child health care including family planning, immunization against major infectious diseases, prevention and control of locally endemic diseases, treatment of common diseases and injuries, essential drugs) (19). It is reported that 5,492 villages, which account for 64.8% of all the villages in Laos, have been certified as Model Healthy Villages at present (5).

Criteria for Certification of Model Healthy Village

- > Three cleans villages with water supply.
- Village health volunteers are available.
- > Village drug kit (provided by the government or like) has been kept.
- Sleeping under impregnated bed net.
- ▶ Fully immunized.
- ➤ Having latrine and use.
- > Birth spacing, breast feeding, ante natal care.
- > Risk case referral and decease or birth reporting.

The final assessment of the 7th 5-Year Health Sector Development Plan, which was carried out in 2015, pointed out that although the targets of maternal, neonatal and child health indices that are relevant to the MDGs, such as the maternal mortality ratio, are likely to be achieved, problems of stunting and underweight, which are relevant to nutrition indicators and part of the causes of death of children under five, still remain and continued efforts are needed for improvement.

Under these circumstances, in developing the draft version of the 8th 5-Year Health Sector Development Plan (2016-2020), the government has also designated maternal, neonatal and child health as a priority issue, aiming to improve the quality and quantity of the health care services to achieve UHC by 2025. The objective is to enable almost all people to access basic health care services by 2020 and with respect to the medical insurance scheme, in particular, the government pledges to achieve the coverage of 50% of the people by 2020 for the achievement of universal coverage by 2025 (20).

Priorities in the strategy for health sector reform are the following five items.

The 8th Health Sector Plan (2016 – 2020) Priorities in the strategy for health sector reform

- ➢ Human resource for health
- ➢ Health finance
- Governance, organization and management
- Improvement of infrastructure and health care services, invest to referral hospitals and hospitals with specialized health care
- Modernize the improvement of health information system (HMIS) and capacity, M&E forms

With regard to the referral system described above, the 8th HSDP declares that the system will be strengthened to make it equivalent to those of the neighboring Asian countries and particularly for the emergency referral system (EMS), efforts will be made to strengthen both the aspects of vehicles and medical technology. For this purpose, development of health care infrastructure is also designated as a priority issue.

In addition, the 8th HSDP also includes the establishment of standard operating procedures (SoP) and implementation of training to ensure the quality of health care, establishment of reporting system and implementation of a system for the local level to request for support from the central level among others (17). Developing partners, such as WHO, have also provided support in the field of maternal, neonatal and child health by strengthening the facilities for basic emergency obstetric care (BEmOC) and comprehensive emergency obstetric care (CEmOC) and providing training to midwives (21).

With respect to the control of NCD, which is newly included in the 8th HSDP, health care services will incorporate the aspects of prevention, diagnosis, treatment and rehabilitation and prevention of NCD will be addressed in the context of collaboration between the health sector and other sectors, rather than by the health sector alone. For the improvement of health information system, since on-line data collection programs, such as District Health Information System (DHIS) as a part of Health Management Information System (HMIS), have already started up, training of personnel for the improvement of data input rate and quality is focused. The Plan also declares that the quality of data for the 10th version of the International Statistical Classification of Diseases and Related Health Problems (ICD-10) and the civil registration and vital statistics (CRVS) system will be improved.

1.3.2 Organization and System

The health administration structure in Laos is headed by the minister of health and three vice ministers. The Ministry of Health in the central government has the Cabinet of the Ministry, Department of Hygiene and Health Promotion, Department of Communicable Disease Control, Department of Finance, Department of Health Care, Department of Health Personnel, Department of Planning andInternational Cooperation, Department of Food, Department of Training and Research and Drug and Department of Inspection as well as the Executive Committee, which serves as the supreme decision-making body. Under each department, centers, research institutes, central hospitals, universities, schools of public health and drug manufacturing plants function as organizations directly managed by the central government. Each province has a provincial health office and a district health office is installed in each district. Provincial hospitals and district hospitals are located near the provincial or district health offices, respectively, and in some districts, the district hospital is positioned as the curative department of the district health office (22).

In accordance with the Law on Health Care proclaimed by the Office of the President in 2005 and revised in 2015, the health care system is divided into the public system and the private systems. Health care facilities are installed in accordance with the nation-province-district-village line of administration. Central hospitals are at the nation level, provincial hospitals are at the province level, district hospitals are at the district level and health centers are at the village level. As the public health care facilities, there are five central hospitals, 17 provincial hospitals, 135 district hospitals and 985 health centers (23). All the central hospitals are located in Vientiane Capital City and three of them, namely, Setthathirath Hospital, Mahosot Hospital and Mittaphab Hospital are the sites for practical training in medical education, which means that they also function as

educational institutions. The minimum requirements of the central hospitals (in Vientiane Capital City), provincial hospitals, district hospitals and health centers are determined by the Decree of Health Care. In Laos, hospitals are upgraded in a phases as part of the program for the development of health and medical facilities and formulation and development of relevant decrees and regulations are carried out accordingly.

In Laos, expand of private hospital business are not much previling. Private Hospital, apart from private clinic, is considered as a facility which fulfilled standards of Decree on Private Hospitals No 151, enacted in 2014. Because the decree does not obligate facilities to prepare the beds for in-patient, there are 6 failities where do not have beds for in-patient services. At present, there are 16 private hospitals in total including ones with in-patients and out-patients in overall Laos, of them, 10 facilities are located in Vientiane capital city (23). In addition, as a results of requesting updated information to Ministry of Health, as of 15 Feburuary 2016, there are 1 more private hospital in Vientiane exists, which made total number of facilities as 11 (of them, 5 facilities are with inpatient services), 3 facilities in Luang Prabang Province (Norhter region), 1 facility in each Oudomxay province (Norhter region), Bokeo province (Norhter region), and Savannakhét province (central region), and overall total number of private hospital in Laos is 17. There are no private hospital in southern region of Laos. A NPO in Japan also established a pediatric hospital in the building lot of Luang Prabang hospital, and the number indicated above does not include this hospital. Among the 17 hospitals stated previously, 10 hospitals have in-patient services whose number of beds ranges from minimum 20 to 100 in maximum. In terms of country invested to private hospital business, 10 facilities are funded by the domestic companies, 4 facilities each by Viet Nam and China, 1 facility each by Republic of Korea and Japan.

In this survey, among the hospitals listed above, a site visit was conducted to 1 hospital where has average size. It was started as a clinic in 2006 and became a hospital in 2012 with 30 beds for in-patients. The average day of hospitalization is 3 to 5 days and beds occupancy rate are on ly 55 to 60 %. The nuber of patients are 42,500 per year and the major causes of hospitalization are reported as emergency cases, diabetes and dengue fever etc. The out-patient department opens all year rounds. The number of emergency patients are 10 to 20 per day, and this number includes the patients of after-hour visits (which is 4 o'clock or after). The cases such as head injury, cardiovascular diseases, cerebrovascular disorder are subjects to refer to the corresponding national central hospitals. As for the patients of a cardiac infarction, there are some cases that refer to the hospitals in Bangkok of Thailand. With regards to medical equipements, the hospital holds an own amburance and the usage fee per one time is 2 to 25 USD that impose from individual. There is a 4 DAS (Data Acquisition System) CT, and it is used 5 to 7 times per day. There are also 3 ultrasonic echo machines (that is used for 14 to 16 patients per day). As for the ultrasound, a medical specialists is providing the services on part time basis. Othere than Biochemistry and CBC, there are 5 dialysis stands operated by three-shifted staff on 6-day-per-week basis. Regarding the human resources, there are 14 doctors (of them, 5 are part time basis), only 18 nurses, 3 or 4 laboratory technicians, 7 or 8 administration staff and this figure indicarets that the hospital are somehow managing by largely cutting staff cost.

The figure below is the organization in public health sector in Laos. This figure was provided by WHO as WHO publication and this information is as of 2012. Through the survey in this time, updated information was also provided by other sources, such as, National health insurance bureau is located under Department of Finance or private and central hospitals are supervised by DHC not by the MoH directrly.



Figure 1-9 Organization in health sector, Lao PDR Source : MOH, 2007; MOH, 2012b; MOH & MPI 2001; MOH & Lao Statistics Bureau, 2012

According to the national health statistics, health care human resources in Laos are classified into 34 types. The national average of the staff of health center was increased 2.8 (2012/2013) in previous year to 4.3 (2013/2014) and the report suggests that he area of Maternal, Child and Neonatal health service was hugely improved. Although, statistics by provice shows that only some provinces excess this avatrage. They are, in decreasing order, Champasak, Khammouan, Bolikhamxai, Xiangkhouang, Savannakhét, Xaignabouli, and Vientian

Capital City. As such, for the provinces other than these provinces, in addition to capacity building, increasing the number of human resources should also be considered. As of August 2014, 1,920 doctors are working in the public health sector, but the number of doctors per population of 1,000 is still 0.28, which is low as compared to the neighboring countries (24).

1.3.3 Sources of Revenue and Financial Flows of Public Health Care Institutions

The health care services in Laos are provided by the public central hospitals, provincial hospitals, district hospitals and health centers. The central hospitals are under the jurisdiction of the Ministry of Health (Department of Finance, Department of Planning and International Cooperation), the provincial hospitals are under the provincial health office and the district hospitals and health centers are under the jurisdiction of the district health office by way of the provincial health office. According to the Laos Health System in Transition (HiT) report by WHO in 2014(25), there are three major financial resources for the operation of the public health care institutions, namely, revenue from patients (including insurance and drug purchasing fee), contribution from development partners and government subsidy (26, 27). The RDF system was established in accordance with Article 230 of the Decree of the Ministry of Health in 1997. As the National Drug Policy was extensively revised at the same time, many private pharmacies opened and it is reported that as of 2010, there are more than 2,000 private pharmacies in the whole country. With respect to drugs, 25% of the purchasing fee is the revenue of the institution, but this applies only in the case where the patient purchased the drug from the pharmacy in the hospital. Also, the service fee varies between the health care institutions. With respect to the service fee, as Article 381 of Decree 52/PM of the Law on Health Care was extensively expanded in 2005 and Article 1464 of the Decree of the Ministry of Finance specified the fee for each health care service at the same time, an environment enabling each institution to provide services at a unified fee was set up. However, it is also pointed out that such decrees are not applied and the values of drug fee and service fee always vary between institutions and cases (25). Moreover, the same report also says that it is a common practice in Laos that patients voluntarily make informal payments to health care providers when they receive services (25). In view of the circumstances as described above, it is considered that the revenue breakdown of health care institution actually varies from one institution to another, depending on the operating status and other factors of the institution. The government has initiated a decentralized system, including further strengthening of district level management and planning. Instead of a top-down system of budgeting and allocations, as seen previously, more room is given for comprehensive planning and budgeting at the district level for their own activities. Around 64 districts have been assigned to the management initiative in 2013 (19).

Fig. 1-10 shows the financial flows in the health sector.



Figure 1-10 Financial flow in health sector, Lao PDR Source : MOH &WHO, 2013

The lower half of the central part of the figure shows the health care institutions and the arrows pointing to them represent the flow of funds to the corresponding institution. The yellow area at the center, which says "Capitation", represents the flow of funds from the three public health insurance frameworks (SASS, SSO/SSS, CBHI) to each health care institution. This shows that, in principle, the funds corresponding to health care fee are paid in advance to designated hospitals allocated to the insurance participants (25). The figure shown above indicates that the contricutionfrom general public goes only to the central hospitals, however, our field survey reveieled that the same financial flow applyies to provincial or district hospitas as well as health centers.

1.3.4 Regulations about Functional Standards and Unit Service Fee of Health Care Facilities

According to the 2013 – 2014 information from the Ministry of Health, there are five central hospitals, three specialized treatment centers, 17 provincial hospitals, 134 district hospitals (one hospital was added in January 2016) and 983 health centers (two centers were added in January 2016).

	Organization Unit	Health Center	District Hospital TypeB	District Hospital TypeA	Province Hospital	Central Hospital
1	Vientiane Capital	42	9	0	0	5
2	Phongsaly	35	5	1	1	0
3	Luangnamtha	40	4	1	1	0
4	Oudomxay	46	5	1	1	0
5	Bokeo	38	4	1	1	0
6	Luangprabang	79	11	1	1	0
7	Huaphanh	61	5	3	1	0
8	Xayabury	76	6	4	1	0
9	Xiengkhuang	51	5	1	1	0
10	Vientiane Province	41	8	3	1	0
11	Xaysomboun	17	4	0	1	0
12	Borikhamxay	40	5	1	1	0
13	Khammuane	85	8	0	1	0
14	Savannakhet	149	10	4	1	0
15	Saravane	59	6	1	1	0
16	Sekong	26	3	0	1	0
17	Champasack	65	6	4	1	0
18	Attapeu	33	4	0	1	0
	Total	983	108	26	17	5

Table 1-1 Allocation of Public Health Care Institutions to Each Province in Laos

Source: Prepared by the Survey Team based on the National Health Statistics, Laos (2013/2014) and the DHIS2

The Decree of Health Care Institutions specifies the definition, functions, personnel allocation and operational responsibility of each of these facilities. Health centers are installed within the village, which is the smallest administrative unit, and they provide basic health care treatment as well as health services centered on primary health care. District hospitals are at the level above the health centers. These two facilities are divided into Type A and Type B in accordance with the regulations about the functions and facility size and Type A facilities are of a higher grade. Provincial hospitals are upper-level facilities of the health centers and district hospitals described above. Above the provincial hospitals are central hospitals, which theoretically function as tertiary health care facilities, but since all the central hospitals are located in Vientiane Capital City, in the northern and southern regions, which are several hundred kilometers away from Vientiane, provincial hospitals are virtually the uppermost-level health care facilities. Specialized treatment centers are of dermatology, ophthalmology and rehabilitation and they are also located in Vientiane City. To improve the quality of service and the usage rate of these health care institutions allocated to each administrative unit as described above, efforts have been made to upgrade such institutions, and development of facility standards and improvement of facility equipment are still in progress for this purpose. Regarding upgrading the provincial hospitals to regional hospitals, the government of Laos indicted, in its 8th Health Sector Development Plan (HSDP), to develop and upgrade 5-7 provincial hospitals to become regional hospitals.

Concept of upgrading health centers



Concept of upgrading district hospitals





Figure 1-11 Concept of upgrading health centers, district hospitals and provincial hospitals Source: Prepared by the Survey Team based on the Decree of Ministry of Health (Health Center, District and Provincial Hospitals) and WHO Health Survey Profile Lao PDR 2012

In order to implement such development, it is necessary to understand the current situation and develop regulations first. In terms of human resources, in addition to the development of personnel to make up for the shortage and appropriate allocation planning, education and training to improve the quality of the existing personnel is considered to be necessary. Moreover, with respect to the regional hospitals that are virtually the uppermost-level health and medical facilities in the northern and southern regions away from Vientiane, it is necessary to develop them so that they will be able to function as tertiary medical facilities in the future.

1.4 Summary of Assistance Provided by Other Developing Partners

Japan has been the largest provider of ODA grants to Laos. In the area of health care, Japan, as the leading developing partner, has been constructing a good relationship with the Government of Laos by providing grant aid for the development of top referral hospitals and district hospitals and the provision of technical cooperation in maternal, neonatal and child health care. Among central hospitals, specifically, regarding the Setthathirath Hospital, Japan has long been providing assistanceby conducting technical cooporation projects such as The Project for the Improvement of Sethathirath Hospital from October 1999.10 to Setember 2009 and Project for Medical Education and Research for the Setthathirath Hospital, from December 2007 to 2010. Grand aid were also provide for the Project for Construction of New Sethathirath Hospital in 1999. In the Country Assistance Policy for Laos established in 2012, the health sector was defined as one of the priority fields. Moreover, with an aim at "improving the health care service" in Laos, an assistance direction was established. Under the direction, it was determined to provide assistance for enhancing the country's health system mainly through supporting the development of healthrelated human resources particularly in the field of maternal, neonatal and child health and the development of health care facilities to help its people to have better access to health care service. In "Japan's Strategy on Global Health Diplomacy" issued in June 2013, the Government of Japan indicated its intention to offer assistance to the achievement of universal health coverage (UHC). In addition, in "JICA's Cooperation in the Health Sector" issued in September that year, a cooperation policy to put more emphasis on the "organization of systems and strengthening of management in order to achieve UHC" was announced.

Other providers of total ODA grants to Laos following Japan are Australia, Germany, South Korea and Switzerland. Among international organizations, the largest developing partner is the Asian Development Bank that provided assistance of a total of 66.47 million USD (about 8 billion yen when converted with an exchange rate of 120 yen/USD). Following the Asian Development Bank is the International Development Association (IDA), European Union (EU), the Global Fund to Fight AIDS, Tuberculosis and Malaria (GFATM, 2012) and the International Fund for Agricultural Development (IFAD) (28).

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Year	Rankin	ig No.1	No.	2	No.3		No.4		No.5	
2008	Japan	68.13	Germany	28.83	Australia	28.10	France	25.45	Sweden	20.79
2009	Japan	94.40	Australia	29.61	Germany	27.36	South Korea	25.14	France	19.12
2010	Japan	123.62	Australia	32.68	South Korea	27.75	Germany	24.8	Switzerland	16.37
2011	Japan	59.63	Australia	55.09	South Korea	33.48	Switzerland	24.58	Germany	24.32
2012	Japan	93.17	Australia	53.85	Germany	31.52	South Korea	23.52	Switzerland	20.72

 Table 1-2
 ODA Amount Provided to Laos and Yearly Change

(Unit: 1 million USD))

Source: OECD/DAC 2015

Ministry of Foreign Affairs Japan HP http://www.mofa.go.jp/policy/oda/data/pdfs/laos.pdf

According to an OECD report of 2015, the breakdown of ODA grants provided to Laos in 2013 was 243 million USD (about 29.1 billion yen when converted with an exchange rate of 120 yen/USD) for the social sector, 141 million USD (about 16.9 billion yen) for the production sector, 99 million USD (about 11.9 billion yen) for the economic sector and 80 million USD (about 9.6 billion yen) for the multi-sectoral area. To the social sector, which also includes education, and health sectors, more than 50% of the total ODA grants were provided (28). ODA grants provided to the multi-sectoral area are the largest next to the social sector, the production sector and the economic sector (28).

Sector	USD	JPY
Social	243	Approx.
	million	29.1billion
Production	141	Approx. 16.9
	million	billion
Economic	99	Approx.11.9
	million	billion
Multi-	80	Approx. 9.6
sectoral	million	billion

 Table 1-3
 Distribution of ODA to Laos among Sectors

Source: OECD, Development aid at a glance – statistics by region, Asia 2015 http://www.openaiddata.org/purpose/745/121/701/

1.5 Summary of Health Service in Metropolitan Area

As mentioned above, the Government of Laos has been working to improve the country's health indices as a whole and incorporated in its 8th 5-year health sector development plan 2016 - 2020 (8th HSDP) for the sophistication of the health functions and the development of an emergency referral system. The government also works to expand the health service network in relation with the five central hospitals (Mahosot Hospital, Mittaphab Hospital, Setthathirath Hospital, Mother and Child Hospital and Children's Hospital). By 2020, it also plans to offer specialized treatment that is comparable to the average of Asian countries, while it works to enhance the emergency referral system (20). A detailed plan for differentiation of functions at each central hospital has already developed and it was decided that Mittaphab Hospital would respond to emergency cases and external injury, while Setthathirath Hospital would try to improve its special functionality in infectious diseases. It is considered that central hospitals and specialized therapy centers located in Vientiane Capital City will drive efforts like this, acting as a leader. Currently, in fact, central hospitals are assigned with provinces they should be in charge of and they are supposed to offer service in those provinces. According to an analysis of hospital data for the past 5 years submitted by Setthathirath Hospital, Mahosot Hospital and Mittaphab Hospital under the District Health Information System 2 (DHIS2), however, each central hospital has medical departments they excel in and there are deviations of the number of patients visiting those hospitals depending on such excellence. At Setthathirath Hospital, the number of inpatients and outpatient suffering from infectious diseases or common cold is fewer than that of other 2 hospitals and the number of patients of hypertension is about one third of the total. However, regarding the cancer, Setthathirath Hospital is treating 76 % of all patient in these three hospitals. Partly in conjunction with such present conditions, currently, there is precondition that each central hospital given geographic quata and suppose to provide health and medical services to the corresponsig provinces, it is considered that the Government of Laos will change its policy for hospital development, putting more emphasis on treatment functions under its national plan.

In Vientiane Capital City, it was confirmed that urban-type issues already exist, from provincial information and from a tendency in which diseases occur reported in facility-based statistics (DHIS2). The reported number of diabetes in Vientiane Capital City increased about twice for 3 years from 2011 and the same rate of high blood pressure was increasing, too.

The WHO report on NCDs (30) projects breakdown of causes of death and reports the projected number of patients who did not visit the hospital and died. According to the report, it is predicted that death from NCDs in Laos accounts for 48% of the total (Figure 1-13). In addition, of its total population, the probability of dying from four major diseases in NCD (cancer, diabetes, circulatory diseases and chronic respiratory diseases) among people in the age group of 30 to 70 is 24% (30) and the problem is considered to become more serious in urban areas like Vientiane Capital City. Concerning NCDs, in the 8th HSDP, it is stated that health service technologies will be further adopted to enhance capabilities of both treating infectious diseases and prevention, diagnosis, therapy and rehabilitation. Particularly at Setthathirath Hospital, a plan is being

made to upgrade itself to a hospital where cancer therapy can also be provided.



Figure 1-12 Breakdown of Patients' Death in Laos by Cause (Projection) Source: Non-Communicable Diseases (NCD) Country Profiles, 2014

Furthermore, according to cancer statistics of WHO (31), in terms of risk factors of NCDs, of total population, about one fourth is smoking, 3% is suffering from obesity and 9% is found lacking physical exercise. Among cancer death causes, liver cancer ranks at the top for both men and women, with a half of deaths coming from liver cancer among men. Among women, the second largest cancer death cause is breast cancer, followed by a gynecologic disease which is cervical cancer. Among men, the second largest cancer death cause is lung cancer. This trend has not changed for the past 15 years.

Recently in the capital of Laos, Vientiane, an increasing number of traffic accidents in addition to non communicable diseases has been a concern. It is reported that, of 7.16% of external injury cases, such injury caused by traffic accidents accounts for two thirds and people dying from external injury caused by traffic accident have increased at the rate of 7% yearly. Moreover, this death rate is expected to rise in the future, too, and therefore, the Lao National Road Safety Committee (NRSC) implemented measures to strengthen traffic safety and other measures under the Action Plan 2011 – 2020 (32) and has been working to reduce external injury cases caused by traffic accident (particularly injury cases of young motorcyclists) in 5 specific areas including road safety management, safer roads and mobility, safety vehicles, safer road users and post-crash response. It is reported (33), however, on some roads, traffic injury increased 10 times from the previous year and it is urgently necessary to construct and maintain a system for ambulance transportation and emergency medical service provision² (referral system) which is a part of response to traffic accidents.

 $^{^2}$ It is important to balance between facilities to accept serious injury cases (a smaller number) and facilities to accept minor injury cases (a larger number).

1.6 Summary of Health Care in the Southern Provinces

The Laotian southern region is composed of 4 provinces of Sekong, Attapeu, Salavan and Champasak.

The capital of Champasak Province, Pakse, is the second largest city in Laos next to the country's capital, Vientiane, and the poverty rate of Champasak Province as a whole is as low at 18.4% as in the capital Vientiane. The other three provinces excluding Champasak Province where Pakse is located have an extremely high poverty rate in Sekong Province (41.9%), Attapeu Province (44.0%) and Salavan Province (54.5%) (34). When comparing the northern, central and southern regions, it seems that the poverty rate in the southern region is lower than that of northern region but a characteristic of the southern region is that it has two different elements, urbanized Pakse where poverty rate is low and its neighboring areas where poverty rate is high. The map on the right shows the poverty rate in various areas and the redder the area is, the higher the poverty rate is and the greener the lower.



Figure 1-13 Poverty Rate in Laos by Province Source: MDG Progress Report Laos 2008

In terms of population, Champasak Province has the largest of about 670,000 in the southern region and it accounts for more than half (55.7%) of the total population of all of the 4 southern provinces. Following Champasak Province is Salavan Province which has a population of 380,000 (32%), followed by Attapeu Province with a population of 130,000 (11%) and Sekong Province with a population of 100,000 (8.6%).

When looking at health index of these four southern provinces, the literacy rate among women at the age of 15 to 24 is the lowest at 39% in Salavan Province where the poverty rate is the highest and the maternal, neonatal and child health index such as infant mortality rate is also high (35).

The Government of Laos has already implemented measures for these southern provinces by clearly mentioning about those measures in its 8th Five-Year Health Sector Development Plan (HSDP). Firstly, it was decided to make collaboration with WHO in taking measures for NCDs and Champasak Province was selected to be the target province of such measures. Furthermore, based on the Health Reform Plan (36), the Government of Laos plans to further develop and maintain the newly constructed Sekong and Attapeu Provincial Hospitals. In addition, under the reform plan, each central hospital has an area in which it takes charge and the central hospital in charge of the southern provinces is Mahosot Hospital. Champasak Hospital which has already been designated as a regional hospital plans to become one of top-level hospitals in the country, while it was also decided that efforts be made to try to further develop facilities of other provincial hospitals so that they can be upgraded. Although Japan has long been providing assistance to Laos putting emphasis on the southern provinces so far, it is essential to consider such government policies in the future

and continue to provide assistance in line with the concept of universal health coverage (UHC).

1.7 Present State in Local Communities and their Issues

Laos is a multiracial country with most of its population living in mountainous areas and in a number of areas, residents have difficulty to access health service both physically and socially. In Laos, as a whole, the maternal death rate is high (197 deaths per 100,000 women; 2015) (37) and 26.6% of children under 5 years of age have low body weight and 44% of them are in the state of poor development. Under such circumstances, it is pointed out that surveying and confirming actual health action, particularly that of mothers and children is important (21). In order to improve health indicators in the future, in addition to maternal, neonatal and child health, it is important to examine the possibility of making efforts beyond the existing framework, share knowledge obtained through past activities of MOH and developing partners and study measures and methods that can contribute to elimination of barriers to the use of health care service.

Efforts to tackle issues in communities have already been implemented under a national policy. In the 7th 5-Year National Socio-Economic Development Plan (7th NSEDP), emphasis was put on the development of each sector and decentralization such as the "3 Builds" project. In the 8th 5-Year National Socio-Economic Development Plan (8th NHEDP)to start in 2016, multi-faceted efforts covering multiple sectors are incorporated. Particularly for the health sector, the plan expressly handles specific elements including food security for improving malnutrition, provision of high-quality health service and efforts concerning preventive medicine. Also, in the 7th Five-Year Health Sector Development Plan (7th HSDP), new types of job such as village health worker (VHW) and village health volunteer (VHV) were established so that health centers in local communities can provide services by them who is residing in respected villages. However it is pointed out no training programs have been developed to improve workers' skills and workers tend to lack necessary skills. In addition to underdevelopment of functional standards for various facilities, there are other issues such as a deviation between the theoretical value and actual state of personnel distribution and imbalanced allocation and incorrect categorization of areas of which those facilities should be in charge. This new trial is still in the pilot stage.

In a 2012 WHO report on the health service which clearly indicated the breakdown of health actions (21), it is stated that in Laos, traditional or alternative medicine, acupuncture, Ayurveda and herbal therapy are also popular among people of Laos in addition to modern health care. It reported that 77% of the population have used traditional medicine, which indicates there is a possible conceptual conflict between modern health care and those types of health care. Also, 21% of the population were found to be living in areas without road and factors not related to the health sector are possibly giving a large impact on people's actions related to visit to health care facilities. It was pointed out that the factors inhibiting an improvement of maternal death rate included a lower contraceptive prevalence rate, a lower rate of delivery attended by person who has special obstetric skill or conducted at health care facilities and limited access to health care before and after delivery and emergency obstetric care³⁷.

It is necessary to confirm the motives of visiting health care facilities and barriers to access to health service and to examine the future assistance aiming at improving people's use of health service. Particularly with respect to issues in local communities in the southern provinces, it is necessary to study future measures against underdeveloped access to health care facilities and cultural habits concerning women's childbirth (38).

Chapter 2 Development of Central Hospitals (Setthathirath Hospital, Mahosot Hospital, Mittaphab Hospital)

2.1 Objectives and Method of Survey

From October 25 to November 7, 2015, the Survey Team conducted a questionnaire-based data collection survey about the details of the three central hospital facilities.

2.2 Analysis of Current Status

Mittaphab Hospital

Setthathirath Hospital

2.2.1 Current status of the three central hospital facilities

Tables 2-1 and 2-2 show the survey results on the patients of the three central hospital facilities in 2013/2014.

No. of No. of Hospital No. of OPD/IPD **Hospital Name Outpatients** Inpatients beds (A) Emergencies (B/C) (B) (C) 450 414.486 18.982 7.5 Mahosot Hospital 55.264

66,404

Table 2-1 Summary of the Three Central Hospitals in 2013/2014

250

220

129,331 42,471 13,114

16,258

13,146

Unit: Persons, ratio

3.0

4.1

IPD/Bed

(C/A)

42.1

52.5

59.8

Source: JICA Survey Team, based on the results of field survey

Mahosot Hospital has an outstandingly large number of outpatients and accordingly, the ratio of outpatients to inpatients is high. It is presumed that Mahosot Hospital has emphasis on outpatient treatment, while Setthathirath Hospital and Mittaphab Hospital has emphasis on inpatient treatment. On the other hand, the number of inpatients is more or less the same, but the number of inpatients per hospital bed was the highest in Setthathirath Hospital. From the patient demographics relating to hospitalization, it was found that hospitalization days, average hospitalized days and occupancy rate were lower in Setthathirath Hospital as compared to the other two facilities.

Hospital Name	Year	No. of Inpatients (persons)	Total Hospitalization Days (days)	Average Hospitalized Days (days/patient)	Hospital Beds	Occupancy Rate (%)
	2010-2011	22,864	75,588	4.16	450	69.50
	2011-2012	18,162	76,096	4.00	450	70.17
Mahosot	2012-2013	21,425	88,783	4.00	450	78.75
Hospital	2013-2014	18,982	73,345	4.00	450	60.00
	2014-2015	19,661	102,366	5.00	450	57.07
	Average	20,219	83,236	4.23	450	67.10
	2010-2011	9,161	73,288	8.00	150	112.80
	2011-2012	10,261	71,827	7.00	150	118.77
Mittaphab	2012-2013	12,433	74,598	6.00	250	98.34
Hospital	2013-2014	13,114	65,570	5.00	250	87.90
	2014-2015	N/A	N/A	N/A	250	N/A
	Average	12,774	70,084	5.50	250	93.12
	2010-2011	15,747	35,008	3.50	220	54.44
	2011-2012	17,100	38,511	2.44	220	54.49
Setthathirath	2012-2013	26,293	10,222	2.05	220	54.59
Hospital	2013-2014	13,176	37,264	4.20	220	47.48
	2014-2015	13,649	31,718	2.21	220	57.34
	Average	19,193	30,545	2.88	220	53.67

Table 2-2 Patient Statistics of the Three Central Hospitals in 2013/2014

Note 1) The average value of four years from 2010/2011 to 2013/2014 for Mittaphab Hospital Note 2) The average value of five years from 2010/2011 to 2014/2015 for the other two hospitals.

Source: JICA Survey Team, based on the results of field survey

2.2.2 Emergency Care

As shown in Figure 2-1, two facilities take up 86% of the emergency patients, which means that in Vientiane City, emergency care is mainly provided by Mahosot Hospital for internal medicine and Mittaphab Hospital for surgery. Nevertheless, since injury is ranked

No. 1 for the patient type (2,195 cases) in Setthathirath Hospital in 2013/2014 and in terms of the breakdown by clinical department, the emergency department treated the largest number of patients visiting the hospital, involvement in emergency care has an important meaning for Setthathirath Hospital. However, as this hospital transfers 87 serious cases of injury to Mittaphab Hospital in a year, it is presumed that external injuries treated by Setthathirath Hospital are mild to moderate cases, such as non-open fracture and soft tissue injury. Likewise, for emergency care in internal medicine, as this hospital is not able to carry out CT examination at present, serious cases need



Figure 2-1 Distribution of Emergency Cases in the Three Central Hospitals in 2013/2014 Source: JICA Survey Team, based on the results of field survey to be transferred to Mahosot Hospital, and as such, it is presumed that the hospital treats mild to moderate cases.

2.2.3 General Treatment

From the analysis of hospital data for the past five years submitted by Setthathirath Hospital, Mahosot Hospital and Mittaphab Hospital to DHIS2, it was found that each hospital has strength in some clinical departments and that for each clinical department, patients are concentrated on certain facilities. While Setthathirath Hospital treated only 16.5% of patients with infectious diseases and common colds and 34.5% of those with hypertension, it treated 75.8% of cancer patients. Similar results were also found from the questionnaire-based survey. Division of functions has also been observed for general practice in relation to emergency care, such as, overall internal medicine and abdominal surgery for Mahosot Hospital, injury treatment, orthopedics, neurosurgery and renal dialysis for Mittaphab Hospital and HIV infection, tuberculosis (TB), hypertension and diabetes for Setthathirath Hospital. Maternal, neonatal and child care is handled by the National Mother and Child Health Hospital as well as the three central hospitals.



2.2.4 Outline of existing equipment

The following description is about the existing equipment in the three central hospital facilities, their maintenance status and local equipment distributors.

(1) Mittaphab Central Hospital

① Existing equipment

Facility	Current status
Emergency room	Although 13 patient beds are installed, there are only five bedside monitors, which
	were recently installed. The number of the bedside monitors is somewhat
	insufficient. Two ECGs were installed in 2010 and two defibrillators were installed
	in 2014. All the equipment have been managed adequately. The hospital owns five
	ambulances, which have been maintained without any problem.
ICU	The ICU is well-maintained with 16 patient beds, 10 bedside monitors and 11
	ventilators. Not only the health care equipment used but also the room are all
	maintained very well and hygienic. It is particularly noteworthy that the equipment
	that are not normally used are neatly stored in a small storeroom.
Delivery room	Delivery tables and suction units do not seem to have a problem as they function
	adequately, although more than 10 years have passed since they were installed.
	However, it seems that there is a need to install ultrasound units for the observation
	of unborn babies since the room does not have one.
Operation theater	As operation tables and operation lamps were installed in 2013, there is no problem.
Image diagnosis	General X-ray unit, which was installed 10 years ago, is still in use. Mobile X-ray
	unit and CT were installed in 2013 and they function sufficiently. It is particularly
	noteworthy that this central hospital installed an MRI in 2015 and a dedicated
	building has been built for it.
Examination room	Three automatic hemocytometers, four biochemical analyzers, four centrifuges,
	three autoclaves and a microscope have been installed. The equipment of the
	examination room are maintained and calibrated based on a contract with an external
	party and as such, they operate without any problems.

② Maintenance status

Although some the health care equipment were installed in the early 2000s, others were installed between 2010 and 2015 and they are used in good shape. Consumables and spare parts are purchased from distributors in Vientiane or by contacting Thailand or Vietnam. At the time of the field survey in November 2015, MRI was not in operation due to a failure, but by the technician sent by the manufacturer, it was in operation at the time of the second field survey.

③ Users of health care equipment

As many of the health care equipment are used by doctors, doctors are skillful in operating the equipment. Also, specialized personnel have been assigned for the X-ray unit and MRI. As such, there is no problem in the utilization of the equipment.

(2) Mahosot Central Hospital

① Existing equipment

Facility	Current status
Emergency room	Nine patient beds and five bedside monitors are arranged in a large hall measuring about 10×20m and a defibrillator, an ECG and two suction units are installed. The patient beds were installed in 1995 and the defibrillator and the suction units were installed in 2008. Although they have no problem in function, the timing for replacement is approaching. Although the beds are arranged in an orderly manner, the bedside monitors are also kept near the beds of patients who do not need them. It is necessary to make sure of keeping them neat and tidy. The hospital owns four ambulances including the one obtained in 2015. They have been maintained adequately.
ICU	Eleven patient beds, 14 bedside monitors and seven sets of ventilators are installed. They are new, because they were procured between 2013 and 2015. There is also relatively old equipment, which is a defibrillator procured in 2010.
Delivery room	With respect to delivery table, two units that were procured in 1995 are installed. They have been used for 20 years after installation, but have no problem in terms of function. As for ultrasound unit, one unit was procured in 2010 and it still operates satisfactorily.
Operation theater	There are seven operation theaters. The operation tables, electric scalpels, operation lamps and ventilators that are used in them were procured in 2008.
Image diagnosis	General X-ray unit (2005), mobile X-ray unit (2007) and CT (2002) are installed. As the CT is more than 10 year old, it must have deteriorated, but it is still usable.
Examination room	Automatic hemocytometers, biochemical analyzer, centrifuge and microscope are installed. The hemocytometers were procured in 2010 and 2013 and the microscope was procured in 2014, but other equipment are relatively old, having been procured in 2007 and 2009. However, they are in a good condition and used without a problem.

② Maintenance status

Mahosot Central Hospital does not have any personnel dedicated to maintenance and the electrician carries out simple repair work. Most of the equipment in the operation theaters were installed around 2008 and as such, they look slightly old but they still function well. The equipment for the ICU were installed after around 2010 and they have no problem. If any of the existing equipment fail, the supplier is called to repair and if the supplier is not able to respond, a repair request is sent and spare parts are procured by way of the manufacturer's agent in Vietnam or Thailand.

③ Users of health care equipment

Seventy seven medical specialists who use health care equipment are registered and they have ample experience in using the equipment. On the other hand, with respect to the operation of the X-ray units, 15 technicians are assigned and as such, there is no problem.

(3) Setthathirath Central Hospital

① Existing equipment

Facility	Current status
Emergency room	Seven patient beds, three bedside monitors, a defibrillator and an ECG are installed. The defibrillator was installed in 2012 and the bedside monitors were
	newly purchased.
Delivery room	The delivery table, which was procured in 1999, has reached the timing for
	replacement. The ultrasound units were replaced from 2012 to 2015 and they have
	no functional problem.
Operation theater	The operation table, operation lamp and electric scalpel were installed in 2001 and
	they need to be replaced because the bed part is broken and the operation lamp
	malfunctions.
Image diagnosis	The general X-ray unit was installed in 2014, but the mobile X-ray unit was
	installed in 1998 and the CT was installed in 2001. The CT, which failed in 2011,
	has been left as is and cannot be used for diagnosis.
Examination room	The equipment in the examination room are maintained and calibrated based on a
	contract with an external party. The area around the analyzers is kept neat and tidy
	and the analyzers operate without a problem.
Laundry	One of the two industrial washing machines installed in 2001 is already out of
	order and requires replacement. Also, a dry machine that was installed at the same
	time is no longer in operation.

② Maintenance status

As with the other central hospitals, the hospital does not have dedicated maintenance personnel and the electrician performs simple repair. Many of the equipment for image diagnosis and in the operation theater and the delivery room were installed in the early 2000s and problems have occurred, such as being unable to procure consumables and spare parts in case the equipment breakdown. When equipment recently failed, the spare parts were ordered from the manufacturer in Japan, since the local distributor could not procure them and the spare parts arrived two months after the placement of the order.

③ Users of health care equipment

Twenty-three medical specialists who use the health care equipment are registered and they have enough experience in using them. With respect to laparoscopic surgery, the hospital has no track record as it does not have a laparoscope at present. However, as the hospital has three medical specialists with experience and track records in other hospitals, there should be no problem with the equipment installation.

2.2.5 Local equipment distributor

In Vientiane, the capital of Laos, there are many distributors of health care equipment, but most of them are importers who import equipment according to order. Therefore, they do not have their own technicians and when the equipment need to be inspected or repaired, technicians are sent from neighboring countries, such as Vietnam and Thailand.

2.3 Financial status and problems of the three central hospital facilities

2.3.1 Composition of financial accounting in public health care institutions

Financial accounting in public health care institutions in Laos is organized with a focus on the following two items.

- a) Government subsidy
- b) Revolving fund³ budget actual expenditure (achievement rate)

It should be noted that the details of the revenues are not described in the financial materials submitted by the three central hospitals and as such, the profit and loss status of each health care institution based on the revenues and expenditures from medical practices is hardly visible. In this survey, the Team carried out the analysis by reorganizing the findings as described below. Numbers in italics in parenthesis are those of the accounting articles designated by the government.

[Revenues]

a) Government subsidy

Expenses (=expenditures) covered by government subsidy based on the approval of the parliament consist of the following:

- Wages and allowances of the staff of health care institutions (10=Relating to basic wages and standard allowances, 11=Relating to overtime and special allowances)
- 2 Expenses for large-scale investments, such as facility development and installation of expensive health care equipment (17)

On the other hand, large-scale financial aids provided by foreign and domestic organizations to the health care institutions are temporarily received by the national treasury and then they are allocated to the expenses for large-scale investments of ②, after appropriate budgeting and execution procedures are completed.

b) Revolving fund (RF)

The revolving fund revenues are covered by the medical practice revenues of each health care institution, but the budgeting and execution require reporting to and approval from the Ministry of Health, which is the competent ministry, and the Health Office of the relevant province and district.

³ Revolving fund = Clinical service revenue = Medical practice revenue as referred to in Japan

The medical practice revenues are divided into direct revenues (from uninsured patients) and indirect revenues (from public health insurance) and each of them has two sources, namely, "① Drug price revenue, which is 125% of drug purchasing cost" and "② Clinical service revenue".

It should be noted that the usage of ② Clinical service revenue is designated by legislation that it shall be used for the improvement of the health care services and accordingly, 15% of the revenue is supposed to be allocated for the personnel cost (10, 11) to improve the motivation of the staff in executing their duties and 85% for the expenses to maintain and improve the clinical functions and to facilitate the operation (12 = general expenses, 13 = facility operation cost, 16 = cost for newly purchasing equipment).

[Expenditures]

a) Government subsidy

*Actual positioning of the revolving fund revenues

The rules described above are not strictly enforced. Some health care institutions do not allocate any to the personnel cost, claiming that it does not have reasonable benefit for the cost and other health care institutions mechanically add on to the government subsidy for personnel cost.

(Source: Interview of the financial officer in charge of the Salavan Provincial Health Office by the Survey Team)

*Actual positioning of the public health insurance revenues

With regard to the flow of funds, the funds are indirectly provided to each health care institution by way of the Ministry of Health and each Health Office from the Foundation or the national treasury, but since they are revenues generated in accordance with clinical services, each health care institution incorporates them into the revolving fund revenues.

(Source: Interviews of the director and financial officer in charge, Setthathirath Hospital, and the financial officers in charge of the Health Offices of the four southern provinces by the Survey Team)

*Actual health care fee structure

No uniform health care fee structure has been established. The reason is low coverage of the public health insurance and the pricing varies between the health care institutions. However, with respect to the fees, fees relating to clinical technology, such as diagnosis fee and operation fee, except for laboratory test fee, are not publicly disclosed.

(Source: Interviews of the directors and financial officers in charge of the central hospitals and the financial officers in charge of the Health Offices of the four southern provinces by the Survey Team)

It is distributed to expense items relating to the personnel cost (10, 11) and large-scale capital investment (17), but there were also exceptional cases in which it was allocated to other expense items (12, 13, 16).

b) Revolving fund

It is mainly distributed to the items relating to expenses, but it is presumed that 15% of the clinical service revenues is distributed to the personnel cost (10, 11). However, the details and the actual distribution ratio were different between the health care institutions.

[Balance between revenues and expenditures (profit and loss)]

As it is difficult to determine the profit and loss based on the medical practice revenues and expenditures (costs) as in the case of Japan, scale of revenues, profit and loss status and management efficiency index were checked on the basis of total revenues (government subsidy + revolving fund) and revolving fund (medical practice revenues).

2.3.2 Financial statuses

i) Scale and growth rate of revolving fund (medical practice) revenues

The differences in medical practice (=clinical service) revenues between Mahosot Hospital or Mittaphab Hospital and Setthathirath Hospital are greater than the differences in the number of beds. The revenues of Setthathirath Hospital are only about one-third of those of Mahosot Hospital and about a half of those of Mittaphab Hospital.

	5		Unit: Million LAK
Hospital Name	2013/2014	2014/2015	Growth Rate
Mahosot Hospital	42,475.2	49,136.5	15.7%
Mittaphab Hospital	35,581.2	40,231.4	13.1%
Setthathirath Hospital	17,399.6	19,841.8	14.0%

Source: JICA Survey Team, based on the results of field survey

ii) Dependency on government subsidy

As 30 to 40% of the total revenues are from the government subsidy, it is obvious that these hospitals are not yet able to manage themselves without the government subsidy. The small scale of revolving fund revenues of Setthathirath Hospital shows that the management of this hospital currently has to depend more strongly on the government subsidy as compared to the other two hospitals. However, it cannot be said that the medical practice revenues of the other two hospitals are on a growth trend.

Table 2-4 Percentage of Government Assistance of the Three Central Hospitals (Government assistance/Total revenue × 100)

Unit: %

Hospital Name	2013/2014	2014/2015
Mahosot Hospital	37.4	40.1
Mittaphab Hospital	30.3	31.7
Setthathirath Hospital	49.0	48.4

Source: JICA Survey Team, based on the results of field survey

iii) Profit and loss status (profit and loss amount and rate)

As shown in Table 2-5, based on the total revenues, while Mahosot Hospital and Mittaphab Hospital are mostly in the black, Setthathirath Hospital is in the red or at the breakeven point. However, in terms of the profit and loss status based on the revolving fund revenues, as shown in Table 2-6, all the hospitals have a deficit.

The deficit of Mittaphab Hospital in fiscal 2014/2015 was exceptional, because it was generated as a result of advance purchasing of clinical supplies or health care equipment that are linked to the revenues carried

over to the next fiscal year⁴. In addition, considering that the growth of revolving fund revenues of this hospital from the previous fiscal year is greater than the growth of personnel cost, it seems, in real terms, that the hospital has a surplus (based on the total revenues).

Table 2-5 Profit or Loss Structure based on	Total Revenue of the	Three Centra	l Hospitals
			Unit: Million LAK

	2013/2014		2014/2015	
Hospital Name	[Total Reveues – Total Expenditures]	[Profit and Loss]/[Total Revenues]	[Total Reveues – Total Expenditures]	[Profit and Loss]/[Total Revenues]
Mahosot Hospital	4,048.9	6.0%	3,105.1	3.8%
Mittaphab Hospital	10,479.3	20.5%	-30,658.2	-52.1%
Setthathirath Hospital	975.1	3.1%	0.0	0.0%

Source: JICA Survey Team, based on the results of field survey

 Table 2-6 Profit or Loss Structure based on Revolving Fund Revenue of the Three Central Hospitals

 Unit: Million LAK

	2013/2014		2014/2015	
Hospital Name	[Total Reveues – Total Expenditures]	[Profit and Loss]/[Total Revenues]	[Total Reveues – Total Expenditures]	[Profit and Loss]/[Total Revenues]
Mahosot Hospital	-21,275.7	-50.1%	-29,791.8	-60.6%
Mittaphab Hospital	-5,024.7	-14.1%	-30,658.2	-122.6%
Setthathirath Hospital	-13,551.2	-77.9%	-18,598.7	-93.7%

Source: JICA Survey Team, based on the results of field survey

iv) Management efficiency index (personnel cost ratio)

With respect to personnel cost ratio, the management efficiency of Setthathirath Hospital is outstandingly low as compared to the other two central hospitals. According to the survey result of the Ministry of Health, Labour and Welfare disclosed in 2015, of the general hospitals with 300 or more beds in Japan, those that are in the black have an average personnel cost ratio of 46.9% and those in the red have 50.3%. Therefore, based on the revolving fund revenues, the personnel cost ratio of Mahosot Hospital is very close to that of profit-making hospitals in Japan and Mittaphab Hospital is already at a level beyond.

 Table 2-7 Personnel Expenditure Ratio Based on Revolving Fund Revenue of the Three Central Unit: %

Hospital Name	2013/2014	2014/2015	
Mahosot Hospital	51.0	53.5	
Mittaphab Hospital	34.9	37.0	
Setthathirath Hospital	88.3	77.2	

Source: JICA Survey Team, based on the results of field survey

 $^{^4}$ The cost of this purchasing is 53,750 million LAK, while that of the precious fiscal year was 20,095 million LAK, which shows a growth of 33,655 million LAK. This is much greater than the deficit of 30,658.2 million LAK based on the total revenues.

Table 2-8 Total Number of Staff and the Ratios of the Number of Beds to the Number of Staff in
the Three Central Hospitals

Hospital Name	Total number of staff	Number of Beds/Number of Staff
Mahosot Hospital	828	1.8
Mittaphab Hospital	515	2.1
Setthathirath Hospital	464	2.1

Source: JICA Survey Team, based on the results of field survey

However, in view of the difference in the scale of revolving fund revenues as described above, it is considered that the high personnel cost ratio of Setthathirath Hospital is a result of the low medical practice (clinical service) revenue rather than the surplus personnel.

2.3.3 Current status of Setthathirath Hospital

(1) Trend of outpatient care

Figure 2-5 shows the trend of the number of outpatients by clinical department in Setthathirath Hospital for the past five years. Ranked in the first place remains the emergency outpatients (ER), but the ear, nose and throat (ENT) and ophthalmology (OPH) rose to the second place and the number of outpatients of diabetes mellitus (DM) and hemato-oncology increased three times.



Note: See Attachment 57 (2) in Appendix 1 for reference. Source: JICA Survey Team, based on the results of field survey Figure 2-5 Trends in the Number of Outpatients by Clinical Department in Setthathirath Hospital (2010-2014)

(2) Trend of inpatient care

Figure 2-6 shows the trend of the number of inpatients by hospital ward in Setthathirath Hospital for the past five years.

Except for the increase of inpatients in the internal medicine ward in 2013, which was caused by the epidemic of dengue fever, no major change is observed in these five years.



Note: See Attachment 58 (2) in Appendix 1 for reference. Source: JICA Survey Team, based on the results of field survey Figure 2-6 Trends in the Number of Inpatients by Hospital Ward in Setthathirath Hospital (2010-2014)

(3) Clinical care/education structure

The Survey Team confirmed that the hospital has the infrastructure for the provision of specialized treatment of internal diseases and general treatment of the emergency, surgery, obstetrics and gynecology, and urology. The Team also confirmed that with respect to the preparation of clinical records and description of operations covered by the project for the improvement of Setthathirath Hospital from 2007 to 2010, the skills and methods learned by the staff are still in use. This implies that further improvement of the clinical infrastructure, clinical record preparation and management of Setthathirath Hospital will make the hospital a great strength in the education and training of health care providers in Laos and that it will be able to continue performing the duties as a more advanced educational hospital in the future. However, the deterioration of existing equipment including diagnostic apparatuses is remarkable. Moreover, it is concerned that the internal structure of the hospital, which is complicated because of repeated expansions, may exert an adverse effect not only on daily clinical services but also on human resource development.

(4) Financial status

The Team identified the following problems after studying the financial status from four perspectives.

- The revolving fund (medical practice) revenues of Setthathirath Hospital are only about one-third of those of Mahosot Hospital and about a half of those of Mittaphab Hospital.
- Because the revenues are low, operation of Setthathirath Hospital is more strongly dependent on the government subsidy as compared to the other two hospitals.
- On the basis of the total revenues, while Mahosot Hospital and Mittaphab Hospital are in the black, Setthathirath Hospital is in the red or at the breakeven point.
- In terms of personnel cost ratio, management efficiency of Setthathirath Hospital is outstandingly low as compared to the other two hospitals.

As shown in Tables 2-9 and 10, the clinical care revenue of the hospital mostly comes from the inpatient revenue. From the financial viewpoint alone, the outpatient and emergency care means nothing more than the window for inpatient care.

As shown in Table 2-1, the number of inpatients in Setthathirath Hospital is less than that of Mahosot Hospital, but it is greater than that of Mittaphab Hospital. However, as shown in Table 2-9, the inpatient revenue is much less than that of these two hospitals. The quality of clinical functions is manifested in the number of patients visiting the hospital for outpatient and emergency care. Simply put, patients who are assumed to be suffering from serious diseases do not visit a hospital that is not capable of CT^5 . Then, the pipeline to lead patients suffering from serious diseases (whose clinical fee is high) to hospitalization will inevitably be narrow. This will result in the cycle that no matter how many inpatients the hospital may have, the ratio of low-severity patients (who are hospitalized for fewer days) becomes high, increasing idle beds and lowering the bed occupancy rate and as a result, the inpatient revenue becomes low.

The difference in medical practice revenues between Setthathirath Hospital and the other two facilities can be well-explained by the low hospitalization indexes (average hospitalization days, hospital bed occupancy rate)⁶.

Hospital Name	Number of Patients (A) (unit: person)	Revolving Fund Revenue (B) (unit: 1,000 LAK)	Revenue per Person (B/A) (unit: 1,000 LAK/person)
Mahosot Hospital	20,219	39,262,160	1,942
Mittaphab Hospital	12,774	32,491,110	2,544
Setthathirath Hospital	19,193	15,960,600	832

Table 2-9 Inpatients Revolving Fund Revenue Index of the Three Central Hospitals

Note 1) The average number of inpatients was determined as with Table 2-1.

Note 2) The RF revenue is the average value of two years from 2013/2014 to 2014/2015 for all the hospitals. Note 3) For the RF revenue, since none of the hospitals has materials for inpatient and outpatient revenues,

respectively, the ratio of inpatient to outpatient is assumed to be 6:1.

⁵ The director of Setthathirath Hospital said with a distressed look on his face, "Because of the failure of CT, we have no choice but to transfer patients requiring advanced diagnosis and treatment to Mahosot Hospital and Mittaphab Hospital." in the interview with the Survey Team.

⁶ See Table 2-1 Summary of the Three Central Hospitals.

This ratio was determined based on the materials for inpatient revenue and outpatient revenue in October 2015 submitted by Setthathirath Hospital.

Source: JICA Survey Team, based on the results of field survey

Table 2-10 Outpatients/Emergency Patients Revolving Fund Revenue Index of the Three Central Hospitals

Hospital Name	Number of Patients (A) (unit: person)	Revolving Fund Revenue (B) (unit: 1,000 LAK)	Revenue per Person (B/A) (unit: 1,000 LAK/person)
Mahosot Hospital	469,750	6,543,690	14
Mittaphab Hospital	171,802	5,415,190	32
Setthathirath Hospital	82,662	2,660,100	32

Note 1) The average number of outpatients/emergency patients was determined as with Table 2-1.

Note 2) The RF revenue is the average value of two years from 2013/2014 to 2014/2015 for all the hospitals. Note 3) For the RF revenue, since none of the hospitals has materials for inpatient and outpatient revenues,

respectively, the ratio of inpatient to outpatient is assumed to be 6:1.

This ratio was determined based on the materials for inpatient revenue and outpatient revenue in October 2015 submitted by Setthathirath Hospital.

Source: JICA Survey Team, based on the results of field survey

2.4 Future Prediction

According to the result of the 2015 Census (1), the population pyramid of Laos is changing from the expanding population distributions to the stationary population distributions. Similar change started to occur in Japan around 1950 and considering the changes in the ASEAN nations (29), it is predicted that Laos will also experience a transition from the stationary type to the contracting type, and accordingly, the disease structure will change. This section gives an outline of the chronological changes in the Japanese disease structure and the future prediction of Laos.

2.4.1 Visualization of disease structure

The Team attempted to visualize the disease structure and extract the issues in each period. The visualization rules are as follows:

- Diseases are classified according to two axes, namely, "emergency" to "non-emergency" and "internal medicine" to "surgery".
- Diseases located farther from the center require more advanced technology and structure.
- Diseases enclosed by a bold line are new clinical issues in the period.
- The area of disease indicates the size of the number of patients in the period.
- The shape and the extent of disease change due to the influence of the medical technologies available in the period.

2.4.2 Changes in the disease structure and the health care policies in Japan

In the 1930s, the maternal mortality ratio was 257.9 and the infant mortality rate was 124.1. As such, they were principal issues in the health sector⁷. Likewise, diarrhea, infections and TB were also major issues. The maternal mortality ratio and the infant mortality rate significantly decreased in the 1950s to 161.2 and 39.8, respectively. However, with the advent of motorization, patients of traffic injury and accompanying orthopedic diseases rapidly increased and at the same time, gastrointestinal diseases, such as gastrointestinal bleeding and liver damage, became the issues.

To solve these issues, an emergency transport system was established in different locations and a system to certify emergency hospitals to accept external injury patients was started.

In the 1970s, along with internal emergency diseases, such as acute myocardial infarction and stroke, malignant neoplasm newly emerged as a major issue. Beginning with the development of emergency transport system and emergency and critical care center, advanced specialized facilities, such as cancer centers and cardiovascular centers, were established one after another. On the other hand, with the implementation of traffic safety programs, patients of traffic injury began to decrease.



Figure 2-7 Disease Structure in Japan in 1930 Source: JICA Survey Team



Figure 2-8 Disease Structure in Japan in 1950s Source: JICA Survey Team

⁷ In Laos, the maternal mortality ratio is 197.0 and the infant mortality rate is 54 in 2015.

In the 1990s, while advanced specialized treatment was provided in the fields of oncology, cardiac surgery and neurosurgery, hypertension, diabetes and other internal diseases became conspicuous and with the progress of bone marrow transplantation and chemotherapy, hematopoietic tumor became an issue. At the same time, new infectious diseases, such as HIV infection, TB of the elderly and increase of orthopedic diseases in accordance with the aging of population also posed a problem.



Figure 2-9 Disease Structure in Japan in 1970s Source: JICA Survey Team

In the 2010s, while non-emergency internal diseases called lifestyle diseases and communicable diseases outbreak (eg. SARS, Ebola), infectious diseases, such as SARS became major issues, innovation of the clinical care structure has been needed to meet the requests for minimally invasive surgery and outpatient chemotherapy for malignant tumor.

As described above, new issues arose every 20 years or so and these issues were overcome by implementing new health care policies. It should be noted, however, that this was made possible because of such factors as the general practitioner system that has existed since the Edo period, high educational level of the people and the universal health insurance coverage system that started in 1958.

Figure 2-10 Disease Structure in Japan in 1990s Source: JICA Survey Team



Figure 2-11 Disease Structure in Japan in 2010s Source: JICA Survey Team

2.4.3 Predicting the future of Laos

It is presumed that Laos of today is equivalent to Japan in the 1950s. However, there is a major difference between them in that changes in the industrial structure and progress of information technology in Japan from 1950 to 1990 were gradual and that Japan was fortunate enough to have the national strength enabling it to overcome the issues.

As such, in predicting the future disease structure in Laos, it is necessary to consider the impacts of the development of communication technology and the rapid development of infrastructure and assume the situation in which the country faces a myriad of issues that took Japan several decades to overcome. In other words, although it seems that the next issue is the treatment of external injury at this point in time, it is considered necessary to make strategic efforts to anticipate the diseases that are poised to emerge as the issues after that and cope with them in advance.

2.5 Current Status and Future of Central Hospital Functions

2.5.1 Current status and issues of division of functions by the three central hospital facilities

This section outlines the handling of cases of diseases in Vientiane Capital City.

As of 2015, division of functions is underway by the three central hospital facilities⁸ as described below.

- Emergency internal diseases
 - o Cardiovascular diseases by Mahosot Hospital
 - Diseases requiring emergency dialysis by Mittaphab Hospital
- Non-emergency internal diseases
 - Hypertension and part of diabetes by Mahosot Hospital
 - Infectious diseases, obstructive pulmonary disease and hematopoietic tumor by Setthathirath Hospital
- Emergency surgery diseases
 - o Abdominal surgery by Mahosot Hospital
 - Treatment of injury, orthopedics and neurosurgery by Mittaphab Hospital
- Non-emergency surgery diseases
 - Surgical treatment of gastrointestinal cancer by Mahosot Hospital



Figure 2-12 Disease Structure Covered with Central Hospitals (2015) Source: JICA Survey Team

o Surgical treatment of brain tumor and spinal tumor by Mittaphab Hospital

Benign surgical treatment of gallstone and kidney stone by Setthathirath Hospital

⁸ Similar division of responsibilities is presented in the 8th 5-Year Health Sector Development Plan.

2.5.2 Future goals of the central hospitals

The current division of responsibilities by these hospitals has been devised in accordance with the predicted disease structure of Laos, allowing each hospital to concentrate on the core competence. The Team considers the following four points with respect to the cooperation to strengthen and support the direction of this initiative.

- In regard to emergency diseases, it is essential to provide care to emergency patients of low and medium severity who make up the majority of the patients.
 - To maintain the functions of Mahosot Hospital and Mittaphab Hospital, the emergency system of Setthathirath Hospital should be improved.
- To make progress in surgical operations, it is necessary to accumulate experience in handling emergency diseases, which serves as the foundation.
 - Mahosot Hospital should focus on abdominal surgery and Mittaphab Hospital should focus on neurosurgery and thoracic surgery.
- With respect to cancer treatment that will be needed in the future, specialization is required for operative treatment and chemotherapy.
 - Mahosot Hospital and Mittaphab Hospital should be in charge of surgical treatment and radiation therapy and chemotherapy should be carried out by Setthathirath Hospital.
- A central facility is needed to handle lifestyle diseases and other internal diseases that will rapidly increase in the future and to control communicable diseases outbreak (eg. SARS, Ebola)
 - Setthathirath Hospital should be developed to be a facility for advanced treatment in internal medicine.

The current emergency care structure clearly defines the responsibilities of Mahosot Hospital, which is in charge of emergency internal medicine and Mittaphab Hospital in charge of emergency surgery. In accordance with this current structure, referral and emergency transport of patients are carried out by the district hospitals and private clinics and hospitals located around these hospitals⁹ and the development of emergency transport system has started in Vientiane Capital City and its vicinity¹⁰. However, in order to maintain this emergency care structure, a support facility is required to accept low to medium-severity cases that constitute the majority of emergency patients. Even today, Setthathirath Hospital generally functions as a supporting facility, but it is necessary to extend cooperation to enable the hospital to treat low to medium-severity emergency patients of both internal medicine and surgery to provide for the increase in the cases of emergency transport in the future.

⁹ Interview by the JICA Survey Team

¹⁰ As of December 2015, training in initial treatment of traumatic injuries has started for the NPO staff engaged in emergency transport and the staff of central/national hospitals under the initiative of Mittaphab Hospital. An emergency call center is scheduled to be installed within Mittaphab Hospital.
Major target of surgical operations includes the treatment of cancer, orthopedic diseases, cranial nerve diseases and cardiovascular diseases, but for the improvement of treatment results, it is necessary to focus on selected diseases¹¹. In this respect, Mahosot Hospital and Mittaphab Hospital are making efforts by themselves, but Japan may be able to cooperate in the field of multidisciplinary therapy for cancer¹². Chemotherapy and radiation therapy are comparable to surgical treatment in the multidisciplinary therapy for cancer. As with surgical operations, they require accumulation of experience not only in treating the disease itself but also in controlling complications. In particular, chemotherapy of hematopoietic tumor should be provided at advanced special hospitals in internal medicine, as it requires repeated application, making the treatment period long. It is worthwhile to leverage the experience of Japan in chemotherapy and radiation therapy as well as the operation of facilities for the provision of such therapies to extend cooperation.

Internal diseases, such as lifestyle diseases, are not urgent issues, but the diagnosis and treatment of internal diseases require experience in long-term observation and as such, it takes time to develop the personnel to provide treatment. On the other hand, with respect to the control of communicable diseases outbreak (eg. SARS, Ebola), it is necessary to make continuous efforts in cooperation with Pasteur Institute and the like. Accordingly, cooperation in this field has to be strategically implemented on a long-term basis.

2.6 Proposals on Grant Aid to Setthathirath Hospital

In view of the current circumstances as described above, with respect to the direction of cooperation to Setthathirath Hospital, the Team proposes the strengthening of the following functions.

- Provision of initial treatment to low to medium-severity emergency patients, who are the majority of emergency patients
- Provision of advanced treatment in internal medicine as a center for the control of lifestyle diseases, which are expected to rapidly increase in the future, as well as response to communicable diseases outbreak (eg. SARS, Ebola)
- Provision of environmental improvement as a clinical medical education site to develop the future human resourses

¹¹ Integration of critical injury patients to Mittaphab Hospital will enable the hospital to accumulate experience not only in the initial treatment but also in the treatment of complications. This is essential for the improvement of the treatment results. Patient integration is also helpful for cardiovascular and cranial nerve diseases.

¹² For the multidisciplinary therapy, aside from surgical oncology, disciplines of endoscopy, pathological diagnosis, chemotherapy and radiation therapy are needed.

2.6.1 Overview of grant aid

(1) Facility development plan

With respect to the existing outpatient department in which the line of flow in the provision of treatment is disorganized as a result of temporary extensions and repairs, the space should be reorganized for the improvement of the line of flow and the installation of new materials and equipment. The emergency department and the laboratory department should be integrated into the current and right wing and the current left wing should be renovated to operation theaters and hospital wards.



Figure 2-13 Draft Facility Development Plan for Setthathirath Hospital Source: JICA Survey Team

Classification	Study details
Improvement of the	a) Small-scale renovation to make it possible to use the existing outpatient department
line of flow within	as an emergency treatment room by removing the partition wall (about 124 m ²)
the existing building	b) Small-scale renovation to reuse the (former) adult ICU space at the east end of the
	first floor of the existing ward for the same purpose (about 194 m ²)
Construction of new	a) All the outpatient functions, endoscopy department, conference room that can be
outpatient building	used as standby ward when dengue fever and other infectious diseases are prevalent as
	well as the office and disease history room should be transferred from the existing
	outpatient building to the new outpatient building (about 2,496 m ²).
	b) The vacant space in the existing outpatient building should be used after renovating
	to an adult ICU, ultrasound examination room, etc. (about 348 m ²). At the same time,
	an infection control training and education facility should be developed (about 462 m ²
	to be included in the new outpatient building above).
	c) This facility also intends to be used as a clinical training facility for intensive training
	in outpatient treatment for the students of the University of Health Sciences, Laos.
Response to	a) The existing blood test/biochemical laboratory should be demolished and the space
communicable	should be converted to an isolation ward (with an anteroom) and examination room
diseases outbreak	(about 70 m ²).
(eg. SARS, Ebola)	b) The functions of the existing blood test/biochemical laboratory should be transferred
	to the examination room (within the extended building beside the central slope).
	To enable the control of communicable diseases outbreak, the blood test/biochemical
	laboratory, etc. located to the east of the outpatient department should be renovated for
	conversion and the space should be used as an isolation ward (negative pressure room:
	with an anteroom) and an examination room (with movable X-ray units). The functions
	of the existing blood test/biochemical laboratory should be transferred to the
	examination room within the extended building beside the central slope.

Note: As to the proposed facility improvement plan in this table, which includes renovation of existing building and construction of new building, it's quite possible for local construction firms in Vientian to complete the construction works.

(2) Equipment installation plan

1) Study of major equipment and equipment

In order to improve the current condition of the existing equipment and restore the hospital functions, health care equipment and instruments should be installed in Setthathirath Central Hospital. The following table shows the details of the studies conducted for the major equipment and instruments for each department.

Department	Study Details
ICU	Portable ultrasound unit: The conditions in patient's body cannot be checked in the ICU since there is no portable ultrasound unit at present. Installation of this equipment will make it possible to check the patient's condition immediately and respond accordingly. As such, the necessity is high.
Emergency	Ventilator: The emergency room cannot handle patients of respiratory failure since there is no ventilator at present. Installation of this instrument will enable the improvement of the conditions of patients suffering from respiratory failure. As such, the necessity is considered to be high. Nebulizer: A nebulizer, which is used for oral inhalation of medicines by patients of asthma, is essential to an emergency room.

	Endoscope: Since there is no instrument for endoscopic operation, laparotomy, which makes a
	high impact on the patient's health after operation, is currently performed. It is necessary to
	install an endoscope, which can reduce the impact on the patient's health and shorten the
	recovery period after operation.
	Laparoscope: It is considered necessary to install a laparoscope as it can reduce the impact on
Operation	the patient's health like the endoscope described above.
	Operation lamp: The current operation lamps, which were installed in the last grant aid project,
meater	have already deteriorated and multiple bulbs have failed. As such, they cannot adequately
	function as shadowless lamps. Therefore, it is highly necessary to replace them.
	Ultrasound unit: As the operation theater does not have an ultrasound unit at present,
	observation of the abdominal organs, stomach, large intestine, vermiform appendix, etc. cannot
	be performed before or after operation. As it is equipment essential for an operation theater, it
	should be installed.
	Mammography equipment: Mammography cannot be performed at present as there is no
OBGY	equipment for it. As such, it is considered highly necessary to install one to enable early
	detection of breast cancer.
Radiology	X-ray fluoroscope: As this device has been inoperable since 2013, diagnosis cannot be
radiology	performed. As such, it is necessary to install one as soon as possible.
	Industrial washing machine: The industrial washing machine, which was installed in 2001, has
	already deteriorated and does not operate. Since it has caused troubles in washing linens for
	operations, ICU, etc., early replacement is needed.
Laundry	Industrial dry machine: The industrial dry machine was installed at the same time as the
	industrial washing machine above and it is already inoperable.
	Autoclave for linen: Since there is no autoclave at present, linens for operations, ICU, etc.
	cannot be sterilized. Therefore, it is highly necessary to install one.
	Ultrasound unit: As there is no ultrasound unit at present, diagnosis of cardiac function cannot
	be performed. Therefore, it is determined necessary to install one.
Internal	Upper endoscope and colonoscope: There is an endoscope in the image diagnosis department,
Medicine	but no endoscope has been installed in the internal medicine department, which makes it
	difficult to perform diagnosis. Therefore, it is considered highly necessary to install these
	equipment.
	Bedside monitor: For the eight patient beds that have been installed, there are only three
Recovery	bedside monitors at present. Since the number is not enough, it is highly necessary to add them.
Room	Ventilator: Since there is no ventilator, treatment cannot be provided. As such, it is highly
	necessary to install one.
	Body refrigerator: The body refrigerator was installed in the grant aid project in 2001, but it is
Morgue	not in operation because of the failure of the cooling unit and bodies cannot be stored in the
	morgue. Therefore, it is highly necessary to install one.

The equipment list below summarizes the study results described above. Basically, the quantity given in the list is the minimum requirement. Also, the amount of equipment that needs to be installed in more than one room, such as beds for operation theaters and recovery rooms, has been determined to conform to the number of rooms. The amount of existing equipment that is still usable is not included in the required quantity.

Dept.	Equipment Name	Q'ty (pcs)
	Suction Unit	1
	Defibrillator	1
	Syringe Pump	1
	Ventilator	2
ICU	Bedside Monitor	7
	Nebulizer	2
	Infusion Pump	4
	Portable Ultrasound Unit	1
	Phototherapeutic Apparatus	2
	Syringe Pump	1
NIGH	Ventilator	1
NICU	Bedside Monitor	2
	Incubator	3
	Infusion Pump	1
	Suction Unit	1
	Delivery Suction Unit	1
Delivery	Electric Scalpel	1
Delivery	Delivery Table	2
	Shadowless Lamp	1
	Infusion Pump	2
	Suction Unit	1
	Defibrillator	1
	Bedside Monitor	1
	Stretcher	2
FR	Electric Scalpel	1
	Anesthesia Unit	1
	Infusion Pump	2
	ECG	1
	Ventilator	2
	Nebulizer	2
	Suction Unit	3
	Autoclave	2
	Operation Table	3
	Defibrillator	3
	Bedside Monitor	3
Operation	Stretcher	3
	Electric Scalpel	3
	Anesthesia Unit	2
	Infusion Pump	8
	Endoscope (for surgery)	1
	Laparoscope	1

Table 2-11 List of Equipment to be Installed in Setthathirath Hospital

Dept.	Equipment Name	Q'ty (pcs)
	Operation Lamp	3
	Ultrasound Unit	1
ORCY	Ultrasound Unit	1
0601	Mammography Equipment	1
	Mobile X-Ray Unit	1
Padiology	Digital X-Ray Unit	1
Radiology	Computed Tomography (CT) Apparatus	1
	X-ray Fluoroscope	1
	Industrial Washing Machine	1
Laundry	Industrial Dry Machine	1
	Autoclave (linen)	1
	Ultrasound Unit (Cardiology)	1
Internal Medicine	Upper Endoscope	1
	Colonoscope	1
Booovery Boom	Bedside Monitor	8
	Ventilator	2
Morgue	Body Refrigerator	1

2) Maintenance plan of installed equipment

(1) Capability of operation

As shown in Table 2-12, the personnel allocation of Setthathirath Hospital is significantly different from that of the other two hospitals in terms of the number of doctors, which determines the availability of human resources to engage in the maintenance of the instruments and the capability of operating the instruments in performing diagnosis. The personnel allocation in the laboratory and other departments compares favorably with that of the other hospitals and is suitable for the current health care structure.

Since the doctors working at Setthathirath Central Hospital have been using the equipment in the hospital in consultation, diagnosis and treatment efficiently and effectively, they are expected to be able to use the equipment mentioned above without problems. However, since the operating methods of the X-ray unit and CT system to be installed are expected to be different from those of the existing ones, operational technology transfer to the doctors in the Radiology Department will be required to familiarize them with their operation and to improve the level of consultation in a short period of time. Therefore, it is recommended to include such technology transfer in the grant aid cooperation project as a soft component associated with it. At the same time, with respect to the selected human resources who will engage in the maintenance of the instruments, it is necessary to carry out technology transfer equivalent to that to the doctors and increase the number of them year by year.

	Mahosot	Mittapab	Sethathirat
Specialist medical doctor	77	57	23
Family medicine specialist doctor	1	2	1
General medical doctor (bachelor)	49	51	34
General medical doctor (primary health care)	-	19	-
Medical Assistant	18	-	-
Nurse	405	127	185
Midwife	13	24	10
Pharmacist	49	14	24
Laboratory technicians- medical	58	25	32
Laboratory technicians- pathology	0	13	5
Medical engineer (anesthesia, X-ray, CT, MRI etc.)	15 (X-ray)	26	-
Health workers	-	-	7
Others	143	157	138

 Table 2-12 Number of Staff by Job Description in the Three Central Hospitals

Source: JICA Survey Team based on the field survey results

(2) Maintenance

Periodic checking of the equipment enables early detection of failures and problems, thereby preventing major damage. However, according to the manufacturer's warranty regulations of X-ray unit and CT apparatus, only the manufacturer's technicians are allowed to check the inside of the instrument and if the checking is done by any other personnel, the instrument's warranty will be voided. Therefore, it is necessary to conclude a maintenance contract or the like with the manufacturer or the manufacturer's agent after the installation of these instruments to ensure the long-term use of these instruments.

2.6.2 Verification of the financial relevance of new medical equipment installation (simulation)

In accordance with the results of the current status analysis in the survey, for the improvement of the financial status of Setthathirath Hospital, it is necessary to take the following steps.



Source: JICA Survey Team based on the field survey results Figure 2-14 Financial Predictions of and Countermeasures to be taken by Setthathirath Hospital

[Step 1]

If the image diagnosis capability, which is one of the factors causing the low treatment capabilities, is improved by support, the hospital will be able to secure patients of "slightly high severity¹³" who are not currently accepted for treatmentin a wide range of clinical treatment areas.

[Step 2]

Securing of patients of "slightly high severity" is expected to lead to an increase in the average hospitalization days. Supposing that the average hospitalization days increase from the current 2.88 to 3.00 and further to 3.30, even if the number of hospitalized patients is the same, the revenue is expected to increase 10 to 13 billion kip per year. In actuality, since the number of hospitalized patients will increase and the bed occupancy rate will improve at the same time, it is predicted that the overall revenue increase will increase 13 to 20 billion kip per year, making the revolving fund revenues almost the same as those of Mittaphab Hospital at present. For the maintenance of the equipment to be installed under the grant aid project, about 300 million kip, which is 10% of the total cost, will be required. However, the Team presumes that this can be looked after by the increase in the RF revenues based on the assumption that the RF revenues of Setthathirath Hospital will reach 60 million yen by the increase in the medical practice revenue resulting from the improvement of the clinical functions.

¹³ This term refers to the severity of injuries and diseases that some emergency patients may have. Such injuries and diseases include head injuries and abdominal injuries caused by traffic accidents that require no emergency operation and that are expected to be cured with conservative treatment and acute abdomen on which elective operation can be performed, such as intestinal obstruction and acute cholecystitis, respectively.



Source: JICA Survey Team based on the field survey results Figure 2-15 Predictive Improvement of RF Revenue

[Step 3]

Complying with the legal requirement about the usage and purpose of the RF that "85% of it shall be the expense for the maintenance and improvement of the clinical functions and for the facilitation of the operations", a new expense item of equipment maintenance expense should be created and 10 to 11% of the RF revenues should be allocated to it. At the same time, supplier contracts should be introduced as a method for maintenance. As the laboratory department of Setthathirath Hospital has already concluded a maintenance contract, the image diagnosis department should also outsource maintenance. With respect to the outsourcing cost, joint contracts of five central/national hospital facilities should also be studied with the initiative of the MOH.

2.6.3 Rules on arbitrary use of RF for hospital operating expenses

The rule on the use of RF was amended by Decree No.349 issued on December 18, 2013. The amended rule has allowed hospitals to use up to 15% of the entire expenditure on the training of their staff including overseas training as an incentive to them. Meanwhile, it provides that up to 85% of the total expenditure should be used for the hospital operating expenses, i.e. for the purchase of drugs, materials and equipment, facility maintenance and hospital administration. The new rule allows each hospital to use a certain percentage approved for the hospital of the expenditure on the maintenance on items selected in accordance with its priority list at its own discretion. Setthathirath Hospital actually began to use this new expenditure scheme in FY 2015/2016. Detailed percentages of expenses according to the expenditure plan approved by the Ministry of Health and the Ministry of Finance are as follows: 11% for part-time staff employment and staff training, 53% for the purchase of drugs, materials and equipment, 7% for maintenance

of medical instruments, 6% for building repair and vehicle management, 13% for office expendables and 10% for others. As such, hospital operating expenses account for 89% of the total.

The percentages of the maintenance expenses in the total expenditure from RF at Setthathirath, Mahosot and Mittaphab Hospitals are 5.0%, 9.8% and 6.2%, respectively, in FY2013/2014 and 11.9%, 13.7% and 8.4%, respectively, in FY2014/2015. The three hospitals have spent the budget allocated to the maintenance on buildings, vehicles and equipment in accordance with the actual needs at the respective hospitals. For example, while Mahosot Hospital spent the maintenance budget only on equipment, Mittaphab Hospital spent almost all the maintenance budget on buildings in FY2014/2015. Since the survey result mentioned above indicates that Setthathirath Hospital has begun securing the quota of the budget for the maintenance, it is considered possible for the hospital to use approx. 10% of RF on equipment maintenance in future.

Chapter 3 Survey on the Development of Health Care Facilities and Equipment in the Southern Provinces

3.1 Objectives and Method of Survey

In order to confirm the possibility of providing support in the future and what kind of direction such support should have concerning provincial and district hospitals in the 4 southern provinces (a total of 27 hospitals including 4 provincial hospitals and 23 district hospitals), a survey was conducted on the present situation (the period of the field survey: December 7 - 21, 2015). Since only about 10 days could be spent on the survey, the Survey Team members were grouped into 5 smaller teams. A survey method was chosen and in which, based on a questionnaire composed of carefully selected question items (location, a system for operation of the hospital, how patients are accepted, facilities and infrastructure and health care equipment), each Survey Team member conducted a direct interview to hospital officials to collect data and make visual observation of the current status of hospital equipment and facilities. Of these 5 teams, one team mainly visited each provincial health office in order to make an investigation to confirm the provincial and district hospitals' financial status as well as collect information on all health centers located in each province.

3.2 Functional Standards and Facilities/Equipment Standards at Provincial/District Hospitals 3.2.1 Functional Standards at Provincial Hospitals (Decree No. 107/MOH, July 2010)

According to Decree No. 107/MOH of July 2010, requirements of roles and functions of provincial hospitals are summarized as follows:

1) Location, roles, etc.

As a general hospital in the provincial capital (50 to 250 beds), each provincial hospital is engaged in health care service, health examination, diagnosis, treatment, resuscitation, rehabilitation, survey, development and improvement of hospital staff's skills, diseases/illness prevention and promotion of health as well as supervision of lower-level hospitals with respect to how disease treatment is managed there.

2) Composition of clinical departments

i) Hospital ward, ii) traditional health care, iii) outpatients department, iv) pediatrics, v) obstetrics and gynecology, vi) resuscitation/anesthesia, vii) ophthalmology, viii) ear, nose and throat, ix) dentistry (with nursing department for both hospital ward and outpatient department)

3) Composition of support departments

i) Pharmacy, ii) diagnosis, iii) radiology

4) Allocation of personnel

Under the supervision of a director and deputy directors of the hospital, 2 - 2.5 staff members are allocated per bed with one medical doctor being allocated to every 5 beds and 3 to 4 nurses to every one medical doctor.

3.2.2 District hospitals (Decree No. 2312/MOH, December 2008)

According to Decree No. 2312/MOH of December 2008, requirements of a district hospital are summarized as follows:

1) Location, roles, etc.

As a general hospital offering health care service in a rural area (with 15 to 30 beds in total), a district hospital has health care equipment required in accordance with the official notice of the Senior Vice Minister of Health and works to make improvement in health examination, diagnosis, treatment, resuscitation, rehabilitation, hygiene/disease prevention/infectious disease prevention/promotion of health, survey, development and improvement of hospital staff's skills and improvement of health care capability of health centers and villages.

2) Organizational composition

[Type A district hospital]

i) Hospital ward and traditional health care, ii) obstetrics and gynecology, iii) outpatient department, iv) anesthesia, v) pediatrics, vi) dentistry, vii) ophthalmology and ear, nose and throat, viii) diagnosis, ix) radiology, x) pharmacy, xi) personnel, planning/financial and public relations

[Type B district hospital¹⁴]

i) Hospital ward and traditional health care, ii) obstetrics and gynecology, iii) outpatient department, iv) pediatrics, v) dentistry, vi) diagnosis, vii) radiology, viii) pharmacy and ix) personnel, planning/financial and public relations

Under supervision of a director and a deputy director, each of these 2 types of district hospital allocates medical doctors, nurses and technicians and other staff members to each bed as follows:

- Type B district hospital: 1 to 1.5/bed
- Type A district hospital 1.8 to 2/bed

3) Requirement of health care equipment

The Ministry of Health established a list of standard health care equipment to be equipped at Type A and Type B district hospitals as shown in Table 3-1:

¹⁴ For the total number of beds, in Champasak Province, an official notice was issued to each Type B district hospital that starting FY2014/2015, the number of beds shall be 15 in total at such district hospitals.

Dept		Equipment	Type A Ouantity	Type B Ouantity	Dept.		Equipment	Quantity	Quanti
	1	Ultrasound	1	1	11	1	Bed labor and delivery	1	1
	2	Examining and treatment table	1	1		2	Delivery set	2	2
	3	Film illuminator	1	1		5	Weight and height scale (infant)	1	1
	4	Stethoscope	5	3		4	Instrument Cabinet	1	1
	5	Spnygmomanometer Tongua daprassor	1	1		6	IV stand	1	1
	7	Tongue depressor	2	1		7	Infant warmer	1	1
tnatient	8	Hammer reflex test	5	3		8	Resuscitator for infant	1	1
quitient	9	Kidney dish	5	3		9	ECG	1	1
	10	Thermometer	10	5	Ob/Gv	10	Ambu bag for adult	1	1
	11	Weight and height scale (adult)	1	1		11	Ambu bag for infant	1	1
	12	Weight and height scale (infant)	1	1		12	Hot air Sterilizer	1	1
	13	Instrument Cabinet	1	1		13	Weight and height scale (adult)	1	1
	14	Medicine cabinet	1	1		14	Weight and height scale (infant)	1	1
	15	Instrument table	1	1		15	Stethoscope	1	1
	2	Table (dressing)	1	1		16	Sphygmomanometer	1	1
	3	Film illuminator	1	1		17	Tongue depressor	1	1
	4	Defibrillator	1	1		18	Examining Light	1	1
	5	ECG	1	1		19	Oxygen cylinder	2	2
	6	Cardioversion	1	1		1	Audiometer for adult and for infant	1	1
	7	Infusion pump	1	1		2	Tympanometer automatic	1	1
	8	Mayo instrument table	1	1	ENT	3	Tuning fork	1	1
	9	Instrument table	1	1		4	Hearing aid	1	1
	10	Instrument cabinet	1	1		5	ENT Treatment chair	1	1
	12	Stretcher (adult)	1	1		6	ENT Treatment unit, single tray	1	1
	12	Hot air sterilizer (20 liters)	1	1		1	Biochemy Analyzer 18 parameter	1	1
	13	Suction pump electrical (2-5 liters)	1	1		2	Retrigerator medical	1	1
	15	Stethoscope	1	1		3	Blood bank refrigerator	1	I
ergencv	16	Sphygmomanometer		i		4	Hematocrit Centrifuges	2	1
J,	17	Tongue depressor	10	5		5	Microscope	2	1
	18	Examination light	2	1		6	Hot air sterilizer for 20 liters	1	1
	19	Hammer reflex test	5	3		7	Glucose analyzer	1	1
	20	Kidney dish	1	1		8	Instrument cabinet	1	1
	21	Thermometer	10	5	Lab	9	Laboratory glassware set	1	1
	22	Minor surgery set	1	1		10	Laboratory incubator	1	1
	23	Examining and treatment set	1	1		11	Laboratory coats	1	1
	24	Dressing instrument set	1	1		12	Stainless steel lockable (locker)	1	1
	25	Oxygen cylinder	1	1		13	Incubator (low temperature)	1	1
	26	ECG Duba anamatan (nubimatan)	1	1		14	Pipette shaker	1	1
	27	Suringa nump	1	1		15	PH meter	1	1
	20	Ventilator	1	1		16	Slide warmer	1	1
	30	Glucose test	2	1	-	17	Slide warming table	1	1
	31	Oxygen cylinder	2	2		1	Ultra-sound	2	1
	1	Bed (hi-lo catch)	1	1		2	Examination table simple type	2	1
	2	Bedside cabinet	1	1	Image	3	X-ray Machine	1	
	3	Stainless steel lockable (locker)	1	1	Diagnosis	4	X-ray film processor automatic	1	
	4	Table (bed side)	1	1		5	X-ray development tank	1	
	5	Bed (standard)	1	1		6	Patient identification printer	l	
	6	Examining and treatment table	1	1		1	Anesthesia ventilator	1	
	7	Film illuminator	1	1		2	Oxygen cylinder	1	
	8	Instrument table	1	1	Anesthesia	3	ECG	1	1
nternal	10	Stethoscope	1	1		4	Pulse oxymeter (pulsimeter)	3	2
fedicine	11	Sphygmomanometer	1	1		5	I hermometer	10	5
	12	Tongue depressor	1	1		2	Universal operation table with stool	1	
	13	Examination lamp	1	1		2	Operating chair	2	
	14	Hammer reflex test	1	1		3	Minor operation light	1	
	15	Kidney dish 200mm	1	1		4	Suction unit for heavy duty	1	1
	16	Thermometer	1	1	Minor	5	Defibrillator with cart	1	
	17	IV stand	1	1	Surgery	6	Minor surgery set	3	2
	18	Weight and height scale	1	1		/	I area auroaru aat	1	+
	19	Wheel chair	1	1		8	Large surgery set	1	
	20	Ambu bag infant	1	1		9	Luich namper carriage	1	
	1	Examining and treatment table	1	1		10	Laundry cart	1	
	2	Stethoscope	1	1		11	Dental portable unit	1	
	4	Sphygmomanometer	1	1		2	Dental x-ray unit	1	<u> </u>
	5	Tongue depressor		i i	Dentistry	2	Dental film davaloner	1	<u> </u>
	6	Examination lamp	1	1		3	Dental basis instrument sot	1	<u> </u>
	7	Hammer reflex test	1	1		4	Autoologie 70,100 I	1	<u> </u>
	8	Kidney dish 200mm	1	1	Sterilization	1	Autocave /0-100 L	2	<u> </u>
	9	Thermometer	5	3		2	riot air Sterlitzer for 20 liters	2	<u> </u>
argen/	10	Weight and height scale (adult)	1	1		1	Amoulance Venicle	1	1
su gery	11	Weight and height scale (infant)	1	1		2	Pick up Commuter dealsten	1	1
	12	Instrument cabinet	1	1		3	Computer desktop	5	3
	13	Medical cabinet	1	1	Administration	4	Printer	5	3
	14	Instrument table	1	1		5	Photocopy	3	2
	15	Wheel chair	1	1		6	Telephone	2	1
	16	Bed (hi-lo catch)	1	1		7	rax Literat	2	1
	17	Bedside cabinet	1	1		8	Internet	1	
	18	Statuess steel lockable (locker)	1	1					
	19	Laure (Ded Side) Rad (standard)	1	1					
	20	Deu (standard) Weight and beight scale (infant)	1	1					
	2	Infant warmer	1	1					
	2	Baby cot	1	1					
	4	Incubator for haby (nediatric)	1	1					
	5	Lumbal puncture set	1	1					
	6	Pleural puncture set	1	i i					
diatric	7	Defibrillator (for children)	1	1					
diatric		Ventilator (for children)	1	1					
diatric:	8	T CHILDRAND LINE CHILDREND							
diatric	8	Tongue depressor	1	1					
diatric	8 9 10	Tongue depressor Thermometer	1	1					

Table 3-1 List of MOH Standard Equipment (for district hospitals, 2014)

[Contradictions of the List of Standard Equipment]

In Decree No. 2312/MOH (2008), although it is stated that the X-ray unit shall be furnished at both types of A and B hospitals, the List of Standard Equipment of MOH above designated the X-ray unit shall be

furnished only at Type A district hospitals. In addition, in this Decree, although only Type A district hospitals are required to have functions of ophthalmology and ear, nose and throat, the List of Standard Equipment designates that both Type A and B hospitals shall have ear, nose and throat equipment while it does not specifically designate that those hospitals shall have ophthalmological equipment.

3.2.3 New Guidelines of MOH (Standards of Community Hospitals and Small Hospitals, March 2014)

According to the Standards of Community Hospitals and Small Hospitals of March 2014, requirements for a community hospital trying to be upgraded to a district hospital are summarized as follows:

1) Composition of technical departments

i) Internal medicine and traditional health care, ii) external (areas of general surgery (non-complicated fracture, fracture, appendicitis, bilestone, etc.) Cesarean operation, hysterectomy, etc.), iii)
anesthesia/resuscitation and emergency treatment, iv) obstetrics and gynecology, v) pediatrics, vi) dentistry, vii) image diagnosis (radiology and ultrasonic wave), viii) laboratory (blood, biochemistry, urine/feces, TB, virus (AIDS, Hepatitis B, etc.)), ix) pharmacy and x) administrative office (personnel, planning, financial affairs, drivers, maintenance and laundry/cleaning)

2) Basic health care equipment and office work equipment

MOH has established a list of standard equipment. The details of the list, however, are a conversion of the List of Standard Equipment of MOH established for district hospitals (Type A and B) shown in above (2) (it means the List of Standard Equipment list for Type A district hospitals applies).

3) Allocation of personnel (as a case of a community hospital with 30 beds)

For each of departments from 1) i) to v) above, 2 medical doctors and 4 nurses are allocated and to vi) one dentist and 2 nurses are allocated, to vii) one medical doctor and 3 technicians, to viii) 4 laboratory technicians, to ix) 4 pharmacists, and to x) 15 persons. In total, 60 doctors and other staff members are allocated (11 medical doctors, one dentist and 22 nurses).

4) Preconditions for establishment

- Government policy: It shall be a target area under Sam Sang ("3 Builds") decentralization policy and at the same time a strategic area.
- Population: It shall have more than 35,000 in a mountainous area and 50,000 in a plain area.
- Location: It shall be a community area, shall border with a main road or a road in a good condition and shall not be prone to natural disasters.
- Land area: It shall have 20,000m² in plain area and 10,000m² in mountainous area.

When a preliminary evaluation is made on targeted 23 district hospitals checking against the relevant conditions, the result shown in Table 3-2 can be obtained. When a district is assumed as satisfying the conditions of the policy as long as it is a target district under Sam Sang ("3 Builds") decentralization policy, of a total of 23 district hospitals, only the 2 hospitals of Lao Ngam District Hospital of Salavan Province and Paksong District Hospital of Champasak Province can conform to all the 4 conditions to become a community hospital (the cells highlighted yellow in the table below).

		Conditions to be established as community hospital			Other conditions				
Province	District hospital	Policy ³	Population	Location	Land area	Proposed target for grant aid ¹	Target for support for equipment in community empowerment ²	Type	Proposed target under this report
	14-02 Ta-Oy	0	×	0	×			А	~
	14-03 Toomlarn		×	0	0			В	
Colouron	14-04 Lakhonepheng		×	0	×	~		В	
Salavan	14-05 Vapy		×	0	×			В	
	14-06 Khongsedone		0	0	0	~		A	
	14-07 Lao Ngam	0	0	0	0	~	~	В	~
	14-08 Samuoi		×	×	0			В	~
Sokong	15-02 Kaleum	0	×	×	×	~	~	В	
Sekong	15-03 Dakcheung		×	Δ	×	~	~	В	
	15-04 Tha Teng	0	×	0	×			В	~
	16-02 Sanasomboun		0	0	0	~		В	
	16-03 Bachiangchaleunsouk		0	0	×			В	
	16-04 Paksong	0	0	0	0			А	
Champasak	16-05 Pathoumphone		0	0	0	~		В	
	16-06 Phonthong		0	0	×	~	~	В	
	16-07 Champasak		0	0	×			А	~
	16-08 Soukhouma		0	Δ	×			В	
	16-09 Mounlapamok	0	×	0	0			В	
	16-10 Khong		0	0	×			А	~
	17-01 Xaysetha	0	×	0	×	~	~	В	
Attapeu	17-03 Sanamxay	0	×	0	×	~		В	
	17-04 Sanxay		×	0	×			В	
	17-05 Phouvong		×	0	×			В	~

Table 3-2 Preliminar	y Evaluation bas	sed on Conditions	for Establishing	Community	y Hospital
	4				

Note 1: "Proposed target for grant aid" means 10 hospitals for which in FY2014, MOH sounded out the Japanese Embassy/JICA for grant aid.

Note 2: "Target for support for equipment in community empowerment" means 5 district hospitals that were target facilities for health care equipment purchase under the Project for Strengthening Health Service Network in Southern Provinces (preparatory survey: FY2013).

Note 3: For the column "Policy," districts that are targets of the decentralization policy (3 Builds) pilot project are marked as satisfying the condition (Source: NIOP).

5) Basic elements of facilities and equipment

A total of 15 elements were listed in relation to facilities and equipment and a standard floor plan for a single-story building was created as attached (refer to the footnote). (1) Health care service building/rooms, (2) administrative building/room, (3) electric building/room, (4) maintenance building, (5) warehouse, (6) water supply facilities, (7) laundry and sterilization building/room, (8) staff building/room, (9) lodging facilities for patients' families, (10) incinerator, (11) morgue, (12) parking lot, (13) waste water disposal facilities, (14) fence and (15) name display boards within the hospital.

Note: Under the general concept of the standard floor plan, 3 buildings including the outpatient building, a combined administrative building (emergency outpatients, radiography room, examination room, dentistry treatment room, delivery/surgery/ICU (4 beds) and inpatients' room (16 beds)) and an additional hospital ward (16 beds) are allocated in 3 rows in parallel and those building are connected with each other through multiple connecting passages (total floor area of 1,488m²).



Figure 3-1 Standard Floor Plan of a Community Hospital Source: Standard of Community Hospital and Small Hospital (Ministry of Health: March 2014)

[Remark]

For "small hospitals" to be upgraded from health centers, a list of standard equipment has been established as follows:

Department	No.	Equipment Name	Quantity
	1	ENT diagnostic set	1
	2	Scale for infant	1
	3	Scale for infant portable, suspension type	1
	4	Scale for adult	1
a	5	Sphygmomanometer aneroid for adult	1
Consultation room	6	Sphygmomanometer for child	1
	7	Stethoscope binaural type	1
	8	Thermometer clinical	5
	9	Stretcher folding type	1
	10	Sterilizer dressing	1
	11	Health education set	1
	1	Wound and abscess surgery set	1
	2	Box, instrument, for minor surgery	1
	3	Counter, for tablets and capsule, with spatula	1
	4	Jar forceps, with cover, SS	2
Treatment room	5	Jar, needle with cover and handle, 180ml, stainless steel	2
	6	Jar, thermometer, stainless steel	2
	7	Kidney bowls	3
	8	Lotion bowls, 80mm	2
	9	Tray, instrument, with cover	2
	10	Dressing bowl, large	2
	1	Bed labor and delivery	1
	2	Delivery set	2
	3	Bath baby oval 25 liter	1
	4	Doppler sound detector	1
Delivery	5	Examination light	1
Delivery room	6	IV stand	1
	7	Warm bed for newborn	1
	8	Resuscitation set (Bag & Mask)	1
	9	Tray instrument shallow 343x247x16mm	1
	10	Aspirator/ Suction pump (Manual or electric)	1
	11	Tape measuring	1
	1	Binocular microscope	1
	2	Machine for CBC	1
	3	Tray instrument shallow 343x247x16mm	1
Examination room	4	Cup board for drugs and instrument	1
	5	Hematocrit centrifuge	1
	6	Refrigerator	1
	7	Disinfector instrument boiling type	1
	8	Blood lancet, box/ 200pcs	1

Table 3-3 List of Medical Equipment for Small Hospital

Department	No.	Equipment Name	Quantity
	1	Motorbike	1
	2	Computer desktop	1
0.17	3	Printer	1
Office	4	Photocopier	1
	5	Telephone	1
	6	Fax	1
	7	Internet	1

Source: Standard of Community Hospital and Small Hospital (Ministry of Health: March 2014)

Comparison Table for Provincial Hospital, District Hospital, Community Hospital/ Small Hospital based upon MOH Decrees and Guideline

	Provincial Hospital	District MOH Decree No	Hospital .2312 (Dec 2008)	Community Hospital	Small Hospital
	MOH Decree No.107 (Jul 2010)	А Туре	В Туре	MOH: Standard of Comn Hospital (J	nunity Hospital and Small May 2014)
1. Location/ Roles	Provincial hospital, capital city hospital, with 50 – 250 beds	General hospital of g clinical unit, with 15 –	overnment, as a local 30 beds		
2. Organization Structure	Inpatient, Traditional Medicine, Outpatient, Pediatrics, Ob/Gy, Urgent- resuscitationand Anesthesia, Optical, ENT, Dentistry, Pharmacy, Diagnosis, X-ray	In addition to the secsions of B type District Hospital, Anesthesia and Optical/ ENT are added.	Inpatient/ Traditional Medicine, Ob/Gy, Outpatient, Pediatrics, Dentistry, Diagnosis, X-ray, Pharmacy, Personnel organization, panning-finance and foreign affairs	Internal/ Traditional Medicines, External, Anesthesia, Resuscitation/ Emergency, Ob/Gy, Pediatrics, Dentistry, Radiology and images, Laboratory, Pharmacy Administration	Examination/ diagnosis/ treatment, Health Prevention and Promotion, Health Information Collection and Consideration
3. Personnel	1 Director, and some Deputy Directors. As a standard, 2-2.5 staff per 1 bed, 1 doctor per 3- 4 nurses, 1 doctor per 5 beds	1 Director, 2 Deputy directors. Other staff, doctor, nurse and other technician with different qualification. 1.8 - 2 persons/bed	1 Director, 2 Deputy directors. Other staff, doctor, nurse and other technician with different qualification. 1 - 1.5 persons/bed	(Example of 30 beds hospital) In total, 60 staff members are allocated (11 medical doctor, 1 dentist, 22 nurses and other 26 staffs)	Total number of staff: 7-10 persons (1 -2 medical doctor, 1 dentist, 1-2 nurses and others)
4. Condition for establishment				There ae conditions on Policy, Population, Location and Land Area (Refer to the introduction part of this section).	There ae conditions on Policy, Population, Approach ability Location and Land Area (Refer to Appendix 2).
5. Equipment		MOH's Standard equipment list for A type district hospital (Refer to Table 3-1).	MOH's Standard equipment list for B type district hospital (Refer to Table 3-1).	MOH's Standard equipment list for A type district hospital (Refer to Table 3-1).	Refer to Table 3-3.
6. Facilities				Refer to Figure 3-1.	Standard plan is mensioned in this guideline.

Note: For further details, refer to Appendix 2.

3.3 Analysis of Current Status

3.3.1 Clinical Practice in Southern Provinces

The summary of the analysis result of the preliminary survey through direct visit and questionnaire made to all provinces and district hospitals is shown below:

- There is a large difference in both the numbers of inpatients and outpatients between Champasak Regional/Provincial Hospital and other 3 provincial hospitals:
 - Champasak Regional/Provincial Hospital puts emphasis on impatient treatment and other provincial hospitals have emphasis on outpatient treatment.
- When comparing these 4 provincial hospitals in terms of the number of inpatients per bed:
 - The number for Salavan Provincial Hospital is small and Attapeu Provincial Hospital has a surplus.
- There is a large difference among district hospitals in terms of past records:
 - A comparison of the number of inpatients per bed shows there are some district hospitals putting emphasis on outpatient treatment and other district hospitals putting emphasis on inpatient treatment.

3.3.2 Provincial hospitals

The number of beds owned by and the numbers of inpatients and outpatients accepted at the four provincial hospitals during 2014/2015 are shown in Table 3-4 and Figure 3-4 below:

Hospital Name	No. of Beds (A)	No. of Outpatients (B)	No. of Inpatients (C)	OPD/IPD (B/C)	IPD/Bed (C/A)	Bed Occupation
Champasak RH/PH	250	52,466	21,297	2.5	85.2	70.2
Salavan PH	70	40,050	9,607	4.2	137.2	78.0
Attapeu PH	100	20,111	4,407	4.6	44.1	68.6
Sekong PH	45	20,407	3,966	5.1	88.1	104.3

Table 3-4 Summary of Four Provincial Hospitals in 2014/2015

Unit: Persons: %

Source: JICA Survey Team based on the field survey results

Between Champasak Regional/Provincial Hospital and the other 3 provincial hospitals, there is a large difference in the numbers of inpatients and outpatients. Looking at the outpatient/inpatient ratio, it can be said that Champasak Regional/Provincial Hospital has emphasis on inpatient treatment and others have emphasis on outpatient treatment¹⁵.

When comparing the number of inpatients per bed among the 4 provincial hospitals, Salavan Provincial Hospital has a fewer beds per inpatient and Attapeu Provincial Hospital has a surplus¹⁶.

¹⁵ The same index indicates Setthathirath Hospital (5.1), Mahosot Hospital (21.8) and Mittaphab Hospital (9.9), which means the central hospitals have more emphasis on outpatient treatment than hospitals in southern provinces.

¹⁶ The same index indicates Setthathirath Hospital (59.8), Mahosot Hospital (42.2) and Mittaphab Hospital (52.5), which



Figure 3-2 Total Number of OPD/IPD/Bed in Southern Provincial and District Hospitals in 2014/2015

Source: JICA Survey Team based on the field survey results

3.3.3 District hospitals

The number of beds owned by and the numbers of inpatients and outpatients at district hospitals in all 4 provinces are shown in Figure 3-3 below:

means the central hospitals have more bed space available than hospitals in southern provinces.



Figure 3-3 Total Number of OPD/IPD/Beds in Southern District Hospitals in Southern Provinces (2014/2015)

Source: JICA Survey Team based on the field survey results

Among district hospitals, there is not a large difference in the number of beds owned, while some difference exists in the numbers of inpatients and outpatients. As shown in this figure, there are 2 different groups, one group of district hospitals encircled with a red line where there are larger numbers of both inpatients and outpatients and another group of district hospital encircled with a green line where there are fewer numbers of inpatients and outpatients. Also, there are some district hospitals that have a different and unique patient flow.

3.3.4 Referral system

Relationship in terms of location among district hospitals and provincial hospitals in southern provinces and the flow of patients referred are shown below:



Figure 3-4 Referral Flow among Health care Facilities in Southern Provinces Source: JICA Survey Team based on the field survey results

Patients are referred to provincial hospitals located in each province by district hospitals and hence, to Champasak Provincial Hospital by such provincial hospitals. Common reasons for referral found are external injury and difficult childbirth delivery and in many cases, patients are transported from a hospital to another accompanied by health care staff in an ambulance owned by the hospital. On the other hand, patients are sometimes transported from a district hospital located in a different province directly to Champasak Provincial Hospital depending on the road conditions. From the past records of the referral system, it can be seen that Champasak Provincial Hospital has already been acting as a regional hospital.

Past records related to the number of patients referred to Champasak Provincial Hospital are shown in Table 3-5 below:

	Total Number	%
Outpatient	48,638	
(Including emergency cases)	(24,585)	(50.5)
Total Referral Patients	3,449	7.1
From Attapeu PH	104	0.2
From Sekong PH	67	0.1
From Salavan PH	24	0.05
From DH/HC	3,254	6.7

Table 3-5 Past Records of Patients Referred to Champasak Provincial Hospital in Southern Provinces (2013/2014)

Source: JICA Survey Team based on the field survey results

The total number of patients referred to Champasak Provincial Hospital was 3,449 and 3,254 (94%) of which were referred from district hospitals/health centers. The similar tendency was shown in the flow of patients in FY2014/2015. According to an interview survey made to Champasak Provincial Hospital, however, it is known that patients with serious external injury are transported to Ubon Ratchathani in Thailand for receiving examination and initial treatment.

3.3.5 Hospital Finance in Southern Provinces

- In terms of income in the form of revolving funds and the number of beds, Champasak Regional/Provincial Hospital accounts for more than 50% of all 4 provincial hospitals in southern provinces.
- Since the ratio of personnel expenses is high and the management efficiency is low at all of these 4 provincial hospitals, they are in the red.
- It is highly possible that district hospitals manage to operate by receiving government subsidy.
- Public health insurance systems and the social security schemes' contribution to a stable and selfsustained management of hospitals is very weak.

(1) Current status of provincial hospitals

1) Scale of income

The financial statuses of provincial hospitals in the 4 southern provinces are shown below. Champasak Provincial Hospital is the receiver of the largest government subsidy and revolving funds, which is almost at the same level of one of central hospitals, Setthathirath Hospital. One of the reasons for this is the fact that the majority of population of the 4 southern provinces that the majority of the greater than 1.3 million population of the 4 southern provinces in Champasak Province.

Hospital Name	Total Revenue	Revenue from National Treasury	Revolving Fund Revenue
Champasak RH/PH (2013/2014)	29,955.6	15,386.2	14,569.3
Salavan PH (2014/2015)	12,679.9	7,619.2	5,060.8
Attapeu PH (2014/2015)	12,515.3	7,900.0	4,615.3
Sekong PH (2014/2015)	10,181.2	8,116.5	2,064.7
i.e. Setthathirath CH (2013/2014)	31,926.0	14,526.4	17,399.6

Table 3-6 Breakdown of the Revenue of the Southern 4 Provincial Hospitals (Unit: Million LAK)

Source: JICA Survey Team based on the field survey results

Table 3-7 Breakdown of the Expenditure of the Southern 4 Provincial Hospitals

			(Unit: Million LAK)
Hospital Name	Total Expenditure	Expenditure from National Treasury	Revolving Fund Expenditure
Champasak RH/PH (2013/2014)	412.9	230.8	182.1
Salavan PH (2014/2015)	185.2	122.6	62.6
Attapeu PH (2014/2015)	164.9	93.5	71.4
Sekong PH (2014/2015)	152.9	121.9	31.0

Source: JICA Survey Team based on the field survey results

Hospital Name	Total Number of Beds (A) (bed)	Revolving Fund Revenue (B) (million LAK)	RF Revenue/ Bed (B/A) (million LAK/bed)
Champasak RH/PH (2013/2014)	250	14,569.3	58.3
Salavan PH (2014/2015)	70	5,060.8	72.3
Attapeu PH (2014/2015)	100	4,615.3	46.5
Sekong PH (2014/2015)	45	2,064.7	45.9
i.e. Setthathirath CH (2013/2014)	220	17,399.6	79.1

Source: JICA Survey Team based on the field survey results

2) Dependence on government subsidy

Dependence on government subsidy is also similar between Champasak Provincial Hospital and Setthathirath Hospital and it can be seen that revolving fund income increases in relation with the number of inpatients, which makes dependence on government subsidy lower. Revolving fund income can increase while lowering dependence on government subsidy, depending on how hospitals will be managed in the future. In addition, even at Salavan Provincial Hospital, if the number of patients can be further increased, dependence on government subsidy become lower and lower.

Hospital Name	Percentage of Government subsidy (Government subsidy/Total Revenue×100)
Champasak RH/PH (2013/2014)	51.4
Salavan PH (2014/2015)	60.1
Attapeu PH (2014/2015)	63.1
Sekong PH (2014/2015)	79.7
i.e. Setthathirath CH (2013/2014)	49.0

Table 3-9 Percentage of Government Subsidy of the Southern 4 Provincial Hospitals (Unit: %)

Source: JICA Survey Team based on the field survey results

3) Profit and loss structure (amount and ratio of profit and loss)

When looking at total income, the 4 hospitals are in the black in general. When looking at revolving fund income, however, excluding Champasak Provincial Hospital where the deficit is less than such income at the rate of -89.0%, the other 3 hospitals have a large deficit exceeding their revolving fund income at a rate of more than 100%. This kind of large difference of profit and loss between gross income and revolving fund income indicates that hospitals cannot operate without receiving government subsidy. With respect to profit and loss of Sekong Provincial Hospital, however, it is assumed that there is a reflection of expected personnel procurement, since it is planned the number of beds (45 to 70) will be increased in January 2016 and later.

|--|

Hospital Name	Profit or Loss based on Total Revenue	Profit or Loss based on Revolving Fund Revenue
Champasak RH/PH (2013/2014)	2,426.1 (8.1)	-12,960.2 (-89.0)
Salavan PH (2014/2015)	336.2 (2.7)	-7,283.0 (-143.9)
Attapeu PH (2014/2015)	1,450.0(11.6)	-6,450.0 (-139.8)
Sekong PH (2014/2015)	-4.3 (-0.0)	-8,120.8 (-393.3)
i.e. Setthathirath CH (2013/2014)	975.1 (3.1)	-13,551.3 (-77.9)

Source: JICA Survey Team based on the field survey results

4) Index of management efficiency (ratio of personnel expenses)

Regarding the ratio of personnel expenses on the revolving fund income basis, 3 hospitals excluding Champasak Provincial Hospital have a remarkably high ratio. These 3 hospitals have a deficit in their profit and loss and therefore, it is an indication that the major reason for their tendency of being in the red is in personnel expenses. In order to reduce the ratio of personnel expenses, it is indispensable to increase revolving fund income as in the case of 3 central hospitals. Hospitals that can expect an increase in revolving fund income in southern provinces are 2 hospitals that are Champasak Provincial Hospital and Salavan Provincial Hospital based on their past records of the number of patients, while Sekong Provincial Hospital and Attapeu Provincial Hospital continue to need to receive government subsidy

Hospital Name	Personnel Expenditure(A) (Million LAK)	Revolving Fund Revenue (B) (Million LAK)	Personnel Expenditure Ratio (A/B) (%)
Champasak RH/PH (2013/2014)	12,830.8	14,569.3	88.1
Salavan PH (2014/2015)	7,619.2	5,060.8	150.6
Attapeu PH (2014/2015)	4,858.0	4,615.3	105.3
Sekong PH (2014/2015)	7,211.0	2,064.7	349.3
i.e. Setthathirath CH (2013/2014)	15,356.9	17,399.6	88.3

 Table 3-11 Personnel Expenditure Ratio Based on Revolving Fund Revenue of the Four

 Southern Provincial Hospitals

Source: JICA Survey Team based on the field survey results

(2) Current status of district hospitals

In this survey, it was found that each province had only province-based comprehensive informational material concerning the amount of government subsidy budget planned and implemented for all of (1) district health offices, (2) district hospitals and (3) health centers and there was no information on the financial status of each district hospital and therefore, information on the status of revolving fund income for each district hospital has not been collected.

In order to understand the overall financial status of district hospitals, the Survey Team visited six district hospitals and health offices as recommended by the provincial health offices. It was found, however, that only three hospitals of Sanasomboun District Hospital in Champasak Province (16-02), Khongsedone District Hospital in Salavan Province (14-06) and Xaysetha District Hospital in Attapeu Province (17-01) were maintaining financial data on government subsidy and revolving fund balance, by organizing expense items based on the provisions of the government designated accounting standard.

As shown below, the Team predicts the overall status of district hospitals using the flow of patients and financial status of the above three hospitals.

As shown in Table 3-12 below, the scale of functioning health care service at the above 3 district hospitals differs between Khongsedone District Hospital and the remaining 2 of Sanasomboun District Hospital and Xaysetha District Hospital. The financial characteristics at the district hospitals are that the revolving fund income has almost no influence on hospital management and dependence on government subsidy is strong. In addition, not only personnel expenses but also other expenses are highly dependent on government subsidy. Meanwhile, even at Khongsedone District Hospital with a high-level revolving fund income, personnel expenses are covered entirely with government subsidy and about 30% of other expenses are dependent on government subsidy. That is, even at all these 3 district hospitals, it is assumed there is some relationship between the number of inpatients and their financial status. Assuming from the financial status of provincial hospitals in southern provinces, all district hospitals can be said highly dependent on government subsidy.

Table3-12 Number of Patients at Three District Hospitals in Southern Provinces (2014/2015) Unit: Persons

Province Name	District Hospital Name	IPD/year	OPD/year	
Champasak	Sanasomboun	396	3,719	
Salavan	Khongsedone	2,653	8,940	
Attapeu	Xaysetha	1,191	3,578	

Source: JICA Survey Team based on the field survey results

Table3-13 Breakdown of Expenses Dependent on Government Subsidy at Three DistrictHospitals in Southern Provinces (2014/2015)Unit: Million LAK

-	District Hospital Name	Total Expenditure	National Treasury		
Province Name			Subtotal	Personnel Expenditure	Expenses
Champasak	Sanasomboun	3,674.7	3,333.0	2,767.8	565.3
Salavan	Khongsedone	5,339.7	3,568.5	2,900.2	668.3
Attapeu	Xaysetha	3,491.6	3,398.4	2,554.5	843.8

Source: JICA Survey Team based on the field survey results

Table3-14 Breakdown of Revolving Fund Expenses at Three District Hospitals in SouthernProvinces (2014/2015)Unit: Million LAK

	District Hospital		Revolving Fund Revenue			
Province Name	Name	Total Expenditure	Subtotal	Personnel Expenditure	Expenses	
Champasak	Sanasomboun	3,674.7	341.7	0.0	341.7	
Salavan	Khongsedone	5,339.7	1,771.2	0.0	1771.2	
Attapeu	Xaysetha	3,491.6	93.3	0.0	93.3	

Source: JICA Survey Team based on the field survey results

3.3.6 Actual status of public health insurance systems and social security schemes

(1) Current status of maternal, neonatal and child health care systems

- At all provinces, the subscription rate of public health insurance exceeds that of national average (9% in FY2014/2015).
- The current status of maternal, neonatal and child health care benefit system at each province can be understood but it is difficult to make comparison.
- The current public health insurance systems do not contribute to a stable and self-sustained hospital management.

Information on the current status of maternal, neonatal and child health care systems is not unified in terms of collection method and although the current status could be understood, it was not easy to make comparison.

Table3-15 Maternal, Neonatal and Child Health Care System Expenditure in the Four Southern Provinces of Laos

Nº	Province	Operation	Hospital	Actual Result		
		[2013/2014] *Subsidies for childbirth delivery (free of charge)	PH (1)	ANC: 2,345/PNC: 579 Normal delivery: 821/ Caesarean operation: 202		
1	Champasak	[Source] National Treasury	DH (8)	ANC: 2,629 (of these, OR: 181)/PNC: 360 (of these, OR: 69) Normal delivery: 651/Caesarean operation: 50		
			HC (27)	ANC: 1,600/PNC: 380 (of these, OR: 176) /normal delivery: 173		
		[2014/2015]	PH	[Scale of source per target]		
0	Optower	*Subsidies for childbirth delivery (free of charge)	DH	Subsidies for delivery \rightarrow 2,348,532,400 kip		
2	Salavan	*Treatment for children under 5 (free of charge)	HC	Subsidies for children under 5 \rightarrow 1,439,997,394 kip		
		[Source] National Treasury		(For the entire system: 3,788,529,7940 kip)		
	[2014/2015] *Subsidies for childbirth	PH DH	[Coverage per target] 2012/2013 Subsidies for delivery → coverage of 4% of total			
3	Sekona	delivery (free of charge) * Treatment for children		provincial population Subsidies for children under 5 \rightarrow coverage of		
		under 5 (free of charge)	HC	14% of total provincial population		
		[Source] National Treasury		(With the entire system, coverage of 18% of total provincial population)		
	4 Attapeu	[2014/2015]	PH	[Coverage per target] 2012/2013		
4		*Subsidies for childbirth delivery (free of charge)	DH	For the entire system: 14,388 (10% of total provincial population)		
		* Treatment for children under 5 (free of charge) [Source] National	HC			
		Treasury				

Note 1: Data is from FY2013/2014 for Champasak Province and FY2014/2015 for other provinces.

Note 2: ANC: Antenatal care; PNC: Postnatal care; and OR: Outreach

Source: JICA Survey Team based on the data collected by each of provincial health office in the target provinces or created through interview survey made to personnel responsible for financial affairs.

(2) Coverage of public health insurance systems in 4 southern provinces and their characteristics

The public health insurance system in Laos consists of the schemes operated by the State Authority for Social Security (SASS), the Social Security Organization/Social Security Scheme (SSO/SSS) and the Community-Based Health Insurance (CBHI). In addition, there are free health care schemes called Health Equity Fund (HEF) for the poor and the Maternal and Child Health Fund (Free-MCH) for expectant and nursing mothers and children under five years of age. These insurance schemes do not cover the entire country. CBHI and HEF, in particular, are available only in certain districts and not in others.

The comparison of the health insurance coverage in the four southern provinces studied in this survey reveals that the number of the subscribers to the health insurance for the poor, HEF, is large in Sekong Province and that the percentage of the people subscribing to the public health insurance schemes is higher in this province than in the other three provinces. Due to high number of subscribers for the HEF which substantially

facilitates national povety reduction policy in Sekong Province, it resulted to raise the proportion of number of subscribers per total district population. Numerous developing partners including Swiss Red Cross have been provided finantial support to this fund and, as for the health insurance, supporting capacity development in finantial management has been implemented as well.

N⁰	Province	Population	Insurance type	Subscriber	Subscription/ Population (%)	Details
1	Champasak	671,535	SASS	30,945		
			SSO/SSS	9,787		
			CBHI	19,344	-	*CBHI subscribed in 4
			HEF	9,898		districts, 205 villages
			Total	69,974	10.42	205 villages
2	Salavan	450,132	SASS	17,477		
			SSO/SSS	1,726		
			CBHI	2,344	-	*CBHI subscribed in 1
			HEF	46,738		district
			Total	68,285	15.17	(Khongsedone)
3	Sekong	110,546	SASS	10,491		
			SSO/SSS	828		
			СВНІ	4,278	-	*CBHI subscribed in 1
			HEF	40,041		district
			Total	45,147	40.84	(Tha Teng)
4	Attapeu	143,944	SASS	11,770		
			SSO/SSS	914		
			СВНІ	541	-	*CBHI subscribed in 1
			HEF	9,899		district
			Total	23,124	16.04	(Samakkhixay)

 Table3-16 Coverage of Public Health Insurance Systems in 4 Southern Provinces
 Unit: Persons: %

Note: Data is from FY2013/2014 for Champasak Province and FY2014/2015 for other provinces.

Source: JICA Survey Team based on the data collected by each of provincial health office in the target provinces or created through interview survey made to personnel responsible for financial affairs.

(3) Influence of public health insurance or maternal, neonatal and child health insurance systems on hospitals' financial status

As shown in the table below, there is an indication that deficits arising from a gap between insurance premium receipt and health care fees can accumulate at Sekong Provincial Hospital and Attapeu Provincial Hospital in the future and there is a possibility the same can happen at Champasak Provincial Hospital and Salavan Provincial Hospital, too. The current public health insurance systems in southern provinces can be said to not be financially contributing to a stable and self-sustained management of provincial hospitals.

Hospital	Health insurance - social security	Balance brought forward from the previous year	Income	Health care fee	Balance
Champasak	SASS	Not given	15.6	19.6	(4.0)
	SSO/SSS	Not given	10.5	5.5	4.9
	СВНІ	Not given	9.8	11.0	(1.2)
	HEF	Not given	1.8	1.8	0.0
	Provincial compensation for unpaid fee	Not given	4.4	4.3	0.0
	Free-MCH	N/A	N/A	N/A	N/A
	Total	0.0	42.1	42.2	(0.2)
Salavan	SASS	(3.4)	7.6	11.5	(7.3)
	SSO/SSS	3.0	0.6	0.4	3.2
	СВНІ	N/A	N/A	N/A	N/A
	HEF	N/A	N/A	N/A	N/A
	Free-MCH	0.0	13.4	13.1	0.4
	Total	(0.4)	21.6	25.0	(3.8)
Sekong	SASS	(14.9)	10.7	8.5	(12.7)
	SSO/SSS	(0.1)	0.8	0.5	0.2
	СВНІ	(1.0)	0.2	0.2	(1.1)
	HEF	(8.1)	4.1	8.0	(12.0)
	Free-MCH	(4.9)	9.2	12.8	(8.5)
	Minority race support system	0.0	0.1	0.1	(0.1)
	Total	(29.1)	25.1	30.2	(34.1)
Attapeu	SASS	(8.0)	13.4	22.4	(17.0)
	SSO/SSS	0.0	0.8	0.8	0.0
	СВНІ	(2.0)	0.4	3.8	(5.4)
	HEF	0.0	0.1	0.2	(0.1)
	Free-MCH	0.0	0.0	6.5	(6.5)
	Total	(9.9)	14.7	33.7	(28.9)

Table3-17 Income from Public Health Insurance Systems and Health Care Fees at 4 ProvincialHospitals in Southern Provinces of LaosUnit: Million yen

Note: Data of 2013/2014 for Champasak Provincial Hospital and those of 2014/2015 for other three provincial hospitals.

Source: JICA Survey Team based on the field survey results

3.3.7 Conformance to the Facilities and Equipment Standards in Southern Provinces

Based on the Decree No. 107/MOH of July 2010 concerning functional standard of provincial hospitals, Decree No. 2312/MOH of December 2008 concerning functional standards of district hospitals and the List of Standard Equipment of MOH (2014) mentioned in 3.2 above as well as keeping in mind a minimum equipment that is necessary for meeting recent movement, issues and problems related to facilities and equipment were confirmed for a total of 27 provincial and district hospitals. The summary is shown below (detailed data and information is included in Attachment 3).

[Salavan Province]

(1) Salavan Provincial Hospital (District code: 14-01)

Salavan Provincial Hospital is located about 3km east of the bus station in central Salavan, at the end of Route 15B. There is a gate to control traffic at the entrance and unnecessary vehicles are not allowed to enter. The hospital facilities were built in 1980 and the site covers an area of approximately 2ha. Issues and problems were confirmed as follows:

Item	Description
Facilities	Although the buildings are 35 years old, the rooms are clean and tidy and do not give the
	impression of being old.
Equipment	The main health care equipment was upgraded from 2010 through 2015 and nothing seems
	to be lacking. However, the X-ray unit was installed in 2011, but it is a film-type unit and
	there is concern about the film supply. Early transition to digitalization is desired.

(2) Ta-Oy District Hospital (District code: 14-02)

Ta-Oy District Hospital is a 15-bed Type A district hospital situated about 86km (distance by road) northnortheast of Salavan City and 50m south of Route 15B. The facilities were built in 2004 by the American Veterans Association. Issues and problems were confirmed as follows:

Item	Description	
Facilities	The main building is equipped with the necessary rooms for a Type A district hospital, but	
	the layout lacks coherence and is not considered user-friendly for patients or carers. It	
	looks very disorderly and as a result it also gives the impression of not being very clean.	
	There are severe water shortages in the dry season and it is necessary to secure a stable	
	water supply from a deep well. The hospital should also be equipped with an emergency	
	generator.	
Equipment	The equipment cannot be described as adequate even for a district hospital. In particular,	
	the sterilizer is installed in semi-open space and is operated in the worst environment.	

(3) Toumlan District Hospital (District code: 14-03)

Toumlan District Hospital is a 15-bed Type B district hospital situated 200m east of Route 1G and about 54km (distance by road) north of Salavan. Built in 1988, the outpatient building, obstetrics & gynecology building and inpatient building are scattered across the premises and all give the impression of being cramped. The hospital ward was revamped in FY2014/2015 and is just big enough for the regulation 15 beds. The dental chair, electrocardiograph (ECG), bedside monitor and other equipment were provided by the provincial health office in recent years, but the director's excuse for the equipment not being utilized effectively was that no dentist had been assigned to the hospital and no training had been provided for the other equipment, so the equipment remained packed in its boxes. Issues and problems were confirmed as follows:

Item	Description
Facilities	No dental examination room (or equipment) is planned so the hospital does not meet the
	standards for a Type B district hospital. Built in 1988, the hospital facilities are
	significantly dilapidated and come across as cramped even just in terms of the services
	currently provided by each building. The site is extensive and there is space for more
	buildings. The hospital should be equipped with an emergency generator.
Equipment	Some new equipment related to maternal, neonatal and child health has been installed, but
	the delivery table and resuscitation table have been in use for over 20 years. New
	equipment for departments such as the examination room and emergency room has been
	provided by the provincial health office, as with other district hospitals in Salavan
	Province, but the bedside monitor and ECG have been stored away unused. A dental chair
	has been provided but no dentist has been assigned and the chair has been left sitting in
	the outpatient diagnosis room. Thus the hospital fails to meet the standards for a Type B
	district hospital.

(4) Lakhonepheng District Hospital (District code: 14-04)

Lakhonepheng District Hospital is a 10-bed Type B district hospital situated about 120km (distance by road) north of Pakse and 300m east of Route 13. It is the westernmost district hospital in Salavan Province. The district hospital facilities (not including the equipment) were completed in 2010 with assistance from the Government of Japan (grant aid for grassroots project). Despite its fairly small size for a district hospital with a total floor area of approximately 450m2, it has abundant human resources with 1 (volunteer) specialist, 8 general practitioners (MD) and 8 registered nurses providing health care services. The female deputy director, a physical therapist, was the main respondent to the interview survey. The hospital's current headache is the provision of equipment not immediately required by the Salavan Provincial Health Office. (Even though the hospital has no dentist, a dental chair was suddenly delivered. The chair is in storage still packed in its wooden box.) Issues and problems are shown below:

Item	Description		
Facilities	Completed in 2010 with grant aid for grassroots project, the hospital facilities seem		
	extremely robust and the workmanship close to that obtained with general grant aid, while		
	maintenance and cleaning also appear to be meticulously carried out. Inventiveness is		
	apparent in terms of operation, with the ordinary consulting room used as an emergency		
	treatment room. However, the number of inpatients that can be accepted is 10 (two 4-bed		
	rooms and one 2-bed room), thus the hospital does not satisfy the standards for a Type B		
	district hospital (15 beds).		
Equipment	Since the hospital opened in 2010, it has secured most of the equipment for emergency		
	care and some of the equipment for delivery with the provincial budget, while efforts to		
	acquire equipment for delivery, echocardiography and equipment of the examination room		
	from development partners are ongoing.		

(5) Vapi District Hospital (District code: 14-05)

Vapi District Hospital is a 30-bed Type B district hospital located on Route 15A about 45km (distance by road) west of Salavan. The hospital recently moved from another location in the village in December 2015. Since the new hospital was built in the new location on Route 15, the number of patients has increased and the hospital was bustling when the Survey Team visited. A new building was erected accompanying the relocation and new equipment was installed, including a mobile X-ray unit, electrocardiograph (ECG) and ventilator. As with other district hospitals in Salavan Province, some of the test-related and emergency care-related equipment was replaced from 2013 to 2014, but in 2015 more equipment than was necessary was delivered and the lack of health care personnel in relation to the excessive supply of equipment and the lack of training in operation of the new equipment are a source of concern for the director and deputy directors (the only two general practitioners in the hospital). On the other hand, there is a shortage of tables, chairs and other items for sorting and tidying, and boxes still containing equipment were being used as tables in the examination room. Issues and problems are shown below:

Item	Description
Facilities	The hospital just moved to a new location in the village in December 2015 and the facilities
	are kept in a very clean state. Although it is one building short, it was built in compliance
	with community hospital standard drawings and is equipped with a room for the X-ray
	unit, thus meeting the space standards for a Type B district hospital. The hospital is not
	equipped with an incinerator, so waste including waste with a risk of contamination is
	incinerated outside in the hospital grounds. The hospital has no emergency generator
	either.
Equipment	Following relocation of the hospital, as well as a mobile X-ray unit, emergency care-
	related and operation-related equipment such as an ventilator, ECG, bedside monitor and
	suction unit, and specimen test-related equipment such as biochemical blood test
	equipment were supplied by the provincial health office, but some of the equipment had
	just been replaced in recent years and it is now in excess supply. Also, even though new
	equipment has been provided, no training has been given and no trained personnel have
	been assigned (for example, there is no radiologist), so the equipment has been stored
	without being used, and the balance between training and assignment of human resources
	and provision of equipment is an issue.

(6) Khongsedone District Hospital (District code: 14-06)

Khongsedone District Hospital is a 35-bed Type A district hospital located on Route 13 about 60km (distance by road) north of Pakse. The hospital's health care services are provided in two buildings, the main building and the MCH building. Health care equipment was procured for the main building with grant aid from the Government of Japan in 2006. The MCH building, on the other hand, was planned and designed by the United States Pacific Command and was donated in 2005. Issues and problems were confirmed as follows:

Item	Description
Facilities	The main building was built in the 1960s and renovated around 2006 – 2007. The layout

	is straightforward and user-friendly. The building is kept very clean. The MCH building,		
	on the other hand, was built in 2005. Although it is a single-story building, the roof is		
	unnecessarily high, and in addition, the design of the corridor and rooms comes across as		
	complicated and hard to use.		
Equipment	The equipment was procured in 2006 with grant aid from Japan. At the present time, it is		
	all in working order and is well used.		

(7) Lao Ngam District Hospital (District code: 14-07)

Lao Ngam District Hospital is a 15-bed Type B district hospital located about 77km (distance by road) northwest of Pakse, 47km (distance by road) southeast of Salavan City and 200m north of Route 20. The facilities, including an administration building, six clinical services-related buildings, district health office, Saymai House, garage and laundry, are scattered across the extensive 6ha site. In particular, the main buildings on the site (district health office, six clinical treatment-related buildings and Saymai House) are symbolically situated along a connecting corridor. In fact, the layout corresponds well to the differences in elevation and undulations of the site. In terms of operation, though a Type B district hospital, it copes well with minor surgery. On the other hand, there is a lack of dental treatment-related personnel, health care equipment and space. Issues and problems are shown below:

Item	Description		
Facilities	As the hospital has no dental treatment-related personnel, equipment or space (it has a		
	old dental chair donated by Mahosot Hospital), it does not satisfy the conditions for a Type		
	B district hospital. (However, as the existing facilities have plenty of space, it would not		
	be difficult to find space for a dentistry treatment room.) The hospital has no emergency		
	generator.		
Equipment	Most of the emergency care equipment and equipment for the examination room is		
	obtained with the provincial budget. However, as mentioned above, the hospital has no		
	dental treatment-related equipment.		

(8) Samuoi District Hospital (District code: 14-08)

Samuoi District Hospital is a 15-bed Type B district hospital located about 148km (distance by road) north-northeast of Salavan and 62km from Ta-Oy on the same Route 15B. The facilities are scattered across an extensive site. Issues and problems were confirmed as follows:

Item	Description
Facilities	Based on a district hospital building method commonly used in Laos, the facilities are in the form of a spacious outside corridor running in front of the departments. The facilities are still robust and not in need of reconstruction. The hospital should be equipped with an emergency generator.
Equipment	The hospital is equipped with a phototherapy unit with infant warmer (with aid from Cesvi) and oxygen generator, but they are not used very much.

[Sekong Province]

(9) Sekong Provincial Hospital (District code: 15-01)

Sekong Provincial Hospital is located on the Route 16 bypass about 3km north of the market in the center of Sekong. The hospital facilities were built in 1984. Issues and problems were confirmed as follows:

Item	Description
Facilities	Although it is 30 years since the hospital was built, the rooms are clean and tidy and do not come across as old.
Equipment	The main health care equipment was provided from 2010 through 2015 and nothing seems to be lacking. However, the X-ray unit was installed in 2010, but it is a film-type unit and there is concern about the film supply. Early digitalization is desired. Also, the bedside monitor in the ICU and the operation table, electric scalpel and shadowless lamp in the operating theatre were provided in 1999, but are still in use and early replacement is required.

(10) Kaleum District Hospital (District code: 15-02)

Kaleum District Hospital is a 20-bed Type B district hospital newly built in a new location in May 2015 due to the construction of a dam that resulted in the relocation of two entire villages due to be submerged to a hillside 35km nearer Vietnam than their original location. Issues and problems were confirmed as follows:

Item	Description
Facilities	The hospital facilities are more than big enough and quiet enough for the current treatment
	departments and number of patients. It is six months since the hospital moved to its present
	location, but there are still items that need to be properly tidied away and arranged.
Equipment	Same as above

(11) Dakcheung District Hospital (District code: 15-03)

Dakcheung District Hospital is a 16-bed Type B hospital located along the main road that is being developed as Route 16B (scheduled to be completed in 2017) about 92km east of Sekong. Of this total distance of 92km from Sekong, about 30km is paved road (near Sekong there is a bridge that has not been completed so it is necessary to cross by ferry. The bridge is scheduled to be completed in 2017). The next 30km is reasonably maintained unpaved road (red soil that is easy to slide on), and the remaining 32km is unmaintained completely mountainous road. Dakcheung town has wide streets but the overall impression is desolate. It is like the town was built on the top of a mountain that had been flattened, no matter which direction you go in the town eventually one arrives at a steep downward slope, so the location conditions are severe. When the wind blows it passes through the whole town, so the climate conditions are poor.

The district hospital facilities are provided on a hill outside the town towards Sekong. The district health office is adjacent to the hospital but on a separate site. The site of the district hospital is narrow and there is no expansion or new construction. The facilities are small and at a minimum level, but at present an operation

theater is being newly constructed with funds from MOH, and after this is completed the category of the district hospital is due to change from "B" to "A". Issues and problems were confirmed as follows:

Item	Description
Facilities	The application for upgrade to a Type A district hospital has been submitted, and for this purpose the operation building is under construction in the forecourt. However, radiography room (including equipment), diagnosis and treatment room for ophthalmology and ear, nose and throat (including equipment), and an additional 14 beds to make a total of 30 beds are necessary. Also, the hospital should be equipped with an emergency generator.
Equipment	The number of childbirths is small, and because the amount of traffic is small the number of injured due to accidents is extremely small, and as a result there is no significant health care equipment. There is a full set of equipment in the examination rooms received from MOH, but it does not seem to be used very much. In 2001 a used ambulance was received from the health office, but now it does not move (due to a breakdown that can be repaired but there is no budget, and it has not been repaired for nearly 1.5 years). Oxygen generation equipment was received as grant aid for grassroots project from the Japanese Embassy, but it has only been used a few times. A fetal phonocardiograph was received from MOH, but the batteries are discharged, and it is not used.

(12) Tha Teng District Hospital (District code: 15-04)

Tha Teng District Hospital is a 10-bed Type B district hospital located on Route 16 going from Pakse towards Attapeu Province at the branch towards Salavan. The surrounding national routes are all paved, so it is convenient to go to Pakse, Attapeu, and Salavan. It is a plateau area (elevation 800m) so the climate is cool even in summer, and it is pleasant for living. Because of the good environment there are many retired foreigners living nearby. There is plenty of produce such as highland vegetables, etc., and it ranks alongside Bolaven Plateau for the shipment of fruit and vegetables. Issues and problems were confirmed as follows:

Item	Description
Facilities	The facilities include both the old characteristic Laotian facility (constructed in 1992) and
	the main facility constructed with US aid in 2012. In addition there is a maternal, neonatal
	and child health building, and a malaria project building. The site has surplus space. The
	facility is tidily managed maintaining the 5S and very cleanly used, under the guidance of
	volunteers dispatched from Thailand Red Cross (2013). However, an emergency generator
	should be provided.
Equipment	Most of the equipment for dealing with emergencies is lacking.

[Champasak Province]

(13) Champasak Provincial Hospital (District code: 16-01)

Champasak Provincial Hospital is the 250-bed provincial hospital in Pakse, the capital of Champasak Province. When there are severely ill patients in the west of the neighboring province, Salavan Province, it
is thought that they are immediately referred to this hospital, and referrals are also received from the provincial hospitals of the three southern provinces. Issues and problems were confirmed as follows:

Item	Description
Facilities	There is clear and major differentiation between the facilities, such as the outpatients,
	emergency and surgery, treatment room/ward for each department, MCH and pediatrics.
	On the other hand, there are clearly insufficient rooms, as the supplementary beds are
	constantly used on the second floor of the central hall of the main building and diagnosis
	and treatment for each department building. However, it is necessary to study the
	demarcation with the Pakse District Hospital which is currently under construction.
Equipment	One of the two X-ray units that they possess (11 years have passed since they were
	purchased) is broken down, so the workload is compensated for using a mobile X-ray unit,
	and in addition the CT is also broken down. Renewal of these devices should be examined.

(14) Sanasomboun District Hospital (District code: 16-02)

Sanasomboun District Hospital is a 10-bed Type B district hospital located along Route 13 about 24km northwest of Pakse (distance by road), on a site of about 2.7ha together with the district health office. The facilities of the district hospital were completed in 2010 with assistance from the Government of Japan (grant aid for grassroots project). Nearby the hospital, land preparation is in progress for attracting companies. A temporary road and an electrical power line have been developed on part of the 100m \times 300m site recognized by Champasak Province as being for the district hospital use (discussion with the director of the district health office). This director of the district health office was almost the only person that clearly knew and was immediately able to reply regarding the hospital site areas and the total floor areas of the hospital facilities in an interview survey regarding the regional hospitals in the south.

At present a new ward building is being constructed in the back yard of this hospital in order to satisfy the rules for the number of beds in a Type B district hospital (15 beds). Note that one dentist is deployed, but because they have no dentistry diagnostic equipment, dentistry is not included in the diagnostic and treatment departments. Issues and problems were confirmed as follows:

Item	Description
Facilities	The hospital facility which was completed in 2010 by grant aid for grassroots project is a
	Type B district hospital, but the number of beds (10 beds) does not satisfy the requirements
	(15 beds), so at present a new ward building is being constructed out of the province's own
	budget. Apart from that shown on the left, equipment and space is lacking for dentistry
	diagnosis and treatment. An emergency generator has not been installed.
Equipment	As stated above, there is no dental chair.

(15) Bachiangchaleunsouk District Hospital (District code: 16-03)

Bachiangchaleunsouk District Hospital is a 15-bed Type B district hospital located along Route 20 about 35km northeast of Pakse (distance by road), and the new district health office building is being constructed close to the south side of the outpatient building. The director of the hospital and the deputy director are both

women, and the deputy director used to be an MCH specialist doctor. Pediatrics, which is one of the essential departments, is not provided at this hospital. Therefore they have been making efforts to secure health care staff, but to the annoyance of the director and deputy director of the hospital, they are unable to provide in the existing facility the required number of beds (15 beds) for a Type B district hospital, and the maximum is about 7 beds (previously the rule for a Type B hospital was 10 beds but in FY2014/2015 the number of beds was revised to 15). Issues and problems were confirmed as follows:

Item	Description
Facilities	According to a notification from the provincial health office, the required 15 beds are provided as inpatient beds, but the absolute space of the hospital ward is insufficient, so it is necessary to expand the patients rooms. Also, an emergency generator has not been installed.
Equipment	In recent years the procurement of equipment has been better.

(16) Paksong District Hospital (District code: 16-04)

Paksong District Hospital is a 30-bed Type A district hospital located along Route 16 about 50km east of Pakse (distance by road), and as of December 2015 two buildings are being constructed including operation theaters and recovery rooms, etc., on the east side of the existing building with assistance from Thailand. Since the hospital opened in 1975, in 2005 the existing emergency, outpatient, and inpatient building, in 2010 the hospital building (additional beds. Constructed with assistance from Australia), and in 2014 the obstetrics and gynecology building were constructed. In the case of the equipment also, an ambulance was obtained with assistance from Thailand, beds for emergency treatment rooms were acquired from a private Vietnamese company, the examination room equipment was purchased with the hospital's budget, etc., continually making efforts not to rely on government budget. This is a Type A district hospital, but the X-ray unit has not been used since it broke down in 2005. Issues and problems were confirmed as follows:

Item	Description
Facilities	Since opening in 1975, it has been expanded and enhanced 3 times. In addition, the
	operation theater and recovery room within the aging building constructed in 1975 are
	scheduled to be moved to a new multipurpose building that will also include hospital wards
	that is currently as of December 2015 under construction with assistance from Thailand.
	Note that the minimum level of emergency generator equipment should be provided.
Equipment	Besides the equipment for each department provided with assistance from the Thai Royal
	family, a Vietnamese company, and JICA, efforts are continuing to procure using the
	hospital budget biochemical examination equipment, a centrifuge, and ultrasonic
	diagnostic equipment (which broke down in 2013), but the X-ray unit has now been broken
	down for 10 years. The operating equipment being used is old but is being repaired, but
	assistance from Thailand for supply of equipment is scheduled to be provided.

(17) Pathoumphone District Hospital (District code: 16-05)

Pathoumphone District Hospital is a 15-bed Type B district hospital located about 300m to the west of Route 13 about 40km south of Pakse (distance by road), on a site of about 2.7ha together with the district health

office. The building is spacious (more than about 1,200m²), but the impression is that there is an unbalance in the health care and dental equipment. In other words, the examination room has biochemical analysis equipment but is lacking in a blood cell counter (CBC). In addition there is not a single ultrasonic examination device, but on the other hand they have an ambulance. Issues and problems were confirmed as follows:

Item	Description
Facilities	Equipment and space is lacking for dentistry diagnosis and treatment (it is considered that space can be easily provided within the hospital). Note that the capacity of the emergency generator is extremely small
Equipment	As stated above, there is no dentistry diagnosis and treatment equipment. Also, CBC and ultrasonic examination equipment should be provided.

(18) Phonthong District Hospital (District code: 16-06)

Phonthong District Hospital is a 15-bed Type B district hospital located along Route 16 about 15km west of Pakse. On the site, which is about 100 m length along the national route and has a depth of more than 200m, buildings are arranged in the following order from the front: OBGY and hospital ward, followed by outpatient building and ultrasonics examination building, and further inside there are several small buildings that are facilities related to the district health office. Therefore to first-time visitors it does not look like hospital facilities (the local residents meeting facility close to the road within the site can be mistaken for the hospital). The current district hospital facility is a temporary facility developed as a camp for Chinese workers engaged in road construction. After completion of construction in 2002 it was converted as it was to the district hospital, and in 2015 a new ultrasonic examination facility building was constructed. Issues and problems were confirmed as follows:

Item	Description
Facilities	The hospital facilities are in the building that was constructed about the year 2000 for
	another purpose and then converted, and on the hospital side various operational measures
	were carried out. However, there is no covered connecting corridor between the three small
	buildings or paved road for transporting stretchers or wheelchairs, so the convenience of
	use is still poor. Considering normal function as a Type B district hospital, it is necessary
	to construct a new building suitable for hospital use. However, it is necessary to provide
	functions taking into consideration the location conditions of being very close to the Pakse
	Provincial Hospital (15km). Note that emergency generator equipment should be
	provided.
Equipment	Ultrasonic examination equipment and other examination equipment are generally
	provided, but there is almost no equipment for emergencies.

(19) Champasak District Hospital (District code: 16-07)

Champasak District Hospital is a 20-bed Type A district hospital, located near the east side of Route 14 A about 60km south of Pakse (only about 1km adjacent to the hospital is unpaved, and the remaining about 59km is paved road). This hospital was completed in 2008 with Japanese grant aid cooperation. A new

hospital building is under construction in the backyard on the south side of the existing facility. This is a measure taken in response to the large number of inpatients (the hospital bed occupancy rate in the last 2 years exceeded 80%), and this extension is clearly being carried out with awareness of the standard facility drawings for community hospitals indicated in the Ministry of Health "Standards of Community Hospitals and Small Hospitals". About 7 years has passed since commencement of operation, and although there are no major signs of degradation in the facilities, there have been some breakdowns in the equipment. Issues and problems were confirmed as follows:

Item	Description
Facilities	No major degradation can be seen in the facility, and at present the hospital ward is being extended.
Equipment	There is scope for considering renewal of the X-ray unit.

(20) Soukouma District Hospital (District code: 16-08)

Soukouma District Hospital is a 15-bed Type B district hospital about 70km (distance by road) from Pakse, located on the south side of the village that spreads from the west side of the main road. Its referral hospitals are the Champasak District Hospital, a Type A district hospital located about 16km to the north (time required during the dry season about 40 minutes), and Champasak Provincial Hospital in Pakse City (do., about 80 minutes). However about 8km from the hospital is unpaved road, so during the rainy season passage is more difficult and more time is required. There are two dentists but there is no dentistry treatment space and no dental chair, so other departments provide support. The director of the hospital states that a major problem is stability of the health care staff. Issues and problems were confirmed as follows:

Item	Description
Facilities	There is sufficient space on the site, and the overall impression is that maintenance and
	cleaning is carried out well. Facilities other than the inpatients building are concentrated
	in the building at the entrance gate, and there are no problems at present regarding
	provision of services, however there is no space or equipment for dentistry treatment, so
	the criteria for a Type B district hospital are not satisfied. Also, an emergency generator
	should be provided.
Equipment	Old equipment such as the operation table and delivery table are being carefully used, but
	efforts are continuing to obtain maternal, neonatal and child health equipment from
	development partners such as Médecins du Monde, etc. However, as described in the
	facilities column, even though a dentist is deployed, there is no dental chair, so this service
	cannot be provided, and the criteria for a Type B district hospital are not satisfied.

(21) Mounlapamok District Hospital (District code: 16-09)

Mounlapamok District Hospital is a 15-bed district hospital located about 2km from the Mekong River, about 100km (distance by road) south of Pakse, in 2014 it was moved into the village away from the Mekong River. According to Champasak Provincial Health Office, the aim is that it should become a community hospital, so it has been decided that it will be converted from the existing Type B to Type A, and although it is one

building short, it has been constructed almost in conformance with the standard drawings for a community hospital. About one third of the total length of the road along the Mekong River to Pakse is unpaved, so when referring to the Champasak Provincial Hospital each ambulance crosses the Mekong River using a public boat, and then uses the paved road on the opposite bank. The referral time varies depending on the status of passengers on the boat. Also, there are several simple ambulances in which a pickup truck is installed with a cradle and a roof. New equipment that is necessary for the operation theater of the Type A hospital is scheduled to be provided, but there is no X-ray unit. Intern students and other staff that have been trained frequently do not return, so stability of health care personnel is a major problem, the same as for the other district hospitals in Champasak Province. Issues and problems were confirmed as follows:

Item	Description
Facilities	The building completed in 2014 was constructed in compliance of the community hospital
	standard drawings, and although it has one fewer building than the standard drawings it
	can satisfy the criteria for the number of hospital beds (30 beds) for a Type A district
	hospital (if they are squeezed into the space). During the rainy season on some days there
	can be power outages lasting 2 hours or more per day, so a generator should be installed.
Equipment	New equipment has been provided in the examination rooms, the same as for other
	hospitals in Champasak Province, and some equipment for maternal, neonatal and child
	health is being supplied from development partners. Equipment for surgery is scheduled
	to be provided for the conversion to a Type A district hospital, but on the other hand there
	is no ultrasonic examination equipment, so the criteria for a Type B district hospital are
	not satisfied. Also, the dental chair (obtained secondhand from Champasak Provincial
	Hospital) is broken down and only functions as a chair.

Note: In some cases secondhand dental chairs are provided to district hospitals from Mahosot Hospital, the central educational hospital, and provincial hospitals. However, at the time that they are received or soon after use they break down, and many examples were seen in which they were just discarded without being repaired (Mounlapamok, Khong, Lao Ngam).

(22) Khong District Hospital (District code: 16-10)

Khong District Hospital is a 30-bed Type A district hospital located on the east side of Khong Island, a sandbar in the Mekong River, about 130km (distance by road) south of Pakse. It was opened in 1943 through the efforts of a Vietnamese doctor, and before independence played the role as the provincial hospital. Now we can transfer to the east bank of the Mekong River using a bridge on the southeast part of the island, and the time required to travel to the referral destination of Champasak Provincial Hospital is about 2.5hours. At present it is located about 1km on the south side of the center of the town, but a new hospital is being constructed complying with the standard drawings for a community hospital in a location about 2km to the north of the present location, and in the near future the hospital is scheduled to be transferred. On the other hand, procurement of new health care equipment and renewal of existing equipment is not scheduled. Although it is a Type A district hospital, there is no X-ray unit similar to the other district hospitals, and in addition the equipment being used in the operation theater is very old. The building constructed with Japanese aid for carrying out research into the Mekong schistosome is currently being used as the district health office. Issues and problems were confirmed as follows:

Item	Description
Facilities	The fact is that there are aged buildings for clinical treatment dotted within the site, so it
	is judged that the construction of a new hospital is appropriate. Although it is a Type A
	hospital at present there is no plan for an X-ray room, but the new hospital will be
	constructed in accordance with the community hospital standard drawings, so it is
	considered that this problem will be resolved. The transfer location is just a short distance,
	but there is an unpaved front road of the hospital, so there is a concern that during the rainy
	season the time to arrive at the hospital and the time to transfer to a referral hospital will
	increase.
Equipment	Efforts can be seen such as broken down surgery equipment being repaired by the hospital
	staff and continuing to be used. However, although some of the equipment is being
	renewed with donations from individuals, etc., apart from the examination room
	equipment all the equipment is aged, so it is necessary that it be renewed. Nonetheless
	there are no plans for new procurement or renewal of X-ray equipment or surgery
	equipment. Besides the fact that an X-ray unit has not being installed, there is no
	ophthalmology or ENT treatment provided within the hospital (even though the
	organization chart shows an ENT department), and also there is no equipment for
	measuring hearing capacity, so the criteria for a Type A district hospital are not satisfied.

[Attapeu Province]

(23) Xaysetha District Hospital (District code: 17-01)

Xaysetha District Hospital is a Type B district hospital located about 10km east after crossing the river from the market in the center of Attapeu. The hospital facilities were constructed in 1996, and it is a small scale one-story building hospital. Issues and problems were confirmed as follows:

Item	Description
Facilities	Twenty years have passed since its construction in 1996, so it is considered that some repairs are necessary on the external walls and roof, but there are no practical problems.
Equipment	Apart from the beds for the patients provided in 1996, the equipment has mostly been procured comparatively recently, and sufficiently exhibit their function.

(24) Attapeu Provincial Hospital (District code: 17-02)

Attapeu Provincial Hospital is located about 3km northwest from the market in the center of Attapeu, on the Route 11 bypass. The front road is paved, and a rotary and medians are installed. The hospital facilities were newly constructed in 2012. Issues and problems were confirmed as follows:

Item	Description
Facilities	Only a few years have passed since construction, so at present the facilities are sound.
	Note that there is a 3-story part in which there is no elevator, so this is a burden on the
	patients and health care staff.
Equipment	The health care equipment was mostly provided when the hospital was newly constructed,

and there are no problems with its operational status. However, as with other provincial
hospitals, the X-ray equipment is film type, so there is concern over supplies in the future,
and it is desirable that the equipment be converted to digital type in the near future.

(25) Sanamxay District Hospital (District code: 17-03)

Sanamxay District Hospital is a Type B district hospital located about 45 minutes west by vehicle from the center of Attapeu. Immediately upon leaving Attapeu the roads become rough unpaved roads. On the way it becomes necessary to cross the river by a timber bridge several times, but the road is roller compacted and it is possible to drive at a speed of about 50km/h. When you enter Sanamxay Town, the roads are paved, and the access to the hospital is very good. Issues and problems were confirmed as follows:

Item	Description	
Facilities	The hospital was constructed in 1998, but there are no problems in practice.	
Equipment	The equipment was procured comparatively recently, but there is no automatic blood cell counter necessary for examination, and this is an obstacle to the examination function.	

(26) Sanxay District Hospital (District code: 17-04)

Sanxay District Hospital is a Type B district hospital located about 30km east-northeast after crossing the river from the market in the center of Attapeu. The hospital facilities were constructed in 2009, with 2 small scale one-story buildings side by side. Issues and problems were confirmed as follows:

Item	Description	
Facilities	The hospital was constructed in 2009, there are few signs of degradation (cracks in the	
	external walls and rusting of metal sheets), but there are no problems in practice.	
Equipment	The equipment has mostly been procured comparatively recently, and sufficiently exhibit	
	their function.	

(27) Phouvong District Hospital (District code: 17-05)

Phouvong District Hospital is a Type B district hospital located about 30km south after crossing the river from the market in the center of Attapeu. The hospital facility was constructed in 1996, and is a one-story building. Issues and problems were confirmed as follows:

Item	Description	
Facilities	The hospital was constructed in 1996, but there are no problems in practice.	
Equipment	The equipment was procured comparatively recently, but there is no automatic blood cell	
	counter or biochemical analysis equipment necessary for examination, and this is an	
	obstacle to the examination function.	

3.4 Future Prediction

It is necessary to forecast the number of hospital beds, hospital functions and system for assistance required for the entire southern region in order to make Champasak Provincial Hospital a hub regional hospital in the said region.

[Number of Beds]

• About twice as many beds as there are at present may need to exist in the southern provinces.

[Hospital Functions]

- Champasak Provincial Hospital shall provide appropriate diagnosis and advanced treatment on external injuries and internal-medicine emergency disorders and appropriate diagnosis on malignant neoplasms.
- Provincial hospitals and some district hospitals shall be able to provide primary care to injured patients.

[System for Assistance]

• Other three provincial hospitals and some district hospitals shall be able to complement the functions of Champasak Provincial Hospital.

3.4.1 Number of beds

The 2015 Census result (1) shows that the Champasak Province has 11% of the total population, comparable to the Vientiane Capital City with 13% of the population. When the conditions of regional hospitals are considered through comparison of Champasak Provincial Hospital and three central hospitals, Champasak Provincial Hospital has 250 beds and, in 2014/2015, had 85.2 inpatients per bed and an outpatient-to-inpatient ratio of 2.5. In the Vientiane Capital City, with approximately the same population, the three central hospitals have 920 beds in total, 49.2 inpatients per bed, and an outpatient-to-inpatient ratio of 13.5. In other words, Champasak Provincial Hospital has about one-fourth of beds but the beds are used by twice as many inpatients. Therefore, it is estimated that about twice as many beds as there are at present may need to exist in the southern provinces. On the other hand, the outpatient-to-inpatient ratio is about one-fifth so that the focus seems to be on the hospitalized care for the time being.

However, considerations must be given to the health care circumstances in Laos, under which a period of prevalence of the dengue fever or other disease causes a temporary increase of patients who do not need advanced treatment but must be hospitalized, resulting in the need for a temporary increase of hospital beds.

3.4.2 Hospital functions

From the status quo of the referral system, it seems that cases of external injuries and difficulties in childbirths were referred to and concentrated in Champasak Provincial Hospital. An interview survey discovered that the circumstances of referral are changing due to the conditions of national route development. There were two significant changes: 1) Patients are coming to district hospitals and provincial hospitals, bypassing health centers located along national routes and 2) traffic accidents are on the increase. Therefore, provincial hospitals and some district hospitals need to have facilities and treatment systems required to give primary care to injured patients. In particular, Champasak Provincial Hospital, as a regional hospital, must be able to provide examinations and advanced treatment required for injured patients in general.



Southern Provinces in 2015-2020 Source: JICA Survey Team

In the future, the hospitals are expected to provide treatment not only to injured patients but also to internalmedicine emergency disorders such as acute myocardial infarction and cerebral stroke as well as surgical and medical treatment on malignant neoplasms increasingly more frequently¹⁷. As a nationwide system, however, it is desirable to refer the cases of malignant neoplasms to the central hospitals because more time can be allowed for treatment on them than other cases, in an effort to raise the health care level by facility selection and patient concentration. Therefore, the regional hospitals shall have the roles of providing appropriate diagnosis and advanced treatment on external injuries and internal-medicine emergency disorders and appropriate diagnosis on malignant neoplasms.

3.4.3 System for assistance

The tendency of overconcentration on Champasak Provincial Hospital seems to be increasing year by year. In a period of prevalence of dengue fever or other disease, an increase of patients with mild symptoms who do not need treatment at Champasak Provincial Hospital but directly visit this hospital is constantly deteriorating its functions as a referral hospital. Since no system is available yet to control the actions of users¹⁸ who seek advanced health care, a change in the disease structure, an improvement of road conditions, and an advancement of economic circumstances are expected to further increase the tendency of overconcentration on Champasak Provincial Hospital. To maintain a sufficient referral system in the southern provinces, other three provincial hospitals and some district hospitals should be able to complement the functions of Champasak Provincial Hospital.

¹⁷ Refer to Chapter 2.

¹⁸ One of the health centers, completed in 2015 along a national route to the provincial hospital, is being used for maternal, neonatal and child health assistance but bypassed for emergency disorder and disease treatment.

3.5 Direction of Functional Enhancement

This section describes the overview of direction of assistance to the health care facilities in the southern

provinces.

- Functional enhancement of Champasak Provincial Hospital
 - Capability to provide appropriate diagnosis and advanced treatment on external injuries and internal-medicine emergency disorders and appropriate diagnosis on malignant neoplasms
- Functional enhancement of other three provincial hospitals
 - o Capability to provide primary care to injured patients
 - o Capability to provide treatment to internal-medicine emergency disorders
 - o Constant increase of hospital beds
- Functional enhancement of district hospitals
 - o Capability to provide primary care to internal-medicine emergency disorders
 - o Temporary increase of hospital beds

3.5.1 Functional enhancement of Champasak Provincial Hospital

To serve as a regional hospital in the southern provinces, Champasak Provincial Hospital must cover the treatment functions shared by three central hospitals and motherand-child hospitals in the Vientiane Capital City. However, these hospitals need not have equal technology to central/national hospitals. First, it is essential for these hospitals to provide appropriate diagnosis and advanced treatment on external injuries and internal-medicine emergency disorders and appropriate diagnosis on malignant neoplasms.

For this purpose, it is deemed useful to provide assistance such as supply of image diagnosis





equipment to improve the diagnosis capability, equipment to enhance the operative and postoperative management, and bacteriologic examination room. Furthermore, outpatient treatment (including endoscopic inspection) for diagnostic confirmation of malignant neoplasms and the development of the pathological examination function shall also be required in succession.

3.5.2 Functional enhancement and reorganization of other provincial hospitals

In view of the geographical factors, the functional enhancement of Salavan Provincial Hospital seems effective. Salavan Provincial Hospital accounts for approximately 76% of the number of outpatients and 45% of the number of inpatients compared with Champasak Provincial Hospital, and ranks the second in this region. However, it has as few as 100 beds and needs to have approximately 15 more beds to have a hospitalization function equivalent to Champasak Provincial Hospital.

If patients can be referred between this hospital and Sekong Provincial Hospital with 45 beds, the function of assistance to Champasak Provincial Hospital can be realized. Due to the geographical factors of Attapeu Provincial Hospital, it seems essential to handle injured patients and internal-medicine emergency disorders in the Attapeu Province.

From such circumstances, it is deemed effective to provide materials and equipment to the three provincial hospitals to allow them to give primary care to injured patients and treatment to internal-medicine emergency disorders and construct facilities at Salavan Provincial Hospital to constantly increase the number of hospital beds.

3.5.3 Functional Enhancement of District Hospitals

When planning the functional enhancement of district hospitals, it is necessary to give sufficient consideration to the geographical factors. The strategic layout of district hospitals in view of time distance aspects with Champasak Provincial Hospital will be more important in the future than per-population indices, facility areas, and other such indices. The supply of assistance to district hospitals will increase the region's receiving capacity for patients who visit provincial hospitals directly and thus contribute to enhancing the assistance system for regional hospitals/provincial hospitals.

For example, Tha Teng District Hospital (15-04) in Sekong Province is located at a key point of transportation, from which any of Sekong Provincial Hospital, Salavan Provincial Hospital, and Champasak Provincial Hospital can be accessed. The potential users are approximately 90 thousand inhabitants in the three districts: Tha Teng District in Sekong Province, Lao Ngam District in Salavan Province, and Paksong District in Champasak Province. The number of inhabitants is expected to increase when the development of the Bolaven Plateau advances. This hospital, being Type B, already handles nearly 70% of the number of patients of Sekong Provincial Hospital. This hospital shall serve as a model-case improvement for community hospitals in the sense that it will receive patients beyond the borders of existing administrative districts.

Furthermore, a period of prevalence of dengue fever causes a temporary increase of inpatients who do not need advanced treatment. Beds required in such a case are similar to provisional beds for disasters, which can be made up for with temporary use of meeting rooms. The Pakse District Health Office has constructed the Type B Pakse District Hospital by itself in order to alleviate concentration of patients, which can serve as an example of functional assistance to Champasak Provincial Hospital.

On the other hand, district hospitals close to the national border need allocation of materials and equipment to ensure the function for supplying appropriate primary care to patients in order to overcome the difficulties of time distance to provincial hospital. However, it should be noted that the consultation records found at some district hospitals reveal that they only provide health care services at the same level as those provided at the health centers. Under such circumstances, it is deemed essential to conduct functional enhancement of district hospitals through individual handling in search for functional differentiation between small hospitals and health centers that share daily health checks and normal childbirths with them as the starting point of the referral system and not through uniform assistance based on the standard equipment list or other data.



Figure 3-6 Proposal for the Reorganization of DHs, HCs into "Community Hospitals," "Small Hospitals" and "HCs"

Source: JICA Survey Team, based on the field survey results

3.6 Proposal of Grant Aid Cooperation

3.6.1 Overview of grant aid cooperation

The following proposals shall be made on the grant aid cooperation in the assistance for the southern provinces.

[Priority 1: Establishment of a Referral System in Southern Provinces]

(1) Functional enhancement of Champasak Provincial Hospital

- (2) Improvement and functional enhancement of Salavan Provincial Hospital
- (3) Functional enhancement of Sekong Provincial Hospital and Attapeu Provincial Hospital
- (4) Model-case improvement of community hospital

[Priority 2: Selective Functional Adjustment of District Hospitals]

- (5) Improvement of district hospitals as community hospitals
- (6) Reorganization of district hospitals to small hospitals

Note: It is meaningful to discuss a way to implement these two prioritized project in an integrated project, without insisting on implementing them successively in accordance with the priority order (Refer to 5.2 in Summary and 5.2 (2) in Chapter 5).

The outline of the proposed grant aid cooperation project is described in accordance with the priority order.

[Priority 1: Establishment of a Referral System in Southern Provinces]

Description of grant aid cooperation	
(1) Functional Enhancement of Champasak PH	
(2) Improvement and Functional Enhancement of Salavan PH	
(3) Functional Enhancement of Sekong PH and Attapeu PH	
(4) Model-case Improvement of Community Hospital	

(1) Functional enhancement of Champasak Provincial Hospital

Overview of facility plan	Overview of equipment plan
 Conversion of rooms of existing facilities Any minor repair, if required, shall be conducted at the expense of the recipient country. Therefore, no facility plan is made. 	 Image diagnosis equipment to improve the diagnosis capability Equipment to enhance the operative and postoperative management Aseptic manipulation facilities in bacteriologic examination rooms

Equipment Name	Q'ty
General X-Ray Unit	1
Mobile X-Ray Unit	1
CT Apparatus	1
Operation Table	1
LED Operation Lamp	1
Electric Scalpel	1
Defibrillator	1
Clean bench	1

(2) Improvement and functional enhancement of Salavan Provincial Hospital

Overview of facility plan	Overview of equipment plan	
• A new hospital ward can be easily constructed in the extra space in the hinterland of the Salavan PH.	 Image diagnosis equipment to improve the diagnosis capability Equipment to enhance the operative and 	
• A one-storied hospital ward with approx. 30 beds (additional ward) is planned.	postoperative managementEquipment for additional number of beds	

Note: The brief floor plan of the additional hospital ward is shown in the figure below. The floor area is expected to be approx. 480m².



Equipment Name	Q'ty
General X-Ray Unit	1
Mobile X-Ray Unit	1
Operation Table	1
LED Operation Lamp	1
Electric Scalpel	1
Defibrillator	1

Equipment Name	Q'ty
Hospital bed	32
Beds for night duty	2
Counters and chairs for nurses' stations	2
Filing cabinets	2

(3) Functional enhancement of Sekong Provincial Hospital and Attapeu Provincial Hospital

Overview of facility plan	Overview of equipment plan
 Conversion of rooms of existing facilities Any minor repair, if required, shall be conducted at the expense of the recipient country. Therefore, no facility plan is made. 	 Image diagnosis equipment to improve the diagnosis capability Equipment to enhance the operative and postoperative management

Equipment Name	Q'ty
General X-Ray Unit	2
Mobile X-Ray Unit	2
Operation Table	2
LED Operation Lamp	2
Electric Scalpel	2
Defibrillator	2

(4) Model-case improvement of community hospital

The Tha Teng District Hospital (15-04) shall be improved as a "community hospital" as a model case.

Overview of facility plan	Overview of equipment plan
 The part including the ER, radiography room, consultation room, and delivery/operating and hospital rooms (16 beds) shall be adopted. The construction of a new main building is planned next to the existing facilities (see the footnote). The existing facilities shall be used as an administrative office, a hospital ward (with 4 more beds to make a total of 14 beds), and a temporary hospital ward to be used in a period of prevalence of an infectious disease. 	 Image diagnosis equipment to improve the diagnosis capability Equipment to enhance the operative and postoperative management

Note: The brief floor plan of the new main building is shown in the figure below. The floor area is expected to be approx. $960m^2$.

Regarding the hospital personnel newly required for this proposal, it is necessary to restaff X-ray technician because Tha Teng District Hospita is not equipped with X-ray unit currently.



Equipment Name	Q'ty
General X-Ray Unit	1
Operation Table	1
LED Operation Lamp	1
Electric Scalpel	1
Defibrillator	1
Bedside Monitor	1

[Priority 2: Selective Functional Adjustment of District Hospitals]

The following shows the overview of grant aid cooperation for selective functional adjustment of district hospitals.

Description of grant aid cooperation
(5) Improvement of District Hospitals as Community Hospitals
(6) Reorganization of District Hospitals to Small Hospitals

(5) Improvement of district hospitals as community hospitals

Overview of facility plan	Overview of equipment plan
• No facility plan is made.	 Image diagnosis equipment to improve the diagnosis capability Equipment to enhance the operative and postoperative management

Note: Radiography rooms are already equipped in four district hospitals (DHs) currently under construction as community hospitals: Ta-Oy DH (14-02), Khongsedone DH (14-06), Champasak DH (16-07), and Khong DH (16-10).

Equipment Name	Q'ty
General X-Ray Unit	4
Operation Table	4
LED Operation Lamp	4
Electric Scalpel	4
Defibrillator 4	
Bedside Monitor	4

(6) Reorganization of District Hospitals to Small Hospitals

Overview of facility plan	Overview of equipment plan
• Composite ward for radiography and operations (additional ward) at Samuoi DH (14-08) and	• Image diagnosis equipment to improve the diagnosis capability
Phouvong DH (17-05).	• Equipment to enhance the capability for minor
• Radiography ward (additional ward) at	operations
Dakcheung DH (see the footnote).	

Note: The brief floor plan of the composite ward for radiography and operations and the radiography ward is shown in the figure below. The floor area of the composite ward for radiography and operations is expected to be approx. 260m². The floor area of the radiography ward is expected to be approx. 121m².

Regarding the hospital personnel newly required for this proposal, it is necessary for these three district hospitals to restaff X-ray technician because they are not equipped with X-ray unit currently.



Equipment Name	Q'ty
General X-Ray Unit	3
Operation Table 3	
LED Operation Lamp 3	
Bedside Monitor	3

3.6.2 Financial relevance of grant aid cooperation

In Pakse City in Champasak Province, a representative regional hub city, it is unavoidable for Champasak Provincial Hospital, the top referral in the southern provinces, to aim at becoming a regional hospital. Whereas grant aid is essential for this course of action, the problem in securing the maintenance cost is the same as the three central hospitals. In the southern provinces, with ongoing industrial development increase in employment is expected. While active governmental intervention is a prerequisite, the scale of insurance revenue is estimated to expand, which contribute to an increase in the revenue other than the government subsidy. As a result, the hospital is expected to approach the financial status of the three central hospitals or Setthathirath Hospital in the near future and consequently depend less on the government subsidy. The natural increase of inpatients and the increase of insurance revenue will gradually stabilize the hospital finance and allow it to afford the maintenance cost.

For the other three provincial hospitals and some hospitals, on the other hand, the improvement of the hospital network in the entire region shall be implemented as a measure for the poverty-stricken region to improve the efficiency of the referral system and promote the increase of insurance revenue from also the poorer members of society, which is expected to increase the entire revenue. This is another reason for giving the top priority in this grant aid to the health care network in pursuit of enhancement of referral in the region. Therefore, the improvement of the other district hospitals was limited to the improvement of the status quo in order to minimize the financial burden. This concept of enhancing the referral function through improvement of the regional top referral hospital and the hospital network and minimizing functional and financial overburden of district hospitals will serve as an effective model of region-by-region hospital network improvement throughout Laos.

Chapter 4 Community Interventions including Multi-sectoral Approach in Removing Barriers regarding Health Seeking Behaviors, Medical Security and Accessing Health Services among Community People

4.1 Background and Objectives, and Methods and Targets of the Survey

4.1.1 Background of the Survey

Lao PDR has witnessed the improvements in many of their health related indicators owing to the recent rapid economic development. Yet, through the final assessment on the progress towards MDGs in 2015 has indicated that the targets in the area of nutrition have not been realized and it has been noted that the exiting issues of stunting and uderweight remain as the factor obstructing further reduction of under 5 child mortality rate. These nutrition issues are found more evident in rural communities and require measures from the point of daily subsistence and food consumption in addition to the promotion of health service utilization, and the Government has realized the needs for measures at the community level. In addition to the nutrition issue, communicable diseases still remain as major causes of infant and under 5 child mortality. Furthermore, the coverage of delivery by skilled birth attentandants and antenatal care attendance is not at the desirable level and the maternal mortality also remains still at the high level. Addressing these issues require attention for further improvement of health services through the assessment of accessible health facilities at the community (village) level.

Laos is a country with the population of diverse ethnic groups and much of its population live in mountainous remote areas, where physical barriers exist in accessing to health services. Health Center has been set up at the lowest level health facility, accessible to the village level when available. In addition to the availability of health facilities, there exist socio-cultural issues such as communication with health workers (difference in ethnic local languages) and contents of services provided. Low coverage is also noted regarding the membership participation for CBHI and HEF for the poor.

Under the above background, under the 8th Five-year Health Sector Development Plan (2016-2020) the Government of Laos has set up the goal of ensuring most of the population to access to basic health and medical services by the 2020 with the principle of Universal Health Coverage (UHC). For local and community development, the Government plans for such measures as strengthening monitoring on Model Health Villages and leveling-up health centers. In order to further improve health indicators and achieve UHC, this is the high time to consider measures and approaches for removing barriers in accessing health care services, through acquired knowledge and lessons learned from the past experiences by the Ministry of Health and development partners beyond the existing framework of health sector. This current survey is to gather information, make analysis and examine key contributing factors regarding effective approaches towards resolving barriers in accessing health services at the community level.

The administrative unit in Laos is divided by "Province – District – Village." According to the Statistics Bureau, a total of 10,473 villages exist (Refer to Chapter 1). In this report, "community" refers to the

"village" level and the focus is placed on activities at the smallest administrative unit.

4.1.2 Objectives of the Survey

The objectives of the survey is to explore effective approaches and measures towards resolving barriers in accessing health care services at the community (village) level, closest to local residents, in order to achieve the goal of UHC, and to provide useful information in planning future collaboration by the Government of Japan. Especially, from the multi-sectoral point of view, the survey has gathered information and made analysis from multi-sectoral activities useful for the health sector in such areas as nutrition, education and agriculture.

4.1.3 Method and Process of the Survey

The survey was undertaken through the following steps.

(1) Step 1: Review of existing relevant documents and studies

Relevant documents and information were gathered regarding the development agencies and organizations working in Laos mainly through internet and relevant information was extracted and analyzed. The review and analysis was made on the existing activities and programs regarding the relevance to the 7th Five-Year Health Sector Development Plan (HSDP) (2011-2015) and the 8th Five-Year Health Sector Development Plan (HSDP) (2011-2015) and the 8th Five-Year Health Sector Development Plan (HSDP) (2016-2020), and especially useful information on approaches towards resolving barriers to the access to health services. Based upon the review and analysis, the preparation was made for further information gathering with development partners in Laos (including donors and international NGOs).

(2) Step 2: Information gathering from the government and development partners in Laos

Based upon the information gathered above (1), the development partners (including international NGOs) implementing community level interventions were identified. Further information gathering through direct interviews was undertaken among the identified agencies/organizations, with special attention made on experiences in community interventions and experiences with multi-sectoral approach. The interviewees are officers in agencies/organizations, e.g. Ministry of Health, development partners (bilateral agencies, UN and international agencies, international NGOs). The major points of questions are: a) target place of activities, b) component of activities, c) major activities (especially multi-sectoral approach, community interventions).

(3) Step 3: Community Intervention Survey

Based upon the information gathered above, the possible target sites of the community intervention survey were identified after reviewing the support of existing government and developing partners to community interventions, the situation of governance and related organizations and the 14 sites (villages) were selected in consultation with MOH and JICA. Prior to the identification of survey targets, the selection criteria was discussed and agreed upon among MOH, JICA and the survey team as follows: good practices noted for community interventions, accessibility geographically and by road conditions, and the possibility of

conducting survey in Lao language.

The survey was contracted out to the local consultant (National Institute of Public Health: NIOPH) and conducted from December 2015 to January 2016. The details of the survey process and research questions are presented in Section 4.3.

4.2 Review of Existing Documents and Trends of Activities by Major Development Partners

4.2.1 Barriers to Access and Utilization of Health Care Services in Laos

Towards the achievement of Universal Health Coverage (UHC) the Government of Loos is striving for, the current situation and barriers in the health sector is summarized in Figure 4-1.



Figure 4-1 Barriers to Access to and Utilization of Health Services and Underlying Causes in Laos Source: JICA Survey Team, based upon the references from MOFA, JICA and others

As touched in the Chapter 1, various previous research and studies have been undertaken regarding the barriers to access to and utilization of health care services in Laos and globally and three major obstructive factors have been identified; (1) Economic factors, (2) physical factors, (3) sociocultural factors.

(1) Economic Factors:

As shown in the Figure 4-2 by the survey report by the World Bank, the biggest barrier is the financial matters in seeking health care treatment including transport cost (45% of the respondents) (42). As discussed in the Chapter 1, the underlying background noted in Laos is the high out-of-pocket expenses (this figure was 60% in 2000 and 40% in 2012 in the report by WHO) (41). In the same study by the World Bank, it was reported that a majority of households experienced the catastrophic economic shocks in their household account due to illness by family members (68% of households experienced during the 2 years prior to the survey) and the coverage for health insurance is low (46,48). Furthermore, the previous study show that the awareness and knowledge on health insurance is also limited (45).



Figure 4-2 Barriers in Seeking Health Care Services among Women in Laos (2013) (%) Source: (42)

(2) Physical Factors:

Among physical factors, as indicated by Figure 4-2, geographical and physical barriers in accessing health facilities, such as the availability of roads and transportation means, and communication facilities and means, is one of the biggest barriers (42). The availability of road access to health facilities is highly related with people's seeking health care treatment. Furthermore, as elaborated in the Chapter 1, and as shown in the Figure 4-2 for the concerns felt by women in seeking health care treatment, the factors related with health system need to be noted as underlying constraints, such as the lack and maldistribution of health personnel, limited capacity and qualifications, lack of essential supplies, drugs and medical equipment, and lack of emergency referral system and means (33, 41, 42, 44) . The difficulty in accessing water and sanitation facilities is also found, which is closely related to the health of community residents (43).

(3) Sociocultural Factors:

Sociocultural factors also greatly influence the attitudes of people in seeking health care services, including

people's lack of awareness and knowledge on health matters, harmful sociocultural practices such as food taboos, educational level and decision making power of women and ethnic minorities. As shown in Figure 4-2, getting permission and finding someone to accompany to health facility were noted among the constraints as well as communication barriers with health staff (language barrier or no female staff). Another factor is the availability of the means of communication (access to health information as well as mass media).

Underlying the above 3 barriers, the quality of services provided in the health system, especially in the primary health care system poses a critical challenge, leading to the level of trust by the people towards the public health care services. Various measures have been taken to resolve the exiting barriers to the utilization of health services, however, it is noted that the level of the quality of services and the satisfaction and trust by the people towards the services provided influence the willingness to participate in health insurance as CBHI (47). Furthermore, from the point of socioeconomic and natural environment surrounding the health system, such factors as the existence of poverty, the delay in development of basic infrastructure concerning the provision of public services, the availability of education, agricultural and fishery production and food security in relation to health and nutrition, water and sanitation are closely linked with the health status of community people (43, 48). Thus, towards the achievement of UHC, multi-sectoral approach becomes indispensable in ensuring equity in accessing health and medical care services (including health promotion and nutrition).

4.2.2 Major Policies for Community Health

The following are the major policies related with the promotion of community health in the Government of Laos.

(1) "3 Builds" Policy

Referring to the Chapter 1, the "3 Builds" Policy was initiated in 2011 by the Government of Laos as the approach towards accelerating decentralization. During the past 3 years from 2012-2015, the pilot projects have been implements in the designated sites, 109 villages in 51 districts nationwide. Towards the end of 2015, the review of achievements in the pilot projects was undertaken and further extension is being expected.

The "3 Builds" Policy, is aimed to promote socioeconomic development based upon local needs and strengthen effective management and delivery of public services, under the ownership and leadership by local governments, which therefore will lead to improve community health services and access to such services at the community level. In the context of community development, community health can be incorporated under the "3 Builds" initiative.

(2) Model Healthy Village (MHV)

"Model Healy Village" was initiated in 2006 under the "Developing Model healthy Villages in Northern Lao

PDR", supported by Asia Development Bank/Japan Fund for Poverty Reduction (JFPR). The model project was implemented in 100 villages in 10 districts in the 2 Northern Provinces (Houaphanh, Xieng Khouang). Based upon the outcome of this project, later the MHV has been made into a policy and expanded nation-wide. The Model Healthy Village is aimed to promote community-based primary health care services and focus on preventive health, health promotion and water and sanitation with a set of criteria established for certifying as MHV (refer to Chapter 1). The "Guidelines for Model Healthy Village Establishment" is made for the process of implementation. Up to now more than half of the villages have been accredited for "Model Healthy Village." Every year local health authorities set up their target for MHV. Currently there is no systematic follow-up and assessment system for those villages already certified as MHV, which is expected to be taken up in the future.

(3) Policy on Primary Health Care: PHC (2000)

Policy on Primary Health Care (PHC) was formulated through the committee for PHC established in the Ministry of Health in 2000. It has not been revised since then. The Policy elaborates the principles of PHC, the 9 basic components of PHC, and stipulates the responsibilities of health sector at each level, village, district, province and central levels. The policy also stipulates the roles of Village Health Volunteers (VHV) at the community level and Basic Drug Kit managed by VHV where no health centers exist (49). No concrete plan for revision is noted during the current survey. Primary Health Care Unit of the Department of Hygiene and Health Promotion (DHHP) in the Ministry of Health is currently considering the review and revision of this PHC policy for further PHC promotion.

(4) National Reproductive, Maternal, Newborn and Child Health (RMNCH) Strategy and Action Plan 2016- 2020

"National Reproductive, Maternal, Newborn and Child Health Strategy and Action Plan 2016- 2020" was formulated to provide the new directions, visions and framework by the Government of Lao PDR for the improvement of reproductive, maternal, newborn and child health in line with 8th Five-Year National Socioeconomic Development Plan (2016-2020) and the 8th Health Sector Development Plan (2016-2020). The RMNCH Strategy and Action Plan was officially launched on December 17, 2015. This has been formulated through a series of consultations at the Technical Working Group (Maternal, Newborn and Child Health: MNCH). In this process through 2015, the internal and external assessments were conducted on the previous strategy, "the Strategy and Planning Framework for the Integrated Package of MNCH 2009-2015" (often referred to by the pink book), and the achievements and lessons learned identified were taken into consideration for formulation.

This "RMNCH strategy and action plan 2016-2020" sets its goal as "to improve the reproductive health status and reduce maternal, neonatal and child mortality and morbidity including malnutrition," and specifies the 11 strategic and specific objectives (7 RMNCH sub-areas including nutrition, 3 health system related areas, i.e. human resources, health financing (free MCH), health information, essential RMNCH commodities.

The monitoring and evaluation framework has been also established with a set of assessment indicators and concrete targets to be achieved by 2020.



Effective Coverage through Prioritized Interventions

Figure 4-3 Conceptual Framework for the National Reproductive, Maternal, Newborn and Child Health Strategy and Action Plan 2016-2020

Source : The National RMNCH Strategy and Action Plan 2016- 2020 (50)

The National RMNCH Strategy and Action Plan 2016- 2020 continues to emphasize the challenges identified through the review of the previous strategy, for example, strengthening health system and improvement of the quality of services as well as demand-side community-based interventions, i.e. health promotion, demand creation and community mobilization. The assessment on the "Strategy and Planning Framework for the Integrated Package of MNCH 2009-2015" pointed out that past good practices and lessons learned in community mobilization could be utilized, and in this regards the support of international and national NGOs could be sought (50).

(5) National Nutrition Strategy to 2025 and Plan of Action 2016-2020

The Government of Laos organized National Nutrition Forum on November 27, 2015, launched "the National Nutrition Strategy to 2025 and Plan of Action 2016-2020" and reaffirmed its commitment to scaling up nutrition action in the country. The first National Nutrition Policy was formulated in 2008, and before this revision of this new strategy, "the National Nutrition Strategy to 2020 and Plan of Action 2020-2015" was made. This process was in accordance with the international development surrounding nutrition issues and in April 2011 Laos joined the global Scaling up Nutrition (SUN) movement.

In 2015, as the last year of MDGs, the review of MDGs progress was undertaken and it was noted that among the MDG goals, the target of the "reduction of malnutrition (stunting and wasting among under-5 children) and underweight" was not achieved. Noting that there are many other countries which have not achieved this target, this issue of nutrition continued to be one of the challenges under the SDGs (Sustainable Development Goals: The 2030 Agenda for Sustainable Development).

In light of the SDGs, the National Nutrition Strategy to 2025 and Plan of Action 2016-2020 is aimed to contribute to the SDG2 (Goal 2. End hunger, achieve food security and improved nutrition and promote sustainable agriculture) and sets its goal to reduce the chronic malnutrition rate among under 5 children (stunting) from 44% in 2012 to 25% in 2025. The National Nutrition Strategy also aims to reduce such global nutrition targets as the prevalence of wasting, underweight, acute malnutrition, and anemia, the promotion of breastfeeding and the prevention of over-weight (51).

In 2013, the Government of Laos established a multi-sectoral coordinating body, National Nutrition Committee (NNC), chaired by the Deputy Prime Minister (by the Prime Minister's decision, July 2013, No. 13). This multi-sectoral approach was brought about with the government's keen recognition that the issue of nutrition, specially addressing the challenge of child malnutrition should involve various sectors concerned, considering the need for measures towards both nutrition-specific and nutrition sensitive factors. The NNC's secretariat is chaired by Vice Minister of Health and co-chaired by the Vice Ministers of Planning and Investment, Agriculture and Forestry and Education and Sports.

Under the above structure, the new National Nutrition Strategy to 2025 and Plan of Action 2016-2020 emphasizes and puts forth the multi-sectoral convergence approach as its key platform. It sets 4 Strategic Directions, 11 Strategic Objectives, and 29 Priority Interventions which composed of Priority 1 (focus on short-term impacts) and Priority 2, with the three targeted periods (short-term, medium-term and long-term). Among the priority interventions, 22 Priority 1 interventions were identified, and categorized into Health Sector (10 interventions), Agriculture Sector (4 interventions), Education Sector (4 interventions) and Multi-sectoral (4 interventions).



Figure 4-4 Conceptual Framework for the National Nutrition Strategy Source: National Nutrition Strategy to 2025 and Plan of Action 2016-2020

4.2.3 Existing Committees and Related Organization in the Health Sector

(1) Project Coordination Mechanism and Sector Working Groups in the Health Sector In Laos since 2006 when the Vientiane Declaration was signed among development partners in 2006, the project coordination mechanism has been well established with the Sector Working Groups in eight sectors for planning, implementation and monitoring of the progress of the country action plan in each sector. In the Health Sector, through the JICA-assisted technical cooperation Project "Capacity Development for Sectorwide Coordination in Health Phase I and II," the coordination mechanism is established and managed, working to coordinate among the Ministry of Health and development partners especially in recent years towards the 8th Five-Year Health Sector Development Plan 2016-2020. The following coordination meetings are currently organized in the health sector.

- Sector Working Group (SWG) : Policy Level; Chaired by Health Minister and Co-chaired by Japan Ambassador and WHO Representative; Twice a year
- Sector Working Group (SWG): Operational Level: Chaired by Deputy Minister, Three times a year

• Technical Working Group (TWG): 6 TWGs have been set up including MNCH, approximately once in 2 months.

The rearrangement of MNCH Technical Working Group is under consideration in order to include all the sub-sectors under the DHHP of the Ministry of Health and in the future this TWG will be tasked to serve as the body for management and coordination for community level activities.

(2) National Commission for Mothers and Children (NCMC)

The National Commission for Mothers and Children (NCMC) was set up in 1999 as a national coordination mechanism with the aim to promote healthcare for mothers and children, comprehensive development and protection of the rights and benefits of mothers and children.

NCMC is chaired by the Standing Deputy Prime Minister and composed of Vice-Ministers and Vice-Minister-Equivalents from all relevant ministries and organizations as vice-chairman or members. With the organizational networks throughout the country from the central to local levels (Province and District), the NCMC works for various issues concerning mothers and children and plays a key advocacy role mobilizing concerned central and local government administrations/sectors under the supervision of the provincial governors or vice-governors at the provincial level, district chiefs or deputy district chiefs at the district level.

(3) Lao Women's Union and Lao Youth Union

Lao Women's Union (LWU) and Lao Youth Union (LYU) are quasi –governmental mass organizations with the network from the central to the community (village) level. Membership of LWU is women over 15 years of age. Membership of LYU is men and women from 15 to 35 years and could be extended to 45 years of age.

LWU has been closely collaborating with the Health Sector for the training of leaders/facilitators and the conduct of educational activities including health education towards women at the community level in such areas as nutrition, HIV/AIDS, MCH, Malaria prevention, EPI promotion, etc. Many development partners including international NGOs are working with LWU in undertaking community-based activities utilizing its network down to the community level. On the other hand, LYU is working with the health sector regarding the issues concerned with the youth, for example the prevention of HIV/AIDS, tobacco control and health education (health promotion and adolescent health).

(4) Other related organizations and local NGOs

In addition to the above mass organizations in the section (3), there are other related organizations as National Institute of Public Health (NIOPH) and various local NGOs. According to the *Directory of Lao CSOs 2014*, 69 local civil society organizations are listed. Local NGOs are officially registered under the Ministry of Home Affairs. Many of these local NGOs have been established recently and are with capacity and the areas of their activities are geographically limited.

1) National Institue of Public Health (NIOPH):

National Institute of Public Health has been set up in 1999 as a technical organization for research and training under the Ministry of Health. The NIOPH has a nation-wide network and undertakes research activities through the dispatch of its technical staff and in collaboration with local NGOs. They have been implementing a 2-year project for the prevention of infectious diseases among children under 5 years old by dispatching their 4 staff members in Khammouane Province since June 2015 with the support of USAID.

2) Local NGOs

Information for Local NGOs can be obtained through the focal point coordinator at iNGO (INGO Network) as below.

Coordinator of iNGO Network in Lao PDR; E-mail: ingonetwork@directoryofngos.org).

For further information, refer to the list of major NGOs, Directory of Lao CSOs 2014, in the supplementary documents.

Through the information gathering from some international NGOs, no cases of working with local NGOs were identified. With the limited capacity of local NGOs, no specific names of local NGOs have been mentioned. It was also noted that careful consideration would be required for partnership and collaboration in selecting counterpart local NGOs since some NGOs which are recognized by development partners tend to receive more work than their capacity.

In the health sector, the following NGO is working with International Planned Parenthood Federation (IPPF) and UNFPA.

- Promotion of Family Health Association of Lao PDR (PFHA): established in 2012, Partner organization of IPPF (Planning to apply for full membership of IPPF in 2016).
 - Activities: Promotion of sexual and reproductive health (especially among women and youth, pregnant women and ethnic minorities in rural and hard-to-reach areas.
- Areas: Vientiane municipality, Oudomxay, Luang Namtha and Bokeo Provinces.
- http://www.ippfeseaor.org/our-work/where-we-work/laos

JICA collaborates with the following 2 local NGOs in the education sector technical cooperation project.

- The Education for Development Fund (EDF-Lao) :established in 1997.
 - Activities: Promotion of basic education in rural areas, including the construction of schools, the provision of scholarships, the provision of educational materials.
- Areas: Khammouane, Savannakhet, Salavan and Sekong Provinces

• Village Focus International (VFI)/ ACD (Association for Community Development, Established in 2000, VFT/ACD is based in Salavan Province.

- Activities: With the objective of improving the quality of education for children and youth, VFT/ACD undertakes activities regarding community development, e.g. the construction of schools, capacity development of teachers, leadership training, health education and agricultural training, etc.
- Note: The organization has the partnership with the Japanese Non-Profit Organization "Class for

Everyone" (for the donation of secondhand computers), and Asian Education and Friendship Association.

<http://www.nippon-aefa.org/about_aefa/group/>

<<u>http://class4every1.jp/project/vfi-laos</u>>

4.2.4 On-going Government Programs Concerning Community Health

(1) Integrated Comprehensive Community Primary Health Care Project

Department of Hygiene & Health Promotion (DHHP), Ministry of Health initiated the model project called "Integrated Community Primary Health Care Project with the government funding under the minister's agreement (signed September 2015, No.2175) for the one-year period from November 2015 to 2016. A detailed activity report is not available for the survey team since the project was just started. According the presentation made during the TWG meeting (RMNCH) by the director of PHC Unit, the outline of the project is as follows.

- Objectives : To improve the PHC network at the community level by comprehensively integrating nutrition, MCH promotion, clean water supply and sanitation and the promotion of Model Healthy Village.
- Target areas: 8 Provinces, 52 Districts, 3,473 Villages and 454 Health Centers
- Major Activities:

The project introductory meeting was conducted in September 2015 with the participation of the targeted provincial level representatives and the TOT and training at the provincial, district, village and health center levels have been started. In promoting the integrated approach of 12 service components at the community level, emphasis is placed on capacity development for Village Health Committee (VHC) and Village Health Volunteers (VHVs) /Village Health Workers (VHWs) as well as health personnel in the planning and implementation of integrated comprehensive services. The Project facilitates the development of action plan at each level under their own leadership. It is planned that based upon the performance the budget for implementation is allocated and transferred directly to the health center level (15%) and the village level (60%), 15% for district and 10% for province.

(2) Training and Deployment of Village Health Worker (VHWs)

The Ministry of Health is currently planning to train and deploy Village Health Workers as the lowest level health personnel in addition to Village Health Volunteers. In Laos, there are various community health workers working at the community level with the support of development partners including international NGOs.

Major community-based health workers are as follows.

- Village Malaria Workers (Global Fund): malaria program
- · Community-Based Distributors: CBD (UNFPA): family planning promotion
- · Village Health Volunteers (Ministry of Health) : including management of Revolving Drug Kit
- Village Health Facilitator/Village Health Promoters (UNFPA and other NGOs for health education)

- Village Health Workers (NGOs) : Volunteer workers for MCH
- · Community Nutrition Workers (NGOs): Community volunteers for nutrition

The above community-based health workers are principally trained as volunteers. Village Health Workers to be trained by MOH are paid staff and categorized as the lowest health personnel in the health administration.

The following is the comparison between VHV and VHW.

Village Health Volunteer (VHV)	Village Health Worker (VHW)
• Part-time, available for the compensation for travel cost	• full-time and paid staff
(in some cases)	• Comprehensive training provided based upon the manual
Training only for 8-10 days	(6-8 months)
• Major activities focus on community mobilization, health	• Wider scope of health promotion activities, the promotion
education, IEC and limited provision of health services	of Model Healthy Village with some direct health care
· Management of drug kit (with some revolving fund	services (including support to normal delivery in case of
income)	emergency)
• Target areas: accessible villages (with roads)	Target areas: Inaccessible remote villages with no roads
	(more than 6 km away from health center)

Source: 52, 53

The roles and responsibilities of Village Health Workers are stipulated in the Agreement by the Minister of Health (No. 064/MoH, dated January 8th, 2015.

The first batch of VHW training was conducted as part of the project for the development of Model Healthy Village with the support of ADB. At the time of the current survey (as of December 2015), the training and placement of VHWs has been extremely limited due to securing the required budget for training (with the support of developing partners) and acquiring the quota for MOH health personnel. The significance of the roles of VHWs in remote hard-to-reach areas is recognized in view of improving accessibility to health services. However, it has been noted during the survey from the development partners that further consideration would be required regarding the TOR for VHWs as well as VHVs, the improvement of training and the establishment of support system and supportive monitoring and supervision system for both VHW/VHV (52, 53).

(3) Production and Utilization of Maternal and Child Health Handbook (Lao Version)

The Maternal and Child Health (MCH) Handbook (Lao version) was first developed in 1995 with the support of Japan Overseas Cooperation Volunteers (JOCVs) based upon the Japanese MCH Handbook and pilot tested in 2 provinces. The MCH Handbook has been updated and revised in accordance with the changes in the government protocol for MCH services with the technical and financial support from various development partners, e.g. UICEF, WHO, Rotary Foundation (Japan), JICA, Danish Red Cross. According to the MCH Center, it was noted that the MCH handbook has been distributed nation-wide, but the volume

of distribution is still limited. In 2014, a survey was conducted in the 52 villages regarding the use of MCH Handbook. The result indicated that about 60% of children (12 to 35 months) in the survey areas used the MCH Handbook for the record-keeping of immunizations. The MCH Handbook has been recently revised at the end of 2015 and for the promotion of its utilization the development of a user guide book is undertaken under the joint collaboration of the MCH Center and JOCV.

*The above information is based upon the presentation made by the Deputy Director General of DHHP, MOH, Lao PDR on the occasion of the 9th International Conference on MCH handbook Yaunde, Cameroon. 16 September 2015 and the information from the MCH center.

(4) Major Existing Policies, Medium-term Plans, Guidelines and Manuals

The following are existing related policies, medium-term plans, technical guidelines and manuals in the health sector in Laos.

- National Birth Spacing Policy (1997)
- Safe Motherhood, Deliveries and Neonatal Care Policy (1997)
- IMNCI (Integrated Management of Neonatal and Childhood Illness) Strategy and Guidelines (2002)
- Regulation on the Promotion of MCH (2004)
- National Reproductive Health Policy (2005)
- National Breastfeeding Policy (2007)
- Baby Friendly Hospital Initiative
- National Policy on Health Communication (2012)
- Family Planning Action Plan 2014/15 and onward
- Midwifery Improvement Plan (2016-2020)
- National Emergency Obstetric and Newborn Care Five Year Action Plan (2013-2017)
- Early Essential Newborn Care Action Plan (2014-2020)
- National Immunization Programme Comprehensive National Multi-Year Plan 2016-2020
- National HIV/AIDS Strategy and Action Plan 2016-2020
- Technical Standards for Immunizations and Malaria and HIV
- Guideline for Establishing Model Healthy Villages
- Manual for comprehensive Integrated services in community
- Manual for village health volunteer in PHC
- Manual for training of village health worker (6 months): Vol. 1 V
- Manual for training Village Health Committee
- Micro-Planning for Integrated Outreach Guideline

*Source (41, 50)

4.2.5 Trends and Assistance of Development Partners in Lao PDR: Measures Taken Against Barriers for the Access and Utilization of Health Care Services

Both in the 8th Five-Year National Socio-Economic Development Plan (NSEDP) (2016-2020) and the 8th 5-

Year Health Sector Development Plan (2016-2020), references are made to the achievement of Universal Health Coverage (UHC) while considering MCH as a priority issue. In line with these five-year plans, MOH and many development partners are carrying out activities to enhance the community health by trying to improve access to health services and promote people's utilization of health services.

The Table 4-1 outlines the major measures/approaches taken by development partners against impeding factors for accessing health services (in reference to Figure 4-1) based upon the information obtained through the interviews with selected development partners and the review of exiting documents are outlined.

The Table 4-2 shows the summary of activities by major development partners at the community level.

Table 4-1 Community Interventions Taken by Major Development Partners against Barriers Towards Access and Utilization of Health Care Services

(1) Measures towards the Barriers

Derriers a) Use out of poster normant rate of health our appage (h) Low participation and of health our
barriers. a) right out-of-pocket payment rate of nearth care expenses, b) Low participation rate of health care
insurance
• As high out-of-pocket medical expenditure (including transportation cost) prevent people from using health services,
assistance is given to the Health Equity Fund for the poor, free MCH for childbirths and children below age 5 (ADB,
World Bank, Swiss Red Cross Society, and other DPs).
• World Bank's social protection programs covering health care services for poor people to receive MCH services
(Conditional Cash Transfer to expecting mothers and children below age 2 including transportation fees)
• Promotion of publicity and recognition for health insurance schemes (including CBHI), capacity building in
financial management of the government (Swiss Red Cross Society)
• Establishment of the Village Development Fund to respond to the needs of villagers for medical expenses in case of
emergency (Voluntary community fund in Champasak Province and Lux-Development)
2) Physical Factors
Barriers: a) Geographical access to health care facilities (Limited availability of roads and transportation, and
communication facilities and means of communication), b) Shortage and uneven allocation of health care providers, c)
Low quality of health care providers, d) Shortage of drugs and health care equipment, e)Shortage of means of
emergency referral transport, f) Limited access to water and sanitation
• Physical access to health facilities: infrastructure development in alliance with the 3 Builds Policy, infrastructure
development using the District Development Fund (schools, roads, public facilities) (UNDP, Lux-Development)
• Capacity building of health personnel (training and placement of VHVs/VHWs, training of community midwives)
• Training and placement of midwives by providing scholarships for women from ethnic minorities (Save the
Children, Care International, Plan International, KOICA、KOFIH)
• Establishment of emergency birth preparedness plan and arrangement for the means of transportation (vehicles) in
strengthening and collaboration with VHC (UNFPA and others)
• Community led development of water and sanitation facilities with integration with MCH and nutrition programs
(UNICEF, Plan International and others)
• Arrangement of communication facilities and means for communications (infrastructure development)
3) Socio-Cultural Factors
Barriers: a) Lack of knowledge and understanding of health matters, b) Existence of social customs and taboo harmful to
health, c) Low status and lack of decision-making power of women, d) Low educational level (ethnic minorities, women),
e) Lack of trust towards health care services among people, f) Limited availability of communication means

- Organization and empowerment of women's groups (including LWU members) and Training and empowerment of male and female Health Volunteers (Care International)
- Training and placement of Community-Based Distributers (health education for villagers, distribution of contraceptives, Vitamin A, ORSs, and deworming drugs) (UNFPA)
- Improvement of health care services by promoting the comprehensive primary health care model (Save the Children)
- Counseling and educational activities in partnership with LWU on feeding practices and nutrition for infants in villages (using LWU's networks in villages) (UNICEF)
- Positive Parenting Program: Train Volunteers as facilitators to conduct education on health, hygiene and nutrition for children below age 6 (Plan International)
- 4) Establishment of Supportive Health System
 - Barriers: assurance of quality of services, primary health care service system
- Cooperation and linkages with the policies of Model Healthy Villages and the "3 Builds" Policy for the development of basic infrastructure building, community development
- Capacity development and strengthening management capacity of governmental administration (Province, district, village), capacity development and strengthening of Village Development Committee, and Village Health Committee (Lux-Development and other development partners).
- Promotion of a comprehensive primary health care approach (Save the Children)

5) Other sectors

- Barriers: poverty, Basic Infrastructure, Education, Production of agricultural and fishery products, Food Security
- Community development in cooperation with the "3 Builds" policy, e.g. improvement in water sanitation, basic infrastructure, public facilities (Lux-Development, UNDP, etc.)
- Utilization of the District Development Fund, Village Development Fund
- LANN (Linking Agriculture, Natural Resource Management and Nutrition)-Approach for the betterment of living relating to food and nutrition: including the organization and training of Women's and Farmers' Groups connecting agriculture, food consumption and nutrition; the provision of training and technical assistance for improvement of nutrition, food consumption and agricultural production (Care International)
- Multi-sectoral approach to nutrition (cooperation among health, water/sanitation, agriculture, and education sectors) (MOH in cooperation with development partners)

Source: JICA Survey Team

(2) Measures taken by development partners in addressing barriers to access health centers in remote and hard-to-reach areas

Organization	Measures taken/Outcome and Challenges
Care International	• In order to promote reproductive, maternal and newborn and child health (RMNCH) in
	Phongsaly Province, VHC as a focal point is encouraged to prepare an emergency birth
	preparedness plan and conduct educational activities and send messages to the community
	regarding RMNCH, through the training and capacity building of VHC. A manual for VHC
	training is being produced in collaboration with MOH (CIEH and MCH Center) and UNFPA.
	• Women's group is organized (including members of LWU and VHC) , and empowered through
	the provision of knowledge regarding their health (specially pregnancy and delivery) and health
	care of newborns and children, and the approach and education to men is also conducted.
	<outcome and="" challenge=""></outcome>
	The project is Phonsaly has just started and the activities will be gradually expanded to other
	target villages. The revision and development of VHC training manual is almost completed.
	Follow-up and supervision to VHC and women's groups after the training are very important.
	For ethnic minority groups, local ethnic language is a challenge for communication.

UNFPA	Community-Based Distributers (CBD) has been trained and placed at the community level in
	remote and mountainous areas where physical access to health services (without health centers)
	exists and many ethnic minority groups live. The CBDs are selected among those with medical
	backgrounds such as retired nurses and they conduct outreach services including the provision of
	information on family planning and contracentive methods (i.e. condom pills injectables)
	through regular home visite (once a month) They also provide information and services to
	youth During the period 2006 2010 (the previous country program) the CBD was initiated in
	youn. During the period 2000-2010 (the previous country program), the CBD was initiated in
	Salavan, Attapeu and Sekong Provinces. Under the currently country program (2012-2016),
	CBD program is undertaken in Savannakhet, Phongsaly, Odomxay and Luang Namtha Provinces.
	MOH is planning to continue and expand this program in collaboration with UNFPA beyond
	2016.
	<outcome and="" challenge=""></outcome>
	Based upon the evaluation, in remote and hard-to-reach areas with physical barriers to health
	services, the activities by CBDs without cultural barriers to FP services (distance, time and cost)
	have led to the increase of demands and acceptance of FP among community people. However,
	the program provides allowances, transportation fees and some incentives, and this would remain
	as the issue for sustainability. Continuous capacity building and supervision for CBDs are also
	required.
Lux-Development	Bolikhamxay Livelihood Improvement and Governance Project (BOLIGO – LAO/021): This is
	the project to address poverty reduction, community development and governance strengthening
	under the joint collaboration of the Provincial Planning and Investment Department and Lux-
	Development
	The target areas are 3 districts and 60 villages and the major focus is placed on improvement on
	rural life governance strengthening improvement of infrastructure / access and establishment of
	district and village development funds (DDF/VDF)
	The initial fund for setting up DDE/VDE is provided by Lux-Dev Capacity development
	training for planning and management is conducted. According to the plan developed at each
	lavel (province/district/village), each unit undertakes implementation with their initiatives with
	the suppose on health (including water and conitation and subtice), education coniculture and
	the emphasis on hearin (including water and samtation and nutrition), education, agriculture and
	environment. The DDF is used mainly for infrastructure development (roads, schools, water and
	sanitation and public facilities). VDF is comprised of 2 schemes, grant and credit. Grants of
	VDF are mainly made on latrine and water facilities, emergency fund (medical matters), loud
	speaker, drug kit and other community facilities. Credit scheme is utilized for livelihood
	improvement activities, e.g. small livestock and cash cropping, handicraft.
	<outcome and="" challenges=""></outcome>
	In the target areas, the improvements are found in the reduction of poor families, increased access
	to health services and to toilet and water, and improved nutritional status and school attendance.
	Challenges include: continued leadership and commitment among government staff due to the
	frequent changes of the staff, continued building of administrative capacity and governance, and
	weak infrastructure maintenance system. The project is now currently planned to be expanded
	within Bolikhamxay Province and to Khammouane, Vientiane and Bokeo Provinces, and t linking
	with the Health Sector Project is also considered.
Save the Children,	As measured for ethnic minority groups and the areas where they live, providing scholarships to
Care, Plan, KOICA,	candidates selected from the ethnic minority group communities to receive training for nurses and
KOFIH, etc.	midwives. After the training, they will be placed in the health centers in their areas.
	<outcome and="" challenges=""></outcome>
	It is noted that through the good services provided by the trained nurse/midwife after returning to
	their areas, good reputation goes around by the clients who are satisfied with the services
	provided, which leads to increasing the utilization of health services at the health center. The

building trust for services among community people would be more effective for promoting the
utilization of health services, noting that various education activities have been undertaken, but
not effectively leading to good results (based upon the experience from Save the Children).
Challenges are: the selection of candidates for scholarships among ethnic minority groups (due
to educational level), time required for training, securing the placement posts and follow-ups and
supervision system after placement.

Source: JICA Survey Team

4.2.6 Assistance Schemes and Modalities by Developing Partners

(1) District Development Fund : DDF

This model was introduced in 2005. Currently, UNDP is operating the DDF in partnership with the Ministry of Home Affairs, as part of the project "Strengthening Capacity and Service Delivery of Local Administrations." Along with the on-going decentralization efforts, this project aims to strengthen local government administrations and build capacity of officers and public service providers including health services. Target districts are determined considering poverty ratios, population size and scope of services, and performances in the previous year. The content of assistance includes: direct financial assistance given to the district government level (financial decentralization), capacity enhancement through implementing processes (planning including budgetary planning, administrative management and reporting), and infrastructure development and its management. According to the survey report, DDF invested a total of 4.25 million dollars into the local administrative offices in 5 target provinces for the period of 2006-2011. The investment covers 4 sectors; Health (health facilities, water and sanitation, 111 projects, 29%), Public program development (66 projects, 28%), Education (78 projects, 22%), and Agriculture (34 projects, 10%), the Heath sector being the largest (54).

(2) Village Development Fund (VDV)

VDF, a microfinance institution, was introduced by the government in 1997and since then has spread nationwide. It is aimed to provide loan for small amounts of money to poor people with an aim to alleviate poverty. There are two channels of collecting initial funds, one from contributions from development partners and the other contributions from villagers themselves. A Village Development Fund management committee is set up through the formation of a cooperative at the community level. In the Case of Champasack, the VDF management committee is composed of 3 to 5 representatives, each responsible for accounting, saving and credit, agricultural production, group production, marketing and advisory group is also included.

The Livelihood Improvement and Governance Project in Bolikhamxay Province by the Luxemburg Development Agency has supported the establishment of VDFs in 60 villages by 2014. Based on villagers' desire, VDFs are operated in two ways, one for a microfinance system, and the other for grant assistance in case of emergency needs. As a result, 32 villages has chosen the credit scheme. It is reported that the selection of credit or grant scheme is dependent on road conditions and access to marketplaces from the consideration of possible income generation.

In Champasak Province, VDF was introduced in 2000, and as of 2009, the number of VDFs is reported to
have increased to more than 370. The Village Development Committee and Village Credit Committee administer VDFs established with villagers' contributions, and many provide emergency assistance (in case of educational cost or sickness) in addition to the use for income generation activities. The challenge of VDFs is the operational management capacity at the village level and technical assistance is required (55, 56).

(3) Primary Health Care Model (Save the Children)

This project was recommended by the Department of Hygiene and Health Promotion of MoH.to be included as a target site for the community intervention survey as a good PHC model. Save the Children began its activities in Sainyabuli Province in 1992. At the beginning, the project was initiated with the support of Save the Children Australia, but currently the project receives support from various supporters. The target areas are: (1) Sainyabuli Province: The project has been implemented for 22 years since 1992, and now target the whole province. (2) Luang Prabang Province: The experience in Sainyabuli Province was extended to Luang Prabang Province in 2010.

The key feature is the promotion of so-called "PHC Model" to strengthen the health system focusing on MCH and Nutrition in cooperation with the Health Department of the Provincial Government. Emphasizing initiative and ownership of the local government, following activities are promoted in a comprehensive manner:

- a) Management capacity building for officers in the province and district government (planning, reviewing, regular reporting meetings for the District Health Department and other district officers) and capacity building of health staff;
- b) Improvement of health services (improvements of facilities, equipment, basic medical instruments and medicines, and provision of one-stop-shop services);
- c) Multi-sectoral approach: regular inter-sectoral cooperation committee meetings (LWU, Education, Agriculture and Transportation sectors);
- d) Outreach services (service provision by Comprehensive Mobile Clinics);
- e) Water supply and hygiene (toilets) development; and
- f) Regular monitoring of all the Health Centers.

The evaluation made by an external evaluation team in 2015 reports that there has been an increase by 20% and more in the coverage of ANC, family planning and immunization in the target villages in 2009-2014 with regard to the achievement of the goal in improving access and use of health care services by providing high quality services. The cost effective analysis has proven that input in the 3 phases (excluding WASH) was 5000 kip (60 US cents) per person per year (57, 58).

(4) Roles of International NGOs

In Laos where the project coordination mechanism among development partners is progressed, coordination

is made to avoid duplication as to identifying target areas among development partners including international organizations and international NGOs in the health sector. Many of community interventions (particularly comprehensive activities on the village level) are operated with the support from international NGOs. Therefore, the scope and target villages are largely limited.

International NGOs working in Laos are registered at the Ministry of Foreign Affairs, and national non-profit organizations are registered at the Ministry of Home Affairs. International NGOs set up the INGO Network in 2005. In 2014, 69 full members, and 6 associate members share their information through this network. The webpage is as follows.

http://directoryofngos.org/ingo2/home

(5) Approach towards economic barriers impeding access to health care services

Considering economic factors, the high out-of-pocket expenditure by patients is one of the major impeding factors in seeking health care services. Thus, various assistances have been provided by development partners including the Health Equity Fund (HEF) for the poor, and Free MCH. Most of these programs are dependent on external assistance. This poses the challenge for long-term program sustainability on the part of the Government of Laos. The standardization of guidelines is another challenge since there are different guidelines by development partners. The weak management of the Free MCH programs at the administration requires attention.

(6) Communication approach and tools

As shown in Figure 4-1, through the interviews with the development partners, it was recognized that consideration is necessary for ethnic minority groups and gender issues in educational activities and communication strategies at the community level. Different approaches should be taken in due consideration for village power structure, decision makers at the household level, age groups, different regions and target people (ethnic minority groups, men and women). In responding to address these constraints for communication at the community level, the development partners and International NGOs emphasize interpersonal communications, and undertake various approaches, such as "peer approach/peer education", "training/use of satisfied clients," and activities to train female volunteers and volunteers from among ethnic minority groups.

Various educational materials for communication are produced by the Center for Information and Education for Health (CIEH) with assistance from development partners. According to the policy of the Lao Government, the materials are published only in Lao language. Audiovisual materials with local ethnic languages can be made. Since some ethnic minority groups have no written languages, educational materials and tools with the use of many illustrations and photos are produced, for example posters, flipcharts, picture cards and DVD. The use of these available educational materials is limited to areas supported by development partners, since each development partner works in the target areas and target audiences.

(7) Implementation system by development partners

Many development partners (DPs) (including International NGOs) work under the implementation system / mechanism as below in undertaking their activities in Laos.

- A country office is usually set up in Vientiane with a responsible person for health sector. In view of emphasizing local level interventions, the DPs works with the signing of Memorandum of Understanding (MOU) with counterpart provincial government bodies, e.g. Save the Children with Sainyabuli and Luang Prabang and Care International with Phongsaly). It is noted that it takes time to obtain the signing of MOU.
- At the field level, a local office is set up with the placement of international office in charge (field manager/coordinator) and a few local staff members. Placing local staff is important consideration the communication in Lao language. Many DPs have offices in the counterpart government administration offices (e.g. provincial government, provincial health department). For example, Lux-Development has their field officer/technical advisor in each target site for each project and implements the project jointly with the counterpart provincial/district government bodies.
- DPs appoints responsible persons in Vientiane country offices in order to report the field experiences to the central government and conduct advocacy towards government policies and programs based upon their experiences, and undertake consultations with other DPs through the participation of SWG and TWG.
- It was noted from DPs that in order to promote initiatives from the counterpart organizations in Laos and develop their capacity, the number of the staff from the development partners (international staff and local staff) should be minimum and the much of the responsibility of implementation be left to counterpart organizations. Care International has been implementing the project for women's empowerment and poverty reduction in Sekong under the LANN (Linking Agriculture, Natural Resource and Nutrition) approach in collaboration with EU and other development partners. There are many ethnic minority groups in Sekong and the difference in sociocultural aspects and local language exist. Therefore, a half of the local staff are recruited and trained from the targeted local areas.

Table 4-2 Major Community Health Interventions by the Government, Development Partners and INGOs

[The Government of Laos]

Agonor	Policy/	Target	Areas of Activities*					
Agency	Program	Geographical Areas	А	В	С	D	Е	
МОН	Model Healthy Village	4,533 villages certified nationally ¹⁾	0	0		0		
	The Multi-Sectoral National Food and Nutrition Security Action Plan (FNSAP)	Louang Namtha (4 districts), Oudomxay (4 districts), Salavan (3 districts)		0	0	0		
Lao Government	3 Builds Policy Pilot Projects	51 districts, 109 villages nationwide	\bigcirc		0	0		

*Areas of Activities: A: Health System/Governance,

B: Health Service Delivery/Human Resource

C: Multi-sectoral (Nutrition/Education/Agriculture/Infrastructure)

D: Water and Sanitation,

E: Social Health Protection (incl. Health Insuarance)

Agonov	Policy/	Policy/ Target Geographical		Areas of Activities					
Agency	Program	Areas	А	В	С	D	Е		
ADB	Health system strengthening (incl. HEF and Free MCH	64 districts in Norther 8 Provinces to expand nationwide from Oct. 2015	0	0			0		
	Model Healthy Village development project (Nov. 2009 – June 2014)	2 provinces in Northern Region (Houaphanh, Xieng Khouang), 10 districts, 100 villages	0	0		0			
World Bank	Community Nutrition Project (2009–2013)	7 Provinces in Central & Southern Regions, 62 Health Centers	0	0	0		0		
	Health Governance and Nutrition Project (2015-2020)	14 Provinces	0	\circ	0		0		
WHO	Support to Five-Year Health Sector Development Plan, governance/capacity development in 2 Northern Provinces, (in collaboration with KOFIH)	Technical Assistance to MOH, Houaphanh, Xieng Khouang	0	0			0		
UNFPA	5 th Country Program (2012– 2016) Strengthening RMNCH with focus on remote vulnerable populations	4 provinces from UN Joint Focused Areas ²⁾ (Luang Namtha, Udomxay, Phongsaly, Savannakhet) Focus: Savannaket (4 districts)	0	0					
UNICEF	Country Program (2012 -2016) Service delivery and capacity development for MNCH and nutrition Water/sanitation (WASH)	Immunization & commodities support; nationwide, MCH/Nutrition: 9 provinces incl. Unfocused areas WASH: 15 provinces	0	0	0	0			
UNDP	"Strengthening Capacity and Service Delivery of Local Administration" through District Development Fund (DDF): link with "3 Builds"	7 Provinces (Salavan, Sekong, Xieng Khouang, Houaphanh, Luang Prabang, Oudomxay, Luang Namtha) 66 districts	0		0	0			
WFP	MCH Program (Support to the "First 1000 Days" from pregnancy to children under 2 years old (2011-2015)	3 provinces, Oudomxay, LuangNamtha, Sekong		0	0				
	School Lunch Program (2002-)	7 provinces, Salavan, Sekong, Attapeu, Phongsaly, Oudomxay, Luang Namtha, Luang Prabang		0	0				
Lux- Development	Lao-Luxenburg Health Sector Support Programme 2014–2020	3 Provinces (Vientiane, Bolikhamxay, Khammouane)	0	0	0	0			
	Integrated Rural Development Project (2014-2020)	KhammouaneProvince (Nakai, Boualapha, Mahaxai, 3 districts)	0		0	0			
KOICA	「 I HOPE Project 」 in collaboration with Hanyang	Luang Prabang (5 districts), Oudomxay (4							

[International and Bilateral Agencies]

	University (2013-2016)	districts)		0	0	0	0
KOFIH	Support to strengthening health system/health service delivery (focus on MNCH) in collaboration with WHO	Xieng Houaphanh	Khouang,	0	0		0

[International NGOs]

Agonov	Policy/	Target		Area	s of Activities		
Agency	Program	Geographical Areas	А	В	С	D	Е
Swiss Red Cross	Governance/capacity development, management of social health protection schemes, i.e. Health Equity Fund and Free MNCH; Project "contribution towards UHC in Lao PDR" (2015- 2017) with focus on Sekong Province	Sekong (all distircts) Luang Prabang (4 districts)	0	0		0	0
Save the Children	Promotion of comprehensive PHC and health system strengthening with focus on MNCH and nutrition	Sainyabuli (all 11 districts) Luang Prabang (5 districts)	0	0	0	0	
Care International	Linking agriculture, food consumption and nutrition (LANN ⁴⁾ Approach)	Sekong Province, Dakchung District	0		0		
	MNCH/Nutrition program and gender issue; Strengthening VHC and capacity building of health staff	Phongsaly (3 districts, Khoua, May, Samphanh) Target 35 villages to be expanded to 62 villages	0	0			
Plan International	Integrated MNCH/nutrition, community-led WASH, basic education, child and early childhood care and development (under 8 years old); Gender issues	Bokeo (3 districts), Oudomxay, Salavan	0	0	0	0	

Note:

1) Report on Health Village Establishment 2013-2014, MOH, Department of Hygiene and Health Promotion

2) UN Joint Focused Areas : 6 provinces, i.e. Phongsaly, Luang Namtha, Oudomxay, Xieng Khouang, Houaphanh, Svannakhet

3) KOFIH: Korea Foundation for International Healthcare (under the Korean Ministry of health and Welfare

4) LANN: Linking Agriculture, Natural Resource Management and Nutrition, under the joint collaboration of National Nutrition Committee, CARE Laos, Helvetas, Comite de Cooperation avec le Laos (CCL) and World Renew with the support of EU.

Source: JICA Survey Team

4.3 Community Intervention Survey

Based on the collection of data and information from the Ministry of Health (MOH) and development partners (UN agencies, bilateral organizations, and international NGOs) and the review of the existing documents and research reports, the community intervention survey was developed and commissioned to the local consultant in Laos under the following specifications. The target communities were determined in consultation with the MOH and JICA Laos Office.

4.3.1 Methods of the Survey

(1) Purpose:

- To have a deeper understanding about approaches taken in community interventions including multisectoral approach to help improve access to health services and resolve barriers to accessing health services.
- To identify useful lessons and contributing factors to be utilized as references for undertaking future community interventions.

(2) Survey Process:

Step 1: Determination of Contents of the Survey and Survey Sites

Based on the data and information collected from MOH and development partners, examples (good practices) were reviewed and mapped. With a list of candidate communities, the selection of sites and the contents of the survey were discussed together with MOH and the JICA Lao Office.

Step 2: Ethical Review

An application was made to the National Ethics Committee for Health Research (NECHR) with the agreed contents, and its approval was given on November 11, 2015.

Step 3: Pilot Study

On a trial basis, focus group discussions (FGD) with community leaders, and a pre-test using a draft questionnaire among villagers (one male and female) in two communities were conducted in the Lao Language in Pak Neguam District in the suburbs of Vientiane Municipality on November 4, 2015 with the participation of JICA Laos Office. On the basis of the findings, the approach, schedule and methods of the survey were examined.

Step 4: Final Confirmation and Agreement on the Survey Contents and the Survey Sites

Final agreement was made on the revised survey contents incorporating what had been learned from the findings in Step 3 in consultation with MOH and the JICA Lao Office. Main criteria for selecting target sites were: a) Good practices identified in community interventions for community health, b) "Model Healthy Village," or pilot villages of the "3 Builds" Policy, c) model examples of primary health care, d) Examples of a multi-sectoral approach. Focus group discussions (FDG) and Key Informant Interviews (KII) were carried out for the survey. It was decided that a survey with villagers was excluded. The reason for their exclusion was the inability of the survey team to conduct a survey using the languages of minority ethnic groups. Only the Lao language was used for the survey.

Step 5: Preparation for the survey

The survey was conducted as follows upon the agreement of MOH, JICA and the survey team.

(3) Target Areas:

14 villages in 14 districts in 9 provinces were selected as target areas.

*Refer to Table 4-3 for target areas.

(4) Methods

Focus Group Discussion (FGD) and Key Information Interview (KII) were employed, and the survey was contracted to the local consultant and undertaken in the Lao language.

1) Participants

(a) Focus Group Discussions (FGDs)

Village Representatives (e.g. Village Development Committee, Village Health Committee, LWU/Women's Group, LYU, Traditional Medical Personnel, Village Health Volunteers/Village Health Workers)

One session in every village was held.

(b) Key Informant Interviews (KIIs)

Leaders of implementing organizations and other important stakeholders (Village chief, leaders, health staff, etc.)

2) Survey Points

- (a) FGDs
- Existing community organizations and networks
- Perceptions about health services at the community level
- Obstructing factors for the use of health care services
- Access to the media, means of communication and transportation
- Ethnic groups, family composition and decision making members

- Understanding about challenges faced by the community and community intervention activities (when good activity examples are in place)

(b) KIIs

- Obstructing factors for the use of health care services
- Status of access to the media, means of communication and means of transportation
- Outline of existing community organizations, the roles of interviewees, and decision-making process in the village
- Priority issues and challenges and existing activities to settle issues and challenges in communities
- Lessons learned and contributing factors for successful cases

Separate FGD and KII guides were given to survey facilitators, and the Laotian version of the guides were prepared for survey implementation.

3) Analysis

The contents of FGDs and KIIs were transcribed and analyzed in a qualitative manner.

4) Survey Period

Contract Period: from the end of November 2015 to January 2016

Direct Survey in the site: from December 7, 2015 to January 13, 2016

Area	No	Province	District	Village (3 Builds village)	Implementing/ Supporting Agency
	1	Phongsaly	Khoua	Thabuk	MOH/WFP
	2	Phongsaly	Boun Tai	Namlannoy	MOH/WFP
	3	Luang Namtha	Luang Namtha	Namgnene (3 Builds village)	MOH/WFP
	4	Bokeo	Paktha	Donemixay	Plan Int'l
North	5	Luang Prabang	NanThongchaleun (3 Builds village)MOH Save the		MOH Save the Children
	6	Luang Prabang	Xieng-Ngeum	Kiewgna	World Vision
	7	Xieng Khouang	Kham	Nagnong (3 Builds village)	МОН
	8	Xieng Khouang	Nonghad	Khangphanien (3 Builds village)	KOFIH/WHO
	9	Savannakhet	Kaison Phomvihanne	Phonsim (3 Builds village)	МОН
Central	10	Savannakhet	Thapangthong	Xekeu	MOH/UNFPA/ UNICEF
	11	Bolikhamxay	Khamkeuth	Khammouane	Lux -Development
	12	Sekong	Dakcheung	Daklane	Swiss Red Cross/WFP
South	13	Sekong	Laman	Namhieng	Swiss Red Cross/WFP
	14	Champasack	Pathouphone	Nongboua Yai	МОН

Table 4-3 Targeted Survey Sites (9 Provinces, 9 Districts, 14 Villages)

Source: JICA Survey Team

4.3.2 Survey Outcome

A total of 102 persons participated in the 14 FGDs conducted in the 14 sites. 37 were women (36%) and the average age was 42.2 years old, ranging from 22 to 68 years. More than half of participants had attended some years in secondary school (55.9%) and more than a quarter had attended some years in primary school (28.4%). The majority of participants were farmers (85.3%). Among the participants, 24 persons (23.5%) were head or deputy head of village, followed by head or deputy head of senior unit (Neohom) or Lao front unit (17 persons, 15.7%) and head or deputy head of Lao Women Union (15 persons,14.7%). Ethnic background was comprised of Lao-Tai (38 persons, 37.3%), Khmu (17 persons, 16.7%), Hmong (5 persons, 4.9%) and others. As for Village Health Volunteers (VHVs), a total of 11 VHVs participated in the FGDs, with the only 2 females, and the average age of 40.8 ranging from 27 to 59 years. As for their educational background, one person completed secondary education and the rest received primary and some secondary level education. In all 14 sites, one VHV has been appointed and in some areas with one substitute.

(1) Existing Community Organizations/ Networks and Resources

In each community, a village organization (by leaders of different sectors) exists to manage community matters. There are sectoral organizations such as Village Health Committee, and Village Fund (Village Development Fund) Management Committee.

Existing village	• In all villages, a village organization exists consisting of representatives of 7 units from
organizations	among village chief, vice-village chief, LYU, LWU, senior group (Neohom), Village
(administration and	Health Volunteers (VHV), sociocultural, security, defense, and economic (5 units in 2
management) and	sites).
selection of members	• Head of a village organization (village chief) is selected by villagers under the
	supervision of the District Party Committee. Members of other units are appointed by
	the village chief.
	• Committees of a village organization conduct various activities in close cooperation with
	the village chief. Monthly meetings are held to report and plan their activities.
Roles of every unit	• Every unit plays its roles and functions under the supervision of the Village Party
	Committee, village chief and vice village chief.
	• Lao Youth Union conducts various village services particularly hard works and
	information communication to villagers and conduct the educational activities to prevent
	HIV/AIDS
	 Lao Women's Union plays roles for mothers and children. It supports and promotes
	children to go to school and supports health promotion activities by VHVs and Health
	Staff
Village Health	• Village Health Committee (VHC) is formed in the community composed of
Committee (VHC)	rapresentatives from respective units a g village chief Women's Union Vouth Union
Committee (VIIC)	VHVs, and Saviar Group (Nacham) The most responsible persons are Village Chief
	and VHV The famele members were limited except for LWLL Every month VHC
	and VHV. The female memoers were minited except for LWO. Every month VHC
	There is one cose in which VIIC does not wist and VIIVs and the basis modical drag.
	• There is one case in which VIIV with the village experimental drug
	kit managed by VHV exists. There are two cases in which the village organization
	neaded by the village chief is acting as the main player in health-related activities.
Selection of Village	• VHVs are selected from among candidates based on their educational level, expectation
Health Volunteers	and motivation as VHVs, and the selected VHVs are approved by District Health Office
	(DHO).
Village Fund (Village	• There is a VDF Management Committee (found in 9 sites out of 14 sites). VDF is set up
Development Fund	as a revolving fund and managed in the village. In many cases, it is managed by Village
VDF) Management	Chief and LWU. Villagers deposit their money and also can borrow money (at low
Committee	interest rates.)
	• The management of VDF is different from Village Chief and VDF management
	committee. For example, in the north interest is free for the poor and members and but
	non-members can borrow for emergency medical expenditure without interest rate. On
	the other hand, in the south, villagers deposit money and become members and members
	can borrow money, but non-members cannot borrow money. In Bolikhamxay Province
	where Lux-Development provides assistance, the initial fund for VDF is provided by
	Lux-Dev and managed by the village and any villagers can deposit money and borrow
	money with the VDF.

(2) Perception about Health Care Services at the Community Level

Clean-up activities regularly conducted by the Village Health Committee, outreach activities by the Health Center and District Health Department were given as examples of health service in villages, and the roles of the Village Health Committee and Village Health Volunteers (VHVs) were perceived as below. VHVs were placed in all villages.

Health services and health activities in villages	 Promotion of regular clean-up activities (from weekly to monthly), and three hygienic practices (clothing, food and housing), Outreach services (e.g. immunizations) by the Health Center and District Health Department Conducting health education activities (by health staff, VHVs, LWU, VHCs and mother's trained peer groups)
Presence and Roles of Village Health Committees (VHC)	 VHC is responsible for conducting and supervising health activities in the community as follows. Conducting regular clean-up activities, installing water systems (to schools and public places), and installing trash/garbage boxes in villages Communicating with Health Center and DHO, and supporting outreach activities (immunizations, health education, and other activities) by the Health Center and DHO Conducting health education (encouraging expecting mothers to take antenatal checkup (ANC) at the Health Center, delivery at health facilities, and immunizations to children) VHCs report health information to health center (every month). VHC promote the prevention of seasonal diseases (malaria, diarrhea and pneumonia) and in case of outbreak of diseases the VHC reports to the health center.
Village Health Volunteers (VHVs)	 VHVs serve as a health network in the community and communicate directly with the health center in case of needs. VHVs are responsible for all the matters related to the health of villagers, in particular, conduct of health education in the community concerning hygiene (three hygiene, eating, living and clothing cleanly), proper management of livestock, constructing latrines and its use, destroying breeding site of mosquitos, health education towards pregnant women (promotion of ANC, facility delivery and PNC). VHVs support outreach activities by the Health Center, and encourage villagers to receive health services. In some cases, when a pregnant woman cannot reach to a health facility in time, VHVs attend to the delivery. VHVs manage the basic drug kit (including supplies and finances from sales) based upon the list of standard basic drugs (Drug kit not found for all the sites) DHO and Health Center provides training to VHVs (pre-assignment training, management of drug kit, rapid test for malaria, drug treatment of bed nets, etc. With the support from the development partners, VHV have received additional capacity building training.) VHVs collect information in communities, i.e. birth, death, target children under 5 years for vaccinations, women with reproductive age) in cooperation with LWU to report to the Health Center (the format is provided from the health center). They are supervised by the chief and vice chief of villages. Two comments on activities by VHVs They are working very well. They have basic knowledge about health education, and if a family does not live up to what it has learned in health education, they visit the family and give direct instructions. A case is reported that VHVs are not playing their roles after the Health Center was established in the village, where 5 health workers were assigned and they worked with the chief of village and LWU.

(3) Access to Health Services and People's Use of Services

While the communites reported in FGDs the improvements made in physical access to health services including improved road conditions and the establishment of the Health Center in the village or its vicinity, there were three cases of long distances and inaccessibility (particularly in the rainy season) to the Health Center.

People's attitudes in case of illness	 When villages become sick, first, they visit the Health Center for advice and services. In case of serious illness, referral to a hospital (provincial or district) will be made and patients are sent there. It was noted that Health staff members at the Health Center are fully qualified, and are trusted by community people. Nobody mentioned about seeking health care with traditional healers or private practitioners. In the areas where access to health centers are difficult, villagers first visit VHV and ask for advice (Villagers rely on VHVs and VHVs require more training).
In case of economic	• There is no emergency assistance from the community to help people with economic
difficulty	difficulty to visit health facilities (hospitals or Health Center).
•	• In case of economic difficulty, people ask their relatives for their assistance, or borrow
	money from the VDF. The VDF in communities lend money with no interest to people
	in need of medical treatment but being unable to pay for themselves.
	• The Heath Equity Fund (HEF) is available for poor people in need of emergency medical
	treatment. When a village chief or administrative office issues a certificate, people can
	receive medical service free of charge.
Pavment for health care	• Villagers utilize Free MCH services and Health Equity Fund (HEF) for the poor.
services	• Participation in a health insurance schemes are very limited, especially the awareness
	and knowledge, and participation of Community-based Health Insurance (CBHI) is very
	low.
	The reasons why the villagers do not patriciate in CBHI are noted as follows.
	1) The people cannot afford to pay for the monthly payment; monthly 25,000 Kip at
	minimum for the households within 7 members, and 28,000 Kip at maximum for
	the households with more than 7 members.
	2) The people are not satisfied with the serviced provides.
	3) CBHI can be applied only to designated health facilities, and only inexpensive
	medicines are dispensed).
	*CBHI has been introduced in 5 sites.

(4) Ethnic Groups, Family Relations, Decision Making

In general, issues on gender relationship and ethnic minority groups were not reported in FGDs. It is reported that compared to the previous time, women's participation in decision making at home and in village activities has enhanced as a result of educational activities by LWU and other non-health sector organizations.

Gender Relation	•	Since LWU began to disseminate gender-related information to villagers, communities
		have practiced and respected gender-equality in their activities
	•	Compared to the previous time, at present, girls and boys can attend school equally.
	•	Men are the main persons to make decision in the household, but after discussion with
		wives. Men now support wives to attend their ANC visit and delivery at the health
		facility (one village case)
	•	Both men and women still perceive that if pregnant women worked hard, they give birth
		easily, and pregnant women are still working hard until giving birth (one village case).
	1	

In Xekeu, Savannakhet Province, the FGD participants noted that there were no gender gaps. However, through Key Informants Interviews, it was note that there are some factors which might affect the number of women in the responsible posts of the community organizations or the female members to become VHVs. Due to the low educational attainment among women and ethnic minority groups, it would become difficult for them to take responsible positions in the community organizations. Women are not allowed to go out

of villages or make trips outside traditionally, this would pose the difficulty of becoming a VHV since VHVs often travel outside of their villages for health activities and training.

(5) Means of Information, Communication and Transportation

Means of transportation much depend on road conditions. In most villages, people have access to mobile phones, TV and radio as the means of communication. As a means of obtaining health information, health education activities by health staff and village leaders, and village broadcasting media (loud speaker) are noted.

Means of Communication	• Mobile phone is available in 80-90% of households and can be utilized. TV is also common in the survey villages (the household coverage is not certain). Recently satellite TV is becoming popular (the instalment of equipment costs 400,000 LAK, without monthly charges, but the coverage is not certain). Internet is available, but its utilization is still limited.
Effective means of	• The most reliable source of health information is the information provided from health
obtaining Health	staff through outreach activities, the next from posters (Posters with the images can be
Information	understood by even those who cannot read.
	• In the villages, Lao Star and Police channels are only available. Through TV, the villagers receive health information through these channels (since the broadcasting time is very short, it is easy to miss the programs.)
	• The most effective means of getting health information is the village broadcast (loud speaker).
	• In a mountainous region (Savannakhet), a local system (loud speaker using the local
	language) is made available to provide health information, but it could only reach the
	central part of the village, which is only 10 % of the village area.

(6) Food Security and Nutrition

In the areas receiving WFP support, rice is supplied to expecting mothers, and nutritive supplements are given to children below age 5 (Luang Namtha, Phongsaly). Some reports indicate vegetables being grown in school gardens. Dietary taboo (particularly after child delivery) is still practiced in some villages, which causes a nutrition problem.

School Garden	• Profits from produce help the school to gain income which is used for school activities (WFP is providing assistance for school lunch programs).
Dietary Taboo	 Traditional dietary taboo after delivery is practiced. (e.g. Rice and salt only for 5 days after delivery without meat.) In order to address the food taboos, VHV, LWU, Village Chief, TBA and all concerned have been conducting educational activities. Through health education at ANC in the health center, some women are now stopping the practice.

(7) Challenges of the Village as Raised by Villagers

Challenges of the	•	Some people do not repay what they have borrowed from the Village Development Fund.
Village	•	Improvement of road conditions is needed particularly those leading to health facilities.
	•	Garbage disposal system of the village should be improved.
Challenges in the field of	•	To secure water and develop water supply system (4 villages)
health	•	Village Health Center conducts a campaign to remove mosquito breeding places every
		year before the rainy season, yet, dengue infection occurs every year.

•	Dietary taboo after child delivery is practiced among some women in spite of health education against the practice.
•	Participation rates of medical insurance schemes are unstable, particularly in CBHI.
•	Among villagers (especially ethnic minority groups), there are people who do not understand the importance of health services (e.g. vaccination) at all.
•	The vaccination coverage dose not reach 100%. The reasons behind are: a) If the child
	gets fever after the vaccination, the mother becomes worried due to the effect of vaccinations, then she would not bring the child for the following vaccinations, b) During
	the busy agricultural period (rice cultivation), the whole family would move to the field
	from the home and they miss the vaccination timing.
•	In the field of hygiene, problems are the inadequate management of domestic animals,
	people defecating outside their houses, and lack of toilets.

(8) Proposals from Villagers

In the field of health	• Support to the construction of the Health Center
	• It is necessary to establish water and sanitation facilities (especially schools and public
	places) and for garbage treatment.
	• Enhancement of capacity of Health Center staff
	• Provision of training for VHVs
	• Some incentives for VHVs for transportation cost to participate in activities and training
	courses.
	 Need for loud speakers and projectors for health promotion activities
Income generation	• Support to income generating activities by LWU (to produce goods for sell).

(9) Points for consideration based upon the survey findings

- More women need to be prioritized as members of any community structures since the female members are still limited considering the fact that the there were only 37 women out of a total of 102 FGD participants. LWU members are fulfilling their responsibility in undertaking community health activities.
- The "3 Builds" Policy is very effective and should be continued for the perspective of comprehensive community development.
- The support provided by development partners have been making impact towards the promotion of community health, but the issue of sustainability should be noted.
- Health education should be further strengthened in order for the community to recognize the importance of health and health care services.
- It is necessary to promote recognition and understanding on the CBHI scheme among community people and the application of CBHI should be reviewed, e.g. for example the choice of health facilities.

(10) Contributing Factors for Community Health Promotion and the Use of Health Services Major contributing factors noted in the FGDs are:

- Improvement of access to health services through improving broads and establishing the Heath Center.
- Presence of leadership such as village chiefs, village management organizations and Village Health Committee.
- Establishment of good partnership and cooperation among concerned organizations at the village level including village organizations, Village Health Committee, VHVs and LWU; specially, through the capacity development with the support from development partners, the enhancement of inter-sectoral collaboration, and in the "3 Builds" pilot areas, the strengthening of multi-sectoral collaboration mechanism from the point of rural development.
- Presence of good relations between villagers and health staff at the District Health Office and the Health Center, and close communication and trust established between them and the good community health system established (including outreach services, and health education).
- Effective management of local resources such as VDF (utilization for the support of medical expenditure in case of emergency, setting up of public facilities, such as water and sanitation).

No	Province	District	Village	Type of Village	Availabiity of HF	Access to Main Road	Health Insurance	HEF	VDF	Free MCH	Implementingy/ Supporting Agency
1	Phongsaly	Khoua	Thabuk	MHV	2km to DH	Perfect RC	Х	0	0	0	MHO/WFP
2	Phongsaly	Boun Tai	Namlannoy	MHV	8km to DH	2km to main road with poor RC	Х	0	0	0	MOH/WFP
3	Luang Namtha	Luang Namtha	Namgnene	3 Builds MHV	HC in village	Perfect RC	Х	0	0	0	MOH/WFP
4	Bokeo	Paktha	Donemixay	MHV	3km to DH	Along the main road	Х	0	Х	0	Plan International
5	Luang Prabang	Nan	Thongchaleun	3 Builds	HC in village	8km to main road Good RC	CBHI	0	0	0	MOH, PT company Save the Children
6	Luang Prabang	Xieng-Ngeum	Kiewgna	MHV	HC in village	Close to main road Good RC	CBHI	0	0	0	World Vision, Cornardo Assn./Switzerland
7	Xieng Khouang	Kham	Nagnong	3 Builds MHV	HC in village	Perfect RC	Х	0	0	0	МОН
8	Xieng Khouang	Nonghad	Khangphanien	3 Builds MHV	HC in village	Perfect RC	Х	0	Х	0	KOFIH/WHO
9	Savannakhet	Kaison Phomvihanne	Phonsim	3 Builds	Close to HC	Perfect RC	SSS/CSS CBHI	Х	0	0	МОН
10	Savannakhet	Thapangthong	Xekeu		Close to HC	Accessible only at dry season with poor RC	CBHI	0	Х	0	MOH/UNFPA/ UNICEF
11	Bolikhamxay	Khamkeuth	Khammouane	MHV	HC in village	Poor RC	Х	0	0	0	Lux-Development
12	Sekong	Dakcheung	Daklane		Far from HC	Accessible only at dry season with poor RC	Х	0	Х	0	Swiss Red Cross/WFP
13	Sekong	Laman	Namhieng		Far from HC	Accessible only at dry season with poor RC	CBHI	0	Х	0	Swiss Red Cross/WFP
14	Champasack	Pathouphone	Nongboua Yai	MHV	8km to HC	Perfect RC	Х	0	0	0	МОН

Table 4-4 Characteristics of Surveyed Sites

Note: MHV: Model Healthy Village; HF: Health Facility; HC: Health Center; DH: District Hospital; RC: Road Condition; HEF: Health Equity FundVDF: Village Development Fund Source: JICA Survey Team

4.4. Examples of Multi-sectoral Approach

4.4.1 Action by the Ministry of Health and Development Partners

The government of Laos established the multi-sectoral National Nutrition Commission in 2013 chaired by the vice-minister in order to improve the status of nutrition. Then the Multi-sectoral National Food and Nutrition Security Action Plan (FNSAP) was formulated as an integrated approach. The integration plan in which the health, water/sanitation, education, agriculture sectors are collaborating has been put into practice in some provinces and districts on a trial basis. Further, in the revised National Nutrition Strategy to 2025 and Plan of Action (2016-2020), the "Convergence" model covering the health, water/sanitation, agriculture and education sectors from a multi-sectoral perspective is promoted (59).

In the process of formulating and implementing the multi-sectoral Action Plan and the convergence model for better nutrition, many development partners and the Lao SUN Civil Society Alliance have provided technical and financial support. Since October 2013, EU and UNICEF have been taking initiative to hold quarterly meetings for national nutrition-related government offices, development partners including UN agencies and international NGOs to facilitate information sharing and discussions on the contents of assistance and approaches taking into consideration the priority issues in the field of nutrition of the Lao government. Recently, mapping relating to nutrition by the government and NNC, and formulating a multi-sectoral National Communication Plan of Action for Nutrition have begun in cooperation with development partners.

Upon the commencement of the National Nutrition Action Plan, a coordination mechanism was created with a multi-sectoral approach and is being strengthened at the national level. Tasks ahead are to establish and promote the similar mechanism at the provincial, district and village levels in order to push forward the implementation of the Plan.

4.4.2 JICA's Approach

Information was gathered from concerned departments under the JICA Headquarters as to a multi-selctoral approach among the health sector including nutrition and other sectors. At JICA, the multi-sectoral approach has been considered as an important pillar. MCH Task Force and Nutrition Task Force have been established for further consideration on this matter. The below shows the outline of projects/programs conceived with a multi-sectoral approach.

(1) Water/Sanitation (Global Environment Department)

There are no projects undergoing in Laos in the field of water supply and sanitation in rural areas. Target countries in this field are shifting from Asia to Africa. Along with the assistance in water and sanitation, partnership is often made with the education sector including health and hygiene sanitation such as hand-washing by health workers at schools and communities. Counterpart organizations of water and sanitation projects are water-related independent ministries (Water Resource Ministry, Public Service Ministry, etc.,

and not the Environmental Agency).

(2) Education Sector (Human Development Department)

Assistance to the "School Management Committee" at the community level in "the School for All Project" in Africa (Niger, Burkina Faso and Senegal) can be cited as an example. In African countries, the establishment of the School Management Committee has been promoted as a part of the decentralization policy, yet, the function of the Committee has not taken roots at the actual educational scene. As a technical cooperation project, JICA intends to develop a model of the School Management Committee to be applied widely throughout the countries. A School Management Committee is established in every school district in which village chiefs, representatives of residents and youth groups act as members. The Committee is fully trusted by village people, and educational activities in the field of health can be conducted in partnership with village people. (Case of Ebola prevention through a School Management Committee is reported.)

It is known that in Laos, organizations for school management on the district and village levels established under the national policy, such as Board of Education or School Health Committee, are not existent. Therefore, an approach taken for other countries may be useful. JICA has been promoting the establishment of "Village Education Development Committee" through its education projects, "Project for Supporting Community Initiative for Education Development." The employment and training of teachers responsible for the health of children is considered to be desirable.

(3) Infrastructure Development (Infrastructure and Peacebuilding Department)

JICA now considers infrastructure development to be the development of basic environment for all people to be able to exercise their potential capabilities and to realize their possibilities. In the road development project in Laos, its benefits for people should be considered to be important. (JICA evaluates time and expense spent by patients to be saved by improved roads for visiting health facilities qualitatively to be an economic benefit.) Further, JICA considers the benefits to be given to health outcome by infrastructure projects (i.e. road improvement).

(4) Nutrition Task (Rural Development Department/Human Development Department)

Nutrition Task Force consists of Human Development, Rural Development, Public Private Partnership Departments and JOCV Office. Currently, members are considering multi-sectoral programs to improve nutrition; i) organizing a project aimed for better nutrition conditions; and ii) incorporating a nutrition aspect to projects/programs conducted in other sectors outside of health (including setting indicators for nutrition improvements).

With regard to the contribution of JICA to the improvement of nutrition, several cases can be cited from the point of the agricultural sector, for example, dietary improvement and the improvement of protein intake in Cambodia through the poultry raising skill improvement project, the WFP-JICA joint nutrition improvement project (support to school lunch by WFP linking with the assistance to strengthen primary education by JICA).

In addition, approaches can be considered such as school-centered dietary education and nutrition improvement for communities, incorporating nutrition improvement and health sector input into the "rural development" or to "community development."

It was pointed out that the quantitative assessment of agriculture-related projects to health outcomes (e.g. nutrition) is difficult.

4.4.3 Additional Information Gathering in Laos

The Survey Team collected additional information in Luang Prabag Orovince in the northern region, and Champasak and Sekong Provinces in the southern region.

(1) Luang Prabang Province in the Northern Region

The team visited the Health, Education and Agriculture Departments in Nan District to obtain information through interviews. Here, a multi-sectoral nutrition improvement project was underway. Inter-sector coordination meetings are held regularly. In every three months, a regular meeting is held, which is attended by the District Health, Education and Agriculture Departments, and community leaders. Information is shared through loose partnership and regular meetings, however, actual implementation of the nutrition-related activities is conducted by respective departments using their specialties and their channels.

- ① Nan District Health Department: The target area is the PHC project site by an INGO, Save the Children. On the village level, nutrition-related education and training programs are conducted directly to villagers, and a training course is held in every six months when the outcome and impact of education and training programs are monitored – including cases of underweight children, stunting and malnutrition.
- ② Nan District Education Department: A member of the Nutrition Improvement Project Committee (who attends three-monthly meetings). Out of all elementary schools in the district, 70% of them have an attached pre-school for children between age 1 and 5. In classroom, guidance is given as to "toilet/water, washing hands, safe food, nutrition, supplements," and health education, extra-curriculum education are given. Unlike the Health Department, the Education Department provides its services as part of preschool and school education and not directly to villagers. There is no school lunch scheme. There is no Health Room in schools either. (The Director expressed his desire for Japan's assistance to train teachers who can provide health education, instead of placing medical nurses or nursing teachers as in Japan.)
- ③ Nan District Agriculture Department: A member who attends three-monthly meetings of the Nutrition Improvement Project Committee. The Health Department takes initiative in the meetings, and the Agriculture Department develops methods to give guidance to farmers for what has been proposed in the meetings, and applies the methods to farmers. The outcomes of 6-month monitoring are effectively utilized. In the district, 54 villages are project sites.
- ④ The Agriculture Department provides education on nutrition, food security, domestic animal growing, and cultivating skills. Agricultural experts in the Department teach agricultural management, the production, securing and distributing seeds, vegetable growing, plantation skills, and domestic animal

skills directly to individual farmers.

- (5) "Farmers organizations" such as Agricultural Cooperatives as the main recipient of government support, and farmers' organizations with specific purposes are not in existence. However, a micro voluntary fund (small amounts of fund to operate a fund for management and maintenance) is operated as a mutual help organization by farmers themselves.
- (6) Impact of the "3 Builds" Policy: It is in the trial stage. The policy is promoted by units at each level of province, district and village. Being responsible to the strategy, the provincial unit has no practical expertise, and district level units are engaged in actual implementation. At present, budgetary allocations are made for personnel and administrative expenses needed for developing a model. In the province, three districts (rich, middle and poor) are designated as the pilot sites of the 3 Builds policy.

(2) Situations in Champasak Province and Tathen District, Sekong Province in the Southern Region

In Champasak Province (Pakse District and Pathouphone District), it was noted that there are cases of collaboration between sectors based upon specific activities and programs. Specific cases, however, were not noted from the perspective of multi-sectoral approach, and no regular inter-sector meetings were found.

- ① The Education and Agriculture sectors respectively have partnered with the Health sector for different issues. The Agriculture Department is responsible mainly for Food Security, and when conducting a project with financial assistance, the Health Department may be invited for partnership.
- ② The Health sector cooperates with the Education sector for EPI for under-5 children, with kindergartens and pre-schools for provision of vitamin A and prevention of parasite infection, and with schools for malaria and parasite prevention targeting school children over age 5.
- ③ Pathouphone District Agriculture Department, upon intervention by an INGO, World Vision, which is carrying out a livelihood improvement project as a part of its rural development program, has requested the District and Village Committees to invite related sectors as members. Regular meetings are held to share policy decision and activity reports. However, actual activities are conducted by individual organizations with their specialties, and the Department gives technical assistance and monitoring service to villages.
- ④ Nonhsavang Village, target village of the "3 Builds" Policy in Pakse District Background for becoming a target village: The provincial government selected this village for it received many certificates and awards (e.g. Model Healthy Village, No Drug Addiction, Culture Village), and the fruits of these honors are recognized. Besides, high community participation, population size (2500 persons), sufficient agricultural and fishing resources were appreciated.

Advantages of being a target village of the 3 Builds policy are; a) enjoying assistance from various sectors through inter-sector cooperation with the support of the province and district including support for infrastructure development; b) becoming able to receive a low interest loan (5 % per year) with the support from the Policy Bank; c) The Village Development Fund was established as a means to secure funds with money contributed by villagers, and is used as a resource for villagers for investment; d)

infrastructure and facility construction (road improvements and the construction of the village administrative office), the Health Center was constructed by assistance from Japan; and e) Assistance to pay salary to administrative office staff. As a result, positive changes were observed such as increased investment from the private sector, and enhanced community participation among villagers.

⑤ Visit to the Village Education Development Committee (VEDC) in Huamouang Village, Thateng District, Sekong Province:

The VEDC in Huamouang is one of the target villages under the JICA-assisted "Project for Supporting Community Initiative for Education Development Phase 1." The VEDC is still continuing its service after the completion of the project (2007-2011). As for the factors behind for its continuation, the VEDC members recognized that training with the support by JICA in the formulation and management of an annual plan has been useful, and the continued operation of the fund for school management with the support from villagers is producing positive results.

4.5 Points of Consideration for Technical Cooperation in Community Interventions

4.5.1 Alliance with the Policies of the Government of Laos

Recognizing the 8th Five-Year Health Sector Development Plan, the Reproductive Maternal Newborn Child Health Strategy and Action Plan 2016-2020, and the Nutrition Strategy to 2025 and Action Plan 2016-2020 emphasizing a multi-sectoral approach, the direction of JICA's cooperation should aim to "improve health and medical services in Laos" with the concept of "Equity – Leaving no one behind" in line with the Sustainable Development Goals (SDGs) and the enhancement of primary health care towards the achievement of Universal Health Coverage (UHC) by 2025 set forth by the Government of Lao PDR.

In order to contribute towards the achievement of UHC, the development of community interventions towards removing barriers for accessing health care services should consider the comprehensive approach from the point of the health care providers, the supply side, and the community people, beneficiaries on the demand side. The following points for consideration are noted for planning community interventions.

- 1) Building an effective comprehensive community intervention model
- 2) Strengthen the existing organizations, personnel and networks to establish a resilient community system
 - Capacity building in community management and training of personnel
 - Promotion of community ownership and leadership
 - Building a support system for cooperation between health promoters (VHVs/VHWs) in the community and health personnel
- Integrate sub-sectors within the Ministry of Health, to build a comprehensive community health system
 Strengthen cooperation among Health Departments on the provincial and district levels.
 - Establish monitoring supervision systems (supportive supervision) at the levels of province, district and Health Center.
 - Strengthen "client-friendly" services by health staff.
 - Develop an effective communication strategy and tools

- Establishment of health information and data at the community level and necessary human resource development for this purpurse
- 4) Promote a multi-sectoral approach involving related sectors to resolve three barriers to achieve UHC (centering on MCH and nutrition).

4.5.2 Use of Other Cooperation Projects under JICA

Approaches and tools can be derived from the following projects and cases in the health or other sectors in other countries.

(1) Health Sector

- The Project for Improvement of Maternal and Neonatal Health Services Utilizing CHPS System in the Upper West Region (Ghana): assistance to the areas where access to health services is difficult based upon the government policy of CHPS (Community-based Health Planning and Services), various manuals developed
- Safe Motherhood Project (Bangladesh): Strengthening service delivery at the district/village (union) levels and introduction of community systems, cooperation with an international NGO
- Project for Improving Maternal Health through Enhancement of Community Capacity in Rural Areas (Myanmar): Introduction of MCH promoters, participatory formulation of a health plan (capacity building on the township level in planning and managing plans)
- Reproductive Health Project (Vietnam): Capacity building in HMIS for the district and Health Center levels and supportive supervision system
- Introduction of MCH Handbook (Indonesia and other countries): Use of the MCH handbook for continued of care, communication and data management
- Nutrition Improvement Project for Mothers and Children (Zimbabwe): Growth monitoring and integrated nutrition education through EPI outreach activities and multi-sectoral cooperation
- Project for Strengthening Community-based Child Health Promotion System in Urban Areas (Zambia): Comprehensive nutrition improvement by the local government and communities including early detection of children with malnutrition, infrastructure development to supply safe water, and the promotion of hygiene education

(2) Education Sector

- Project for Supporting Community Initiative for Education Development (Laos): An example of the Village Education Development Committee (VEDC)
- "School for All" (Burkina Faso and others): Strengthening the School Management Committee, Cooperation with the Health Sector (Ebola, and educational activities)
- Strengthening the function of School Health in the education sector (Egypt, Nepal, etc.); Health education, health checkup, nutrition improvement, home garden, school lunch and related infrastructure development such as Health Room, water supply and sanitation

(3) Agriculture Sector

- School-based dietary education and nutrition improvement for communities (in cooperation with the Rural Development and Human Development Departments as well as JOCV)
- Nutrition improvement in cooperation with WFP; WFP's assistance to school lunch linking with JICA's cooperation to strengthen primary education (in cooperation with the Rural Development and Human Development Departments as well as JOCV)
- Incorporating indicators of dietary improvement and nutrition to other agriculture-related projects (considering the balance between livelihood improvement for farming families and contribution to nutrition improvement)
- Ensuring and making effective use of fund, human resources and materials through forming farmer's organizations
- (4) Infrastructure Development
 - Benefits to community people as a result of infrastructure development projects (Construction of facilities and strengthening communications including facility development and Communications means including vehicles and mobile phones)

4.5.3 Use of the existing community resources

The following existing organizations and resources in communities learned through the Community Intervention Survey can be considered as important stakeholders in community interventions.

- Target areas and villages under the 3 Builds policy (109 villages in the country its future prospect for expansion is unknown)
- Model Healthy Village
- Village Development Committee
- Village Health Committee
- Village Education Development Committee
- District Development Fund (UNDP targets Salavan Province and Sekong Province)
- Village Development Fund: It does not exist in all villages yet. As a factor to be admitted as a Development Village, VDF is included.
- Lao Women's Union
- Lao Youth Union
- Village Health Volunteers
- Village Health Workers: Paid staff in the MOH. They are not assigned in all places. Remote places are focused. No one is assigned in Champasak Province.

4.5.4 Measures Addressing Barriers for Accessing Health Care Services and Major Components for Community Interventions

In searching possible resolutions through community interventions against the barriers in accessing health

care services, the information regarding good practices in progress in Laos was gathered and the in-depth community survey was conducted by the local consultant to examine further the identified good practices undertaken by development partners. Based upon the outcome of the above process as well as the good practices by JICA in other countries from the point of multi-sectoral approach, the following provide the summary of major components for technical cooperation in the area of community interventions in removing the existing barriers against the utilization of health care services.

The following components should be selected in accordance with the objectives, directions and expectations of the Government of Lao P.D.R. for community interventions and JICA's technical cooperation strategies.

(1) Health Sector

1) Economic Factors

Barriers:

High out-of-pocket payment rate of health care expenses, Low participation rate of health care insurance

Measures for Resolutions (Good Practices in Laos, Results of the Community Survey on Good Practices, JICA-assisted Good Practices in Other Countries)	Major Components for Assistance in Community Interventions
 Promotion of participation for health insurance schemes	 Promotion of publicity and recognition and participation
(incl. CBHI) (Promotion of Publicity and Recognition) Establishment of community-led VDF and welfare fund	for health insurance (incl. CBHI) through VDC/VHC Review of the government support to the current health
(to respond to the needs of villagers for medical expenses	insurance policy: Segmentation of insurance premiums
in case of emergency) Emergency preparedness: In case a Health Center does not	(shift from the flat rate to different levels in
exist in the village, emergency preparedness plan to be	consideration of each individual's and household's
developed in collaboration with VHC and VHV, securing	economic conditions Establishment of emergency response system,
necessary fund and means of transportation)	emergency referral system

2) Physical Factors

Barriers:

Geographical access to health care facilities (Limited availability of roads and transportation, and communication facilities and means of communication, Shortage and uneven allocation of health care providers, Low quality of health care providers, Shortage of drugs and health care equipment, Shortage of means of emergency referral transport Limited access to water and sanitation

Measures for Resolutions (Good Practices in Laos, Results of the Community Survey on Good Practices, JICA-assisted Good Practices in Other Countries)	Major Components for Assistance in Community Interventions			
 Regular health activities led by VHC and provision of	1. Formulation of community intervention plans at district			
services through outreach activities by health center and	and village levels and management capacity			
district health department; whether or not the trust	development (training for capacity development for			
relationship between VHC/VHW and community people	VHCs)			

2.	is a key; re-training is required in order to provide correct information to villagers by VHC/VHV/ health staff VHV placed in each village: The knowledge and the level of skills need to be strengthened. Capacity building and support system for VHV is important.	2. S 1 3. 1	Strengthening Supportive supervision system by District Hospitals and Health Centers (Joint planning with villages) Facilitation of linkages and effective collaboration
3.	Villagers receive outreach services by HC and District Health Administration through HC staff and VHC/VHV: Community's awareness on outreach services is high and good assessment is made. However quantitative	t 1	between VHV/VHW (Effective utilization of available transport and mobile communication means)
	assessment is difficult. Setting up monitoring and supportive supervision system is important for continued utilization of services among villagers.	4. 5 5	Strengthening the roles of VHV/VHW and their capacity development ; establishment of support system for VHV/VHW (in kind and financial support)
4.	Access to /Utilization of Health Services: Once HC is available in the village, the initial issues surrounding health among villages are resolved.	6 S	Strengthening and training of Health staff on client friendly services
5.	Access to information and means of communication: TV, radio, mobile phones are available and effectively used without problems. However, during the rainy season, road conditions and transportation availability differ among villages and gaps exist. The most effective means/source to receives health information is through health staff, VHC/VHV and local media (village speaker). Local language is required for ethnic minority groups.	7. 1 8. 1	Establishment of Emergency response system and emergency referral system Establishment of health information and data at the community level and necessary human resource development for this purpose
6.	Responding to obstacles at emergency (means of transport, medical care expenses and quality of services).		
7.	Water and sanitation: setting up water and sanitation facilities through the initiatives of VDC and VHC (with the use of VDF) and water/sanitation problems.		

3) Sociocultural Factors

Barriers:

Lack of knowledge and understanding of health matters, Existence of social customs and taboo harmful to health, Low status and lack of decision-making power of women

Low educational level (ethnic minorities, women), Lack of trust towards health care services among people,

Low availability of communication means

	Measures Addressing Barriers (Good Practices in Laos, Results of the Community Survey on Good Practices)	I	Major Components for Assistance in Community Interventions
1.	Promotion of community-based primary health care service through VHC/VHV and health staff collaboration.	1.	VHC-led community health activities and health education in the community
2.	Existing Community organizations, network and resources: In each village, there exists VDC organized under the leadership of the village chief with the participation of leaders from each sector in the	2.	Collaboration among LWU/LYU and VHV/VHW and other existing field workers; training for the enhancement of their communication skills
	community (VDC/VHC). This village organization is made under the leadership of the village chief and the	3.	Strengthening communication strategy in response to traditional beliefs; development of communication

trust relationship between the leaders and the community people (the selection of VDC members is done by the community people and is depending on each village.) Promotion of leadership and ownership of VDC/VHC is key.

- 3. Ethnic/Family/Gender Relations: Principally the Head of households has the decision-making role, but the progress is seen that the husband and wife are making decisions jointly under consultations (however, due to the low educational level, the participation of women and ethnic minority groups in VDC and VHV is limited).
- 4. Food security and nutrition: No major issues are reported in the community survey, but in a few areas there are still cases of women practicing food taboos after delivery. The change of awareness and attitudes can be promoted with the education of cooking methods and nutrition. But, the nutrition related activities are dependent on external assistance such as WFP for financial and supplementary foods provision.
- 5. The understanding on health is limited among community people (e.g. pregnancy and delivery and health seeking behaviors), and this requires strengthening of health education /educational activities towards community residents (effective communication strategy and tools required).
- 6. Support system to VHC and VHV/VHW in collaboration with LWU and LYU

tools; e.g. in the areas where the Lao language is not spoken among ethnic groups, the production of educational materials with the use of pictures and illustrations; educational activities (dietary improvement, nutrition education. cooking demonstrations, etc.) conducted under the collaboration of VHC/VHV/VHW/LWU/LYU.

- 4. Promotion of publicity and recognition and participation for health insurance (incl. CBHI) through VDC/VHC
- 5. Application of MCH Handbook as a tool for ensuring Continuum of Care
- 6. Nutrition: Incorporating nutrition aspects (e.g. nutrition improvement, provision of nutrition supplement and deworming) into integrated community health/MNCH outreach activities; early identification of cases with malnutrition and acute malnutrition in the community, strengthening support system in collaboration with VHC.
- 7. Water and sanitation education, stop open defecation campaigns, etc.
- 8. Facilitation of effective utilization of communication/media methods and tools; in the areas where access to computer and internet is difficult due to economic reasons, the use of mobile phones and local media can be made.

4) Establishment of Supportive Health System

Barriers :

Assurance of quality of care, Primary health care system

(Measures Addressing Barriers Good Practices in Laos, Results of the Community	Major Components for Assistance in Community Interventions			
	Survey on Good Practices)				
1.	Comprehensive programs through the National Reproductive, Maternal, Newborn and Child Health	1.	Review of Policy on Primary Health Care		
	Strategy and Action Plan (2016-2020) and the National Nutrition Strategy to 2025 and Plan of Action (2016- 2020), and commitment by MOH and development	2.	Development of a guideline for comprehensive community health program		
2	partners Integrated Primary Health Care Project by MOH	3.	Building comprehensive community health system under the coordination of MOH sub-sectors		
2.	Comprehensive PHC and RMNCH approach: in villages without HC, strengthening the roles of VHV/VHW, the effective use of drug kit; the support system for VHV/VHW and monitoring and supportive supervision system are not sufficient and require strengthening.				
3.	Comprehensive primary health program (Sainyabuli and Luang Prabang Provinces, Save the Children)				

(2) Other Sectors

Barriers: Poverty, basic infrastructure, education, agricultural and fishery production, food security

Measures Addressing Barriers (Good Practices in Laos, Results of the Community	Major Components for Assistance in Community		
Survey on Good Practices)	Interventions		
 Utilization of the advantages of the 3 Builds Policy (Currently still under trail period): a) Assistance from various sectors through inter-sector cooperation including support for infrastructure development; b) Receiving a low interest loan (5 % per year) with the support from the Policy Pank (a) the Village Development Fund established 	 Link with the target villages under the 3 Builds Policy. Agriculture Sector Agriculture Sector Food production and livelihood improvement, distribution and marketing (collaboration with VDC/VHC, the use of VDE) 		
with the fund contributed by villagers and used as a resource for villagers for investment; d) infrastructure and facility construction (roads and village facilities); and e) Assistance to pay salary to administrative office staff. As a result, positive changes were observed such as increased	(2)Collaboration with agriculture field workers in the improvement of food consumption and dietary practices and nutrition education; joint planning and training with other sectors		
investment from the private sector, and enhanced community participation.	3. Education Sector (1) Introduction of school gardening, school lunch and water, sanitation and electricity facilities (collaboration with teachers, personnel responsible for health at schools and		
2. A case of multi-sectoral nutrition improvement activities in progress in Laos: Inter-sector coordination meetings are held regularly. In every three months, a regular meeting is held, which is attended by the District Health, Education and Agriculture Departments, and community leaders. Information is shared through loose partnership and regular meetings, however, actual implementation of the nutrition-related activities is conducted by respective departments using their specialties and their channels. Education Sector works with pre-school and school children by different age groups, and agriculture Sector provides skills training on agricultural production to farmers, including food security and nutrition education.	 teachers, personnel responsible for health at schools and VDC, VEDC and VHC) (2)Strengthening school health: pre-school children (targeting pre-schools/kindergartens for children aged 1-5 years), health check-up and health education for primary and secondary school children (collaboration among VDC/VEDC/VHC, the use of VDF) (3)Strengthening communication strategy (educational activities on nutrition, development of common communication tools to be utilized by each sector) 4. Related Infrastructure Sector (1)Infrastructure development as part of community/rural 		
In the case above, the education and agriculture sectors work separately within the sector and collaborate with the health sector for the same objectives.	development (improvement of roads and communication facilities, etc.) : Link with the 3 Builds Policy and MHV and DDF/VDF (2) Infrastructure development (condoced and helio facilities in		
3. In the JICA-assisted "Project for Supporting Community Initiative for Education Development," the fund, set up by the community contributions for school management, is managed by VEDC. Strengthening the capacity of VEDC was conducted through training on formulation and management of an annual plan.	(2) innastructure development (roads and public facilities in the village, water and sanitation facilities, etc. with the use of DDF and VDF		
4. Collaboration between Education and Health Sectors: The Health sector cooperates with the Education sector for EPI for under-5 children, with kindergartens and pre-schools for provision of vitamin A and prevention of parasite infection, and with schools for malaria and parasite prevention targeting school children over age 5.			
5. The example of district level agriculture department: Agriculture sector participates in the livelihood project as part of rural development together with other sectors including health.			

	Measures Addressing Barriers (JICA-assisted Good Practices in Other Countries)	Major Components for Assistance in Community Intervention			
1.	The Project for Improvement of Maternal and Neonatal Health Services Utilizing CHPS System in the Upper West Region (Ghana): In the areas where access to health services is difficult, technical cooperation based upon the government policy of CHPS (Community-based Health Planning and Services); the establishment of health facilities, human resource development for administrative and health staff, community participation and community support system; various manuals were developed. Project for Improving Maternal Health through	1. 2, 3.	Establishing community health system, capacity development of administrative and health staff, referral system, community participation and community support system (utilization of various manuals produced under technical cooperation) Capacity development and strengthening of VHC and VHV, establishing community support system, joint planning between DHO and health center Strengthening supportive supervision to VHC and VHV from District administrative office, District Health		
3.	Enhancement of Community Capacity in Rural Areas (Myanmar): Introduction of MCH promoters and establishment of community support system, participatory formulation of a health plan (capacity building on the township level in planning and managing plans) Utilization of MCH Handbook as tools for continuum of care, communication/education and health information/data management (Indonesia and other countries)	4. 5.	Office and Health Center Strengthening HMIS (utilization of MCH Handbook as tools for ensuring continuum of care) Comprehensive Nutrition improvement program through multi-sectoral approach (collaboration among field workers from agriculture, education and health sectors, development of common communication strategy and tools. Collaboration with VEDC and school health		
4.	Comprehensive nutrition improvement by the local government and communities: early detection of children with malnutrition, infrastructure development to supply safe water, and the promotion of hygiene education, utilization, and multi-sectoral cooperation (Zambia, Zimbabwe)	0.			
5.	Project for supporting community initiative for Education development: Strengthening and capacity development of Village Education Development Committee (VEDC) and linkage with the health sector through school health and community health activities (Laos, Africa)				

(3) JICA-assisted Good Practices in Other Countries

4.5.5 Measures for Community Interventions

The measures for community interventions from the multi-sectoral approach is presented in the following page, indicating the inter-relationships for implementing bodies, measures against the three barriers in accessing health care services, and major components related with the support to community interventions. As examples, the following 3 strategies are proposed as the options

- Option 1: (Green color) Strengthening community health system with the focus of PHC and RMNCH under the MOH/DHHP.
- Option 2: (Blue color) Strengthening comprehensive community health system integrating the concerned sub-sectors under MOH
- Option 3: (Green, Blue and Pink Colors) Comprehensive community development under the multi-sectoral approach

MOH currently emphasizes the importance of comprehensive and integrated approach towards community interventions. In accordance with community intervention strategies by MOH and JICA, the range of components and menu for activities are to be decided for technical cooperation.

Table 4-5 Measures towards Community Interventions from the Perspective of Multi-sectoral Approach

Se	ctor	Health Sector					Other Sectors		
A	rea	MOH/DHHP (Proposal of MOH made; In charge of PHC & Nutrition	MOH/DHHP (in charge of RMNCH, MCH Center And EPI)	Nutrition (NNC & Nutrition Center)	Water/Sanitation (Nat'l Center for Environmental Health & Water Supply)	Social Protection Health Insurance (MOH/NHIB, Link with other DPs)	Agriculture (Food security, Food Production, Agricultural technology and dietary practices and nutrition education)	Education (Linkage with VEDC, School Health, school gardening, school lunch and nutrition improvement)	Infrastructure (Improvement of Roads, Transport, Communication, IT, etc. contributing to health outcomes)
Goal		The 8 th 5-Year National Socio-Eco Goal : Achievement of LIHC by 20	nomic Development Plan(2016-20 025 \Rightarrow by 2020. To ensure the go	20); the 8th Five-Year Health S	ector Development Plan (2016-	-2020)	onle thoroughly and equitably w	with quality specially to those livin	in remote areas
Project Purposes		Obsite: A define vertice by 2023 → by 2020, to ensure the good hearth of the critices to basic hearth and medical services to the people thoroughly and equitably will quarkly specially to those riving in remote areas 1. Strengthen community health system based on PHC (based upon the proposal) → Link with Model Healthy Village (MHV) and the 3 Builds Policy, coordination with SWG/TWG, collaboration with MOH sub-sectors incl. MOH/CIEH 2. Establish the integrated comprehensive community health service system ensuring access to appropriate basic health and medical care at the community level ⇒ same as above: Link with MHV and the 3 Builds Policy 3. Establish the model for the integrated comprehensive community health service system (with RMNCH/Nutrition as core) ensuring access to appropriate basic health and medical care at the community level from the multi-sectoral approach ⇒						oral approach \Rightarrow Link with	
Central Le and I Respon	evel System Roles/ sibilities	 Coordination among MOH su Formulation and revision of p of health insurance schemes Sharing, development and rev 	ib-sectors, establishment of joint co policies and programs, e.g. PHC Po vision of manuals, IEC materials/to	t Coordinating Committee) ment of VHW/VHV, support	Participation of representative Common communication stra	es from other sectors tegies and tools shared among He	ealth Sector and other sectors		
Use of resources	community	Community Organization (involvir District Development Fund (DDF)	ng all sectors). Sector committees, / Village Development Fund (VI	e.g VHC/VDF management con DF); Formation of Task Teams in	mm., VEDC (where available), n collaboration with grassroots	School health Comm., LWU, L' level field workers from other s	YU, VHV • VHW, ectors		
	Physical factors	 Planning/management capacity development at District/Village (Training for VHC) Strengthening Supportive Supervision System at Province/District/Health Center (Joint planning) Support to collaboration between VHV/VHW and health staff (improved means for transport, mobile communication) Establishment of health information and data at the community level and necessary human resource development 		• Incorporate nutrition improvement aspects, into the integrated comprehensive community health/ RMNCH services (joint planning)	• Planning for water and sanitation (toilet) facilities by VDC and VHC (the use of VDF) and sanitation/ hygiene improvement program	 Promotion of participation for health insurance (incl. CBHI) by VDC/VHC The administration to review the policy, e.g. designating the health facilities for the use of insurance 	• Link with food production, livelihood improvement (through VDC and VHC, the use of VDF)	• School gardening and school lunch, water & sanitation and electricity facilities (link with teachers and personnel in charge of health at schools, VDC, VEDC and VHC)	• Infrastructure development in the framework of community/rural development (roads, communication facilities, etc.); Link with the 3 Builds Policy and MHV and DDF/VDF
Measures and Activity Against Barriers	Economic Factors	 Planning/management capacity of (Training for VHC) and support to Set-up of VDF and welfare fund needs) Support to VHV/VHW, set up su financial support 	development at District/Village VHC ls (in response to emergency upport system with in-kind and	• Identification/early detection of cases of malnutrition/acute mal- nutrition, strengthening support system in collaboration with VHC	• Planning for water and sanitation (toilet) facilities by VDC and VHC (the use of VDF)	• Promotion of participation for health insurance (incl. CBHI); review of government support, e.g. shifting from the flat rate of premium to different levels in consideration of each individual's and household's economic conditions	• Link with Food production, distribution, marketing, livelihood improvement (through VDC/VHC, use of VDF); Support to production/ livelihood and marketing support program	• School gardening, health check-up and health education for pre-school children and primary and secondary school children, (collaboration with VDC, VEDC, VHC and the use of VDF)	• Response to improving means of communication (where computers and access to internet is difficult due to economic conditions
	Socio- cultural Factors	 Strengthening community health support system, capacity building training towards VHC-led health activities and health education Collaboration with LWU/LYU, VHV/VHW and other field workers: communication skills development Training for "Client friendly services" for health staff Strengthening Supportive Supervision System at Province/District/Health Center (incl. government offices) Strengthening communication strategy(in response to traditional beliefs), development of tools friendly for ethnic groups with pictures/illustrations Application of MCH Handbook as a tool for ensuring Continuum of Care 		Strengthening communication strategy and development of tools Promoting improvement of dietary practices, nutrition education, cooking methods (Linking with VHC/VHV/VHW/LWU/ LYU, etc.	 Strengthening communication strategy and development of tools Sanitation/hygiene education (stop open defecation campaigns 	 Strengthening communication strategy and development of tools Promotion of publicity and recognition of the health insurance (incl. CBHI) 	 Strengthening communication strategy incl. nutrition and development of common tools for all sectors Link with agricultural field workers for improving dietary practices and nutrition education (joint planning/training) 	 Strengthening communication strategy (nutrition) and development of common tools for all sectors Health education, nutrition education through school health (collaboration with VEDC, joint planning) 	• Strengthening communication strategy incl. nutrition and development of common tools for all sectors; tools friendly for ethnic groups with pictures/illustrations for language barriers

Source: JICA Survey Team

Chapter 5 Recommendations on the Alleviation of the Issues and Direction of Future Cooperation

5.1 Direction of Development and Maintenance of Central Hospitals

(1) Significance of grant aid cooperation to Setthathirath Hospital

1) Short-term countermeasure: Necessity and urgency of re-strengthening a top referral hospital

The deterioration of the quality of hospital health care provided at Setthathirath Hospital, one of the three existing central hospitals, (including decrease in the clinical functions caused by dilapidated equipment and decline in health care service to patients derived from the structure of the hospital) is considered a major obstacle for the hospital to respond to the changing disease structure in Vientiane Metropolitan Area. It has been caused mainly by dilapidated medical equipment and decline in health care service to patients derived from the physical structure of the hospital. As the result, deterioration in the quality of health service, in terms of not only treatment techniques but also development of health care human resources, provided by this top referral hospital, which covers whole area of Laos, has caused a loss of national benefit. For improving this situation, it is urgently necessary to consider removal of major causes including barriers to the redevelopment of obsolete hospital equipment and to people's use of the hospital facilities, which can be seen in inefficient patient flow. In order to solve this issue, in the short term, the hospital facilities and equipment have to be urgently developed in a grant aid cooperation project.

2) Medium-term countermeasure: Construction of a realistic operational system as a top referral hospital

In order to make the grant aid project a "valid assistance project," it is necessary to request the Laotian side to make large efforts in the medium term. The restoration and retention of financial soundness, in particular, in addition to measures against the deterioration of the quality of health care mentioned above, is essential for the proper operation of the hospital. The technical cooperation projects implemented so far have proven to establish the practice of not only the data-processing and maintenance but also the utilization of medical records among the hospital staff. However, the methods of the data-processing and the management of data in the existing internal accounting system and the formulation of the statistical data currently used in the hospital will have to be streamlined and made more transparent for the improvement of hospital management. In order to establish a sustainable hospital management system, the introduction of an electronic accounting system should be promoted based on simplified ledger sheets. Hence, such approaches should be a hospital management and financial affairs by inviting trainees to Japan.

(2) Measures to strengthen operation and maintenance of medical equipment at Setthathirath Hospital

1) Effective use of medical equipment and improvement of operation/maintenance techniques of such equipment

1 Use of equipment

Since the doctors working at Setthathirath Central Hospital are using the existing equipment in diagnosis and treatment efficiently and effectively, they are believed to have no problem in the operation of the new medical equipment to be installed. However, since the operation methods of the X-ray unit and CT system to be installed are different from those of the existing ones, sufficient guidance on their operation shall be provided to the doctors in the radiology department to prevent incorrect operation when they are procured and installed. Therefore, it is recommended that the operational technology transfer should be included in the grant-aid cooperation project, as a soft component associated with it, for the provision of such guidance. In order to prevent incorrect operation of the doctors will have to be provided to the workers selected for its maintenance to increase the number of maintenance workers of the equipment over the years ahead.

(2) Operation and Maintenance of equipment

Regular inspection of installed equipment can make early detection of problems possible and can also prevent serious malfunction, and hence, can proactively prevent significant damage to health care service. Warranty policies of manufacturers of X-ray unit and CT apparatus allow only technicians of the manufacturers to inspect the inside of equipment and if anyone other than the manufacturer's technician does it, the warranty of the manufacturer will become invalid. Therefore, after the planned equipment is purchased, it will be effective to conclude a maintenance agreement with the equipment manufacturer or its agent if the equipment is to be used efficiently and effectively for a long period.

2) Preparation for funds to cover operation and maintenance cost

The issue concerning how to obtain funds for operation and maintenance can be solved by enhancing three elements, that is, "health care service," "hospital operation and financial affairs" and "development of hospital facilities and equipment."

If the image diagnosis capability which is one of the causes for the current poor diagnosis and treatment capability is improved through an assistance project, it will be possible to accept patients of "slightly high severity" in a wider medical fields, which the hospital cannot accept at this moment.

As the number of patients of "slightly high severity" to be accepted at the hospital increases, it is expected the number of the average hospitalization days will also increase. In addition, an increase in the number of inpatients and an improvement of the hospital bed occupancy rate occur at the same time. It is expected that at Setthathirath Hospital, an increased cost of operation and maintenance will be able to be absorbed sufficiently by an increase in revolving fund income gained following an increase in medical practice income as diagnosis and treatment functionality improves.

Meanwhile, Decree No.349 (published in December 2013 that states, "85% of RF shall be used for the maintenance, improvement and smooth operation of the clinical functions") has made it possible for the hospital to generate an operating fund that it can use on its own discretion since FY2013/14. No drastic change has been observed in the hospital so far because the decree has been in effect only for one and half years. However, it has definitely increased the incentive to the managers and staff of the hospital. It is highly

possible for the hospital to pay for the increase in the equipment maintenance cost resulting from the new investment by increasing the revenue and increasing the percentage of the budget allocated to the maintenance systematically under this new procedure.

(3) Assistance for education

In order to respond to changes in the disease structure in the future, it is indispensable not only to develop and construct equipment and facilities but also to upgrade and improve health care service through improved skills of health care personnel. For developing human resources, time and experience is required, while it is clear that there is a shortage of these elements in the current medical education system in Laos and therefore, Laos needs to obtain assistance from abroad on a continuous basis. For that purpose, when planning assistance projects for the country's central/national hospitals, it is needed to make considerations from two different viewpoints, one is assistance for health care provision and another is assistance for education of future health care human resources.

This survey is mainly aiming at making analysis based on current state of health care provision, while the Survey Team recommends that the direction for assistance should have a viewpoint from education in clinical medicine, which is an important aspect in the development of health care in the future.

In Japan, clinical medicine education is given for three years at university hospitals which play a role of training hospitals for health care personnel. Since the University of Health Sciences, Laos, however, does not have a university hospital, clinical medicine is to be studied at central/national hospitals which are clinical training hospitals. In Japan, postgraduate training courses continue usually for two years, when trainees study not only diagnosis and treatment techniques but also philosophy of medicine and healthcare from supervising doctors. Meanwhile, graduates of the University of Health Sciences, Laos, are required to work in the rural area immediately after graduation and they have to work as health care personnel without receiving sufficient training. One of problems occurring under such a circumstance is a possibility that they have a significant difficulty at workplace because although working at an outpatient department needs appropriated techniques and experience, there is a limited chance for them to be trained at a clinical training hospital. Considering this, clinical health care education to be given at central/national hospitals is highly important for trainees. Also for residents who trained for five years after working in rural area, central/national hospitals are important as a place of practice to accumulate advanced clinical techniques and experience.

In order to get ready for future changes in the disease structure, it is important for central/national hospitals to share their roles so that they can meet the needs of the whole nation, by, on one hand, enhancing specialty of each central/national hospital and, on the other hand, strengthening collaboration with regional hospitals. Japan can play a role in the area of education to further develop specialty of central/national hospitals. The Government of France has been engaged in the development of specialty doctors for neurosurgery or external injury and doctors sent from France have been providing technical guidance. There is a system under which

one doctor selected among doctors who acquired qualifications of both Levels 1 and 2 as a skilled medical specialist for the relevant field during the technical instruction can have a chance to be trained at a hospital in France every other year depending on the funds available during the year. Japan will be able to have a similar program in the areas of multidisciplinary treatment for cancers and early endoscopic treatment. In addition, it is considered Japan will be able to provide highly effective assistance if it invites a team of personnel including both doctors and nurses/technicians from an appropriate hospital to transfer not only technology but also organizational culture.

5.2 Direction of Cooperation in the Development of Medical Facilities/Equipment in the Southern Provinces

At provincial/district hospitals in the southern region, gaps between functional standards at these facilities and the actual state were confirmed and recommendations were made concerning a favorable application of functional standards in the region and a grant aid cooperation project proper to current needs. In addition, in the proposed project, components were selected to meet changes in the disease structure projected to occur in the future in this region following the case of Vientiane, since it was expected that in the southern provinces there would be a need among people for health care for injuries from traffic accidents and work-related accidents, myocardial infarction, strokes and malignant neoplasm.

(1) Development of regional hospitals

Because there is no established definition of a regional hospital, it is desirable that recommendations and a development plan be examined based on knowledge Japan has. It is expected that there will be a synergy in which the development of regional hospitals in the southern, central and northern regions will be made in connection with the development of central and national hospitals. It is considered advisable that, in an assistance project for provincial and district hospitals that should have similar clinical departments, short-term assistance for facilities construction and equipment provision and long-term assistance for human resources development and organizational improvement be combined.

For example, by providing Champasak Provincial Hospital with image diagnosis equipment or endoscopic examination and pathological diagnosis equipment with the same standard as a central hospital, doctors who completed the required three-year duty at a southern regional hospital after graduation would consider selecting the familiar Champasak Provincial Hospital as a place for them to be trained as residents. If there is a system for them to continue to receive instruction in the southern region even without need to go to Vientiane Capital City, a foundation will be gradually established where clinical health care education can develop there. In order to provide high-quality health care, it is important that there are health care personnel who take root in the region and, to this end, there should be regional hospitals that attract younger doctors and make them remain in the region. If such regional hospitals have quality health care equipment and operational system, it will be one of attractions for those doctors.

(2) Construction of a new referral system and direction of a grant aid cooperation project

In the southern provinces, it is required to provide health care covering large areas that necessitate long hours of travels, which is not comparable with the circumstances of central and national hospitals. In the southern provinces, health care should be provided covering a large scale of time and distance which is not comparable with that of central and national hospitals. In this sense, it is necessary to construct a solid referral system. It is considered effective to present more realistic recommendations and an assistance project, since community hospitals and small hospitals are still in the conceptual phase. It is considered more effective to use an approach of reviewing the system of health care provision including reorganization of some of the existing district hospitals and health centers than simply upgrading them for the establishment of community and small hospitals required for the establishment of the referral system.

By obtaining means of transportation and information, citizens start moving beyond their own administrative area and seeking for better health care. Since such movement, however, is not unlimited, it is desirable to have optimized allocation of health care facilities, by considering realistic time and distance for transportation as well as time necessary for life sustaining in emergency cases. For optimizing such allocation, it is important to have an idea of "selection and concentration," while, it is considered desirable to make efforts to have an optimization based on necessary time, for example, considering "optimization through a process of reinforcement and culling-out" by looking at the past history and actual state of health care provision.

When allocating health care facilities, it is indispensable to select and reinforce health care service functions in the relevant area as a whole, taking important points of traffic and movement of users into account. Assistance (grant aid cooperation) ranking at the top in the priority list of the southern region is the reinforcement of a system by strengthening support for Champasak and Salavan Provincial Hospitals, developing a solid base to receive referred patients and reinforcing Sekong Provincial Hospital and Tha Teng District Hospital which are supposed to support the former two elements. The second-priority assistance to be given is the development of district hospitals that can conversely accept referred patients from Champasak Provincial Hospital and efforts to add life support functions to small hospitals as part of assistance for small hospital development so that district hospitals located near the border where traffic conditions are poor can have more time to maintain patients' life in emergency.

Through such assistance as above, it is considered, definition of each of regional, community and small hospitals will be clearly made in terms of their functions based on the conditions in areas they are located.

The Ministry of Health also emphasizes the achievement of UHC with the extension of the benefit of health care services to poverty-stricken areas and remote areas, as part of the national policy, in addition to the selection and concentration of health care services mentioned above. It is considered meaningful to discuss a way to implement these two activities in an integrated project, without insisting on implementing them successively in accordance with the priority order.

(3) Securing of financial soundness at hospitals in the southern provinces

Champasak Provincial Hospital, which is a top referral hospital in the southern provinces, is expected to function as a regional hospital. If the hospital's function is improved, it will financially follow the footsteps of Setthathirath Hospital. It is necessary, however, to obtain funds for operation and maintenance of newly introduced health care equipment from the government subsidy until income from insurance increases as middle and high-income earners increase in the southern region where the economy has been growing. In addition, for achieving universal health coverage (UHC), it is indispensable to create a regional health service network with an aim at improving the referral system in the southern region. As the network improves, it is considered, various health insurance systems including those for the poor will be further expand and revolving fund income of district hospitals will gradually increase. It is important to reduce the portion funded from the government subsidy gradually, as the formation of the regional network advances and insurance systems become widespread.

(4) Approach for prevention of accidents in the southern provinces

Health care was something to be given unilaterally to citizens in the past when there was no transportation means, information and funds but it will be something that citizens select in the future. Meanwhile, although health care is one of important security measures for citizens, it can exhaust the national wealth and, therefore, efforts have to be made to optimize access to it. It is presumed that, in accordance with the economic development in the future, traffic accident, which is becoming an urgent issue in Vientiane Special City, will also be a problem in the southern region in several years. It is a fact demonstrated around the world that prevention of the occurrence of accidents is more cost-effective than taking such approaches as the establishment of emergency transport system and provision of support to hospitals for the treatment of traffic accident victims.

Given such circumtances, if Japan can implement educational programs for the prevention of injury in traffic and industrial accidents, focusing first on the prevention of children's accidents and injury as an extension of the efforts that have been made in the area of maternal, neonatal and child health in the southern region, it will be a great contribution to preventing the exhaustion of the national wealth of Lao PDR. Furthermore, it is considered that Japan can also contribute significantly by taking road designs and installation of elevated crossings that can prevent traffic accidents into consideration when planning road development projects. It is expected that such countermeasures against traffic accidents will provide the effect of saving social cost. And it is are also significat from a multi-sectral point of view.

5.3 Community Interventions Including Multi-Sectoral Approach in Removing Barriers regarding Health Seeking Behaviors, Medical Security and Accessing Health Services among Community People

(1) Relevance to the Policy of the Ministry of Health

Department of Hygiene & Health Promotion (DHHP) of the Ministry of Health recognizes the importance of the development of guidelines for comprehensive integrated approaches for the promotion of primary health care (PHC) and reproductive maternal newborn and child health (RMNCH) at the community level, and in addressing the physical access to health services, it plans the establishment of as many health centers as possible in villages in poor remote areas. It also emphasizes; 1) strengthening of community organizations (including Village Development Committees and Village Health Committees), 2) training and retention of staff of health centers, Village Health Volunteers (VHV) and Village Health Workers (VHW); and 3) establishment of community funds to provide financial resources, whether the village has a health center or not. This policy direction is in accordance with the result of the community survey conducted in the villages where the community interventions have provided good practices. The DHHP policy direction on community interventions also corresponds with the findings of this survey, which noted the importance for the effective utilization of the existing resources and implementation structures involving various sectors concerned, and the need for multi-sectoral approach addressing three aspects of the barriers to achieve UHC.

(2) Consensus building among concerned organizations in Laos

Concerning the development of a model for multi-sectoral approach, consensus-building among related ministries has been largely moving forward at the national policy level, while such an approach on a full scale has only been adopted very recently at the provincial and district levels and it still remains in the phase of verification.

In the future, it will be more important to construct a joint and cooperative structure among subsectors under MOH as well as a multi-sectoral collaboration system on the basis of communities who are beneficiaries of health services including nutritional improvement.

(3) International cooperation

In Laos, a number of developing partners including international NGOs have been making interventions in communities and it is desirable that those developing partners will strengthen mutual cooperation effectively based on each one's experience and specialty.

(4) Direction of cooperation for community interventions including multi-sectoral approach contributing to removing barriers regarding health seeking behaviors and utilization of medical security and health care services among community people
1) Objectives and scale of assistance to community interventions

Future cooperation should be directed to community interventions based on the multi-sectoral approach, aiming to resolving "three barriers to access to health services (from physical, economic and sociocultural aspects)", which would contribute to UHC, the overall objective of the health sector.

2) Mechanism for implementing assistance to community interventions

At the central level, the counterpart will be the Ministry of Health and a joint coordinating committee (JCC) will be established consisting of concerned government ministries and agencies. At regional level, a local coordinating committee (LCC) will be established centering on provincial health offices. LCC will be composed of members who are representatives of offices in charge of concerned sectors in each province. In implementing detailed activities, a task team will be established to achieve planned project outcomes. The task team will be in charge of development of a multi-sectoral model as well as monitoring and evaluation of the model. Sectoral working groups will be established in the task team to utilize the existing independent project implementation system of each sector effectively. The representative of each working group will organize a meeting for the planning of a development model and the monitoring and evaluation of its implementation every year. The reports of the meetings of the sectoral working groups are discussed at the biannual or quarterly LCC meetings and the outcome of the discussion will be used in the preparation of an activity plan of the following year.

3) Development of models for assistance to community interventions

The main factors contributing to the success of assistance towards community interventions by development partners and the government are: 1) the leadership of a village chief in the development of his/her village and existence of a community organization in which representatives of villagers participate, 2) the availability of human resources including staff of health centers, Village Health Volunteers/Village Health Workers, and 3) the availability of funds required for the assistance and community activities (VDF, etc.). A multi-sectoral approach is an appropriate means to supplement the shortfall of such assistance and resources of communities and to improve efficiency and effectiveness of the activities.

The Team recommends the development of a model for each of the villages in different physical, economic and social conditions concerning the access to health care services selected from the villages designated as revolutionary development centers by the government (in the policies such as the 3 Builds Policy and MHV Policy). The major components to be incorporated in these models are mentioned below. The Team recommends that components of the assistance to community intervention should be selected from the potential components mentioned below when the decision has been made on the goals and strategy for the implementation of the assistance to community interventions.

A. Health sector

(1) Ministry of Health (primary health care, and reproductive, maternal, neonatal and child health)

• At the level of the central government: Preparation of guidelines for the promotion of comprehensive integrated community-based health care activities

- Strengthening of planning and management capability at district and village levels (capability building training for the Village Health Committee (VHC))
- Strengthening of a supportive supervision system for provinces, districts and health centers (development of joint plans)
- Support for cooperation between Village Health Volunteers (VHV)/Village Health Workers (VHW) and health care personnel (improvement of transportation/mobile communication means (including mobile outreach clinics))
- Establishment of health information and data at the community level and necessary human resource development for this purpose
- Establishment and operation of the Village Development Funds (VDF)/welfare funds (including in response to medical needs in case of emergency)
- Support to VHV/VHW (establishment of a physical and financial support system)
- Strengthening health activities and health education under the leadership of VHC
- Development/strengthening of communication skills of VHV/VHW, LWU, LYU and other field workers and strengthening their collaboration in community health
- Capacity building of health personnel for "Client Friendly Services"
- Strengthening of communication strategy (in response to traditional beliefs, etc.) and development of effective tools, including the tools which are designed using pictures and illustrations for areas and individuals of ethnic minority groups with local languages different from the Laotian language
- Application of MCH Handbook as a tool for ensuring Continuum of Care

2 Nutrition

- Incorporating nutrition improvement aspects into the integrated comprehensive community health and RMNCH services (outreach activities) under the joint planning (including the provision of nutritional supplement/medicine and anthelmintic treatment)
- Identifications and early detection of cases of malnutrition and acute mal nutrition in the community and strengthening of a support system in cooperation with the VHC
- Strengthening of communication strategy and development of tools
- Promotional activities to improve dietary practices, nutrition education, food preparation methods (under the collaboration among VHC/VHV/VHW/LWU/LYU, etc.)

(3) Water and sanitation

- Planning and development of water and sanitation (toilet) facilities (through the use of the village development funds) and sanitation improvement programs with VHC and other community groups
- Strengthening of communication strategy and development of tools
- Sanitation and hygiene education (e.g. campaign to stop open defecation)

(4) Health insurance

• Promotion of subscription for health insurance (including community-based health insurance) by VDC

and VHC

- Review of government policies for health insurance (e.g. CBHI) regarding the designated hospital system, and insurance premium payment (shift from the current flat and uniform payment to a payment taking individuals' economic situation into account)
- Strengthening of communication strategy and development of tools
- Promotion of publicity and recognition of health insurance (including community-based health insurance)

B. Agricultural sector

- Collaboration with activities for food production and livelihood improvement (through cooperation of the VDC and VHC and the use of VDF)
- Linking with activities for food production/distribution/marketing/livelihood improvement (cooperation with VDC and VHC and the use of VDF); and support program to production and livelihood improvement and marketing
- Strengthening of communication strategy (education on nutrition and development of tools for common use among sectors)
- Cooperation for agricultural field workers for dietary practice improvement and nutrition education, development of joint programs and implementation of training

C. Education sector

- Introduction of school gardening and school lunch and introduction of water/sanitation/electric facilities to schools (collaboration with school teachers/health personnel in charge at schools, collaboration among the VDC, the Village Education Development Committee (VEDC) and VHC)
- Health check-ups and health education for children at preschool and elementary/junior high schools (collaboration with VDC, VEDC and VHC and use of VDF)
- Strengthening of communication strategy (education on nutrition and development of tools for common use among sectors)
- Health and nutrition education through school health programs (collaboration with VEDC) and development of joint programs by VEDC and Health Sector

D. Related infrastructure sector

- Development of infrastructure in the community development framework (development of roads and communication means, etc.), linking with the "3 Builds" Policy and Model Healthy Villages and the district development funds/the village development funds
- Strengthening of communication strategy and development of effective tools targeting different groups (including the tools friendly for areas /ethnic groups with different local languages)
- Response related to communication means (economic difficulties to obtain computers or access to the Internet)

ANNEX

ANNEX

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1. Reference List

- 1. Global Times. Lao population reaches 6.8 million people in 2015. [Online] 2015. http://www.globaltimes.cn/content/957896.shtml accessed at Jan 2016.
- 2. Ministry of Planning and Investment. The 7th The Five Year National Socio-Economic Development Plan VII: NSEDP 2011-2015. Ministry of Planning and Investment, 2011.
- 3. Lao Statistics Bureau. Lao Statistics. [Online] 2015. http://www.lsb.gov.la/en/Administration2.php accessed at Jan 2016.
- 4. International Monetary Fund (IMF). World Economic Outlook (WEO) database. International Monetary Fund (IMF), 2014.
- 5. Minister of Planning and Investment. 7th Draft The 8th The Five Year National Socio-Economic Development Plan VIII: NSEDP 2016-2020. Minister of Planning and Investment, 2015.
- 6. ITU. TIME SERIES BY COUNTRY (UNTIL 2014) Fixed-telephone subscriptions. [Online] 2015. http://www.itu.int/en/ITU-D/Statistics/Pages/stat/default.aspx accessed at Jan 2016.
- 7. ITU.TIME SERIES BY COUNTRY (UNTIL 2014) Mobile-cellular subscriptions. [Online] 2015. http://www.itu.int/en/ITU-D/Statistics/Pages/stat/default.aspx accessed at Jan 2016.
- 8. Bank of Lao. Annual Economic Report 2014, Bank of Lao, 2014.
- 9. WHO. World Health Statistics 2015: WHO, 2015.
- WHO and UN partners. Country statistics and global health estimates 2015. WHO and UN partner, 2015.
- UN. The Millennium Development Goals and Lessons Learnt for the Post-2015 Period: A Summary Review. [Online] 2015. <u>http://rtm.org.la/wp-content/uploads/formidable/LaoPDR_MDG_</u>-<u>Review 2015.pdf</u> accessed at Jan 2016.
- 12. WHO. Country Cooperation Strategy Lao PDR 2014. WHO, 2014.
- A National Health Financing Strategy 2011–2015, building on past experience, outlines the main health financing strategies for the country. [Online] 2015. http://www.wpro.who.int/countries/lao/policy_brief_health_financing_lao_pdr.pdf?ua=1 accessed at Jan 2016.
- 14. WHO Global Health Expenditure Atlas 2014 . [Online] 2014. http://www.who.int/health-accounts/atlas2014.pdf accessed at Jan 2016.
- WHO/WPRO. Health financing. WHO/WPRO. [Online] 2013. http://www.wpro.who.int/laos/topics/health_financing/en/ accessed at Jan 2016.
- World Bank. Lao PDR Economic Monitor June 2013. Lao PDR Economic Monitor June 2013. [Online] 2013. <u>http://www.worldbank.org/en/country/lao/publication/lao-pdr-economic-monitor-june-2013-sustaining-growth-maintaining-macroeconomic-stability</u> accessed at Jan 2016.
- 17. ILO. Social security extension initiatives South, 2006-2015. ILO, 2006.
- 18. Ministry of Health Lao PDR. Health Strategy up to year 2020. Ministry of Health Lao PDR, 2000.
- 19. Ministry of Health. The VIIth Five -Year Health Sector Development Plan 2011-2015. Ministry of Health Lao PDR, 2011.
- 20. Ministry of Health Lao PDR. The VIIth Five -Year Health Sector Development Plan 2016-2020. Ministry of Health Lao PDR, 2016.
- 21. WHO. Health Service Delivery Profile Lao PDR 2012.: WHO, 2012.
- 22. Shinichiro Noda. Health Systems in Lao PDR. JICA, 2010.
- 23. Ministry of Health Lao PDR Department of Health Care. Report on FY2013-2014 Plan Implementation. Ministry of Health Lao PDR, 2014.
- 24. Ministry of Health Lao PDR. National Health Statistics Report 2013-2014. Ministry of Health Lao PDR, 2014.
- 25. WHO/WPRO. Lao PDR Health System in Transition (HiT) report 2014. [Online] 2014. http://www.wpro.who.int/asia_pacific_observatory/hits/series/lao/en/ accessed at Jan 2016.

- 26. Murakami H, Phommasack B, Oula R, Sinxomphou S. Revolving drug funds at front-line health facilities in Vientiane, Lao PDR. Health Policy Plan, 2001.
- 27. Patcharanarumol W, Siengsounthone L, Vonglokham M, Jacobs B Tangcharoensathien V. Household costs associated with health care seeking at three tertiary care hospitals in Lao PDR. Southeast Asian Journal of Tropical Medicine and Public Health, 2012.
- 28. OECD. Development aid at a glance statistics by region. OECD, 2015.
- 29. United Nations, Department of Economic and Social Affairs, Population Division. World Population Prospects: The 2015 Revision
- 30. WHO. Non Communicable Diseases (NCD) Country Profiles 2014 Lao PDR. WHO, 2014.
- 31. WHO. Cancer Country Profiles 2014 Lao PDR. WHO, 2014.
- 32. NRSC Secretariat. The Decade Road Safety Strategy and Action Plan 2011-2020. NRSC Secretariat. [Online] 2011. http://www.unescap.org/sites/default/files/2.15.LaoPDR.pdf accessed at Jan 2016.
- 33. Vientiane Times. Traffic accident Lao. : Vientiane Times, 2015.
- 34. UN. MDG Progress Report Lao PDR. UN, 2008.
- 35. LSIS. Lao Social Indicators Survey (LSIS) 2011-2012 accessed at December 2015. LSIS, 2015.
- 36. Vientiane Times, Laos National Assembly Approves Health Reform Plan Developed by a Team Led by DGHI Faculty Member[Online] 2013. http://www.vientianetimes.com/Headlines_Jan-Mar_2013.html, Jan 2013 accessed at Jan 2016.
- 37. JICA. Data Collection Survey on Health Sector. JICA, 2012.
- 38. JICA. Report on planning for Health Service Network Strengthening in Lao PDR. JICA, 2013.
- International Cooperation Bureau, Ministry of Foreign Affairs, Japan. "Iryo no Kokusai Tenkai ni okeru Gaimusho • JICA no Torikumi (International Cooperation by MOFA and JICA in Health and Medical Care Sector), November 2014.
 https://www.kontai.go.in/cingi/konkowirzou/kokwositankai/dai2/airyou6.pdf

https://www.kantei.go.jp/jp/singi/kenkouiryou/kokusaitenkai/dai3/siryou6.pdf

- 40. JICA. Hoken Dayori, Health and Medical Care Task Newsletter (Japanese Version), Vol. 37, November7,2014.
- 41. WHO and Ministry of Health, Lao PDR. Success Factors for Women's and Children's Health, 2015.
- 42. World Bank, Maternal Health, Child health & Nutrition in Lao PDR : Evidence from a Household Survey in Six Central and Southern Provinces, June 2013.
- 43. World Food Programme and Federal Ministry for Economic Cooperation and Development. Food and Nutrition Security Atlas of Lao PDR, September 2013.
- 44. World Bank. Maternal Health Out-of-Pocket Expenditure and Service Readiness in Lao PDR, October 2013.
- 45. MOH & Swiss Red Cross. Baseline Survey Report, Contribution towards Universal Health Coverage in Lao PDR, October 2015.
- 46. National Health Insurance Bureau (NHIB), MOH & WHO Lao Country Office. Patient Satisfaction Survey Report, 2015.
- 47. Alkenbrack, Sarah, et al. "Achieving universal coverage through voluntary insurance: what can we learn from the experience of Lao PDR?". BMC Health Service Research 2013, 13:521. http://www.bionedcentral.com/1472-6963/13/521
- 48. World Bank & Australian Aid. Lao PDR Poverty Policy Notes, Drivers of Poverty Reduction in Lao PDR, September 2015.
- 49. Ministry of Health, Lao PDR. Policy on Primary Health Care (PHC), January 2000.
- 50. Ministry of Health, Lao PDR. National Reproductive, Maternal, Newborn and Child Health Strategy and Action Plan 2016-2020. December 2015.
- 51. National Nutrition Committee, Lao PDR. National Nutrition Strategy to 2025 and Plan of Action 2016-2020. December 2015
- 52. WHO Lao PDR Country Office, Community Health System Strengthening in the Lao People's Democratic Republic: Situation Report, Mapping and Qualitative Inquiries, 2013.

- 53. WHO Lao PDR Country Office, Analysis of the Scope and Investments in On-going Community-based Health Worker Initiatives (WHO Techenial Paper 1, Draft), 2013.
- 54. Onxayvieng, Chanta. "District Development Fund and Strengthening Local Services Delivery in Lao People'd Republic," Public Policy Administration Research, Vol. 4, No. 12, 2014.
- 55. Lux-Development, Brochure, Village Development Funds, Bolikhamxay Livelihood Improvement and Governance Project (Lao/021).
- 56. Bounthom Sisoumang et al."Operation and Management of the Village Development Fund in Champasak Province, Lao PDR," Kasetsart J. (Soc. Sci) 34: 335-349, 2013.
- 57. Save the Children and Health Department, Sayaboury Province, Lao PDR. Primary Health Care Programme: Experience from Sayaboury Province Health Department, Lao PDR. 2012.
- 58. Save the Children. Evaluation Findings-Save the Children Primary Health Care Projects in Lao PDR funded by the EC, 2010-2014. June 2015.
- Meagen Baldwin, Women's Empowerment for Improved Community Nutrition, Scaling Up Nutrition Civil Society Alliance, February 2015

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16_04	Paksong District Hospital, Director	Dr. Boualone
	Paksong District Hospital, Deputy Director	Dr. Douangta
	Paksong District Hospital, MA (medical assistant)	Ms. Khonsavanh Voraout
	Paksong District Etou Health Center , MA (medical assistant)	Mr. Bounleut Sainvilay,
16_05	Pathoumphone District Hospital, Chief of Administrative	Ms. Phongphak
	Pathoumphone District Hospital, Administrative officer	Ms. Lerdmany
	Pathoumphone District Health Office, Head	Dr. Thongdam Keophithoun
	Pathoumphone District Agriculture Office, Director	Mr. Thatsaphone Outherthamala
	Pathoumphone District Education Office, Deputy Director	Mr. Paseuth Boakeo
16_06	Phonethong District Hospital, Director	Mr Khamsy Phithaksin
	Phonethong District Hospital, Director	Mr Souphy Syounhuan
	Phonethong District Health Office, Deputy Director	Dr. Bounmy
	Phonethong District Health Office, Chief of Administrative	Mr. Bounsay
	Phonethong District Health Office, Deputy of Administrative	Dr. Bounmy
16_07	Champasak District Hospital, Director	Mr. Phouveo
	Champasak District Hospital	Mr. Nouphone
	Champasak District Hospital	Mr. Xayphanya
16_08	Soukouma District Hospital, Director	Dr. Bounhong
16_09	Mounlapamok District Hospital, Director	Dr. Bouabay
	Mounlapamok District Hospital, Administrator	Ms. Syvilay
16_10	Khong District Health Office, Director	Dr. Bounthavi
	Khong District Hospital, Director	Dr. Khoamsoue
	Khong District Hospital, Deputy Director	Dr. Bounlieng
	Khong District Hospital, Head of Administration (Academic)	Dr. Senpaseut
	Khong District Hospital, Deputy Director	Ms Sinsay
	Khong District Hospital, Administrator	MA Saikham
Attapu	Province (Administration code :17)	
17	Attapu Province Health office, Deputy Director	Mr Chanthavong Sayasena
	Attapu Province Health office, Finance Head officer	Mr Phetsomphone Norkeo

	Attapu Province Health office, Statistics Head Officer	Mr Phosy Thongdy
	Attapu Province Health office, Insurance	Mr Phousavan Bouphavan
	Attapu Province Health office, Director	Dr. Onphiew Photibd
	Attapeu Province Hospital, Director	Dr Bounthavy Chalernphon
	Attapu Province Hospital, Deputy Director	Ms. Hongkham Sisavath
17_01	Saysettha District Hospital, Director	Ms. Phonesavan Phammachan
	Saysetha District Hospital, Director	Dr Phonsavanh
	Saysetha District Hospital, Deputy Director	Mr. Soukun
	Saysetha District Hospital, Technician	Ms. Phouviong
17_03	Sanamxay District Hospital, Deputy Director	Ms. Vongphot
	Sanamxay District Hospital, Deputy Director	Ms. Phetsisa
	Sanamxay District Hospital, Administration	Mr. Khamphai
17_04	Sanxay District Hospital, Director	Ms. Souphakhit
	Sanxay District Hospital, Deputy Director	Mr. Soulivong
	Sanxay District Hospital, Technician	Mr. Souvinai
17_05	Phouvong District Hospital, Director	Ms. Minkeo
	Phouvong District Hospital, Deputy Director	Ms. Phoutmani
	Phouvong District Hospital, Administrative Staff	Mr. Keovilay

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Capacity Development for Sector-wide coordination in Health – Phase II, MNCH Advisor	Dr. Shogo Kubota
Capacity Development for Sector-wide coordination in Health – Phase II, Project Coordinator	Mr. Takashi Senda
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The Project for Sustainable Development of Human Resources for Health to Improve MNCH Services, Project Coordinator	Ms. Kazue Sone
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The Project for Supporting Community Initiatives for Primary Education Development Phase II (CIEDII), Chief advisor	Ms Masako Iwashina
JICA Lao office , Representative (Agriculture and Rural Development)	Mr. Shuhei Terada
Institut Pasteur, JICA, SATREPS Expert	Dr. Moritoshi Ishigami
The Korea Foundation for International Healthcare (KOFIH), Heath Advisor	Ms. Yongsok Yang
The Korea International Cooperation Agency (KOICA), Field Manager KOICA/Hanyang University	Mr. Jiwoo Kim
KOICA, Public Health Program Specialist	Ms. Mokryeon 'Mora' CHO
KOICA, Project Coordinator	Ms. Haeyeon Kim

The Korea Foundation for International Healthcare (KOFIH), Mr. Kham Chanthalith

Project Coordinator

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Luxembourg Development Agency (Lux-Development), Technical Advisor, Rural Development Project	Mr. Peitro Lombardini
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WHO Representative Office in Lao PDR, Coordinator, Health Systems	Dr. Monica Fong
WHO Representative Office in Lao PDR, Team Leader, Maternal and Child Health	Dr. Ko Eunyoung
UNICEF Lao PDR Country Office, Chief, Health and Nutrition	Ms. Viorica Berdaga
UNICEF Lao PDR Country Office Immunization Specialist, Health and Nutrition Section	Dr. Ataur Rahman
UNFPA in Lao PDR , Sexual Reproductive Health Coordinator	Dr. Sally Siriphone Sakulku
UNFPA in Lao PDR , RH/CM Programme Analyst	Mr. Sengsay Siphakanlaya
UNFPA in Lao PDR, Programme Associate	Ms. Soukphansa Saysamone
UNDP in Lao PDR, Chief Technical Advisor(CTA) National Governance and Public Administration Reform Programme	Mr. Gerry O'Driscoll
UNDP in Lao PDR, Assistant Resident Representative, Head of Governance Unit	Ms. Sudha Gooty
World Food Programme (WFP) office in Lao PDR, National Health Officer	Ms Khangnuen Oudomphone
World Food Programme (WFP) office in Lao PDR, National Health Officer	Mr. Chufeng Vachoima
International organization	
World Bank, Office in Lao PDR, Health Specialist	Dr Phetdara Chanthala
Asian Development Bank, Project Officer	Ms. Phoxay Xayyavong
NGO	
Care International Laos, Gender and Health Advisor	Isabelle Cazottes
Swiss Red Cross, Country Coordinator/ Director	Jean-Marc Thome
Plan International Laos, WASH Manager/ Public Health & WASH Advisor	Dr. Kalana Peiris
Plan International Laos, Deputy Country Director	Yuko Yoneda
Save the Children, Health Advocacy Manager	Ms. Kelley Khamphouxay
Association for Aid and Relief(AAR), Representative	Mr. Noriyasu Okayama
Association for Aid and Relief (AAR), Project Manager	Ms. Noriko Ando
Medical and Education Supporting organization for Asian Children, Representative	Miitsuru Koizumi
Japan Heart, Lao office	Ryoko Hirayama
Nurse	Kazuko Iwata

3. List of Survey Team

Name	Responsibility	Organization
(1) Tateo Kusano	Team Leader/ Health System (1)	System Science Consultant Inc. (hereinafter referred as SSC)
(2) Mai Fujii	Health System (2)	SSC
(3) Mutsumi Gando	Health Care Facilities	SSC
(4) Ryoko Nishida	Community Development	SSC (Self-employed)
(5) Yasushi Nakajima	Hospital Services	SSC
(6) Katsunori Shiraki	Hospital Financial Affairs	SSC (Self-employed)
(7) Toshiharu Hata	Health Care Equipment	SSC
(8) Aiko Hatano	Work Coordination/Assistant to Health Care Equipment	SSC

(1) 1st Field Survey in Lao PDR (Oct.-Nov. 2015)

(2) 2nd Field Survey in Lao PDR (Dec. 2015)

Name	Responsibility	Organization
(1) Tateo Kusano	Team Leader/ Health System (1)	System Science Consultant Inc. (hereinafter referred as SSC)
(2) Mai Fujii	Health System (2)	SSC
(3) Mutsumi Gando	Health Care Facilities	SSC
(4) Ryoko Nishida	Community Development	SSC (Self-employed)
(5) Yasushi Nakajima	Hospital Services	SSC
(6) Katsunori Shiraki	Hospital Financial Affairs	SSC (Self-employed)
(7) Toshiharu Hata	Health Care Equipment	SSC
(8) Aiko Hatano	Work Coordination/Assistant to Health Care Equipment	SSC

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(1) Tateo Kusano	Team Leader/ Health System (1)	System Science Consultant Inc. (hereinafter referred as SSC)		
(2) Mai Fujii	Health System (2)	SSC		
(3) Mutsumi Gando	Health Care Facilities	SSC		
(4) Ryoko Nishida	Community Development	SSC (Self-employed)		
(5) Yasushi Nakajima Hospital Services		SSC		
(6) Toshiharu Hata	Health Care Equipment	SSC		
(7) Aiko Hatano	Work Coordination/Assistant to Health Care Equipment	SSC		

(3) 3rd Field Survey in Lao PDR (Jan.-Feb. 2016)

APPENDICES

APPENDICES

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ABBREVIATI	IONS
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Abbreviation	Standard Nomenclature
AICU	Adult Intensive Care Unit
DEN	Dental
Diabete	Diabetes mellitus
DM	Diabetes mellitus
EMER	Emergency
ENT	Ear, Nose and Throat
ER	Emergency
GI	gastrointestinal medicine
НО	Hematology
IMN I	Internal Medicine Ward I
IMN II	Internal Medicine Ward II
МСН	Maternal and Child Health
OBGY	Obstetrics and Gynecology
ОРН	Ophthalmology
Ped	Pediatrics
PNE	Pneumology
РО	Post-Operation
REH	Rehabilitation
Sur.op	Surgical operation (post)

1. Table of Answers to Questionnaire Given to Central Hospitals

	No.	Items	Setthathirath Hospital	Mittaphab Hospital	Mahosot Hospital	Remarks
(1) (General					
[Code, Name and Address]		ame and Address]				
	1	Official name of hospital	Setthathirat Hospital	Mittaphab Hospital	Mahosot Hospital	
	2	Official address of hospital	Donekoy Village, Sisadthanak District.	Phontong-Dongdok Road, Vientiane	Kaoyot Village, Sysattanark District.	
	3	Name and code number of the nearest main road	Kaphengmuang Road		Mahosot Road	
[C	Commu	nications etc.]				
	4	Name and "telephone number" of main department of hospital	856-21-351156	Medical administration and Planning Department, Tel: 856-21-710663	Administration Department, Mahosot Hospital, Ministry of health Tel 021 214018 Fax 021 214020	
	5	Name and "cellular phone number" of director and/or head of department of hospital	856-20-22226100	Dr. Tavanh MANIVONG, Deputy director of Mittaphab hospital, Tel: 856-20- 55602905	Asso.Prof. Dr. Bounthaphany BOUNXOUIE, Director of Mahosot Hospital (Mob): 020 56917887 Dr. Oudaivone RATTANAVONG, Chief of Administration Department (Mob): 020 55669358	
	6	Email address of hospital	Keota_63@hotmail.co m	mittaphaphosp.vtelao @yahoo.com	Email: mahosotlao@yahoo.c om	
	7	Organization chart	As attached	As attached	As attached	See charts attached below
	8	1)Having on going project		No answer	Yes	

	2)In case answer is "Yes", the fund source and its outline	Complex emergency department (Including operation room, blood test, and ultrasound- X-Ray-CT scan). There is not fund yet.		 Capacity building for medical specialist in and out of countryside (by NGO Health Frontier) -2. 6 excellence center project to improve the quality of health care for cardiology -3. Cath-Lab project for catheterize intervention of heart disease -4. ER project to improve the quality of health care service in the emergency dept. (by JICA) -5. Model ward project to improve the quality of nursing processing and nursig management (by JICA) -6. OPD extra project to improve more facility to these patients who didn't have enough time 	
9	Hospital's own motto	No	No answer	Mahosot is a clean and modern hospital which provides good service with quality	
[Coverage area etc.]					
10	1)Coverage area of hospital with populations	No answer	No answer	 Mahosot is Central, Referral and University Hospital Responsible for national level including 6,8 Million of population 	

		2)Any specific provinces (or provincial hospitals) to which you have to give technical instructions/advices	9 district hospital in Vientiane Capital and referred cases from province hospitals	Supervisor of 6 provincial hospitals such as: - Luang Prabang provincial hospital - Xayabury provincial hospital - Xiengkhouane provincial hospital - Xaisomboun provincial hospital - Houaphanh provincial hospital - Bokeo provincial hospital	Monitoring and Supervising lower level health centers: Provincial, District hospitals (particularly southern provinces such as: Khammouan, Salavanh, Xekong and Attapeu)	
(2) (Operatio	on and Management				
[0	General]		8 00 12 00 12 00	8 00 12 00 12 00	Mondoy Fridoy 8 00	
	51	General working hours in a day	8.00-12.00, 13.00- 16.00	8.00-12.00, 13.00- 16.00	12.00, 13.30-16.00	
	52	Total day number of holiday in a year	15 days	15 days	8 days	
	53	Clinical department in hospital	Emergency, internal medicine, surgery, pediatric, obstetrics and gynecology, gastro-intestine, TB, Virology, oncology, rehabilitation, and OPD.	28 Service Departments (see organization chart)	24 departments of medical cardiology, cardiac surgery, gastro-enterology, infectious diseases and tropical medicine, pneurology and mental health, general pediatric, infectious pediatric, PICU and NICU, Nutrition, gynecology, obstetric and mother-child health, abdominal surgery, urology surgery, bone and plastic surgery, pediatric surgery, anesthesia, adult ICU, ER, Ophthalmology, ENT, Rehabilitation/ Acupuncture and traditional medicine, dentistry, international clinic	

	54	Other supporting department in hospital	Blood test, bacteriology, pathology, pharmacy, ultrasound-X ray, anesthesis.	No answer	Radiology, general laboratory, Bacteriology and pharmacy	
	55	Staffing		No answer		
		1) Specialist medical doctor	23		77	
		 Family medicine specialist doctor 	1		1	
		 General medical doctor (bachelor) 	34		49	
		3) General medical doctor (primary health care)	0		0	
		4) Medical Assistant	168		18	
		6) Nurse	185		405	
		7) Midwife	10		13	
		8) Pharmacist	24		49	
		9) Laboratory technicians- medical	32		58	
		10). Laboratory technicians- pathology	5		0	
		11) Medical technicians (anesthesia, X-ray, CT, MRI etc.)	0		15 (x-ray)	
		12) Health workers	7		143 (Administration staffs)	
		13) Others	138		50 (Nedical Doctors 3 PhD, 47 Master)	
[P	atient i	number etc.]				
	56	Total number of overnight/patient bed	220	250	450	
	57(1)	Total number of outpatients for the past 5 years				
		1) In 2009-2010	91,773	No answer	246,485	
		2) In 2010-2011	83,822	87,059	246,171	
		3) In 2011-2012	87,490	96,711	258,027	
		4) In 2012-2013	107,327	122,955	247,782	
1		5) In 2013-2014	82,662	129,331	242,326	
		6) In 2014-2015	79,486	No answer	246,030	
	57(2)	Breakdown of outpatient number by each clinical department for the past 5 years	As attached	No answer	No answer	See table attached below

	58(1)	Total number of inpatients for the past 5 years				
		1) In 2009-2010	15,536	No answer	18,701	
		2) In 2010-2011	15,747	9,161	22,864	
		3) In 2011-2012	17,100	10,261	18,162	
		4) In 2012-2013	26,293	12,433	21,425	
		5) In 2013-2014	13,176	13,114	18,982	
		6) In 2014-2015	13,649	No answer	19,661	
	58(2)	Breakdown of inpatient number by each clinical department for the past 5 years	As attached	As attached	No answer	See tables attached below
	59(1)	Total (accumulated) hospital stay of inpatients				
		1) In 2009-2010	19,407	No answer	No answer	
		2) In 2010-2011	35,008	73,288	75,588	
		3) In 2011-2012	38,511	71,827	76,096	
		4) In 2012-2013	10,222	74,598	88,783	
		5) In 2013-2014	37,264	65,570	73,345	
		6) In 2014-2015	31,718	No answer	102,366	
	59(2)	Average hospital stay for the past 5 years (in days)				
		1) In 2009-2010	2.00	No answer	4.00	
		2) In 2010-2011	3.50	8.00	4.16	
		3) In 2011-2012	2.44	7.00	4.00	
		4) In 2012-2013	2.05	6.00	4.00	
		5) In 2013-2014	4.20	5.00	4.00	
		6) In 2014-2015	2.21	No answer	5.00	
	59(3)	Bed occupation rate for the past 5 years(in %)				
		1) In 2009-2010	59.90	No answer	65,75	
		2) In 2010-2011	54.44	112.8 (150 beds)	69.50	
		3) In 2011-2012	54.49	118.77 (150 beds)	70.17	
		4) In 2012-2013	54.59	98.34 (250 beds)	78.75	
		5) In 2013-2014	47.48	87.9 (250 beds)	60.00	
		6) In 2014-2015	57.34	No answer	57.07	
_						

[Disease patterns etc.]		patterns etc.]				
	60	Tops 5 of diseases of the patients in hospital in 2014-2015				
		1	Injuries= 2195 cases	Fracture	Dengue fever	
		2	Hypertension(HTN) = 611 cases	Insufficient renal chronic	Urinary tract stone	
		3	Diabetes mellitus(DM)= 607 cases	Head injury	Hypertension	
		4	Influenza = 578 cases	Appendicitis	Pneumonia	
		5	Hepatitis = 548 cases	Accident of cardio- vascular	Appendicitis	
	61	Tops 5 of causes of death of patients in hospital in 2014-2015			No answer	
		1	AIDS-HIV = 14	Head injury		
		2	Pneumonia(HTN)= 13	Insufficient renal chronic		
		3	Stroke =10	Accident of cardio- vascular		
		4	Diabetes mellitus(DM)= 9	Sepsis		
		5	Septicemia = 5	Pneumonia		
	62	Seasonal fluctuation of patient number in 2014-2015 showed the month of the peak value of the OPD number	1.07	No answer	No answer	
[N	lain ac	hievement]				
	63	Number of operation by each department in 2014/2015	OB-GY: 560 cases (Cesarean section =231), Surgery: 254	 Big surgery: 2,414 cases Middle surgery: 2,232 cases Small surgery: 252 cases 	1. 4,879 cases 2. 1,956 cases 3. 2,530 cases 4. 4,690 cases	
	64	Number of examination by echo in 2014/2015	4,425		16,200	
		Number of examination by x-ray in 2014/2015	6,950	10 590	23,162	
		Number of examination by CT in 2014/2015	0	40,580	1,868	
		Number of examination by MRI in 2014/2015	0	•		
					150	Mammo
	65	Number of laboratory test by each types of testing in 2014- 2015	1) Blood test : 8630 cases 2) Urine test : 560 cases 3) Stool test : 610 cases 4) Cytology : 4320 cases	 CBC: 40,522 Bio-chimie: 27,620 Urinology: 8,618 Bacteriology: 7,622 Immuno: 5,142 Parasitology: 4,232 	575,560	
	66	Number of transfusion case in 2014/2015	1) Blood transfusion : 998 cases 2) Red blood : 1261 cases 3) FFP : 76 cases 4) CP : 4 cases 5) PRP : 3 cases	No answer	No answer	

	67	Referred patients				
		1)Number of referred patient from other hospitals/ health centers in 2014/2015	641 cases from district hospital and provincial hospital	No answer	786	
		2)Number of referred patient to higher-level hospitals in 2014/2015	87 cases (Mittaphaph hospital for the severe injured patients)	No answer	355	
[F	inance	l	Separately collected	Separately collected	Separately collected	
	81	Financial data of hospital for the past 5 years (2009/2010- 2013/2014) which mention annual revenues/ expenditures with breakdown, profit and loss statement, and assets/ liabilities				
	82	Approximate percentage of disbursement amount from the health insurances in the gross income in 2014/2015 by each category of insurance				
	83	tariff of health/ medical service to patients				
(3) F	acilitie	s/Utilities		No answer to this section		
[0	General]					
	101	Total land area of the premises of hospital	70,000.8 square meter	150,000 m [*]	31,375 m [*]	
	102	Total floor area of building	19,213.8 square meter	∼30,000m²	16,448.14m ²	
[F	[Requirements from Study Team]					
	110	Buildings layout map (with scale and bearing mark) in hospital premises, list of existing buildings (with information of construction year, floor area, story number, and main structure). Regarding main structure: "Reinforced concrete structure", "Masonry structure", "Wooden structure" or "Others".	As attached	Reinforced concrete structure	As attached	See maps attached below
	111	Building plan of main building (with scale and bearing mark)	No answer	No answer	No answer	
[P	[Power supply]					
	201	Availability of power supply	Available	Available	Available	
	202	Type of the available power	Electricity grid and generator	Electricity grid and generator	Electricity grid and generator	
	203	1) Condition of mainline outside of hospital in case the power from electricity grid available (phases, voltage and frequency)	3 phases, Capacity: building1= 800KVA,building 2=300KVA	3 phases, 380V/50Hz and 220V/50Hz	3 phases concerning 22000 KV and frequency 50 Hz	

		2) Condition of transformer	No answer	800KVA	500KVA (2 Unit), 250KVA (10 Unit), 50KVA (1 Unit)	
	204	phases, voltage (V) and frequency (Hz) within hospital after transformer	220 voltage	1st answer 220 voltage, 380V/50Hz after 380V/50Hz, 2nd answer 380V/50Hz	220V (1 phase), 380V (3 phases), 50Hz	
	205	Supply condition of electricity from mainline or backup source	No interruption	No interruption but sometime electricity grid cut off when they need to repair system or accident (but rarely)	No interruption	
	206	Capacity of generator if available/ functioning	Building1=210 KVA, Building2=250KVA	1st answer:800KVA, 2nd answer: 600KVA, 50Hz	750KVA (1 Unit), 75KVA (2 Unit), 50Hz	
	207	Total Electric load (KVA) shown in the monthly invoice issued by power supply company in case the power from electricity grid is available	153,198KVA/month	No answer	552,705KW/month	
[V	/ater si	upply]				
	301	Type of water sources	City water	City water and well water	City water	
	302	Approximate water volume required in hospital	242.9 m3 /day	150m3 /day	17,000m3 /month	
	303	Water sterilization system (chlorine sterilization by automatic pouring system) currently functioning	Yes but out of order (broken)	No	Yes	
	304	water purification system currently functioning	No	No using mixed water from city and well	Yes	
	305	Supply condition from mainline in case city water is available	No interruptions	4-6 hours city water comes to hospital 4- 6h /day	No interruption	
	306	Volume of ground reservoir tank if used in hospital	Available	150 ton	4 Ton	
	307	Volume of elevated water tank if used in hospital	Volume= 228.375m3	750 ton for reserve in case city water do not come and well water donot work	3 Ton	
[T	[Toilet/ Latrine]					
	401	Availability of tilet/ latrine for general outpatients in hospital	Available	Available but interrupted time by time	Available	
	402	Type of toilet/ latrine if available	Flush toilet	Flush toilet, Open pit and composting toilet	Flush toilet, Ventilated pit latrine and Pit latrine with slab	
[V	/aste v	vater treatment]				
	501	Having waste water treatment system	Yes	Yes but not well	Yes	

	502	Type of waste water treatment system if available/ functioning	Sophisticated treatment plant	Sphosticated treatment plant, having some septic tonic	Sophisticated treatment plant	
	503	Type of treatment facilities functioning in case the answer for 502 is "3. Other"	N/A		N/A	
[S	ewage	system]				
	601	Public sewage system available	Yes	No, open	Yes	
	602	Type of facility used in case public sewage system is not available	N/A	vacuum	N/A	
	603	Where used water discharged to in case the answer for 602 is "3. Other"	N/A		N/A	
[6	[Garbage treatment system]					
	701	Garbage stocking yard (or garbage storage) available	Yes	Yes	Yes	
	702	Garbage separated/ packed by depending on the garbage type	Yes	Yes, Sharp garbage	Yes	
	703	Incubator functioning/ used	Yes, but it does not work now	No	No	
	704	1) Incinerator functioning/ used	Yes, but it does not work now	No	No	
		 temperature and capacity of incinerator in case functioning/ used 	N/A	N/A	N/A	
	705	Public garbage collection service for general garbage available	Yes	Yes	Yes	
	706	Management of the suspiciously contaminated or sharps garbage	Burning by incinerator by capital city(far away from hospital)	Remove offsite	Remove offsite	
(4) Medical Equipment			Separately collected	Separately collected	separately collected	
[Requirements from Study Team]		nents from Study Team]				
	801	Filling out "Check list of medical equipment"				
	802	Providing writtend paper of the purchase plan of new equipment for future if any				
	803	How to obtain equipment budget from outside				
	804	Having special engineer for medical equipment maintenance		Yes		
Attachment



Mahosot Hospital



	Breakdown of outpatient number
57(2)	by each clinical department for
	the past 5 years

Setthathirath Hospital

16	ER.SUR	ສກເສັນພາຍນອກ	5,157	5,955	6.005	6,437	5.266	5,798
16	ER.ADUL	ສກເສັນຜິໂຫຍ່	8,912	9,680	8,899	10,229	6,768	8,94
14	ER.CHILD	ສຸກເສີນເດັກ	4,369	5,400	5,072	4,995	4,224	3,786
	TOtalOP	ລວມເຮດນອກ	66,666	62,887	66,607	85,666	66,404	60,964
13	OBGY	ພະຍາດຍິງ	3,995	6,368	6,695	7,326	7,254	5,84
12	Sur.op	ພາຍນອກ	1,732	2,460	2,733	3,180	2,833	1,84
11	Diabete	ເບົ້າຫວານ	1,957	3,647	3,036	6,346	6,087	1,66
10	H.0	ມະເຮັງ	673	827	998	1,918	2,167	1,88
9	G.I	ກະເພາະ	2,430	3,274	3,132	3,000	2,566	1,99
8	PNE	ຣ/ນ ຊຶມເຊືອ	1,438	477	661	1,645	1,634	6,488
7	REH	ກາຍຍະບຳນັດ	1,916	3,030	3,062	3,314	2,966	1,393
6	ENT	ຫດັງຄ	2,460	2,999	3,167	3,238	3,065	2,92
б	OPH	ពា	2,538	2,981	3,260	3,231	3,204	2,04
4	DEN	ແຂ້ວ	2,870	3,427	3,668	3,528	3,448	1,97
3	INM	พายใบ	9,326	10,382	11,894	21,451	11,522	10,498
2	PED	ເດັກນ້ອຍ	5,532	6,667	6,601	8,363	7,123	2,280
1	MCH	ແມ່ແລະເດັກ	18,888	17,448	17,810	19,127	12,545	20,23
		อะแบก	2,010	2,011	2,012	2,013	2,014	2,01

	Breakdown of inpatient number
58(2)	by each clinical department for
	the past 5 years

Setthathirath Hospital

	Number of IPD patients	in the 6 past Ye	ears of eac	h deparme	ent from 20	10 to 2015	5
	ພະແນກ	2,010	2,011	2,012	2,013	2,014	2,015
1	INM 1	2,926	2,926	3,120	5,795	3,350	2,217
2	SUR	1,768	1,768	2,117	3,350	1,986	1,183
3	OB GYN+NS	2,598	2,598	2,721	3,844	2,849	2,689
4	PED	1,796	1,796	1,956	2,364	1,817	1,059
5	AICU	572	572	568	877	538	501
6	PICU+NICU	640	640	717	1,113	655	440
7	INM II	203	203	206	1,386	219	148
8	EMER	3,498	3,498	3,557	3,726	1	217
9	PO	1,535	1,535	1,570	1,855	1,762	1,080
10	IN.Cliniqu	-	211	568	1,983		4,115
11	LABOUR	-					
12	Total	15,536	15,747	17,100	26,293	13,176	13,649

Setthathirath Hospital



Mittaphab Hospital

Hard copy of land map received



Mahosot Hospital



2. Function Standards and Facility/Equipment Standards Related to Provincial and District Hospitals (1) General

Comparison Table for Location/Roles, Organization Structure, Personnel, Medical Equipment and Facilities for Provincial Hospital/ District Hospital and Community Hospital/ Small Hospital based upon MOH Decrees and Guidelines

	Provincial Hosnital	District	Hospital	Community Hospital	Small Hospital
Item	(MOH Decree No.107, Jul 2010)	(MOH Decree No	.2312, Dec 2008)	(Standards of Communit Hospitals, May 2014)	ty Hospitals and Small
1. Location/ Roles	Article 2 Location and Duty Provincial hospital, capital city hospital (both will be called provincial hospital), consisted with 50 – 250 beds, it is general hospital of government. The role is to provide health services, health checkup, diagnosis, treatment, resuscitation and rehabilitation, research science, develop and strengthen health staff, prevent disease – promote health and supervise lower level hospital on curative management and administration.	 Article 3 Location District hospital is a of government, it is unit, functions to el cure, resuscitate, an under the approval administration of di office. There are po staff, there are 15 – there are necessary equipment accordir agreement of Vice 1 Article 4 Role Provide services up, diagnos resuscitation, re the technical stat Promote hygi prevention, pr promote health; Develop and stree (clinical ability ovillage. 	a general hospital a local clinical heck, diagnose, d rehabilitate, of MOH, under istrict health tential health 30 beds, and medical gg to the Minister (MOH) ; health checking habilitation under habilitation under dard of MOH; ene – disease event epidemic, engthen staff; ; Assist to upgrade f health center and		
2. Organization Structure	Article 5 Organizational structure 5.1 Technical session 5.1.1. Medical session 1. Inpatient unit; 2. Traditional medical unit; 3. Outpatient unit; 4. Pediatrics unit; 5. Obstetric and woman disease unit; 6. Urgent –resuscitation and anaesthetization unit 7. Optical 8. Ear, Nose, Throat 9. Dentistry 5.1.3. Supportive medical technique 12. Pharmacy unit; 13. Diagnosis unit; 14. X-ray unit	Article 7 Organiza A Type 1. Inpatient and traditional medical; 2. Obstetric – woman disease 3. Outpatient 4. Anaesthetize 5. Pediatrics 6. Dentistry 7. Optical, ear – nose—throat 8. Diagnosis 9. X-ray 10. Pharmaceutic 11. Personnel organization, panning- finance and foreign affairs	tional structure B Type 1. Inpatient and traditional medical; 2. Obstetric – woman disease 3. Outpatient 4. Pediatrics 5. Dentistry 6. Diagnosis 7. X-ray 8. pharmaceutic 9. Personnel organization, panning- finance and foreign affairs	 Technical section of Community Hospital Internal and traditional medicines External (General surgery, Caesarean section, hysterectomy) Anesthesia, Resuscitation and Emergency Obstetrics and Gynecology Pediatrics Dentistry Radiology and images (X-ray, Ultrasound) Laboratory (Blood, Biological chemistry, urine, stool, TB, viral (AIDS, Hepatitis B)) Pharmacy Administration, Personnel, Planning, Finance, Driver, Maintenance, Cleaner 	Tasks of technical staff in a Small staff in a Small Hospital 1. The examination-diagnosis and treatment 2. Health Prevention and Promotion 3. Health Information Collection and Consideration
3. Personnel	Article 6 Personnel organization The provincial hospital has 1 director, and some deputy directors. Article 7 Personnel	Article 8 Personne A Type 1. Director 2. Deputy director	B Type 1. Director 2. Deputy director	Personnel Standard for Community Hospital (Example of 30 beds hospital)	Standard of staff for Small Hospital Number of staff: 7- 10 persons

	A type district hospital (refer to next section)	for B type district hospital (refer to next section)	hospital is adopted as a standard equipment list (refer to next section)	Hospital (refer to next section)
6. Facilities			 Basic element for the infrastructure of Community Hospital 1. Technical service building/ room 2. Administration building/ room 3. Electrical building (house) 4. Maintenance building (house) 5. Warehouse 6. Water system (water tank) 7. Washing building (house), sterilization building (house) 8. Building (house) 8. Building (house) 8. Building (house) 6. Vater system (water tank) 7. Washing building (house), sterilization building (house) 8. Building (house) 6. Vater system 10. Incinerator 11. Morgue 12. Car Parking 13. System of wastewater treatment 14. Permanent fence 15. Signboard of hospital Note: Standard building plan is attached (Refer to Chapter 3 in the main report). 	 Basic element for the infrastructure of Small Hospital Administration room, patient service room (examination room, patient room, patient room, laboratory, immunization room, delivery room) Staff house Electrical system Water system (water supply or water tank) Incinerator Permanent fence Signboard of hospital Note: Standard building plan is attached.

Source: Decree No.107 (MOH, July 2010), Decree No. 2312 (MOH, December 2008), and Standard of Community Hospital and Small Hospital (MOH, May 2014)

(2) Equipment (Comparison of Standard Equipment Lists)

Dent	District Hospital A	District Hospital A		District Hospital B	District Hospital B		Community Hospital	Community Hospital		Small Hospital			
Dept.	Equipment Name	Q'ty	Dept.	Equipment Name	Q'ty	Dept.	Equipment Name	Q'ty	Dept.	Equipment Name	Q'ty		
	Ultrasound	1		Ultrasound	1	1	Ultrasound	1					
	Examining and treatment table	1		Examining and treatment table	1		Examining and treatment table	1					
	Film illuminator	1		Film illuminator	1	l S	Film illuminator	1					
	Stethoscope	5		Stethoscope	3		Stethoscope	5		Stethoscope binaural type	1		
	Sp hy gmomanometer	1		Sp hy gmomanometer	1		Sphygmomanometer	1		Sphygmomanometer aneroid for adult	1		
									1	Sphygmomanometer for child	1		
	Tongue depressor	1		Tongue depressor	1		Tongue depressor	1	1	•			
	Examination light	2		Examination light	1		Examination light	2					
	Hammer reflex test	5		Hammer reflex test	3		Hammer reflex test	5					
0.00	Kidney dish	5	0.00	Kidney dish	3	0.00	Kidney dish	5					
Ward	Thermometer	10	Ward	Thermometer	5	Ward	Thermometer	10	Room	Thermometer clinical	5		
	Weight and height scale (adult)	1		Weight and height scale (adult)	1		Weight and height scale (adult)	1		Scale for adult	1		
	Weight and height scale (infant)	1	1	Weight and height scale (infant)	1		Weight and height scale (infant)	1	1				
									1	Scale infant portable, suspension type	1		
	Instrument Cabinet	1		Instrument Cabinet	1		Instrument Cabinet	1	1				
	M edicine cabinet	1		M edicine cabinet	1		M edicine cabinet	1					
	Instrument table	1		Instrument table	1		Instrument table	1					
									1	ENT Diagnostic set	1		
										Health education set	1		
										Stretcher folding type	1		
										Sterilizer dressing	1		

	Table (dressing)	1		Table (dressing)	1		Table (dressing)	1			
	Emergency light (battery system)	1		Emergency light (battery system)	1		Emergency light (battery system)	1			
	Film illuminator	1		Film illuminator	1		Film illuminator	1			
	Defibrillator	1		Defibrillator	1		Defibrillator	1			
	ECG	1		ECG	1		ECG	1			
	Cardioversion	1		Cardioversion	1		Cardioversion	1			
	Infusion pump	1		Infusion pump	1		Infusion pump	1			
	Mayo instrument table	1	1	Mayo instrument table	1		Mayo instrument table	1			
	Instrument table	1		Instrument table	1		Instrument table	1			
	Instrument cabinet	1		Instrument cabinet	1		Instrument cabinet	1		Box, instrument, for minor surgery	1
	Stretcher (infant)	1		Stretcher (infant)	1		Stretcher (infant)	1			
	Stretcher (adult)	1		Stretcher (adult)	1		Stretcher (adult)	1			
	Hot air sterilizer (20 liters)	1		Hot air sterilizer (20 liters)	1		Hot air sterilizer (20 liters)	1			
	Suction pump electrical (2-5 liters)	1	1	Suction pump electrical (2-5 liters)	1		Suction pump electrical (2-5 liters)	1			
	Stethoscope	1	1	Stethoscope	1		Stethoscope	1			
	Sphygmomanometer	1	1	Sphygmomanometer	1		Sp hy gmomanometer	1			
	Tongue depressor	10	1	Tongue depressor	5		Tongue depressor	10			
Emergency	Examination light	2	Emergency	Examination light	1	Emergency	Examination light	2	Treatment		
Ward	Hammer reflex test	5	Ward	Hammer reflex test	3	Ward	Hammer reflex test	5	Room		
	Kidney dish	1		Kidney dish	1		Kidney dish	1		Kidney bowls	3
	Thermometer	10		Thermometer	5		Thermometer	10		Iar thermometer stainless steel	2
	Minor surgery set	1	-	Minor surgery set	1		Minor surgery set	1		Wound and abcess surgery set	1
			-							Lar forceps with cover SS	2
										Iar needle with cover and handle 180ml stainless steel	2
										Lation bowle 80mm	2
										Tray instrument with cover	2
	Examining and treatment set	1	-	Examining and treatment set	1	-	Examining and treatment set	1		ridy, list unent, with cover	
	Dressing instrument set	1	-	Dressing instrument set	1		Dressing instrument set	1		Dressing bowl large	2
	Oxygen cylinder	1	-	Oxygen cylinder	1		Oxygen cylinder	1		Dressing bowr, mige	
	ECG	1	-	ECG	1		ECG	1			
	Pulse oxymeter (pulsimeter)	1		Pulse oxymeter (pulsimeter)	1		Pulse oxymeter (pulsimeter)	1			
	Svringe pump	1		Svringe pump	1		Svringe pump	1			
	Ventilator	1		Ventilator	1		Ventilator	1			
	Glucose test	2		Glucose test	1		Glucose test	2			
	Oxygen cylinder	2	-	Oxygen cylinder	2		Oxygen cylinder	2			
	0.0, gan 0,	_	-	0.1, g.u. 1,	_		···· , g.··· - , ·······	_		Counter for tablets and cansule with spatula	1
	Bed (hi-lo catch)	1		Bed (hi-lo catch)	1		Bed (hi-lo catch)	1		counter, for tablets and capsule, with spatula	1
	Bedside cabinet	1	-	Bedside cabinet	1		Bedside cabinet	1			
	Stainless steel lockable (locker)	1		Stainless steel lockable (locker)	1		Stainless steel lockable (locker)	1			
	Table (bed side)	1	-	Table (bed side)	1		Table (bed side)	1			
	Bed (standard)	1	-	Bed (standard)	1		Bed (standard)	1			
	Examining and treatment table	1	-	Examining and treatment table	1		Examining and treatment table	1			
	Film illuminator	1	-	Film illuminator	1		Film illuminator	1			
	Instrument table	1	-	Instrument table	1		Instrument table	1			
	Medical cabinet	1	-	Medical cabinet	1		Medical cabinet	1			
Inter Madiaina	Stethoscone	1	Inter Mediaine	Stethoscone	1	Inter Mediaine	Stethoscope	1			
Ward	Snhymomanometer	1	Ward	Sn hy gmomanometer	1	Ward	Snhymomanometer	1			
	Tongue denressor	1		Tongue depressor	1		Tongue denressor	1			
	Examination lamp	1	-	Evamination Jamp	1		Evamination lamp	1			
	Hammer reflex test	1		Hammer reflex test	1		Hammer reflex test	1			
1	Kidney dish 200mm	1	4	Kidney dish 200mm	1		Kidney dish 200mm	1			
	Thermometer	1	1	Thermometer	1		Thermometer	1			
1	IV stand	1	1	IV stand	1	1 T 1 IV 1 W	IV stand	1			
1	Weight and height scale	1	4	Weight and height scale	1		Weight and height scale	1			
1	Wheel chair	1	4	Wheel chair	1		Wheel chair	1			
1	A mbu bog infont	1	4	A mbu bag infant	1		A mbu bog infont	1			
	Amou bag iniant	1		Amou bag imant	1		Amou dag intant	1			

	Examining and treatment table	1		Examining and treatment table	1		Examining and treatment table	1			
	Film illuminator	1		Film illuminator	1		Film illuminator	1			
	Stethoscope	1		Stethoscope	1		Stethoscope	1	-		
	Sphygmomanometer	1		Sp hy gmomanometer	1		Sphygmomanometer	1			
	Tongue depressor	1		Tongue depressor	1		Tongue depressor	1			
	Examination lamp	1		Examination lamp	1		Examination lamp	1	1		
	Hammer reflex test	1		Hammer reflex test	1		Hammer reflex test	1			
	Kidney dish 200mm	1		Kidney dish 200mm	1	1	Kidney dish 200mm	1	-		
	Thermometer	5		Thermometer	3		Thermometer	5			
External M edicine	Weight and height scale (adult)	1	External Medicine	Weight and height scale (adult)	1	External M edicine	Weight and height scale (adult)	1			
Ward	Weight and height scale (infant)	1	Ward	Weight and height scale (infant)	1	Ward	Weight and height scale (infant)	1			
	Instrument cabinet	1		Instrument cabinet	1		Instrument cabinet	1			
	M edical cabinet	1		M edical cabinet	1		Medical cabinet	1	-		
	Instrument table	1		Instrument table	1		Instrument table	1			
	Wheel chair	1		Wheel chair	1	1	Wheel chair	1	-		
	Bed (hi-lo catch)	1		Bed (hi-lo catch)	1	_	Bed (hi-lo catch)	1	-		
	Bedside cabinet	1		Bedside cabinet	1		Bedside cabinet	1	-		
	Stainless steel lockable (locker)	1	-	Stainless steel lockable (locker)	1		Stainless steel lockable (locker)	1			
	Table (bed side)	1		Table (bed side)	1		Table (bed side)	1			
	Bed (standard)	1	-	Bed (standard)	1	_	Bed (standard)	1			
-	Weight and height scale (infant)	1		Weight and height scale (infant)	1		Weight and height scale (infant)	1			
	Infant warmer	1	-	Infant warmer	1		Infant warmer	1	-		
	Baby cot	1	-	Baby cot	1		Baby cot	1	-		
	Incubator for baby (nediatric)	1	-	Incubator for baby (pediatric)	1	Pediatric	Incubator for baby (pediatric)	1	-		
	Lumbal nuncture set	1	-	Lumbal puncture set	1		Lumbal puncture set	1	-		
Pediatric Ward	Pleural nuncture set	1	Pediatric	Pleural puncture set	1		Pleural nuncture set	1	-		
	Defibrillator (for children)	1	Ward	Defibrillator (for children)	1	Ward	Defibrillator (for children)	1	-		
	Ventilator (for children)	1		Ventilator (for children)	1	-	Ventilator (for children)	1	-		
	Tongue depressor	1		Tongue depressor	1	1	Tongue depressor	1	-		
	Thermometer	1	-	Thermometer	1	-	Thermometer	1	-		
	Sn hu momonomotor for infont	1	-	Subsemmentation for infant	1	-	Sn hy gmomonomotor for infant	1	-		
	Pad labor and delivery	1		Ped labor and delivery	1		Pad labor and delivery	1		Pad labor and daliyany	
	Delivery set	2	_	Delivery set	2	-	Delivery eet	2	-	Delivery set	2
	Weight and height and (infant)	1	-	Weight and beight cools (infant)	2	-	Weight and beight cools (infant)	1	-	Delivery set	
	Medicine achieve	1	-	Weight and height scale (infant)	1	-	Medicine achievet	1	-		
	Instance cability	1	-	Instance Cabinet	1	-	Instance Cabinet	1	-		
	Instrument Cabinet	1	-	W stand	1	-	Instrument Cabinet	1	-	B/ step d	—
	I v stand	1	_	I v stand	1	-	TV stand	1	-	i v stand	- 1
	iniant warmer	1	-	Infant warmer	1	-	iniant warmer	1	-	W LIC I	<u> </u>
			-	D. S. C. S. C. J.	1	-			-	warm bed for newborn	1
	Resuscitator for infant	1	-	Resuscitator for infant	1	-		1	-	Resuscitation set (Bag & Mask)	1
1	ECO Ambu has fan stat	1	4	ECU Andre has for shift	1	4	ECG	1	4		
		1	-		1	-	Ambu bag for aduit	1	-		
Delivery	Ambu bag for infant	1	Delivery	Ambu bag for infant	1	Delivery	Ambu bag for infant	1	Delivery		
Ward	Hot air Sterilizer	1	Ward	Hot air Sterlizer	1	Ward	Hot air Sternizer	1	Room		
	weight and height scale (adult)	1	-	weight and height scale (adult)	1	-	weight and height scale (adult)	1	_		—
	Stathanana	1	_	Weight and height scale (infant)	1	-	Statharana neight scale (infant)	1	-	Scale for infant	1
1	Siemoscope Subvermomonomotor	1	-	Selucioscope	1	4	Sterioscope	1	4		
1	Tangua dan ressor	1	-	Spriy gnonanometer	1	4	Tangua dan ransar	1	4		
	Formation - Linkt	1	4	rongue depressor	1	4	Formation - Links	1	-	Providentian links	—
1	Examining Light	1	4	examining Light	1	4	Examining Light	1	4	examination light	- ¹
1	Oxy gen cy inder	2	4	Oxygen cymder	2	4	Oxygen cy inder	2	4	Dath haber and 25 liter	-
1										Dath baby oval 25 liter	+
1										Doppier sound detector	
									1	1 ray instrument shallow 343x24/x16mm	<u> </u>
1										Aspirator/ Suction pump (M anual or electric)	
	1					L			1	I ape measuring	1

	Audiometer for adult and for infant	1		Audiometer for adult and for infant	1		Audiometer for adult and for infant	1			
	Tympanometer automatic	1		Tympanometer automatic	1		Ty mp anometer automatic	1	1		
ENT	Tuning fork	1	ENT	Tuning fork	1	ENT	Tuning fork	1			
Ward	Hearing aid	1	Ward	Hearing aid	1	Ward	Hearing aid	1			
	ENT Treatment chair	1		ENT Treatment chair	1		ENT Treatment chair	1			
	ENT Treatment unit, single tray	1		ENT Treatment unit, single tray	1		ENT Treatment unit, single tray	1			
	Biochemy Analyzer 18 parameter	1		Biochemy Analyzer 18 parameter	1		Biochemy Analyzer 18 parameter	1			
	Refrigerator medical	1		Refrigerator medical	1		Refrigerator medical	1		Refrigerator	1
	Blood bank refrigerator	1					Blood bank refrigerator	1			
	Hematocrit Centrifuges	2		Hematocrit Centrifuges	1		Hematocrit Centrifuges	2		Hematocrit centrifuge	1
	M icroscop e	2		Microscope	1		Microscope	2		Binocular M icroscope	1
	Hot air sterilizer for 20 liters	1		Hot air sterilizer for 20 liters	1		Hot air sterilizer for 20 liters	1			
	Glucose analyzer	1		Glucose analyzer	1		Glucose analyzer	1			
	Instrument cabinet	1		Instrument cabinet	1		Instrument cabinet	1			
	Laboratory glassware set	1		Laboratory glassware set	1		Laboratory glassware set	1			
	Laboratory incubator	1		Laboratory incubator	1		Laboratory incubator	1			
Clinical			Clinical			Clinical			Laboratory	Disinfector instrument boiling type	1
Ward	Laboratory coats	1	Ward	Laboratory coats	1	Ward	Laboratory coats	1	Laboratory		
	Stainless steel lockable (locker)	1		Stainless steel lockable (locker)	1		Stainless steel lockable (locker)	1			
	Incubator (low temperature)	1		Incubator (low temperature)	1		Incubator (low temperature)	1			
	Pipette shaker	1		Pipette shaker	1		Pipette shaker	1			
	PH meter	1		PH meter	1		PH meter	1			
	Slide warmer	1		Slide warmer	1		Slide warmer	1			
	Slide warming table	1		Slide warming table	1		Slide warming table	1			
										Machine for CBC	1
										Tray instrument shallow 343x247x16mm	1
										Cup board for drugs and instrument	1
										Blood lancet, box/ 200pcs	1
	Ultra-sound	2		Ultra-sound	1		Ultra-sound	2			
Radiology	Examination table simple type	2	Radiology	Examination table simple type	1	Radiology	Examination table simple type	2			
&	X-ray Machine	1	&			& Imaging Ward	X-ray Machine	1			
Imaging	X-ray film processor automatic	1	Imaging				X-ray film processor automatic	1			
waiu	X-ray development tank	1	waiu				X-ray development tank	1			
	Patient identification printer	1					Patient identification printer	1			
	Anesthesia ventilator	1					Anesthesia ventilator	1			
Anasthasia	Oxygen cy linder	1	Anasthasia			Apasthasia	Oxy gen cy linder	1			
Ward	ECG	1	Ward	ECG	1	Ward	ECG	1			
	Pulse oxymeter (pulsimeter)	3		Pulse oxymeter (pulsimeter)	2		Pulse oxymeter (pulsimeter)	3			
	Thermometer	10		Thermometer	5		Thermometer	10			
	Universal operation table with stool	1					Universal operation table with stool	1			
	Operating chair	2					Op erating chair	2			
	M inor operation light	1					M inor operation light	1			
	Suction unit for heavy duty	1		Suction unit for heavy duty	1		Suction unit for heavy duty	1			
Minor	Defibrillator with cart	1	Minor			Minor	Defibrillator with cart	1			
Theater	M inor surgery set	3	Theater	Minor surgery set	2	Theater	Minor surgery set	3			
Ward	M edium surgery set	1	Ward			Ward	M edium surgery set	1			
	Large surgery set	1]				Large surgery set	1			
	Linen hamper carriage	1	1	1			Linen hamper carriage	1			
	1.										
	Laundry cart	1					Laundry cart	1			

	Dental portable unit	1		Dental portable unit	1		Dental portable unit	1			
Dental	Dental x-ray unit	1	Dental			Dental	Dental x-ray unit	1			
Ward	Dental film developer	1	Ward			Ward	Dental film developer	1			
	Dental basic instrument set	1		Dental basic instrument set	1		Dental basic instrument set	1			
Sterilization	Autoclave 70-100 L	2	Sterilization	Autoclave 70-100 L	1	Sterilization A Ward H	Autoclave 70-100 L	2			
Ward	Hot air sterilizer for 20 liters	2	Ward	Hot air sterilizer for 20 liters	1		Hot air sterilizer for 20 liters	2			
	Ambulance Vehicle	1		Ambulance Vehicle	1	A: Pi	Ambulance Vehicle	1			
	Pick up	1		Pick up	1		Pick up	1			
										Motobike	1
	Computer desktop	5		Computer desktop	3		Computer desktop	5	Administratio	Computer desktop	1
Administration	Printer	5	Administration	Printer	3	System	Printer	5	n	Printer	1
	Photocopy	3		Photocopy	2		Photocopy	3	System	Photocopy	1
	Telephone	2		Telephone	1		Telephone	2		Telephone	1
	Fax	2		Fax	1		Fax	2	1	Fax	1
	Internet	1		Internet	1		Internet	1		Internet	2

3. Detailed Data Related to Provincial and District Hospitals in Four Southern Provinces

[Salavan Province]

(1) Salavan Provincial Hospital (District code: 14-01)

Salavan Provincial Hospital is located about 3km east of the bus station in central Salavan, at the end of Route 15B. There is a gate to control traffic at the entrance and unnecessary vehicles are not allowed to enter. The hospital facilities were built in 1980 and the site covers an area of approximately 2ha. An outline of the hospital is shown below.

Table	Current State of Salavan Provincial Hospital Management Structure, Health Care Services
	and Facilities

No	Item	Description								
1	Location, etc.	Phonekeo Village, Salavan District, Salavan Province (Neighboring main road) Route 15, situated at end of Route 15 (Phone no.) Tel/fax 034-211-106								
	Improvement projects	None (and none	nlanne	ed)						
	currently underway with	Tione (une none	praim	cu)						
	Developing Partner aid									
	Hospital motto	None								
2	Organization chart	None	None							
3	Area & population covered	8 districts (Salay Toumlan), popu	van, La lation	ao Ngam, V 394,789	Vap	oi, Lakhonephen	ıg, Kh	ongsedone, T	aoi, Samuoi,	
4	Higher level referral hospital	Champasak Pro	vincial	l Hospital (app	prox. 115km or	2 hou	rs by fully pay	ved road)	
5	Outpatient hours	Monday – Frida	y, 8:00	0-12:00/13:	:30	-16:30				
6	Areas of treatment	Emergency care ENT, rehabilitat	e, interi tion, de	nal medicir entistry, IC	ne, U,	surgery, OBGY dermatology	, pedi	atrics, ophtha	lmology,	
7	Supporting departments	Consulting room	ns, pha	armacy, lab	ora	atory, nutrition				
8	Health care personnel	11 specialists, 1 midwife, 11 pha dieticians, 5 phy	0 gene irmacis /sical t	eral practitionsts, 8 lab te herapists	one	ers (MD), 19 MI nicians, 3 X-ray	E, 57 1 techn	nurses, 1 nurse icians, 2 dent	e/nurse ists, 12 dental	
9	No. of beds	70								
10	Annual number of	2012/20)13			2013/2014		201	4/2015	
	outpatients (persons/year)	26,883	3		25,157			40	0,050	
	Reason for outpatient visit	No.1	No.1 No		No.3			No.4	No.5	
	(2013/2014)	Pneumonia: 1,5	35 I 9	Diarrhea : 924	1: Dysenteriae: 195		Dengue: 496			
11	Annual number of	2012/20)13		2013/2014		2014/2015			
	emergency patients (persons/year)									
	Reason for emergency visit	No.1	N	No.2	No.3		No.4	No.5		
	(2013/2014)									
12	Annual number of referrals	2012/20)13		2013/2014		2014/2015			
	to higher level hospital (persons/year)	23			24		20			
	Reason for referral	No.1			No.2		1	No.3		
	(2013/2014)	Injury	/		Renal failure					
13	Annual number of births	2012/20)13		2013/2014			201	4/2015	
	(births/year)	1,011			1,462			1	,817	
	No. of perinatal deaths (persons/year)	22 (2013/2014)								
14	Annual number of	2012/20)13			2013/2014		201	4/2015	
	hospitalizations (persons/year)	6,129			7,082			9,607		
	Total length of hospitalization (days/year)	17,793			18,191		20,174			
	Average length of hospitalization (days/person)	2.90			2.50			2.09		
	Bed occupancy (%)	71.00)		71.02			7	0.21	
	Reason for hospitalization	No 1		No.2		No.3		No.4 No.5		
	(2013/2014)	Pneumonia: 564	Diar	rhea: 540	(Gastritis: 813	Tons	sillitis: 677	Dengue: 25	

	No. of patient deaths (persons/year)	0 (2013/2014)			
15	Annual number of	Surgery	C	DBGY	Other
	operations (cases/year) (2013/2014)	941		137	
16	Annual number of	Ultrasound	X-ray	СТ	MRI
	diagnoses (cases/year) (2013/2014)	6,358	2,644		
17	Annual number of tests	Blood	Urine	Stool	Other
	(tests/year) (2013/2014)	33,501	558	282	
18	Annual number of blood transfusions (cases/year)	0 (2013/2014)			
19	No. of referral patients	Referred from ar	other hospital	Referre	ed from a HC
	accepted (persons/year) (2013/2014)				
20	Collaboration with community health care services	Vaccinations			

Table	Current State of Salavan Provincial Hospital Facilities and Infrastructure

No	Item	Description			
1	Condition of site and building	Site area: 2.0 ha (estimated from existing fence and descriptions by staff) Existing building: Partial two-story facilities built in 1980			
		Neighboring Local Road Neighboring Local Road Neighboring Local Road To National Road Road 15 (approx. 300 m) 24 min stration Local Road Local Road LocaLocaLocaLocaLocaLocaLocaLocaLocaLoca			
2	Electric power supply	Power is supplied from the public power mains. The hospital facilities run on single- phase 220V/50Hz. There are virtually no power outages. Outages occur for about 10- 20 minutes only in the rainy season. The hospital has a small emergency generator.			
2	Water supply facilities	City water is used A nump is provided to supply water to the algorithm.			
	Toilets	The hospital is actuined with flush type tailets			
4	1 UIICIS	The hospital is equipped with factor tank time treatment equipment			
3	facilities	The hospital is equipped with septic tank-type treatment equipment.			
6	Public sewerage system	There is no sewerage system.			
7	Refuse and waste disposal	There is a refuse collection point and refuse is sorted for collection. There is no			
		incinerator and the refuse is taken away as general waste. Refuse with a risk of			
		contamination is buried without incineration.			

No	Department	Item of aquinment	Current state	Pomerka
1	Department			Remarks
I	Emergency room	Patient Bed	6 (2013)	Government budget
		Bedside Monitor	4 (2013)	Government budget
		Defibrillator		
		Suction Unit	1 (2014)	Government budget
		ECG		
		Ambulance	2 (2013)	Government budget, DP
2	ICU	Patient Bed	4 (2014)	Government budget
		Bedside Monitor	4 (2014)	Government budget
		Ventilator	3 (2014)	Government budget
		Phototherapy		
		Defibrillator	2 (2013)	Government budget
3	МСН	Fetal Doppler	1 (2015)	Government budget
		Ultrasound Monitor	3 (2010/2014/2015)	Government budget
		Phototherapy	4 (2012)	Government budget
4	Delivery room	Delivery Table	2 (2011)	Developing Partner
		Suction Unit	1 (2011)	Developing Partner
		Ultrasound Monitor	1 (2012)	Developing Partner
		Fatal Monitor	4 (2010/2015)	Developing Partner
5	Operation theater	Operation Table	2 (2014)	Developing Partner
	_	Electric Scalpel	2 (2014)	Developing Partner
		Operation Light	2 (2014)	Developing Partner
		Anesthesia Unit	2 (2014)	Developing Partner
6	Diagnostic imaging room	General X-Ray Unit	1 (2011)	Hospital budget
		Mobile X-Ray Unit	1 (1993)	Government budget
		СТ		
		MRI		
7	Examination room	Blood Cell Counter	3 (2014)	Government budget
		Chemical Analyzer	2 (2014)	Hospital budget
		Centrifuge	2 (2001)	Developing Partner aid
		Autoclave	4 (2013)	Developing Partner aid
		Microscope	3 (2000)	
		Sterilizer	1 (2013)	Developing Partner aid
8	Dentistry treatment room	Dental Chair		
	-	Dental X-Ray Unit		

Table	Installation State of Salavan Provincial Hospital Health Care Equipment
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Table Issues and Problems of Salavan District Hospital

Item	Description
Facilities	Although the buildings are 35 years old, the rooms are clean and tidy and do not give the
	impression of being old.
Equipment	The main health care equipment was upgraded from 2010 through 2015 and nothing seems to be
	lacking. However, the X-ray unit was installed in 2011, and it is a film-type unit. Therefore, there
	is concern about the film supply. Early transition to digitalization is desired.

Photos of Current State of Salavan Provincial Hospital

			PUELEN			
Front road and hos gate	spital	View of	hospital from gate	Delivery room	Infant warmer	Automatic blood cell counter
Centrifuge	Op th	eration leater	Ultrasound diagnostic equipment	X-ray unit	Messy temporary waste dump	Wastewater treatment septic tank

(2) Ta-Oy District Hospital (District code: 14-02)

Ta-Oy District Hospital is a 15-bed Type A district hospital situated about 86km (distance by road) northnortheast of Salavan City and 50m south of Route 15B. The facilities were built in 2004 by the American Veterans Association (indicated simply as USA).

No	Item	Description					
1	Location, etc.	Ban Tedsaban, Ta-Oy District, Salavan Province					
		(Neighboring ma	ain road) Route	15A			
		(Phone no.) 030-	-9808922/ 020-	5669-5065 (Dr. Kha	amphone)		
	Improvement projects	None (and none	planned)	× •	• •		
	currently underway with	,	1 /				
	Developing Partner aid						
	Hospital motto	None					
2	Organization chart						
	C						
				Director			
				Deputy Director			
		Ir	terior	Admin+Planning+Finance	544	sq	
		-	1 staff	2 staffs		2 staffs	
		E	denor	Рлатису	Deit	very	
			1 staff	2 staffs		1 staff	
		Delive	ry/Gyneco	Laboratory	2004	drew	
		-		1 staff		2 statts	
			YEs	Echo/X-ray	Tuber	culears	
			HINCALT.	Reception/OPD		1	
						1 staff	
				Toomice of give the g		incolling incolling in the	
		2 staffs	2 staffs 2 staffs	s 2 staffs 2 sta	iffs 2 staffs	2 staffs 2 staffs	
3	Area & population	17 out of 149 vil	lages (9 health	centers cover the re	maining 132 villa	ges), population	
	covered	4,658					
4	Higher level referral	Salavan Provinc	ial Hospital (ap	prox. 86km by fully	paved road)		
	hospital		0.00.10.00/1	2 00 16 20			
5	Outpatient hours	Monday – Friday	y, 8:00-12:00/1	3:00-16:30			
6	Areas of treatment	Emergency care	, internal medic	ine, surgery, OBGY	, pediatrics, denti	stry,	
7	Constant in a discontant of the	opntnaimology,	renabilitation	(D11.(1	
/	Supporting departments	Diagnosis, pharr	nacy, laborator	y (Blood transfusion	is and nutrition ar	e also available)	
8	Health care personnel	0 specialists, 4 g	eneral practitio	ners (MD), 2 medic	al assistants (MA)), 10 nurses, 2	
0	No. of body		wives, 4 phann	acists, 2 lab technic	ialis, i delitist, i p	пс	
9	Annual number of	15)12	2012/2014		2014/2015	
10	outpatients	7.011	/15	0.610		0.591	
	(persons/year)	7,91		9,019		9,381	
	Reason for outpatient	No 1	No 2	No 3	No 4	No 5	
	visit $(2013/2014)$		Gastralgia	Pneumonia	Diarrhea (641)	Common Cold	
	(1512) (2015) (2011)		(733)	(633)	Diamica (011)	(453)	
11	Annual number of	2012/20)13	2013/2014		2014/2015	
	emergency patients		,10	101		125	
	(persons/year)						
	Reason for emergency	No.1	No.2	No.3	No.4	No.5	
	visit (2013/2014)	Accident (00)	Fall down				
		Accident (99)	from tree (2)				
12	Annual number of	2012/20)13	2013/2014		2014/2015	
	referrals to higher level	122		214		72	
	hospital (persons/year)						
	Reason for referral	No.1		No.2		No.3	
	(2013/2014)	Delive	ry	Appendicitis Pa	ain		
13	Annual number of births	2012/20	013	2013/2014		2014/2015	
	(births/year)	110		146	1	122	

Table Current State of Ta-Oy District Hospital Management Structure, Health Care Services and Facilities

	No. of perinatal deaths (persons/year)	0 (2013/2014)						
14	Annual number of	2012/20	2013/2014				2014/2015	
	hospitalizations (persons/year)	900		1	1,219			984
	Total length of hospitalization (days/year)	2,738	3	3,708			2,444	
	Average length of hospitalization (days/person)	3.04		3.04			2.48	
	Bed occupancy (%)	50		1	68			45
	Reason for hospitalization	No.1	No.2	No	o.3	N	0.4	No.5
	(2013/2014)	Pneumonia		Gastı	ralgia	Dia	rrhea	
	No. of patient deaths	7 (2013/2014)		······································				
	(persons/year)	, , ,						
15	Annual number of	Surge	ry	OBGY			Other	
	operations (cases/year) (2013/2014)	6		0				
16	Annual number of	Ultrasound		X-ray CT		СТ	MRI	
	diagnoses (cases/year) (2013/2014)	0						
17	Annual number of tests	Blood		Urine		Stool		Other
	(tests/year) (2013/2014)	4,220		15 43		43		
18	Annual number of blood transfusions (cases/year)	0 (2013/2014)						
19	No. of referral patients	Referred fi	hospital Ref			ferred from a HC		
	accepted (persons/year) (2013/2014)					No reco	rd	
20	Collaboration with community health care services	None						

Table	Current State of Ta-Oy District Hospital Facilities and Infrastructure

No	Item	Description
1	1 Condition of site and building Site area: Approx. 0.7 ha (estimated from existing fence and descriptions be Existing buildings: [Main building] Single-story. Includes emergency dept dept., laboratory, operation theater & sterilization, pharmacy, delivery room, 15-bed ward, etc. (Completed in 2004) [Saymai House] Two-story. Accommodation for relatives of e mothers [District Health Office] Single-story [Other incidental facilities] Storage	
		Neighboring Main Road: National Road - Route 15A Gate Hospital Ward District Health Sorage Office Dormtory for personner
		Ta-Oy District Hospital Estimated Total Land Area: Approx. 0.7 ha <u>100m</u> Source: Created by Survey Team from simple surveying

2	Electric power supply	Electricity is supplied from the public power mains running alongside the front road of the hospital. The hospital facilities run on single-phase 220V/50Hz. Power outages last less than 2 hours. The hospital has no emergency generator.
3	Water supply facilities	City water is used. (The village distributes spring water.) Well water and water from a neighboring pond are also used. (There are serious water shortages in the dry season. The water supply is frequently cut off, sometimes for a few days.) It is not known how much water is used. The hospital is equipped with a water tank (approx. 10 tons) and elevated tank (10 tons). (No chlorine sterilization or filtration)
4	Toilets	Flush toilets are used. (The water for flushing is hand-pumped.)
5	Sewage treatment facilities	There is a sewage septic tank.
6	Public sewerage system	There is no sewerage system. Wastewater is treated in an infiltration basin.
7	Refuse and waste disposal	There is a refuse collection point and refuse is sorted for collection. There is no incinerator. There is no public collection service for general waste. It is not known how waste with a risk of contamination is disposed of.

Table Installation State of Ta-Oy District Hospital Health Care Equipment

No	Department	Item of equipment	Current state	Remarks
1	Emergency	Patient Bed	1 (the year of procurement is not known)	
	room	Bedside Monitor		
		Defibrillator		
		Suction Unit		
		ECG		
		Ambulance	1 (2014)	
2	ICU	Patient Bed		
		Bedside Monitor		
		Ventilator		
		Phototherapy		
		Defibrillator		
3	MCH	Fetal Doppler	1 (2015)	
		Ultrasound Monitor	1 (2015)	
		Phototherapy	1 (2015)	
4	Delivery	Delivery Table	2 (the year of procurement is not known)	
	room	Suction Unit	1 (the year of procurement is not known)	
		Ultrasound Monitor		
		Oxygen Generator	1 (2014)	
5	Operation	Operation Table	1 (2008)	
	theater	Electric Scalpel	2 (1 was procured in 2013, the other is not known)	
		Operation Light		
		Anesthesia Unit		
		Ventilator		
		Defibrillator		
		Suction Pump	2 (1 was procured in 2013, the other is not known)	
6	Diagnostic	General X-Ray Unit		
	imaging	Mobile X-Ray Unit	1 (the year of procurement is not known)	
	room	СТ		
		MRI		
7	Examination	Blood Cell Counter	1 (2015)	
	room	Chemical Analyzer	1 (2014)	
		Centrifuge	1 (2015)	
		Autoclave	2 (2008, 2014)	Outside the examination room
		Microscope	1 (2012)	
		Sterilizer (high	1 (2014)	Outside the examination
		pressure/steam)		room
		Hemoglobin analyzer	1 (2015)	
		Oven	1 (2013)	Outside the examination room
8	Dentistry	Dental Chair	1 (2014)	
	treatment	Dental X-Ray Unit		

Table Issues and Problems of Ta-Oy District Hospital
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Item	Description
Facilities	The main building is equipped with the necessary rooms for a Type A district hospital, but the
	layout lacks coherence and is not considered user-friendly for patients or carers. It looks very
	disorderly and as a result it also gives the impression of not being very clean. There are severe
	water shortages in the dry season and it is necessary to secure a stable water supply from a deep
	well. The hospital should also be equipped with an emergency generator.
Equipment	The equipment cannot be described as adequate even for a district hospital. In particular, the
	sterilizer is installed in semi-open space and is operated in the worst environment.

Photos of Current State of Ta-Oy District Hospital

17 12 20						
Front road (50m to Route 15)	View of gate an	d hospital	MC	СН	De	elivery room
Operation theater	Mobile X-ray unit	Examina	ation room	Dentistry tre room	atment	Pharmacy
Saymai House	City water met	er P	ower mains			

(3) Toumlan District Hospital (District code: 14-03)

Toumlan District Hospital is a 15-bed Type B district hospital situated 200m east of Route 1G and about 54km (distance by road) north of Salavan. Built in 1988, the outpatient building, obstetrics & gynecology building and inpatient building are scattered across the premises and all give the impression of being cramped. The hospital ward was revamped in FY2014/2015 and is just big enough for the regulation 15 beds. The dental chair, electrocardiograph (ECG), bedside monitor and other equipment were provided by the provincial health office in recent years, but the director's excuse for the equipment not being utilized effectively was that no dentist had been assigned to the hospital and no training had been provided for the other equipment, so the equipment remained packed in its boxes. An overview of the hospital is shown below.

Table	Current State of Toumlan District Hospital Management Structure, Health Care Services and
	Facilities

No	Item	Description
1	Location, etc.	Samakkhysay Village, Toumlan District, Salavan Province
		(Neighboring main road) Route 23, turn east onto a branch road for approx. 100m
		(Phone no.) No land line 020 5509 7161 (Director)
	Improvement projects	None (and none planned)
	currently underway with	
Developing Partner aid		
	Hospital motto	None

2	Organization chart			Dire	actor			
			Deputy Director	Admin	istration	Deputy Directo	r	
				Admin				
				Nurse	e chief			
		Surgery ER	Obstetrics/Gune		PD Pediatry	Pharmacy	Laboratory TB	
		2 staffs 2 staffs	cology	2 staffs 2 staf	fs 2 staffs	2 staffs	2 staff 1 staff	
			2 starts					
3	Area & population	71 villages, popu	71 villages, population 28,754					
	covered	~ . ~ .						
4	Higher level referral	Salavan Provincial Hospital (approx. 54km by fully paved road)						
5	hospital	Monday Friday	7.20 11.20	/12.20 16.00				
6	Areas of treatment	OBGY outpatie	y, 7.30-11.30/ nt department	(including en	nergency care	internal i	medicine small-	
0	rieds of treatment	scale surgery and	d pediatrics)	(including ch	liergency care,		incurence, sinan-	
7	Supporting departments	Pharmacy, labor	atory					
8	Health care personnel	0 specialists, ger	neral practitio	ners (MD), 3 1	medical assistar	nts (MA)	, 5 nurses, 3	
		nurse/nurse mid	wives, 4 phar	macists, 3 lab	technicians, 4 l	PHC		
9	No. of beds	15			2011		0.01.1/0.01.5	
10	Annual number of	2012/20)13	2013	3/2014		2014/2015	
	(nersons/year)			-			4,040	
	Reason for outpatient	No 1	No 2	No 3	1	No 4	No 5	
	visit (2014/2015)	Pneumonia:	Influenza:	Gastrointes	stinal Tonsi	llitis:	Neuralgia: 154	
	· · · · ·	540	398	Disease:	369		0	
				385		-		
11	Annual number of	2012/2013		2013/2014			2014/2015	
	emergency patients							
	(persons/year) Peason for emergency	No 1	No 2	No	2	No 4	No 5	
	visit (2014/2015)				5			
12	Annual number of	2012/20)13	2013	3/2014		2014/2015	
	referrals to higher level						83	
	hospital (persons/year)							
	Reason for referral	No.1	•.•	N	0.2	-	No.3	
12	(2013/2014)	Appendi	citis	2013/2014			2014/2015	
13	(hirths/year)	2012/20)15	2013/2014			2014/2013	
	No. of perinatal deaths	0 (2013/2014)				_	501	
	(persons/year)	0 (2015/2011)						
14	Annual number of	2012/20)13	2013/2014		2014/2015		
	hospitalizations			674		1 366		
	(persons/year)			0/4		1,500		
	Total length of			1,208		2,356		
	(days/year)							
	Average length of			1	.79		1.72	
	hospitalization			-			1.72	
	(days/person)							
	Bed occupancy (%)				33		43	
	Reason for hospitalization	No.1	No.2	No.	3 1	No.4	No.5	
	(2013/2014)	Malaria: 174	Diarrhea: 17	72 Pneum	onia: Gasti	ointestin	Influenza: 48	
	No. of notiont dooths	6 (2014/2015)		134	al dis	ease: 103)	
	(persons/vear)	0 (2014/2013)						
15	Annual number of	Surge	ïV	OBGY			Other	
	operations (cases/year)							
	(2013/2014)							
16	Annual number of	Ultrasound		X-ray CT			MRI	
	diagnoses (cases/year)	947						
17	(2013/2014) Annual number of tests	Rlood		Urine	Stool		Other	
1/	(tests/year) (2013/2014)	2,291					202	

18	Annual number of blood	0 (2013/2014)	
	transfusions (cases/year)		
19	No. of referral patients	Referred from another hospital	Referred from a HC
	accepted (persons/year)		10
	(2013/2014)		
20	Collaboration with	Maternal, neonatal and child health activities	S
	community health care		
	services		

Tahla	Current State of	Toumlan District	Hospital Facilities	and Infrastructure
Table	Sufferit State Of	Tournan District	i lospitar i acintico	

No	Item	Description		
1	Condition of site and building	 Site area: Approx. 2.0ha Existing building: Total area: 670m² [Three treatment-related buildings] Single-story. Turn onto branch road and approx. 200m from sign at entrance. Facing is the outpatient building (including lab and pharmacy) with the OBGY building (delivery room, ultrasound room, MCH) at right rear and the hospital ward behind the outpatient building. [Administration building] Single-story. Located next to the OBGY building. Includes the director's office and administration office. [District Health Office and Saymai House] The district health office is a single-story building on the left of the outpatient building and to the left of that is the two-story Saymai House. [Other incidental facilities] Garage and storage 		
		To National Road - Route 23 (approx. 200m) Gate Toumlan District Hospital Total Land Area: 2 ha 0 10m 50m 100m 100m 100m 100m 100m 100m		
2	Electric power supply	Electricity is supplied from the public power mains running alongside the front road of the hospital. There are virtually no power outages. The hospital has no emergency generator.		
3	Water supply facilities	City water and well water are used. (No drought was observed.) The hospital uses 2.0 tons of water per day. There are no water tanks, only an elevated tank (with no chlorine sterilization or filtration).		
4	Toilets	Flush toilets are used. (The water for flushing is hand-pumped.)		
5	Sewage treatment facilities	None		
6	Public sewerage system	There is no sewage system. Wastewater is discharged into a neighboring forest.		
7	Refuse and waste disposal	There is a refuse collection point and refuse is sorted for collection. The hospital has no incinerator. There is no public collection service for general waste. Waste with a risk of contamination is incinerated outside.		

Table	Installation State of	Toumlan District Hos	nital Health Care F	auinment
Table		Tournan District 103	pital i l'oalti l'oalti \Box	quipinent

No	Department	Item of equipment	Current state	Remarks
1	Emergency room	Patient Bed		
		Bedside Monitor	1 (2015, not unpacked)	
		Defibrillator		
		Suction Unit	3 (2014, 2015)	1, not unpacked
		ECG		

		Ambulance	1 (2014)	
		Autoclave	1 (2011)	Located in nurses station in
		Sterilizer	1 (2013)	-hospital ward. Autoclave was
		Oxygen Pump	1 (2011)	provided with DP aid
2	ICU	Patient Bed		
		Bedside Monitor		
		Ventilator		
		Phototherapy		
		Defibrillator		
3	МСН	Fetal Doppler	1 (2011)	
		Ultrasound Monitor		
		Phototherapy		
		Autoclave	1 (2008)	Developing Partner aid
		Sterilizer	1 (Not known)	
4	Delivery room	Delivery Table	1 (Before 1995)	
	2	Suction Unit	1 (2013)	
		Ultrasound Monitor		
		Sterilizer	1 (2012)	Developing Partner aid (JICA)
		Fetal monitor	1 (2015)	
		Reanimation Table	1 (Before 1995)	
5	Operation theater	Operation Table		
	_	Electric Scalpel		
		Operation Light		
		Anesthesia Unit		
		Ventilator		
		Defibrillator		
6	Diagnostic	General X-Ray Unit		
	imaging room	Mobile X-Ray Unit		
		СТ		
		MRI		
		Ultrasound Monitor	1 (2005)	
		ECG	1 (2014, not unpacked)	
7	Examination	Blood Cell Counter	1 (2014)	
	room	Chemical Analyzer		
		Centrifuge	2 (2010)	
		Autoclave		
		Microscope	1 (2014)	
		Sterilizer		
8	Dentistry	Dental Chair	1 (2015)	No dentist
	treatment room	Dental X-Ray Unit		

Table Issues and Problems of Toumlan District Hospital

Item	Description				
Facilities	No dentistry treatment room (or equipment) is planned so the hospital does not meet the standards for a Type B district hospital. Built in 1988, the hospital facilities are significantly dilapidated and come across as cramped even just in terms of the services currently provided by each building. The site is extensive and there is space for more buildings. The hospital should be equipped with an emergency generator.				
Equipment	Some new equipment related to maternal, neonatal and child health has been installed, but the delivery table and resuscitation table have been in use for over 20 years. New equipment for departments such as the examination and emergency rooms has been provided by the provincial health office, as with other district hospitals in Salavan Province, but the bedside monitor and ECG have been stored away unused. A dental chair has been provided but no dentist has been assigned and the chair has been left sitting in the outpatient diagnosis room. Thus the hospital fails to meet the standards for a Type B district hospital.				





(4) Lakhonepheng District Hospital (District code: 14-04)

Lakhonepheng District Hospital is a 10-bed Type B district hospital situated about 120km (distance by road) north of Pakse and 300m east of Route 13. It is the westernmost district hospital in Salavan Province. The district hospital facilities (not including the equipment) were completed in 2010 with assistance from the Government of Japan (grant aid for grassroots project). Despite its fairly small size for a district hospital with a total floor area of approximately 450m², it has abundant human resources with 1 (volunteer) specialist, 8 general practitioners (MD) and 8 registered nurses providing health care services. The female deputy director, a physiotherapist, was the main respondent to the interview survey. The hospital's current headache is the provision of equipment not immediately required by the Salavan Provincial Health Office. (Even though the hospital has no dentist, a dental chair was suddenly delivered. The chair is in storage still packed in its wooden box.) An outline of the hospital is shown below.

Table Current State of Lakhonepheng District Hospital Management Structure, Health Care Services and Facilities

No	Item	Description						
1	Location, etc.	Lakhonesy Village, Lakhonpheng District, Salayan Province						
		(Neighboring m	ain road) Rout	te 23, turn	east onto a	branch	road for a	pprox. 300m
		(Phone no.) 030	9362 961/020	9952 832	3			
	Improvement projects	None (and none	planned)					
	currently underway with		r ·····					
	Developing Partner aid							
	Hospital motto	None						
2	Organization chart							
_	8							
			Director					
				Dep	uty Director 1			
				Den	uty Director 2			
			1					
					, _			
		Internal Medicine	MCH O	bstetrics/Gynecol gy		OPD	Pharmacy	/ Outpatient
		3 Staffs	3 Staffs	3 Staffs	2	Staffs	5 Staffs	4 Staffs
		D	iagnostic Re	ceptionist			Infection	Pediatrics
			maging	"	Administrative, I Financal & Stati	stic	0.01.0	4.01.17
		4 S	uans 4 St	ans	1 Staffa		∠ outrs	4 JUATTS
					4 Stails			
3	Area & population	117 villages po	nulation 12 75	7				
5	covered	117 vinages, po	pulution +3,73	,				
4	Higher level referral	Champasak Prov	vincial Hospit	al (annrox	120km by	fully p	aved road	
т	hospital	Champasak 110	vincial mospia	ui (uppiox.	120km 0y	runy pe	ived folde)	
5	Outpatient hours	Monday – Frida	Monday - Friday 8:00-12:00/13:00-16:00					
6	Areas of treatment	Emergency care	Emergency care internal medicine OBGV nediatrics					
7	Supporting departments	Pharmacy labor	atory (In addi	tion there	is a minor	surgery	room)	
8	Health care personnel	1 (volunteer) sp	1 (volunteer) specialist & general practitioners (MD) & purses 5 purse/purse					
0	ficulti cure personner	midwives 4 nha	midwives A pharmacists A lab technicians 1 physiotherapist					
9	No of beds	10			no, i pilyoi	ounerup	lot .	
10	Annual number of	2012/2	013	2	013/2014			2014/2015
10	outpatients			_	5 732			5 756
	(persons/year)				0,701			0,700
	Reason for outpatient	No.1	No.2	No.3		N	l	No.5
	visit (2013/2014)	Pneumonia:	Gastrointest	inal Ma	laria: 137	Tonsi	litis:	Diarrhea: 256
		1169	: 435			467		
11	Annual number of	2012/2	013	2	013/2014	•		2014/2015
	emergency patients							
	(persons/year)							
	Reason for emergency	No.1	No.2]	No.3	N	Jo.4	No.5
	visit (2013/2014)							
12	Annual number of	2012/2	013	2	013/2014			2014/2015
	referrals to higher level				4			3
	hospital (persons/year)							
	Reason for referral	No.1			No.2			No.3
	(2013/2014)	High-risk d	elivery	Serious	injury by t	raffic		
		Ingii-Iisk C	lenvery		accident			
13	Annual number of births	2012/2	013	2	013/2014			2014/2015
	(births/year)				362			416
14	Annual number of	2012/2	013	2	013/2014			2014/2015
	hospitalizations				674			786
	(persons/year)						ļ	1.011
	Total length of				1,208			1,811
	hospitalization							
	(aays/year)				1.70		 	2.20
	Average length of				1.79			2.30
	nospitalization							
	(uays/person)				22		ļ	50
	Bed occupancy (%)				55		l	50

	Reason for hospitalization	No.1	No.1 No.2		No.4	No.5	
	(2013/2014)	Gastro-internal: 28	3 Tonsillitis: 55 Diarrhea: 6.		Pneumonia: 28		
	No. of patient deaths (persons/year)	2 (2013/2014)					
15	Annual number of	Surgery		OBGY	Oth	er	
	operations (cases/year) (2013/2014)	151 (minor surge	ry)	416		-	
16	Annual number of	Ultrasound	X-ray	C	[MRI	
	diagnoses (cases/year) (2013/2014)	864			-		
17	Annual number of tests	Blood	Urine	Sto	ol (Other	
	(tests/year) (2013/2014)	864		47	7	157	
18	Annual number of blood transfusions (cases/year)	0 (2013/2014)					
19	No. of referral patients	Referred from a	nother hospital		Referred from a H	С	
	accepted (persons/year) (2013/2014)						
20	Collaboration with community health care services	Maternal, neonatal and child health activities					

Table Current State of Lakhonepheng District Hospital Facilities and Infrastructure

No	Item	Description				
1	Condition of site and building	Site area: Approx. 0.7 ha (estimated from existing fence and descriptions by staff) Existing building: [Main building] Single-story, L-shaped layout. Includes emergency room, outpatient department, laboratory, pharmacy, ultrasound room, delivery room and 10-bed ward (2010, grant aid for grassroots project) [Saymai House] Single-story. Accommodation for relatives of expectant mothers [Other incidental facilities] Garage, canteen Elevated Water Tank/ Well City water volume meter volume meter volume meter volume meter volume meter volume meter volume meter volume meter volume meter volume field Lakhonepheng District Hospital Estimated Total Land Area: 0.7 ha				
		Source: Created by Survey Team from simple surveying				
2	Electric power supply	Electricity is supplied from the public power mains running alongside the front road of the hospital. The hospital facilities run on single-phase 220V/50Hz. There are virtually no power outages. The hospital has a small emergency generator.				
3	Water supply facilities	City water is available, but mainly well water is used. (No drought was observed.) The hospital uses 3.0 tons of water per day. There is no water tank, only an elevated tank (2.5 tons) (with no chlorine sterilization or filtration).				
4	Toilets	Flush toilets are used. (The water for flushing is hand-pumped.)				
5	Sewage treatment facilities	None				

6	Public sewerage system	There is no sewerage system. Wastewater is stored in a storage tank which is
		periodically emptied by vacuum truck.
7	Refuse and waste disposal	There is a refuse collection point and refuse is sorted for collection. There is an
	_	incinerator (the incinerating temperature is not known, but it can handle 5kg/day).
		There is no public collection service for general waste. Waste with a risk of
		contamination is disposed of without incineration.

No	Department	Item of equipment	Current state	Remarks
1	Emergency room	Patient Bed	1 (2012)	
		Bedside Monitor	1 (2015)	
		Defibrillator		
		Suction Unit	1 (2013)	
		ECG	1 (2012)	
		Ambulance	1 (2014)	
		Oxygen Pump	2 (2013)	
2	ICU	Patient Bed		
		Bedside Monitor		
		Ventilator		
		Phototherapy		
		Defibrillator		
3	МСН	Fetal Doppler	1 (2011)	
		Ultrasound Monitor		
		Phototherapy		
4	Delivery room	Delivery Table	2 (2003, 2013)	
		Suction Unit	1 (2011)	DP aid
		Ultrasound Monitor		
		Autoclave	1 (2013)	······
		Reanimation Table	1 (2011)	DP aid
		Fetal Doppler	1 (2011)	DP aid
5	Operation theater	Operation Table		
_	r	Electric Scalpel		
		Operation Light		
		Anesthesia Unit		
		Ventilator		
		Defibrillator		
6	Diagnostic imaging room	General X-Ray Unit		
-		Mobile X-Ray Unit		
		СТ		
		MRI		
		Ultrasound Monitor	1 (2012)	DP aid
		Examination Table	1 (2011)	DP aid
7	Examination room	Blood Cell Counter	1 (2012)	
		Chemical Analyzer	1 (2013)	
		Centrifuge	1 (2012)	
		Autoclave		
		Microscope	1 (2006)	DP aid
		Sterilizer		21 114
8	Dentistry treatment room	Dental Chair	1 (2015 not unpacked)	No dentist
Ŭ		Dental X-Ray Unit		

Table Installation State of Lakhonepheng District Hospital Health Care Equipment

Table Issues and Problems of Lakhonepheng District Hospital

Item	Description				
Facilities	Completed in 2010 with grant aid for grassroots project, the hospital facilities seem extremely				
	robust and the workmanship close to that obtained with general grant aid, while maintenance and				
	cleaning also appear to be meticulously carried out. Inventiveness is apparent in terms of				
	operation, with the ordinary consulting room used as an emergency treatment room. However, the				
	number of inpatients that can be accepted is 10 (two 4-bed rooms and one 2-bed room), thus the				
	hospital does not satisfy the standards for a Type B district hospital (15 beds).				
Equipment	Since the hospital opened in 2010, it has secured most of the equipment for emergency care and				
	some of the equipment for delivery with the provincial budget, while efforts to acquire equipment				
	for delivery, echocardiography and equipment of the examination room from DPs are ongoing.				

Photos of Current State of Lakhonepheng District Hospital



(5) Vapi District Hospital (District code: 14-05)

Vapi District Hospital is a 30-bed Type B district hospital located on Route 15A about 45km (distance by road) west of Salavan. The hospital recently moved from another location in the village in December 2015. Since the new hospital was built in the new location on Route 15, the number of patients has increased and the hospital was bustling when the Survey Team visited. A new building was erected accompanying the relocation and new equipment was installed, including a mobile X-ray unit, electrocardiograph (ECG) and ventilator. As with other district hospitals in Salavan Province, some of the test-related and emergency care-related equipment was replaced from 2013 to 2014, but in 2015 more equipment than was necessary was delivered and the lack of health care personnel in relation to the excessive supply of equipment and the lack of training in operation of the new equipment are a source of concern for the director and deputy directors (the only two general practitioners in the hospital). On the other hand, there is a shortage of tables, chairs and other items for sorting and tidying, and boxes still containing equipment were being used as tables in the examination room. An overview of the hospital is shown below.

No	Item	Description					
1	Location, etc.	Phoumsavanh V	illage, Vapi Di	strict, Salavan Prov	vince		
		(Neighboring ma	ain road) Route	15			
		(Phone no.) 030	573363/020 91	32 7412			
	Improvement projects	None (and none	planned)				
	currently underway with						
	Developing Partner aid						
	Hospital motto	None					
2	Organization chart						
				Dire	ector		
				<u></u>			
			Deputy Di	rector		D	enuty Director
			DeputyD				
		OPD/ ER	Internal O Medicine O	Obstetrics/ MCH	Pedia	trics	Administration
		3 staffs	3 staffs 3	staffs 4 staffs	3 staff	5	
		Laboratory		Dantal		Paratinatin	Einenen
		Laboratory	Indise		icy	Statistic	Finance
		3 staffs		staff 4 staffs	2 staff	s	
		Echo	ТВ	Ophtamology Dermato	logy	X-Ray	Equipment
		2staffs	2staffs 1	staff 0 staff	0 satff		1 staff
						_	Cashier
			HC Nasiate	HC Saphat HC Kho	nsai HC	Huoykhon	1 staff
			ine Nasiae ine Sapiat ine Kilolisai ine ruoykiloli				
3	Area & population	57 villages, population 38,401					
	covered						
4	Higher level referral	Salavan Provinc	Salavan Provincial Hospital (approx. 45km by fully paved road)				
	hospital						
5	Outpatient hours	Monday – Frida	y, 8:00-12:00/1	3:30-16:00			
6	Areas of treatment	Internal medicin	e, OBGY, pedi	atrics			
/	Supporting departments	room and an IC	atory (in additi	on, there is a minor	surgery i	room and	radiography
8	Health care personnel	0 (volunteer) spe	cialists 5 gene	ar waru) vral practitioners (N	(D) 14 m	edical as	sistants (MA) 3
0	ficatili care personner	nurses 4 nurse/r	urse midwives	2 nharmacists 21	ab technic	vians 1 d	entist 2 PHC
9	No. of beds	15		, 2 phainacists, 2 i		<i>Julio, 1 u</i>	
10	Annual number of	2012/20	013	2013/2014			2014/2015
	outpatients			10,990		12,595	
	(persons/year)						
	Reason for outpatient	No.1	No.2	No.3	N	0.4	No.5
	visit (2013/2014)	Tonsillitis:	Malaria: 1599	Influenza:	Pneum	onia:	Gastrointestinal
		2400		1322	1130		disease: 845
11	Annual number of	2012/20)13	2013/2014			2014/2015
	(persons/year)						
	Reason for emergency	No 1	No 2	No 3	N	0.4	No 5
	visit $(2013/2014)$	Serious injury	110.2	110.3	IN	. .т	110.5
	Visit (2015/2014)	by traffic	High risk		_		
		accident	delivery				
12	Annual number of	2012/20)13	2013/2014			2014/2015
	referrals to higher level		_	36		· · · ·	28
	hospital (persons/year)						-
	Reason for referral	No.1		No.2			No.3
	(2013/2014)						
13	Annual number of births	2012/20	013	2013/2014			2014/2015
	(births/year)			247			246
	No. of perinatal deaths	0 (2013/2014)					
	(persons/year)		· · · ·		,		
14	Annual number of	2012/20	013	2013/2014			2014/2015
	hospitalizations	1,84	1	1,549			1,676
	(persons/year)	,		y			,

Table Current State of Vapi District Hospital Management Structure, Health Care Services and Facilities

	Total length of			2,294				
	hospitalization							
	(days/year)				1 48			
	hospitalization				1.40			
	(days/person)							
	Red accuracy (%)				12			
	Bed occupancy (76)	 No 1	No 2	L	42 No 2	No 4	 No 5	
	(2012/2014)	INU.1	INU.2	244	N0.5	10.4	IN0.3	
	(2013/2014)	1 $(2012/2014)$	Pneumonia	. 244	Diarrnea: 181		j	
	No. of patient deaths	0 (2013/2014)						
15	Annual number of	Surge	rv.	l	OBGY		Other	
15	operations (cases/year)	5uige	ı y	212				
	(2013/2014)				212			
16	Annual number of	Ultrasound		X-ray	C	<u>г</u>	MRI	
	diagnoses (cases/year) (2013/2014)	921				-		
17	Annual number of tests	Blood		Urine	Sto	ol	Other	
	(tests/year) (2013/2014)	2,986			114			
18	Annual number of blood transfusions (cases/year)	0 (2013/2014)						
19	No. of referral patients	Referred fi	rom another h	ospital		Referred from	m a HC	
	accepted (persons/year)			•				
	(2013/2014)							
20	Collaboration with	Maternal, neona	tal and child h	nealth a	ctivities			
	community health care							
	services							

—		
l able	Current State of Vapi District Hospital Facilities and Infrastructu	re

No	Item	Description					
1	Condition of site and building	Existing buildings: [Main building] The building facing the gate (including the outpatient department, laboratory, pharmacy, small operation theater, radiography room, ultrasound room, specimen laboratory, office, etc.) and the building behind (including the 15-bed ward, ICU, delivery room, MCH room, small operation theater, etc.) are connected by a corridor (built in 2014) [Other incidental facilities] Kitchen, storage (currently undergoing redecoration)					
		National Road					
		Gate Gate OPD/Operation/ Dentistry/X-ray/ Lab/Echo/Pharmacy Icu/CH/Delivery ICU/Ward Vapi District Hospital Total Land Area: 1.5 ha 0 10m 5om 10m 5om 10m 5om 10m 5om 10m 10					
		surveying)					
2	Electric power supply	Electricity is supplied from the public power mains running alongside the road outside the hospital (three-phase 220V/50Hz). Most of the equipment runs on three-phase					

		220V/50Hz. There are virtually no power outages. The hospital has no emergency
		generator.
3	Water supply facilities	Well water is used (No drought was observed). The amount of water used is not
		known. There is no water tank, only a 2.0-ton elevated tank (with no chlorine
		sterilization or filtration).
4	Toilets	Flush toilets are used. (The water for flushing is hand-pumped.)
5	Sewage treatment	None
	facilities	
6	Public sewerage system	There is no sewerage system. Wastewater is stored in a storage tank which is emptied
		periodically by vacuum truck.
7	Refuse and waste disposal	There is a refuse collection point and refuse is sorted for collection. The hospital has
		no incinerator. There is no public collection service for general waste. Waste with a
		risk of contamination is incinerated outside.

Table Installation State of Vapi District Hospital Health Care Equipment

No	Department	Item of equipment	Current state	Remarks
1	Emergency room-cum-	Patient Bed	2 (2015)	
	ICU	Bedside Monitor	1 (2015)	
	(located in hospital	Defibrillator		
	ward)	Suction Unit	2 (2015)	1 is kept in the hospital ward
		ECG	2 (2015, not unpacked)	
		Oxygen Pump	1 (2015)	
		Ambulance	1 (2015)	
2	ICU	Patient Bed		
		Bedside Monitor		
		Ventilator		
		Phototherapy		
		Defibrillator		
3	MCH	Fetal Doppler	1 (2011)	
		Ultrasound Monitor		
		Phototherapy		
4	Delivery room	Delivery Table	3 (2012, 2015)	2 (2015) are used
		Suction Unit	1 (2011)	For newborns
		Ultrasound Monitor		
		Phototherapy	2 (2015)	
		Fetal Doppler	1 (2014)	
5	Operation theater	Operation Table	3 (2015)	
	(small-scale)	Electric Scalpel		
		Operation Light		
		Anesthesia Unit		
		Ventilator	1 (2015)	
		Defibrillator		
		Suction Unit	1 (2015)	
		Oxygen Pump	2 (2015)	
6	Diagnostic imaging room	General X-Ray Unit		
		Mobile X-Ray Unit	1 (2015, unused)	
		СТ		
		MRI		
		Ultrasound Monitor	2 (2015)	1, not unpacked
7	Examination room	Blood Cell Counter	2 (2012)	
		Chemical Analyzer	2 (2013)	
		Centrifuge	1 (2012)	
		Autoclave	3 (2014, 2015)	
		Microscope	1 (2013)	
		Sterilizer	3 (2007, 2012)	1 provided with DP aid (JICA)
8	Dentistry treatment room	Dental Chair	1 (2015)	
		Dental X-Ray Unit		

Table Issues and Problems of Vapi District Hospital

Item	Description				
Facilities	The hospital just moved to a new location in the village in December 2015 and the facilities are				
	kept in a very clean state. Although it is one building short, it was built in compliance with				
	community hospital standard drawings and is equipped with a room for the X-ray unit, thus				
	meeting the space standards for a Type B district hospital. The hospital is not equipped with an				
	incinerator, so waste including waste with a risk of contamination is incinerated outside in the				
	hospital grounds. The hospital has no emergency generator either.				
Equipment	Following relocation of the hospital, as well as a mobile X-ray unit, emergency care-related and				
	operation-related equipment such as an ventilator, ECG, bedside monitor and suction unit, and				
	specimen test-related equipment such as biochemical blood test equipment were supplied by the				
	provincial health office, but some of the equipment had just been replaced in recent years and it is				
	now in excess supply. Also, even though new equipment has been provided, no training has been				
given and no trained personnel have been assigned (for example, there is no radiologist),					
	equipment has been stored without being used, and the balance between training and assignment of				
	human resources and provision of equipment is an issue.				

Photos of Current State of Vapi District Hospital

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				BA				
Front road (Route	e 15)	Maii	n entrance of hospital	Entrance	lobby	Ambulanc	e	Elevated tank
		33						
ICU in hospital ward	Exami roe	ination om	Biochemical analyzer	Sterilizer stora	etc. in ge	Same as left (ECG)	Same as left (Ultrasound diagnostic equipment)
	3					2		
View of radiograph	y room	View of	f small-scale operat	tion theater	Ven	ilator V	iew of pati	ients room
	- A						. Em	
Delivery table	e	Phot (re	totherapy table esuscitation)	Fetal mo	onitor	Suction unit (unused)	St	terilizer

(6) Khongsedone District Hospital (District code: 14-06)

Khongsedone District Hospital is a 35-bed Type A district hospital located on Route 13 about 60km (distance by road) north of Pakse. The hospital's health care services are provided in two buildings, the main building and the MCH building. Health care equipment was procured for the main building with grant aid from the Government of Japan in 2006. The MCH building, on the other hand, was planned and designed by the United States Pacific Command and was donated in 2005. An overview of the hospital is shown below.

Table Current State of Khongsedone District Hospital Management Structure, Health Care Services and Facilities

No	Item				Description			
1	Location, etc.	Khongnakhone V	Khongnakhone Village Khongsedone District Salavan Province					
_	,,,	(Neighboring main road) Route 13						
		(Phone no.) 034 411 267/020 9989 8667 (Dr. Duangta)						
	Improvement projects	None (and none planned)						
	currently underway with							
	Developing Partner aid							
	Hospital motto	Strengthening of	quick technic	al se	rvice devoted to	people		
2	Organization chart							
					Director			
			Deputy Direc	tor 1	Deput	y Director 2	2	
			Administrati	ve	Internal Medicine	Diar	nostic Imaging	
			Medicince Fu	ind	Outpatient		Pharmacy	
			Finance		Pediatrics		OPD	
					, <u> </u>			
			Health Insurance	Fund 1	Obstetrics/Gyne cology	І	aboratory	
					- <u> </u>			
			Health Insurance	Fund 2	Dental			
3	Area & population	110 villages, population 62,151						
	covered							
4	Higher level referral	Champasak Provi	ncial Hospita	ıl (ap	prox. 60km by f	ully pav	ed road)	
	hospital		0.00.10.0	0 /1 0	00.16.00			
5	Outpatient hours	Monday – Saturd	ay, 8:00-12:0	0/13	:00-16:00	. 1		
6	Areas of treatment	Emergency care,	internal medi	cine,	surgery, OBGY	, pediati	rics, denti	stry
/	Supporting departments	Diagnosis, pharm	acy, laborato	ry	(MD) 14	2		1
8	Health care personnel	2 specialists, 1 ge	neral practiti	oner $2 rol$	(MD), 14 nurses	2 nurse	e/nurse m	idwives, 2 midwife 1 PHC
0	No of beds) technicians,	210	ulologists, i dell	usi, i ci	Jiiiiiuiiity	illiuwile, i fric
10	Annual number of	2012/20	13		2013/2014		,	2014/2015
10	outpatients	13 707	15		0 708			8 9/0
	(persons/year)	15,707),//0			0,740
	Reason for outpatient	No 1	No 2		No 3	N	04	No 5
	visit (2013/2014)	Gastrointestinal	Normal		Pneumonia:	Tonsil	litis:	Malaria: 398
		diseases: 1071	influenza: 8	374	719	468		
11	Annual number of	2012/20	13		2013/2014			2014/2015
	emergency patients]					
	(persons/year)							
	Reason for emergency	No.1	No.2		No.3	N	0.4	No.5
	visit (2013/2014)							
12	Annual number of	2012/20	13		2013/2014			2014/2015
	referrals to higher level	31			116			212
	hospital (persons/year)							
	Reason for referral	No.1			No.2		~	No.3
12	(2013/2014)	Hypertensic	on: 30		Pneumonia: 2	L	Gast	rointestinal: 10
13	Annual number of births	2012/20	13		2013/2014			2014/2015
	(Dirths/year)	732			530			TTT
	No. of perinatal deaths	3 (2013/2014)						
	(persons/year)							
	l							

14	Annual number of	2012/2013		2013/2014		2014/2015		
	hospitalizations	3,782		3	3,038		2,653	
	(persons/year)			- -				
	Total length of	10,18	7	8	,084			7,655
	hospitalization							
	(days/year)							
	Average length of	2.69		2	2.66			2.88
	hospitalization							
	(days/person)							
	Bed occupancy (%)	79			63			60
	Reason for hospitalization	No.1	No.2	No	0.3	1	No.4	No.5
	(2013/2014)	Malaria: 450	Pneumonia	: Gastroir	ntestinal:	Tor	sillitis:	Diarrhea: 115
			200	24	44		181	
	No. of patient deaths	2 (2013/2014)						
	(persons/year)							
15	Annual number of	Surger	ry	OBGY		Other		
	operations (cases/year)	748		737				
	(2013/2014)							
16	Annual number of	Ultrasound		X-ray	(CT		MRI
	diagnoses (cases/year)	1,551		417				
	(2013/2014)							
17	Annual number of tests	Blood		Urine	St	tool		Other
	(tests/year) (2013/2014)	3,656		2	2 146			3,508
18	Annual number of blood	0 (2013/2014)						
	transfusions (cases/year)							
19	No. of referral patients	Referred fr	om another h	ospital		Ret	ferred from	n a HC
	accepted (persons/year)		No data				No dat	a
	(2013/2014)							
20	Collaboration with	Health education	n to combat m	alaria				
	community health care							
	services							

Table	Current State of Khongsedone District Hospital Facilities and Infrastructure

No	Item	Description
1	Condition of site and building	Site area: Approx. 3.5 ha (estimated from existing fence and descriptions by staff) Existing buildings: [Main building] Single-story with a cross-shaped layout. Includes emergency room, outpatient department, laboratory, ultrasound room, dentistry department, radiography room, operation theater and ward (35 beds) [MCH building] Single-story building donated by the United States Pacific Command in 2005. Includes MCH, delivery room, pediatrics department and lecture hall [Saymai House] Single-story. Accommodation facilities for relatives of expectant mothers [District Health Office] Single-story. Located at the southern edge of the site [Other incidental facilities] Garage, laundry, arbor

		Image: control of the server in the server
2	Electric power supply	Electricity is supplied from the public power mains running alongside the road outside the hospital. The transformer capacity is 100 KVA. The hospital facilities run on single-phase 220V/50Hz. Power outages occur about 10 times a month in the rainy season, but last for less than 2 hours per time. The hospital is equipped with a small emergency generator (15KVA) which covers only the operation theater.
3	Water supply facilities	City water is used. (No water stoppages were observed.) The hospital uses 3 tons of water per day. There is no water tank, only an elevated tank (6 tons) (with no chlorine sterilization or filtration).
4	Toilets	Flush toilets
5	Sewage treatment facilities	None
6	Public sewerage system	There is no sewerage system. Sewage is collected in a storage tank which is emptied periodically by vacuum. Miscellaneous wastewater is discharged into a nearby stream.
7	Refuse and waste disposal	There is a refuse collection station and refuse is sorted and collected. The hospital has no incinerator. There is a public collection service for general waste, but it is not used. Waste with a risk of contamination is dumped outside the site.

Table Installation State of Khongsedone District Hospital Health Care Equipment

No	Department	Item of equipment	Current state	Remarks
1	Emergency room	Patient Bed	3 (2006)	Japanese aid
		Bedside Monitor		
		Defibrillator		
		Suction Unit	1 (2006)	Japanese aid
		ECG		
		Ambulance	1 (2000)	DP aid
		Autoclave	1 (2015)	
		Lamp	1 (the year of purchase is not known)	
2	ICU	Patient Bed	2 (2015)	
		Bedside Monitor	1 (the year of purchase is not known)	
		Ventilator		
		Phototherapy		
		Defibrillator		
		Oxygen Pump	1 (2014)	
		Suction Unit	1 (the year of purchase is not known)	DP aid
3	МСН	Fetal Doppler	1 (2013)	
		Ultrasound Monitor		
		Phototherapy		

4	Delivery room	Delivery Table	3 (2006)	Japanese aid
		Suction Unit	2 (2006)	Japanese aid
		Ultrasound Monitor	1 (2014)	DP aid
		Reanimation Table	3 (2009, 2012)	DP aid
		Autoclave	1 (2015)	
5	Operation theater	Operation Table	1 (2006)	Japanese aid
		Electric Scalpel	1 (2006)	Japanese aid
		Operation Light	1 (2006)	Japanese aid
		Anesthesia Unit	1 (2014)	
		Ventilator		
		Defibrillator		
		Autoclave	3 (2006, 2010, and 1 is out of order)	2 with Japanese aid
		Suction Unit	2 (2013)	1 with DP aid
		Bedside Monitor	1 (2014)	
6	Diagnostic imaging	General X-Ray Unit	1 (2006)	Japanese aid
	room	Mobile X-Ray Unit		
		СТ		
		MRI		
		Ultrasound Monitor	1 (2010, portable)	
		Examination Table	1 (2006)	Japanese aid
7	Examination room	Blood Cell Counter	1 (2010)	
		Chemical Analyzer	1 (2013)	
		Centrifuge	1 (2006)	Japanese aid
		Autoclave		
		Microscope	1 (2000)	DP aid
		Sterilizer		
		Bang May	1 (2015)	
8	Dentistry treatment	Dental Chair	1 (2006)	Japanese aid
	room	Dental X-Ray Unit		
		Autoclave	1 (2006)	Japanese aid

Table Issues and Problems of Khongsedone District Hospital

Item	Description
Facilities	The main building was built in the 1960s and renovated around 2006 – 2007. The layout is
	straightforward and user-friendly. The building is kept very clean. The MCH building, on the other
	hand, was built in 2005. Although it is a single-story building, the roof is unnecessarily high, and
	in addition, the design of the corridor and rooms comes across as complicated and hard to use.
Equipment	The equipment was procured in 2006 with grant aid from Japan. At the present time, it is all in
	working order and is well used.

Photos of Current State of Khongsedone District Hospital

line marter							
Neighboring main road, Route 13		Main I from g	building as seen MCH buildi gate distance		uilding in the	Entrance of main building	Emergency room in main building
Ultrasound room in main building	Dentistry treatment room in t building	t main	Examination room i building	n main	Radiography room in main building	Operation theater in main building	Same as left
ICU in main	General ward	Corridor in	Delivery room	Pediatrics	Ambulance	Generator in	
-------------	--------------	--------------	---------------	--------------	-----------	---------------	
building	in main	MCH building	in MCH	waiting room		main building	
	building		building	in MCH			
			-	building			

(7) Lao Ngam District Hospital (District code: 14-07)

Lao Ngam District Hospital is a 15-bed Type B district hospital located about 77km (distance by road) northwest of Pakse, 47km (distance by road) southeast of Salavan City and 200m north of Route 20. The facilities, including an administration building, six clinical services-related buildings, district health office, Saymai House, garage and laundry, are scattered across the extensive 6ha site. In particular, the main buildings on the site (district health office, six clinical treatment-related buildings and Saymai House) are symbolically situated along a connecting corridor. In fact, the layout corresponds well to the differences in elevation and undulations of the site. In terms of operation, though a Type B district hospital, it copes well with minor surgery. On the other hand, there is a lack of dental treatment-related personnel, health care equipment and space. An overview of the hospital is shown below.

No	Item	Description							
1	Location, etc.	Huaynamsanh V	Huaynamsanh Village, Lao Ngam District, Salavan Province						
		(Neighboring main road) Route 20							
		(Phone no.) 034	(Phone no.) 034 300 008/020 5906 3089 (Dr. Phaosakoun)						
	Improvement projects	None (and none	planned)						
	currently underway with								
	Developing Partner aid								
	Hospital motto	None							
2	Organization chart			Director]				
]				
				Deputy Director 1					
				Deputy Director 2					
		Internal Medicine and Tradtional Obstet	rics/ OPD Pedi plogy	iatrics Dental Labor	atory Dianostic Imaging Phare	Administrative, HR,			
		Medicine 4 St	5 Staffs 2 S	itaffs 2 Staff 3 Sta	affs 1 Staff 3 Sta	aff Planing, Financal & Foreign involve			
		5 Statts				3 Staffs			
3	Area & population	96 villages population 70 855							
-	covered	yo (mugoo, population / 0,000							
4	Higher level referral	Salavan Provinc	Salavan Provincial Hospital (approx. 47km by fully paved road)						
	hospital				. ,				
5	Outpatient hours	Monday – Frida	y, 8:00-12:00/13	:30-16:30					
6	Areas of treatment	Emergency care	, internal medicin	ne, OBGY, pediatr	rics (minor surger	y)			
7	Supporting departments	Diagnosis, phart	macy, laboratory,	, MCH					
8	Health care personnel	7 general practit	ioners (MD), 2 n	nedical assistants (MA), 1 nurse, 15	nurse/nurse			
		midwives, 3 pha	rmacists, 3 lab te	echnicians, 0 dentis	sts				
9	No. of beds	15							
10	Annual number of	2012/2	013	2013/2014		2014/2015			
	outpatients	10,40	19	9,163		12,920			
	(persons/year)					_			
	Reason for outpatient	No.1	No.2	No.3	No.4	No.5			
	visit (2013/2014)	Pneumonia: 1,014	Tonsillitis: 902	Gastrointestinal	Diarrhea: 545	Normal health			
11	Annual number of	2012/2	013	2013/2014	I	2014/2015			
11	emergency natients		015	2013/2014		2017/2013			
	(persons/year)								
	Reason for emergency	No.1	No.2	No.3	No.1	No.2			
	visit (2013/2014)								
	· /	1							

Table	Current State of Lao Ngam District Hospital Management Structure, Health Care Services
	and Facilities

12	Annual number of	2012/20	13	2013/2014		2014/2015			
	referrals to higher level	176			150		162		
	hospital (persons/year)	No 1		ן ו	No 2			No 3	
	(2013/2014)	High-risk del	iveries	Riska			Serious injury by traffic accident		
13	Annual number of births	2012/20	13	201	3/2014		5011003 IIIj	2014/2015	
15	(births/year)	No dat	а а	201	471			563	
	No of perinatal deaths	6 (2013/2014)	u	.1	1/1				
	(persons/year)	0 (2015/2011)							
14	Annual number of	2012/20	13	201	3/2014		2	2014/2015	
	hospitalizations	2,726		2	2,087			1,930	
	(persons/year)								
	Total length of	5,851		4	l,180			3,535	
	hospitalization								
	(days/year)								
	Average length of	2.15			2.00			1.83	
	hospitalization								
	(days/person)	106.07	7		16 21			61 57	
	Bed occupancy (%)	100.8 No.1	/ No 2		0.34	N	a.4	04.37	
	(2013/2014)	INO.1 Pneumonia: 433	INO.2 Diarrhea: 29	6 Tonsilli	0.5 tis: 219	Gastroi	0.4 intestinal	INU.J Malaria: 50	
	(2013/2014)	Theamonia. 199	Blainea. 2)	- Tonsim	10.21	1	50	William . 50	
	No. of patient deaths (persons/year)	6 (2013/2014)							
15	Annual number of	Surger	у	OBGY		Other			
	operations (cases/year)	1,507 (Minor	surgery)	471 (Delivery No.)		o.)			
	(2013/2014)								
16	Annual number of	Ultrasound		X-ray		СТ		MRI	
	diagnoses (cases/year) (2013/2014)	1,381							
17	Annual number of tests	Blood		Urine		Stool		Other	
	(tests/year) (2013/2014)	5,079			19			208	
18	Annual number of blood	0 (2013/2014)							
10	transfusions (cases/year)	D.C. 1.C		•. •			<u> </u>	110	
19	No. of referral patients	Referred fr	om another I	nospital		Rei	terred from	n a HC	
	(2013/2014)								
20	Collaboration with	Maternal, neonat	al and child	health activiti	es				
	community health care	,							
	services								
21	Condition of site and	Site area: Approx	k. 6ha						
	building	Existing building	: [Administi	ration building	g] Single-	story. S	ituated ne	arest to the gate.	
		Inclu	ides the dire	ctor's office a	ind admir	istration	n office.		
			treatment-re	lated building	gs] Six sir	igle-sto	ried buildi	ngs provide	
		heal	th care servi	ces (6-bed peo	liatrics bi	uilding,	two x 2-b	ed internal	
		medicine & surgery building, outpatient building, pharmacy & laboratory							
		building, emergency building, 2-bed delivery & MCH building), located							
		heds	alternately along a 50m-long connecting corridor. In addition to the 12 beds mentioned above, there are 15 extra beds, making an actual total of						
		27 b	beds mentioned above, there are 15 extra beds, making an actual total of 27 heds						
		[Dis	[District health office and Saymai House] The six buildings mentioned						
		abov	ve are sandw	iched betweer	n the sing	le-story	district he	ealth office and	
		Sayr	nai House (a	ecommodatio	on for the	relative	s of expec	tant mothers)	
		whice	ch are locate	d at the south	western e	dge and	northeast	ern edge of the	
		site,	virtually as	an extension o	of the con	necting	corridor.		
		[Oth	er incidental	facilities] Ga	rage, stor	rage, lau	indry, can	teen	

		Laundy Laundy Laundy Laundy Heated Water Tank Pediatr Heatth District Heatth Dept. Hospital Administration Electric Mainline Office Laongam District Hospital Total Land Area: Approx. 6.0 he <u>1000</u> Laongam District Hospital
22	Electric power supply	Electricity is supplied from the power mains running along the front road of the hospital. The hospital facilities run on single-phase 220V/50Hz. There are no power outages. The hospital has no emergency generator.
23	Water supply facilities	City water is available but is not used. Well water is used. (No water shortage was observed.) The hospital uses approximately 4 tons of water per day. No chlorine sterilization or filtration is provided. There is no water tank, only an elevated tank (2 tons).
24	Toilets	Flush toilets are used. (The water for flushing is hand-pumped.)
25	Sewage treatment facilities	None
26	Public sewerage system	There is no sewerage system. Sewage is treated in an infiltration basin. Miscellaneous water is discharged into a neighboring coffee plantation.
27	Refuse and waste disposal	There is a refuse collection point and refuse is sorted for collection. A public collection service for general waste is available. Waste with a risk of contamination is incinerated outside.

Table Installation State of Lao Ngam District Hospital Health Care Equipment

No	Department	Item of equipment	Current state	Remarks
1	Emergency room Patient Bed		1 (2015)	
		Bedside Monitor	1 (2015)	
		Defibrillator		
		Suction Unit	2 (2015)	
		ECG		
		Ambulance	1 (2011)	DP aid
		Oxygen Pump	2 (2015)	
		Lamp	1 (2015)	
2	ICU	Patient Bed		
		Bedside Monitor		
		Ventilator		
		Phototherapy		
		Defibrillator		
3	MCH	Fetal Doppler	1 (2015)	
		Ultrasound Monitor		
		Phototherapy		
		Sterilizer	1 (2013)	DP aid
		Reanimation Table	1 (2010)	DP aid
4	Delivery room	Delivery Table	1 (2013)	
		Suction Unit	1 (2008)	
		Ultrasound Monitor		

		Reanimation Table	1 (2013)	
		Lamp	1 (2015)	
		Oxygen Pump	1 (2013)	
5	Operation theater	Operation Table	1 (1989)	
		Electric Scalpel		
		Operation Light	1 (2015)	
		Anesthesia Unit		
		Ventilator		
		Defibrillator		
		Autoclave	1 (2008)	DP aid
		Sterilizer	1 (2014)	
6	Diagnostic imaging room	General X-Ray Unit		
		Mobile X-Ray Unit		
		СТ		
		MRI		
		Ultrasound Monitor	1 (2010)	
7	Examination room	Blood Cell Counter	1 (2013)	
		Chemical Analyzer	1 (2013)	
		Centrifuge	2 (2010, 2013)	DP aid
		Autoclave		
		Microscope	1 (2010)	
		Sterilizer		
8	Dentistry treatment room	Dental Chair		
		Dental X-Ray Unit		

Table Issues and Problems of Lao Ngam District Hospital

Item	Description
Facilities	As the hospital has no dental treatment-related personnel, equipment or space (it has an old dental chair donated by Mahosot Hospital), it does not satisfy the conditions for a Type B district hospital. (However, as the existing facilities have plenty of space, it would not be difficult to find space for a dentistry treatment room.) The hospital has no emergency generator.
Equipment	Most of the emergency care equipment and equipment for the examination room is obtained with the provincial budget. However, as mentioned above, the hospital has no dental treatment-related equipment.

Photos of Current State of Lao Ngam District Hospital

	The second				n-i ye		
Entrance gate		Administration build	ing	District hea	alth office	Six treatm buildings in	ent-related the distance
Connecting corridor	Emerge	ency outpatient waiting room	E trea	mergency atment room	MCH/Del waitin	ivery room g room	Laundry

(8) Samuoi District Hospital (District code: 14-08)

Samuoi District Hospital is a 15-bed Type B district hospital located about 148km (distance by road) northnortheast of Salavan and 62km from Ta-Oy on the same Route 15B. The facilities are scattered across an extensive site.

Table	Current State of Samuoi District Hospital Management Structure, Health Care Services and
	Facilities

No	Item	Description							
1	Location, etc.	Tedsaban Village, Samuoi District, Salavan Province							
		(Neighboring main road) Route 15A							
		(Phone no.) 030-	(Phone no.) 030-5198993/030-9957039 (Dr. Khemphon)						
	Improvement projects	None (and none	planned)						
	currently underway with								
	Developing Partner aid								
	Hospital motto	None							
2	Organization chart								
		Deputy directer Nursing Unit 3 staffs Reception 4 staffs Delivery/ Gyneco 2 staffs Chidren 2 staffs	r 1 M&C 2 staffs Fhan M&C 2 staffs EYEs 2 staffs 2 staffs	Director Admin ↓ 4 staffs staffs staffs ↓ 2 staffs ↓ 3 staffs ↓ 3 staffs	n # et îl Exterior 2 staffs 1nterior 2 staffs Small operation 2 staffs 2 staffs	Deputy director 2 ggb Treatment affs 5 staffs Emmergency taffs 4 staffs all Driver 1 staff Water uwawneu (?) ffs 1 staff			
			2 staffs						
3	Area & population covered	16 villages, popu	ulation 4,929						
4	Higher level referral	Salavan Provinc	Salavan Provincial Hospital (approx. 148km by fully paved road)						
	hospital								
5	Outpatient hours	Monday – Friday, 8:00-12:00/13:30-16:30							
6	Areas of treatment	Emergency care, internal medicine, OBGY, pediatrics, dentistry (there is no dentist)							
/	Supporting departments	Diagnosis, pharr	hacy, laborator	ry, nutrition	(A) 8				
8	Health care personnel	4 general practit	rmagist 2 lab f	technicians 2 PHC	MA), 8 nurses, 2	nurse/nurse			
0	No. of body			technicians, 2 Fric					
9	Annual number of	13)13	2013/2014		2014/2015			
10	outpatients	11.88	0	15 735		18 504			
	(persons/year)	11,00	,	15,755		18,304			
	Reason for outpatient	No 1	No 2	No 3	No 4	No 5			
	visit $(2013/2014)$	Tonsillitis (2,654)	Common cold	Pruemonia (1,654)	Diarrhea (1,651)	Gastralgia (1,217)			
			(1,750)						
11	Annual number of	2012/20	013	2013/2014		2014/2015			
	emergency patients	1,450)	1,779		2,511			
	(persons/year)	NL 1		NL 2	NL- 4	NL 5			
	visit (2012/2014)	INO.1	IN0.2	IN0.3	INO.4 Fever (Long)	IN0.5			
	visit (2015/2014)	operation (541)	Pruemonia (350)) Diarrhea (311)	(201)	Accident (70)			
12	Annual number of	2012/20	013	2013/2014		2014/2015			
	referrals to higher level	15		62		78			
	hospital (persons/year)								
	Reason for referral	No.1		No.2		No.3			
	(2013/2014)	Delivery		Accident		Anemia			
13	Annual number of births	2012/20	013	2013/2014		2014/2015			
	(births/year)	231		277		240			
	No. of perinatal deaths	0 (2013/2014)							
1 /	(persons/year)	2012/20)12	2012/2014		2014/2015			
14	Annual number of	2012/20	//3	2013/2014		2014/2015			
	(persons/year)	1,475	5	1,319		1,422			

	Total length of	2,607	7		2,813			2,513
	hospitalization							
	(days/year)							
	Average length of	1.77			2.13			1.76
	hospitalization							
	(days/person)							
	Bed occupancy (%)	47			51			46
	Reason for hospitalization	No.1	No.2		No.3	Ν	0.4	No.5
	(2013/2014)	Delivery (277)	Diarrhea (126)	Pneumonia (106)	Othe	r (157)	Gastralgia (98)
	No. of patient deaths	1 (2013/2014)						
	(persons/year)			-				
15	Annual number of	Surge	ry		OBGY		Other	
	operations (cases/year)	0			277		0	
	(2013/2014)							
16	Annual number of	Ultrasound		X-ra	K-ray CT			MRI
	diagnoses (cases/year)	179		0	0 0			0
	(2013/2014)							
17	Annual number of tests	Blood		Urii	1e	Stool		Other
	(tests/year) (2013/2014)	674		30')7 367			119
18	Annual number of blood	0 (2013/2014)						
	transfusions (cases/year)							
19	No. of referral patients	Referred fi	om another h	ospi	tal	Ref	eferred from a HC	
	accepted (persons/year)	0		1:		15		
	(2013/2014)							
20	Collaboration with	None						
	community health care							
	services							

|--|

No	Item	Description		
1	Condition of site and building	Site area: Approx. 2 ha (estimated from existing fence and descriptions by staff) Existing buildings: [Main building] Single-story. Includes emergency department, outpatient department, laboratory, pharmacy, MCH/delivery room, 15-bed ward [Saymai House] Two-story. Accommodation for relatives of expectant mothers [Accommodation for hospital personnel] Two single-story buildings [District health office] Single-story [Other incidental facilities] Garage		
		Neighboring Local Road Neighboring Local Road Neighboring Local Road Saynai House-2 Garage House-1 Local Road Neighboring Local Road Samuoi District Hospital Total Land Area: 2 ha Samuoi District Hospital Road - Route 15A Source: Created by Survey Team from simple surveying		

2	Electric power supply	Electricity is supplied from the public power mains running alongside the front road of		
		the hospital, transmitted from Vietnam). The hospital facilities run on single-phase		
		230V/50Hz. Power outages occur frequently during the rainy season, but last less than		
		2 hours per day so they have little impact. The hospital has no emergency generator.		
3	Water supply facilities	City water is available. (Water is distributed by the village and no water stoppages		
		were observed.) The amount of water used is not known. The hospital has no water		
		tank, only an elevated tank (2 tons) (with no chlorine sterilization or filtration).		
4	Toilets	Flush toilets are used.		
5	Sewage treatment	There is a septic tank.		
	facilities			
6	Public sewerage system	There is no sewerage system. Sewage is collected in a tank which is periodically		
		emptied by vacuum.		
7	Refuse and waste disposal	There is a refuse collection station and refuse is sorted and collected. The hospital has		
	-	no incinerator. There is no public collection service for general waste. Waste with a		
		risk of contamination is incinerated outside.		

Table Installation State of Samuoi District Hospital Health Care Equipment

No	Department	Item of equipment	Current state	Remarks
1	Emergency	Patient Bed	1 (the year of procurement is not known)	
	room	Bedside Monitor		
		Defibrillator		
		Suction Unit		
		ECG		
		Ambulance	1 (2015)	MOH project
		Oxygen Pump	2 (2013)	
2	ICU	Patient Bed		
		Bedside Monitor		
		Ventilator		
		Phototherapy		
		Defibrillator		
3	MCH	Fetal Doppler		
		Ultrasound Monitor		
		Phototherapy		
4	Delivery room	Delivery Table	2 (2013, 2014)	2013 table provided by JICA
		Suction Unit	2 (2008, 2013)	2008 unit provided by Cesvi
		Ultrasound Monitor		
		Oven	1 (the year of procurement is not known)	
		High Pressure Sterilizer	3 (the year of procurement is not known)	
		Phototherapy with	1 (the year of procurement is not known)	Aid from Cesvi
		Warmer		
5	Operation	Operation Table		
	theater	Electric Scalpel		
		Operation Light		
		Anesthesia Unit		
		Ventilator		
		Defibrillator		
6	Diagnostic	General X-Ray Unit		
	imaging room	Mobile X-Ray Unit		
		СТ		
		MRI		
		Ultrasound Monitor	1 (2012)	Aid from Switzerland
7	Examination	Blood Cell Counter	1 (2014)	
	room	Chemical Analyzer	1 (2012)	
		Centrifuge	1 (the year of procurement is not known)	
		Autoclave		
		Microscope	1 (2009)	
		Sterilizer	1 (2009)	
8	Dentistry	Dental Chair	1 (2015)	
	treatment room	Dental X-Ray Unit		
	Other	High Pressure Sterilizer	2 (2009, 2012)	

Table issues and Froblems of Samuol District Hospital			
Item	Description		
Facilities	Based on a district hospital building method commonly used in Laos, the facilities are in the form of a spacious outside corridor running in front of the departments. The facilities are still robust and		
	not in need of reconstruction. The hospital should be equipped with an emergency generator.		
Equipment	The hospital is equipped with a phototherapy unit with infant warmer (with aid from Cesvi) and		
	oxygen generator, but they are not used very much.		

Table Issues and Problems of Samuoi District Hospital

Photos of Current State of Samuoi District Hospital



[Sekong Province]

(9) Sekong Provincial Hospital (District code: 15-01)

Sekong Provincial Hospital is located on the Route 16 bypass about 3km north of the market in the center of Sekong. The hospital facilities were built in 1984. An outline of the hospital is shown below.

Table Current State of Sekong Provincial Hospital Management Structure, Health Care Services and Facilities

No	Item	Description		
1	Location, etc.	Maihaumeauong Village, Lamam District, Sekong Province (Neighboring main road) On the Route 16 bypass (Phone no.) 038 211 6634, 038 211 055		
	Improvement projects currently underway with Developing Partner aid	None (and none planned)		
	Hospital motto	None		

2	Organization chart			Director	Public	
					organization	
			Deputy director 1	1 Nurse	Deputy director	
			OPD	IPD Technica	al support Administr	ration
				SPD Pha	rmaceutic Statistic	finance
			Emergency	Surgery La	boratory Engi	neer
			Dental –	OB/GY Ect	no, X-ray P	PR
		- Pr	ysiotherapy IC	CU, anesthesia, rehabilitation	Нуд	iene
		-	МСН	ТВ		
			Ontical			
		ор	hthalmology			
3	Area & population covered	4 districts (Lama	ım, Kaluem, D	ukjueng, Tateang)		
4	Higher level referral hospital	Champasak Prov	vincial Hospital	l (approx. 130km or	2.5 hours by fully	/ paved road)
5	Outpatient hours	Monday – Friday	y, 8:30-12:00/1	3:30-16:00		
6	Areas of treatment	Emergency care	internal medic	cine, surgery, OBGY	, pediatrics, opht	halmology, ENT,
7	Supporting departments	Consulting room	CH, dermatolo) <u>gy</u> aboratory, blood trar	sfusions nutritio	n
8	Health care personnel	7 specialists, 44	general practiti	ioners (MD), 16 MA	$\frac{1510310113}{28}$ nurses, 10 nu	irse/nurse
	Ĩ	midwives, 5 pha physical therapis	rmacists, 5 lab	technicians, 2 radio	logists, 2 dentists,	8 PHC, 3
9	No. of beds	45 (expansion to 70 beds is scheduled in 2016)				
10	Annual number of	2012/20)13	2013/2014		2014/2015
	outpatients	3,543	;	15,369		20,407
	Reason for outpatient	No.1	No.2	No.3	No.4	No.5
	visit (2013/2014)	Flu: 1,243	Tonsillitis: 1,136	Pneumonia: 724	Toothache: 945	Gastritis: 934
11	Annual number of	2012/20)13	2013/2014		2014/2015
	emergency patients	4,620)	10,041		8,728
	(persons/year) Reason for emergency	No 1	No 2	No 3	No 4	No 5
	visit (2013/2014)					
12	Annual number of	2012/20)13	2013/2014	3	2014/2015
	referrals to higher level	58		108		98
	Reason for referral	No.1		No.2		No.3
	(2013/2014)	Injury: 4	48	Blood stroke: 9	1	Encephalitis: 3
13	Annual number of births	2012/20)13	2013/2014		2014/2015
	(births/year)	1,011	-	1,462		1,817
	No. of perinatal deaths	22 (2013/2014)				
14	Annual number of	2012/20)13	2013/2014		2014/2015
	hospitalizations	887		1,045		1,392
	(persons/year) Total length of	3.543	;	3.718		3.966
	hospitalization	- ,		- 3		- ,
	Average length of	4.50		4.60		4.50
	hospitalization			•••		
	(days/person)					1010-
	Bed occupancy (%)	105.0		103.95		104.27
	keason for hospitalization $(2013/2014)$	NO.1 Gastritis: 457	No.2 Diarrhea: 224	N0.3	N0.4	N0.5 Malaria: 117
	No. of patient deaths	1 (2013/2014)		$\frac{1}{1}$ neumonia. 515		
	(persons/year)					

15	Annual number of	Surgery O		DBGY	Other	
	operations (cases/year)	902		52		
	(2013/2014)					
16	Annual number of	Ultrasound	X-ray	CT	MRI	
	diagnoses (cases/year)	2,269	1,339			
	(2013/2014)					
17	Annual number of tests	Blood	Urine	Stool	Other	
	(tests/year) (2013/2014)	1,351	159	139		
18	Annual number of blood	181 (2013/2014)				
	transfusions (cases/year)					
19	No. of referral patients	Referred from another hospital Referred from a HC			red from a HC	
	accepted (persons/year)					
	(2013/2014)					
20	Collaboration with	Vaccinations				
	community health care					
	services					

Table Current State of Sekong Provincial Hospital Facilities and Infrastructure

No	Item	Description		
1	Condition of site and	Site area: Not known		
	building	Existing building: Single-story building erected in 1984		
		T N <i>C</i> 1		
		To National Road - Route 16		
		(approx. 500m)		
		17		
		administration To National		
		Ab (approx. 300m)		
		Ganage ER		
		Gate		
		Mathata		
		Local Road:		
		Sekong Province Hospital		
		Total Land Area: NA		
		0 20m 50m 100m		
		Source: Created by Survey Team from simple surveying		
2	Electric power supply	Electricity is supplied from the public power mains. The hospital facilities run on		
		single-phase 220V/50Hz and three-phase 400V. There are hardly ever power outages,		
		at most for about 20 minutes once a month. The hospital has an emergency generator		
-		(0.4KVA).		
3	Water supply facilities	City water is piped directly to the hospital.		
4	I ollets	Flush tollets are provided.		
2	Sewage treatment	i nere is no treatment equipment. Sewage is discharged directly into the drainage ditch.		
6	Dublic conversion system	There is no serverage system		
0	Pathage and waste discussed	There is no sewerage system.		
/	Refuse and waste disposal	incinerator. Other waste is collected by the public refuse collector		

Table Installation State of Sekong Provincial Hospital Health Care Equipment

No	Department	Item of equipment	Current state	Remarks
1	Emergency room	Patient Bed	1 (1999)	Developing Partner
		Bedside Monitor		Government budget
		Defibrillator		
		Suction Unit		Government budget
		ECG		
		Ambulance	2 (2000)	Government budget
2	ICU	Patient Bed	3 (1999)	Developing Partner
		Bedside Monitor	3 (1999)	Developing Partner
		Ventilator	3 (2015)	Developing Partner

		Phototherapy	3 (2001)	Developing Partner
		Defibrillator	1 (2000)	Developing Partner
3	МСН	Fetal Doppler	2 (2015)	Developing Partner
		Ultrasound Monitor		
		Phototherapy		
4	Delivery room	Delivery Table	2 (1999/2015)	Developing Partner
		Suction Unit	1 (2015)	Developing Partner
		Ultrasound Monitor	2 (2000/2010)	Developing Partner
		Fatal Monitor	4 (2010/2015)	Developing Partner
5	Operation theater	Operation Table	2 (1999)	Developing Partner
		Electric Scalpel	2 (1999)	Developing Partner
		Operation Light	2 (1999)	Developing Partner
		Anesthesia Unit	2 (2015)	Developing Partner
6	Diagnostic imaging room	General X-Ray Unit	1 (2010)	Hospital budget
		Mobile X-Ray Unit		
		СТ		
		MRI		
7	Examination room	Blood Cell Counter	3 (2013)	Government budget
		Chemical Analyzer	1 (2010)	Government budget
		Centrifuge	1 (2000)	Government budget
		Autoclave		
		Microscope	1 (2001)	Government budget
		Sterilizer	1 (2001)	Government budget
8	Dentistry treatment room	Dental Chair	2 (1994)	Developing Partner
		Dental X-Ray Unit	1 (1999)	Developing Partner

Table Issues and Problems of Sekong Provincial Hospital

Item	Description
Facilities	Although it is 30 years since the hospital was built, the rooms are clean and tidy and do not come across as old.
Equipment	The main health care equipment was provided from 2010 through 2015 and nothing seems to be lacking. However, the X-ray unit was installed in 2010, but it is a digital type unit and there is concern about the film supply. Early digitalization is desired. Also, the bedside monitor in the ICU and the operation table, electric scalpel and shadowless lamps lamp in the operating theatre were provided in 1999, but are still in use and early replacement is required.

Photos of Current State of Sekong Provincial Hospital

			Killapese	PS-		
Front road and hos gate	spital	View of	hospital from gate	X-ray unit	Operation table	Shadowless lamp
Blood cell counter	Mic	croscope	Ultrasound diagnostic equipment	Electric scalpel	Delivery table	Infant Warmer

(10) Kaleum District Hospital (District code: 15-02)

Kaleum District Hospital is a 20-bed Type B district hospital newly built in a new location in May 2015 due to the construction of a dam that resulted in the relocation of two entire villages due to be submerged to a hillside 35km nearer Vietnam than their original location. An outline of the hospital is shown below.

No	Itom		Facilitie	zə Deser	rintion				
1	Location ata	Ganglaui Villan	Kalaum Di	Desci	Province				
1	Location, etc.	(Neighboring m	, Kalculli Dis	he	1 IOVINCE				
		(Phone no.) 030-9619158 (Dr. Fongsamond)							
	Improvement projects	None (and none	None (and none planned)						
	currently underway with	rione (una none	plainica)						
	Developing Partner aid								
	Hospital motto	None							
2	Organization chart	None							
3	Area & population	5 out of 58 villag	ges, population	on 4,039					
	covered								
4	Higher level referral	Sekong Provinci	al Hospital (a	about 105km a	away. 6.5 hou	rs by car. T	he route is a paved		
	hospital	road for about 1.	5km and unp	aved road for	about 90km a	nd requires	9 river crossings		
		by ferry)	0 00 11 00						
5	Outpatient hours	Monday – Friday	y, 8:00-11:30	<u>/14:00-16:00</u>	OPCV				
0	Areas of treatment	Emergency care,	internal med	licine, surgery	, OBG Y				
/	Supporting departments	2 gamaral prostit	hacy, laboral	6 modical age	istorta (MA)	9 mil maga 2	nharmaaista 1 lah		
0	Health care personnel	5 general practit	ioners (MD),	o medical ass	istants (MA),	o nurses, 5	pharmacists, 4 lab		
9	No. of beds	20							
10	Annual number of	2012/20)13	201	3/2014		2014/2015		
10	outpatients	6.961					6.493		
	(persons/year)	-,, -					•,•••		
	Reason for outpatient	No.1	No.2	No	.3	No.4	No.5		
	visit (2013/2014)	Common cold	Diarrhea (723)	Tonsillitis	(642) Gast	ralgia (540)	Pneumonia (221)		
11	Annual number of	(967))12	201	3/2014		2014/2015		
11	emergency patients	2012/20	/13	201	36		2014/2015		
	(persons/year)	21			50		20		
	Reason for emergency	No 1 No 2		No	.3	No.4	Jo.4 No.5		
	visit (2013/2014)	No data							
12	Annual number of	2012/20	013	201	2013/2014		2014/2015		
	referrals to higher level	26			24		14		
	hospital (persons/year)								
	Reason for referral	No.1		<u> </u> N	No.2		No.3		
10	(2013/2014)	Delivery	(24)						
13	Annual number of births	2012/20)13	201	2013/2014		2014/2015		
	(birtins/year)	/0		1	69		00		
	(persons/year)	0 (2013/2014)							
14	Annual number of	2012/20)13	2013/2014			2014/2015		
17	hospitalizations	2012/20	/15	2013/2014			2011/2013		
	(persons/year)	915			577		473		
	Total length of	2,953	;	2,324			1,819		
	hospitalization			,					
	(days/year)						_		
	Average length of	3.23		4	1.03		3.85		
	hospitalization								
	(days/person)	40		1	22		25		
	Bed occupancy (%)	40 No 1	No 2	lNa	32	No.4	 No 5		
	(2013/2014)	Diarrhea (110)	Malaria (54) Tonsillit	.5 is (51) Pne	INO.4 Eumonia (28)	Gastralgia (65)		
	No. of patient deaths	0(2013/2014)	iniuiuriu (51			(20)	Gustiaigia (05)		
	(persons/vear)	0 (2013/2014)							
15	Annual number of	Surger	v	OBGY			Other		
-		Surgery 0		0803			0		
	operations (cases/year)	0		V					
	operations (cases/year) (2013/2014)	0							
16	operations (cases/year) (2013/2014) Annual number of	0 Ultrasound		X-ray	CT		MRI		
16	Annual number of (2013/2014) Annual number of diagnoses (cases/year)	0 Ultrasound 0		X-ray	CT		MRI		
16	operations (cases/year) (2013/2014) Annual number of diagnoses (cases/year) (2013/2014)	0 Ultrasound 0		X-ray 	<u> </u>		MRI 		
16 17	operations (cases/year) (2013/2014) Annual number of diagnoses (cases/year) (2013/2014) Annual number of tests (testforear) (2012/2014)	0 Ultrasound 0 Blood		X-ray Urine			MRI Other		

Table Current State of Kaleum District Hospital Management Structure, Health Care Services and Facilities

18	Annual number of blood	0 (2013/2014)				
	transfusions (cases/year)					
19	No. of referral patients	Referred from another hospital	Referred from a HC			
	accepted (persons/year)	No record	No record			
	(2013/2014)					
20	Collaboration with	None				
	community health care					
	services					

Table Current State of Kaleum District Hospital Facilities and Infrastructure

No	Item	Description					
1	Condition of site and building	Site area: Approx. 1.5 ha (estimated from existing fence and descriptions by staff) Existing buildings: [Main hospital building] Single-story outpatient building (emergency room, MCH/delivery room, pharmacy, etc.), ward building (3 rooms with 20 beds) and laboratory building (2 laboratories, echocardiography room) are closely connected by a connecting passageway (completed in May 2015). [District health office] Single-story. Next to the main hospital building [Other incidental facilities] Incinerator, generator					
		To Sekong Province Hospital (approx. 105 km) Neighboring Local Road					
		Gate ER/MCH/Lab Hospital Ward District Health Office					
		□ Generator/ Incinerator					
		Kaleum District Hospital Total Land Area: 1.5 ha					
		Source: Created by Survey Team from simple surveying					
2	Electric power supply	Electricity is supplied from the public power mains running alongside the front road of the hospital in single-phase 230V/50Hz and three-phase 380V/50Hz. Power outages last for less than two hours per day. The hospital has a small emergency generator (15KA).					
3	Water supply facilities	City water (No water shortage was observed) The hospital uses 1.5 tons of water per day. It is equipped with both a water tank and elevated tank (with no chlorine sterilization or filtration).					
4	Toilets	Flush type					
5	Sewage treatment facilities	There is a sewage septic tank.					
6	Public sewerage system	There is no sewerage system. Sewage is collected in a storage tank that is emptied periodically by vacuum.					
7	Refuse and waste disposal	There is a refuse collection station and refuse is sorted and collected. The hospital has an incinerator (the incinerating temperature and capacity are not known). There is no public collection service for general waste. Waste with a risk of contamination is incinerated in the incinerator.					

Table Installation State of Kaleum District Hospital Health Care Equipment

No	Department	Item of equipment	Current state	Remarks
1	Emergency room	Patient Bed	1 (the year of procurement is not known)	
		Bedside Monitor		
		Defibrillator		
		Suction Unit	1 (the year of procurement is not known)	

1	I	ECC	[
		Ambulance	1 (2015)	
		Ovvgen Generator	1(2013) 1(2013)	
2	ICU	Patient Red		
2	ICU	Redside Monitor		
		Ventilator		
		Dhotothoropy		
		Defibrilleter		
2	МСЦ	Eatal Dopplar		
3	мсп	Liltracound Monitor	1 (2014)	
		Dh at ath anamy with		1
		Phototherapy with	2 (2012, 2014)	I was provided with
4	Delissensensens	Warmer Dalissers Table	1 (2012)	
4	Delivery room	Delivery Table	1 (2013)	Ald from JICA
		Suction Unit	1 (2008)	
		Ultrasound Monitor		
		Autoclave		
		Reanimation Table		
		Fetal Doppler		
5	Operation theater	Operation Table		
		Electric Scalpel		
		Operation Light		
		Anesthesia Unit		
		Ventilator		
		Defibrillator		
6	Diagnostic imaging	General X-Ray Unit		
	room	Mobile X-Ray Unit		
		СТ		
		MRI		
		Ultrasound Monitor	1 (2012)	Aid from
		Energiantian Tall		Switzeriand
7	Energianting as and	Examination Table	1 (2014)	
/	Examination room	Blood Cell Counter	1 (2014)	
		Chemical Analyzer		
		Centrifuge	I (the year of procurement is not known)	
		Autoclave		
		Microscope	1 (2009)	
		Sterilizer	1 (2009)	
8	Dentistry treatment	Dental Chair		
	room	Dental X-Ray Unit		
	Other	High Pressure	3 (the year of procurement is not known)	
		Sterilizer		

Table Issues and Problems of Kaleum District Hospital

Item	Description
Facilities	The hospital facilities are more than big enough and quiet enough for the current treatment
	departments and number of patients. It is six months since the hospital moved to its present
	location, but there are still items that need to be properly tidied away and arranged.
Equipment	Same as above

Photos of Current State of Kaleum District Hospital

River crossing (35km to	New town of Kaleum in the	View of hospital from the	Gate of district hospital
hospital)	distance	front road	



(11) Dakcheung District Hospital (District code: 15-03)

Dakcheung District Hospital is a 16-bed Type B hospital located along the main road that is being developed as Route 16B (scheduled to be completed in 2017) about 92 km east of Sekong. Of this total distance of 92 km from Sekong, about 30 km is paved road (near Sekong there is a bridge that has not been completed so it is necessary to cross by ferry. The bridge is scheduled to be completed in 2017). The next 30 km is reasonably maintained unpaved road (red soil that is easy to slide on), and the remaining 32 km is unmaintained completely mountainous road. Dakcheung town has wide streets but the overall impression is desolate. It is like the town was built on the top of a mountain that had been flattened, no matter which direction you go in the town eventually one arrives at a steep downward slope, so the location conditions are severe. When the wind blows it passes through the whole town, so the climate conditions are poor.

The district hospital facilities are provided on a hill outside the town towards Sekong. The district health office is adjacent to the hospital but on a separate site. The site of the district hospital is narrow and there is no expansion or new construction. The facilities are small and at a minimum level, but at present an operation theater is being newly constructed with funds from MOH, and after this is completed the category of the district hospital is due to change from "B" to "A". An outline of the hospital is shown below.

No	Item	Description					
1	Location, etc.	Dak Bong Village, Dakcheung District, Sekong Province (Neighboring main road) Route 16A (scheduled to be opened in 2017) (Phone no.) 030-2802769/020-9740-1977 (Dr. Kimsayanh)					
	Improvement projects currently underway with Developing Partner aid	None (and none planned)					
	Hospital motto	None					
2	Organization chart	Image: constraint of the second se					
3	Area & population covered	10 villages out of 54 villages (the other 44 villages are under the jurisdiction of 10 HCs), population 4,657					

Table Current State of Dakcheung District Hospital Management Structure, Health Care Services and Facilities

4	Higher level referral hospital	Sekong Provincial Hospital (total distance about 92 km. Paved road about 30 km, unpaved road about 62 km, crossing by ferry at one river, river crossing by vehicle 8 times)						
5	Outpatient hours	Monday – Friday, 7:30-11:30/13:30-16:00						
6	Areas of treatment	Emergency care	, internal medici	ne, OBGY, pe	diatrics			
7	Supporting departments	Pharmacy, laboratory, nutrition						
8	Health care personnel	5 general practitioners (MD), 6 medical assistants (MA), 0 nurses, 4 nurse/nurse midwives, 2 pharmacists, 2 lab technicians, 4 PHC						
9	No. of beds	16						
10	Annual number of	2012/20)13	2013/2	014	-	2014/2015	
	outpatients (persons/year)	9,234	1	9,64	7	12,340		
	Reason for outpatient	No.1	No.2	No.3	N	0.4	No.5	
	visit (2013/2014)	Common cold (1.481)	Pneumonia (1.508)	Headache (1,3	20) Gastralgi	a (903)	Tonsillitis (752)	
11	Annual number of	2012/20)13	2013/2	014		2014/2015	
	emergency patients (persons/year)	309		247			218	
	Reason for emergency	No 1	No 2	No 3	N	0.4	No 5	
	visit (2013/2014)	Road accident (33)	Other accident (214)	110.5		0.1		
12	Annual number of	2012/20)13	2013/2	014		2014/2015	
	referrals to higher level hospital (persons/year)	107		107			100	
	Reason for referral	No.1		No.2	2		No.3	
	(2013/2014)	Delive	у	Appendicitis		Accident		
13	Annual number of births	2012/20)13	2013/2014		-	2014/2015	
	(births/year)			123		164		
	No. of perinatal deaths (persons/year)	0 (2013/2014)						
14	Annual number of	2012/20)13	2013/2	014	2	2014/2015	
	hospitalizations (persons/year)	1,184	4	1,34	0		2,441	
	Total length of hospitalization (days/year)	5,282	2	5,778		5,551		
	Average length of hospitalization (days/person)	4.46		4.31		2.27		
	Bed occupancy (%)	90		99			95	
	Reason for hospitalization	No.1	No.2	No.3	N	0.4	No.5	
	(2013/2014)	Pneumonia (246)	Diarrhea (130)	(serious case)	(49) Nerve p	ain (119)	Tonsillitis (85)	
	No. of patient deaths (persons/year)	12 (2013/2014)		nnunni (<u> </u>				
15	Annual number of	Surge	ry	OBG	Y		Other	
	operations (cases/year) (2013/2014)	0		189			0	
16	Annual number of	Ultrasound	X-	ray	CT		MRI	
	diagnoses (cases/year) (2013/2014)	0	-					
17	Annual number of tests	Blood		Jrine Sto			Other	
	(tests/year) (2013/2014)	0		0	0			
18	Annual number of blood	0 (2013/2014)						
10	No of referral nations	Referred f	om another hos	nital Referred from a HC				
17	accepted (persons/year) (2013/2014)	Kelened II	No record	No record			rd	
20	Collaboration with community health care services	Maternal, neona	tal and child hea	lth activities in	n villages			

No	Item	Description
1	Condition of site and building	Site area: Approx. 0.9 ha (estimated from existing fence and descriptions by staff) Existing building: [District Hospital Main Building] one-story building Includes emergency, delivery room, pharmacy, patients rooms, etc. [District Health Office] The site is separate, but is adjacent to the District Hospital.
	Electric power supply	Electricity is supplied from the public power mains (the main line is three-phase 400V/50Hz). Within the hospital facility the electricity is single-phase 230V/50Hz. Power outages are less than 2 hours in 1 day. The electrical load is 450kVA. There is no emergency generator.
3	Water supply facilities	Well water is used (No water shortage was observed). The quality of water used is not clear. There is no water storage tank, an elevated tank (2 ton \times 2) is provided (with no chlorine sterilization or filtration).
4	Toilets	Flush type
5	Sewage treatment facilities	There is a sewage septic tank.
6	Public sewerage system	There is no sewerage system. Wastewater is stored in a storage tank which is emptied periodically by vacuum truck.
7	Refuse and waste disposal	There is a refuse collection point and refuse is sorted for collection. The hospital has no incinerator. There is no public collection service for general waste. Waste with a risk of contamination is incinerated outside.

Table Current State of Dakcheung District Hospital Facilities and Infrastructure

Table Installation State of Dakcheung District Hospital Health Care Equipment

No	Department	Item of equipment	Current state	Remarks
1	Emergency	Patient Bed	2 (the year of procurement is not known)	
	room	Bedside Monitor		
		Defibrillator		
		Suction Unit		
		ECG		
		Ambulance	1 (2001)	Broken down at
		Allibulance		present
		Owygen Pumn	1 (2013)	Grant aid for
		Oxygen I unip		grassroots project
2	ICU	Patient Bed		
		Bedside Monitor		
		Ventilator		
		Phototherapy		
		Defibrillator		
3	МСН	Fetal Doppler		
		Ultrasound Monitor		
		Phototherapy		
4	Delivery	Delivery Table	2 (2013, 2014)	
	room	Suction Unit	2 (2008, 2013)	1 was provided with aid from Cesvi

		Ultrasound Monitor]	
		Autoclave		
		Phototherapy with Warmer	3 (2011, 2013)	2 were provided with aid from Cesvi
		Fetal Doppler	1 (the year of procurement is not known)	·
		Oven	1 (the year of procurement is not known)	
		High Pressure Sterilizer	3 (the year of procurement is not known)	
5	Operation	Operation Table		
	theater	Electric Scalpel		
		Operation Light		C.
		Anesthesia Unit		~
		Ventilator		~
		Defibrillator		~
6	Diagnostic	General X-Ray Unit		
	imaging	Mobile X-Ray Unit		
	room	СТ		
		MRI		
		Ultrasound Monitor	1 (2012)	Aid from Switzerland
7	Examination	Blood Cell Counter	1 (2014)	
	room	Chemical Analyzer	1 (2012)	
		Centrifuge	1 (the year of procurement is not known)	
		Autoclave		
		Microscope	1 (2009)	~
		Sterilizer	1 (2009)	
8	Dentistry	Dental Chair	1 (2015)	
	treatment room	Dental X-Ray Unit		

Table Issues and Problems of Dakcheung District Hospital

Item	Description
Facilities	The application for upgrade to a Type A district hospital has been submitted, and for this purpose
	the operation building is under construction in the forecourt. However, radiography room
	(including equipment), diagnosis and treatment room for ophthalmology and ear, nose and throat
	(including equipment), and an additional 14 beds to make a total of 30 beds are necessary. Also,
	the hospital should be equipped with an emergency generator.
Equipment	The number of childbirths is small, and because the amount of traffic is small the number of
	injured due to accidents is extremely small, and as a result there is no significant health care
	equipment. There is a full set of equipment in the examination rooms received from MOH, but it
	does not seem to be used very much. In 2001 a used ambulance was received from the health
	office, but now it does not move (due to a breakdown that can be repaired but there is no budget,
	and it has not been repaired for nearly 1.5 years). Oxygen generation equipment was received as
	grant aid for grassroots project from the Japanese Embassy, but it has only been used a few times.
	A fetal phonocardiograph was received from MOH, but the batteries are discharged, and it is not
	used.

Photos of Current State of Dakcheung District Hospital



(12) Tha Teng District Hospital (District code: 15-04)

Tha Teng District Hospital is a 10-bed Type B district hospital located on Route 16 going from Pakse towards Attapeu Province at the branch towards Salavan. The surrounding national routes are all paved, so it is convenient to go to Pakse, Attapeu, and Salavan. It is a plateau area (elevation 800m) so the climate is cool even in summer, and it is pleasant for living. Because of the good environment there are many retired foreigners living nearby. There is plenty of produce such as highland vegetables, etc., and it ranks alongside Bolaven Plateau for the shipment of fruit and vegetables. An outline of the hospital is shown below.

Table	Current State of Tha Teng District Hospital Management Structure, Health Care Services and
	Facilities

No	Item	Description					
1	Location, etc.	Thateng Tai Village, Tha Teng District, Sekong Province (Neighboring main road) Route 16 (Phone no.) 038-210005/020-5915-8444 (Dr. Khonsavanh) Khonsavanh phanthavong@vahoo.com					
	Improvement projects currently underway with Developing Partner aid	None (and none planned)					
	Hospital motto	None					
2		Director Director Deputy director 1 Deputy director 2 Admin Nurse Children IPD OPD Detwery/ Gyneco J staffs 2 staffs 4 staffs 4 staffs 3 staffs 3 staffs 1 staffs 1 staffs					
3	covered	7 villages out of 50 villages (the other 43 villages are under the jurisdiction of 7 HCs), population 9,561					
4	Higher level referral hospital	Sekong Provincial Hospital (approx. 48km by fully paved road)					
5	Outpatient hours	Monday – Friday, 8:00-11:30/13:30-16:00					
6	Areas of treatment	Emergency care, surgery, internal medicine, OBGY, pediatrics, dentistry					
7	Supporting departments	Diagnosis, pharmacy, laboratory, nutrition					

8	Health care personnel	ealth care personnel 1 specialist, 5 general practitioners (MD), 3 medical assistants (MA), 6 nurses					6 nurses, 3		
0	No. of body	nurse/nurse midwives, 3 pharmacists, 3 lab technicians, 1 dentist, 3 PHC						HC	
9	No. of beds	10			2012/2014		2014/2015		
10	Annual number of	10.90	015		2013/2014			12 800	
	(persons/year)	10,89	9		11,400			13,809	
	Peason for outpatient	No 1	No 2	L	No 2		No 4 No 5		
	v_{isit} (2013/2014)	Tonsillitis (1.613)	Common cold		Gastralgia (207)	IN0.4 Diarrhea (546)		Pneumonia (446)	
	VISIT (2013/2014)	1010111110 (1,010)	(1,073)		Gustiungiu (207)	Diame	(510)	Theamonia (110)	
11	Annual number of	2012/2	013		2013/2014			2014/2015	
	emergency patients	344			342			1,106	
	(persons/year)								
	Reason for emergency	No.1	No.2		No.3	N	0.4	No.5	
	visit (2013/2014)	Accident (342)							
12	Annual number of	2012/2	013		2013/2014			2014/2015	
	referrals to higher level	101			122			219	
	hospital (persons/year)								
	Reason for referral	No.1			No.2			No.3	
	(2013/2014)	Delive	ry		Road accident			Appendicitis	
13	Annual number of births	2012/2	013	ļ	2013/2014			2014/2015	
	(births/year)	361			413			478	
	No. of perinatal deaths	0 (2013/2014)							
	(persons/year)								
14	Annual number of	2012/2	013	ļ	2013/2014		2014/2015		
	hospitalizations	1 59	6		1 748		1.886		
	(persons/year)	1,550			N				
	Total length of	No data			No data		No data		
	hospitalization								
	(days/year)								
	Average length of	No data			No data	data		No data	
	hospitalization								
	(days/person)				40			50	
	Bed occupancy (%)	44 N. 1	NT - 0	49			- 4	52 N. 5	
	(2012/2014)	NO.1	INO.2	2)	INO.3			IN0.5	
	(2013/2014)	Diamea(228)	Tonsiinus (21	3)	Gastraigia (145)	Pneum	00118 (88)	Accident (85)	
	(parsons/year)	0 (2013/2014)							
15	Annual number of	Surge	Surgary		OBGY		Other		
15	operations (cases/year)	Suige	I y	ļ	413				
	(2013/2014)	0			415			0	
16	Annual number of	Ultrasound		I X-r	av	СТ		MRI	
10	diagnoses (cases/year)	No data	İ		-				
	(2013/2014)	i to tutu							
17	Annual number of tests	Blood		Uri	ne	Stool		Other	
- '	(tests/year) (2013/2014)	681			-				
18	Annual number of blood	0 (2013/2014)	8		1		1		
	transfusions (cases/vear)	. (_010/2011)							
19	No. of referral patients	Referred f	rom another h	osp	ital	Ret	Referred from a HC		
-	accepted (persons/year)	No record					No reco	ord	
	(2013/2014)								
20	Collaboration with	Workshops on n	utrition and s	easc	onal diseases				
	community health care	Â							
	services								

No	Item	Description				
1	Condition of site and building	Existing building: [District Hospital] Consists of the main building (single-story constructed in 1992), new building (single-story completed in 2012 with aid from USA), malaria project building, etc. [Saymai House] Two-story building as accommodation for relatives of expectant mothers [District health office] Single-story building, located at the northern end within the site [Other ancillary facilities] Garage, etc. District Health Office Saymai House Hospital Main Bldg Umber Hospital Main Bldg Thateng District Hospital Total Land Area: 1.5 ha 0 100 500 1000				
2	Electric power supply	Electricity is received from the public electricity mains (the main line is running alongside the front road of the hospital). The hospital facilities run on single-phase 230V/50Hz. Power outages are less than 2 hours in 1 day. There is no emergency				
		generator.				
3	Water supply facilities	Well water is used (No water shortage was observed). The amount of water used is not known. There is no water storage tank, an elevated tank (12 ton) is provided (with no chlorine sterilization or filtration).				
4	Toilets	Flush type				
5	Sewage treatment facilities	There is a sewage septic tank.				
6	Public sewerage system	There is no sewerage system. Wastewater is stored in a storage tank which is emptied periodically by vacuum truck.				
7	Refuse and waste disposal	There is no waste collection place. Sorting and recycling of waste is implemented. They have an incinerator (incineration temperature, processing capacity both unknown). There is no public refuse collection service. Waste that is suspected of being contaminated is incinerated outdoors.				

Table Current State of Tha Teng District Hospital Facilities and Infrastructure

No	Department	Item of aquipment	Current state	Pemarks
1	Emorgonou	Detiont Ded	Current state	IXEIIIdIKS
1	Emergency	Patient Ded		
	100111	Bedside Monitor		
		Defibrillator		
		Suction Unit		
		ECG		
		Ambulance	1 (2012)	
2	ICU	Patient Bed		
		Bedside Monitor		
		Ventilator		
		Phototherapy		
		Defibrillator		
3	MCH	Fetal Doppler		
		Ultrasound Monitor		
		Phototherapy with Warmer	1 (the year of procurement is not known)	Aid from Cesvi
4	Delivery	12	2 (2013, 2014)	1 was provided
	room	Delivery Table		with aid from
		5		JICA
			2 (2008, 2013)	1 was provided
		Suction Unit	()	with aid from
				Cesvi
		Ultrasound Monitor		
		Oven	1 (the year of procurement is not known)	
		High Pressure Sterilizer	3 (the year of procurement is not known)	
		Phototherany with Warmer	1 (the year of procurement is not known)	Aid from Cesvi
5	Operation	Thorotherapy with Warmer		The nom Cesvi
5	theater	Operation Table		
		Electric Scalpel		
		Operation Light		
		Anesthesia Unit		
		Ventilator		
		Defibrillator		
6	Diagnostic	General X-Ray Unit		
Ŭ	imaging	Mobile X-Ray Unit		
	room			
	room	MDI		
		WIKI	1 (2012)	Aid from
		Ultrasound Monitor	1 (2012)	Alu Holli Switzerland
				Switzerland
7	Examination	Plead Call Counter	1 (2014)	
/	Examination	Blood Cell Counter	1 (2014)	
	100m	Cnemical Analyzer		
		Centrifuge	1 (the year of procurement is not known)	
		Autoclave	1 (2000)	
		Microscope	1 (2009)	
		Sterilizer	1 (2009)	
8	Dentistry	Dental Chair	1 (2015)	
	treatment room	Dental X-Ray Unit		

 Table
 Installation State of Tha Teng District Hospital Health Care Equipment

Table Issues and Problems of Tha Teng District Hospital

Item	Description
Facilities	The facilities include both the old characteristic Laotian facility (constructed in 1992) and the main
	facility constructed with US aid in 2012. In addition there is a maternal, neonatal and child health
	building, and a malaria project building. The site has surplus space. The facility is tidily managed
	maintaining the 5S and very cleanly used, under the guidance of volunteers dispatched from
	Thailand Red Cross (2013). However, an emergency generator should be provided.
Equipment	Most of the equipment for dealing with emergencies is lacking.



Photos of Current State of Tha Teng District Hospital

[Champasak Province]

(13) Champasak Provincial Hospital (District code: 16-01)

Champasak Provincial Hospital is the 250-bed provincial hospital in Pakse, the capital of Champasak Province. When there are severely ill patients in the west of the neighboring province, Salavan Province, it is thought that they are immediately referred to this hospital, and referrals are also received from the provincial hospitals of the three southern provinces. An outline of the hospital is shown below.

Table	Current State of Champasak Provincial Hospital Management Structure, Health Care
	Services and Facilities

No	Item	Description					
1	Location, etc.	Lak Mueang Village, Pakse District, Champasak Province					
		(Neighboring main road) Route 13					
		(Phone no.) 856-31 212 018/020 5553 2990 (Dr. Keo Sosuphanh)					
	Improvement projects	None (and none planned)					
currently underway with							
	Developing Partner aid						
	Hospital motto	None					

2	Organization chart							
		Champasak Province Hospital						
				Director				
			.] [7	
		Deputy Dir	ector	Deputy Direc	tor	Deputy Director		
		Academic De	partment	Nursing Departs	ment	Administration Department	7	
		1) Emergency 2) Internal Medicine 1		Nursing Administra	- P	Planing Financing and Materia	ls Unit	
		3) Internal Medicine I		Control and Assessn Nursing Education	nent - N	Medical Equipment Maintenace Secretariat	and Eletricity Unit	
		5) Infection Diseases		- Nursing Education - Nursing Activity - Laundry and Cleaning				
		7) Private Clinic II		District Hospital Le Hygien and Infectio	vels - P on protect - P	ersonal Development Heath insurance		
		9) Tuberculosis	dat)					
		11) Ophthalmology	ine					
		12) Rehabilitation 13) Abdominal Surger	y I					
		14) Traumatology 15) ICU						
		16) OB/GYN 17) Pediatric						
		18) CCU (Cardio Care 19) Dermatology	Unit)					
		20) Internatinal Clinic 21) OPD						
		22) Dental Clinic 23) MCH						
		24) X-Ray 25) Laboratory						
		26) Pharmacy						
		- Academic Activity an	d Assessment,					
		- District Hospital Acad	lemic					
		- Library	Protection and					
		- Social ficaldi. Ficaldi						
3	Area & population	The total population of the 4 provinces of the southern region is about 1 million.						
4	covered							
4	hospital	None						
5	Outpatient hours	Monday - Friday, 8:00-12:00/13:00-16:00						
6	Areas of treatment	Emergency care, traditional health care/internal medicine, surgery, OBGY, MCH,						
		pediatrics, ophthalmology, ENT, rehabilitation, dentistry (there is no oncology)						
7	Supporting departments	Diagnosis, phar	Diagnosis, pharmacy, examination, blood transfusions					
8	Health care personnel	13 specialists, 69 general practitioners (MD), 29 medical assistants (MA), 46 nurses,						
		6 / nurse/nurse	ntises industry of the second se					
9	No. of beds	250						
10	Annual number of	2012/2	013	2	013/2014		2014/2015	
	outpatients	53,3	16		48,638		52,466	
	(persons/year)							
	Reason for outpatient	No.1	No.2		No.3	No.4	No.5	
	visit (2013/2014)	mjury. 5055	2002	(Gastro	ointestinal):	FILE. 1800	EIN1. 1370	
11	A.v	2012/2	012	1973	012/2014	<u> </u>	2014/2015	
11	Annual number of	2012/2	2013	2	2013/2014		2014/2015	
	(persons/year)	20,4.	20		24,384		10,770	
	Reason for emergency	No.1	No.2	1	No.3	No.4	No.5	
	visit (2013/2014)	GI: 2166	Injury: 1916	ENT: 1	154	Pneumonia: 1125	Diarrhea: 1003	
12	Annual number of	2012/2	.013	2	013/2014		2014/2015	
	referrals to higher level	No da	No data No		No data		No data	
	hospital (persons/year)				N. 2		NL 2	
	(2013/2014)	No.1			NO.2 No data		No.3	
13	Annual number of hirths	2012/2	013	2	$\frac{110}{013/2014}$		2014/2015	
15	(births/year)	3.16	6		3,626	·	5,181	
	No. of perinatal deaths	19 (2013/2014)			- ,		- , - '	
	(persons/year)	, , ,						
14	Annual number of	2012/2	.013	2	013/2014		2014/2015	
	hospitalizations	25,03	80		24,584		21,297	
	(persons/year)							

	Total length of	106,117			72,148			70,645
	hospitalization							
	(days/year)							
	Average length of	4.23			2.93			3.32
	hospitalization							
	(days/person)							
	Bed occupancy (%)	116		79			77	
	Reason for hospitalization	No.1	No.2]	No.3	No	o.4	No.5
	(2013/2014)	GI: 2166	Injury: 1916	EN	T: 1154	Pneumo	nia: 1125	Diarrhea: 1003
	No. of patient deaths	146 (2013/2014)						
	(persons/year)							
15	Annual number of	Surger	ry		OBGY		Other	
	operations (cases/year)	2,577	7	695				
	(2013/2014)							
16	Annual number of	Ultrasound	2	X-ray CT		MRI		
	diagnoses (cases/year)	14,919	1	6,081 1,329		1,329		
	(2013/2014)							
17	Annual number of tests	Blood	U T	Jrine		Stool		Other
	(tests/year) (2013/2014)	37,982	4	1,702	,702 957			
18	Annual number of blood	1,065 (2013/201	4)					
	transfusions (cases/year)							
19	No. of referral patients	Referred fr	om another ho	nospital Re		Refe	eferred from a HC	
	accepted (persons/year)		No data					
	(2013/2014)							
20	Collaboration with	None						
	community health care							
	services							

Table Current State of Champasak Provincial Hospital Facilities and Infrastructure

No	Item	Description
1	Condition of site and	Site area: Approx. 4.6 ha
	building	Existing building: The health care service facilities are in the main building in the
	-	center of the site, and in the MCH and pediatric building.
		[Main Building] There are 5 two-story buildings, in order from the
		north side, the outpatient building, the administration building
		(including ramp), emergency and operating building (including
		emergency, 5 operating theaters, examination, imaging and diagnosis,
		ICU), 2 diagnosis buildings for each department (the 2 buildings are
		connected with the ramp in between, and with the 250 hospital beds
		on the second floor), and these 5 buildings are connected by a central
		corridor and connecting corridors. Note that there are nominally 250
		beds, but they also have about 40 supplementary beds.
		[MCH Pediatric Building] This is an elevated floor type single-story
		building, that includes obstetrics and gynecology, delivery rooms,
		MCH, and pediatrics.

		Image: set of the set of
2	Electric power supply	Electricity is received from the main electrical power supply line (there are two transformers, with a capacity of 800kVA + 250kVA). The hospital facilities run on single-phase 220V/50Hz. There are virtually no power outages (during the rainy season occasionally there are power outages for about 5 minutes). There is an emergency generator.
3	Water supply facilities	City water is used (there are no water stoppages). There is no data on the quantity of water used. There is no chlorine sterilization or filtration facilities. There is a storage water tank and an elevated tank installed, but data is not available.
4	Toilets	Flush toilets are used
5	Sewage treatment facilities	There is a contaminated water treatment plant.
6	Public sewerage system	There is a sewage facility, and it is used
7	Refuse and waste disposal	There is a refuse collection point and refuse is sorted for collection. The incinerator broke down 2 years ago, and it has not been used since. The public refuse collection service can be used for normal waste (collected 3 times per week). For waste that is suspected of being contaminated, the public collection service is commissioned to process it.

	Table	Installation State of Cha	ampasak Provincial Rospital Realth	
No	Department	Item of equipment	Current state	Remarks
1	Emergency	Patient Bed	30 (2 in 2014, 24 in 2010)	Including DP aid
	room	Redside Monitor	2 (2007)	Both are broken down at
				present
		Defibrillator	1 (2012)	DP aid
		Suction Unit	1 (2010)	
		ECG	1 (2013)	
		A	4 (2 in 2014, 2 in 2008)	2 were provided with DP
		Ambulance		aid
2	ICU	Patient Bed	10 (2004)	
		Bedside Monitor	6 (2004)	
		Ventilator	2 (2010)	DP aid
		Phototherapy		
		Defibrillator	1 (2013)	DP aid
3	МСН	Denominator	4 (the year of procurement is not	
5	men	Fetal Doppler	known)	
		Illtrasound Monitor		
		Phototherapy	$\frac{2}{3}$ (1 in 2012, 2 in 2006)	DP aid
		Filototherapy	2 (the year of program ant is not	DP aid
		Incubator	5 (the year of procurement is not	DP ald
			2 (the second of the second sector	
		Reanimation Table	3 (the year of procurement is not	DP ald
4	D I			
4	Delivery	Delivery Table	4 (2004)	Including DP aid
	room	Suction Unit	1 (2013)	DP aid
		Ultrasound Monitor	1 (2013)	DP aid
			- (200 Å)	
5	Operation	Operation Table	5 (2004)	
	theater		- (200 A)	
		Electric Scalpel	5 (2004)	
		Operation Light	5 (2004)	
		Anesthesia Unit	5 (2004)	
		Ventilator		
		Defibrillator		
6	Diagnostic	General X-Ray Unit	2 (2004)	1 is broken down at present
	imaging	Mobile X-Ray Unit	1 (2004)	
	room	СТ	1 (2004)	Broken down at present
		MRI		
		Ultrasound Monitor	5 (1 in 2015, the other 4 prior to 2004)	1 only with DP aid, 1 is
				broken down at present
7	Examination	Blood Cell Counter	3 (2010, 2015)	1 was provided with DP aid
	room	Chemical Analyzer	2 (2011, 2015)	
		Centrifuge	1 (2005)	
		Autoclave	2 (2004, 2013)	1 was provided with DP aid
		Microscope	3 (2004 2015)	1 was provided with DP aid
		Safety Cabinet	2 (2010, 2012)	DP aid
8	Dentistry	Dental Chair	$3 (2 \text{ in } 2004 \ 1 \text{ in } 2014)$	1 was provided with DP aid
0	treatment	Dental X-Ray Unit	1 (2005)	i was provided with Di alu
	room	Dry clave	1 (2003)	DP aid
7	Other	Dry Clave	6 (the year of progurament is not	
/	Oulei	Hemodialysis machine	known)	

 Table
 Installation State of Champasak Provincial Hospital Health Care Equipment

	Table Issues and Problems of Champasak Provincial Hospital
Item	Description
Facilities	There is clear and major differentiation between the facilities, such as the outpatients, emergency
	and surgery, treatment room/ward for each department, MCH and pediatrics. On the other hand,

	and surgery, treatment room ward for each department, werr and pediatries. On the other hand,
	there are clearly insufficient rooms, as the supplementary beds are constantly used on the second
	floor of the central hall of the main building and diagnosis and treatment for each department
	building. However, it is necessary to study the demarcation with the Pakse District Hospital which
	is currently under construction.
Equipment	One of the two X-ray units that they possess (11 years have passed since they were purchased) is
	broken down, so the workload is compensated for using a mobile X-ray unit, and in addition the
	CT is also broken down. Renewal of these devices should be examined

Front road, Regional Road Overall view of the main Entrance to the main Entrance gate building building 10 Corridor of the Emergency treatment Biochemical Same as left Operation theater Diagnostic Imaging laboratory room Department Corridor of MCH and CT scan room MCH and pediatrics building Radiography room Pediatrics Department Inside delivery room Same as left Ambulance Dialysis room

Photos of Current State of Champasak Provincial Hospital

(14) Sanasomboun District Hospital (District code: 16-02)

Sanasomboun District Hospital is a 10-bed Type B district hospital located along Route 13 about 24km northwest of Pakse (distance by road), on a site of about 2.7ha together with the district health office. The facilities of the district hospital were completed in 2010 with assistance from the Government of Japan (grant aid for grassroots project). Nearby the hospital, land preparation is in progress for attracting companies. A temporary road and an electrical power line have been developed on part of the 100m \times 300m site recognized by Champasak Province as being for the district hospital use (discussion with the director of the district health

office). This director of the district health office was almost the only person that clearly knew and was immediately able to reply regarding the hospital site areas and the total floor areas of the hospital facilities in an interview survey regarding the regional hospitals in the south.

At present a new ward building is being constructed in the back yard of this hospital in order to satisfy the rules for the number of beds in a Type B district hospital (15 beds). Note that one dentist is deployed, but because they have no dentistry diagnostic equipment, dentistry is not included in the diagnostic and treatment departments. An outline of the hospital is shown below.

Table	Current State of Sanasomboun District Hospital Management Structure, Health Care
	Services and Facilities

No	Item	Description							
1	Location, etc.	Xonpark Village, Sanasomboun District, Champasak Province							
		(Neighboring main road) Route 13							
		(Phone no.) 020 2336 7171							
	Improvement projects	None (and none planned)							
	currently underway with								
	Developing Partner aid	<u> </u>	Clean Conveniently Regutiful Clear and Strengthening Health Perconslity						1.
2	Hospital motto	Clean, Convenie	ntly,	Beautifu	I, Clea	r and Strengthe	ening H	ealth Perso	nality
2	Area & population	So willages non	Revillance nonulation 70 362						
5	covered	80 villages, popu	50 vinages, population 70,302						
4	Higher level referral	Champasak Provincial Hospital (approx. 24km by fully paved road)							
5	nospital	Manday Sund	Mandar, C., Jac, (265 Jac, 1997) and 11 (2011) 2016 (20						
5	A reas of treatment	Emergency care	Ivionday – Sunday (365 days per year operation), 8:00-11:30/13:30-16:30					.30	
0	Areas of treatment	no equipment the	ere is	no denti	stry de	epartment)	st is ucp	noyeu but i	because there is
7	Supporting departments	Pharmacy, labor	atory	7					
8	Health care personnel	3 medical assista	ınts (MA), 2 n	urses,	12 nurse/nurse	midwiv	ves, 3 phari	nacists, 3 lab
		technicians, 1 de	ntist	, 1 comm	unity r	nidwife, 4 PHC	C, 9 voli	unteers	
9	No. of beds	10							
10	Annual number of	2012/20)13			2013/2014		2	014/2015
	outpatients	3,579)			3,760			3,719
	(persons/year)	N 1		N- 2		N _a 2	X	In A	N ₂ 5
	v_{isit} (2013/2014)	INO.1 Normal influenza:	Tons	INO.2	G	INO.3	Pneumo	NO.4	INO.5 Traffic accident: 199
	VISIT (2013/2014)	284	10112	5111113. 023	di	sease: 766	Theunc	Jilia. 240	Traffic accident. 199
11	Annual number of	2012/20)13			2013/2014		2	014/2015
	emergency patients								
	(persons/year)							<u> </u>	
	Reason for emergency	No.1		No.2		No.3	<u>٦</u>	10.4	No.5
10	VISIL (2013/2014)		12						
12	referrals to higher level	2012/20	115			116		2	80
	hospital (persons/year)					110			89
	Reason for referral	No.1			No.2		No.3		
	(2013/2014)	High-risk deliveries		Serious injury by traffic		Gastrointestinal disease			
13	Annual number of births	2012/20)13			2013/2014		2	014/2015
15	(hirths/year)	127	/15			2013/2014			174
	No of perinatal deaths	0 (2013/2014)				211			1,1
	(persons/year)	0 (2010/2011)							
14	Annual number of	2012/20)13			2013/2014		2	014/2015
	hospitalizations	544				431		-	396
	(persons/year)								
	Total length of	2,030)			1,210			1,165
	hospitalization (days/year)	, 			A 0.1				
	Average length of	3./3				2.81			2.94
	(deus/person)								
	Red occupancy (%)	56			22			32	
	Reason for hospitalization			No	2	<u> </u>		No 4	
	(2013/2014)	Gyneco-disease: 1	74	Diarrhea	1: 70	Gastrointestin	al To	nsillitis: 35	Pneumonia: 21
		-				disease: 55			
	No. of patient deaths (persons/year)	0 (2013/2014)							

15	Annual number of	Surgery OB		3GY	Other	
	operations (cases/year) (2013/2014)		1	.01		
16	Annual number of	Ultrasound	X-ray	СТ	MRI	
	diagnoses (cases/year) (2013/2014)	792				
17	Annual number of tests	Blood	Urine	Stool	Other	
	(tests/year) (2013/2014)	6762	21	8		
18	Annual number of blood transfusions (cases/year)	0 (2013/2014)				
19	No. of referral patients	Referred from an	Referred from another hospital		Referred from a HC	
	accepted (persons/year) (2013/2014)					
20	Collaboration with community health care services	The assistance of volur promotion outreach act	iteers from Korea, V	ietnam, and France w	as obtained for health	

Table Current State of Sanasomboun District Hospital Facilities and Infrastructure

No	Item	Description
1	Condition of site and	Site area: 2.7 ha (estimated from existing status and descriptions by Director of the
	building	District Health Office)
		Existing building: [District Hospital] A one-story building L-shaped in plan, including
		emergency, outpatients, examination, pharmacy, ultrasound
		examination and delivery departments and hospital ward (10 beds in
		one large room), etc. (2010 grant aid for grassroots project). At
		present a new ward building is under construction at the rear of the
		hospital (1 general hospital room, 1 special room, 1 other room).
		[District Health Office] A one-story building located on the opposite
		side to the district hospital.
		[Other Ancillary Facilities] Garage, warehouse
		70 m
		+
		Ø lis
		B
		Temporary branch road
		30 m + m
		R - lect
		CONT CONT
		A A A A A A A A A A A A A A A A A A A
		8
		3
		National Road
		Route 13
		Sold and a sold a so
		S Compc
		Be District
		Bept. Office
		Ba Gate
		Hospital Building
		Pharm Lab
		New Ward (not completed)
		Terrorary branch road
		Teuthories
		Sanasomboun District Hospital
		Total Land Area: 2.7 ha
		0 10m 50m 100m
		Source: Created by Survey Team from simple surveying

2	Electric power supply	Electricity is received from the public electricity mains (the main line is running alongside the front road of the hospital). The hospital facilities run on single-phase 220V/50Hz. Power outages of less than 2 hours occur rarely. There is no emergency generator.
3	Water supply facilities	Well water is used. The hospital uses approximately 2 tons of water per day. There are no chlorine sterilization or filtration facilities. There is no water storage tank, an elevated tank (2 ton) only is provided.
4	Toilets	Flush toilets are used. (The water for flushing is hand-pumped.)
5	Sewage treatment facilities	None
6	Public sewerage system	There is no sewerage system. Sewage is processed by seepage into the ground via a seepage pit.
7	Refuse and waste disposal	There is a refuse collection point and refuse is sorted for collection. There is no incinerator. There is no public collection service for general waste. Contaminated material is incinerated outdoors.

Table Installation State of Sanasomboun District Hospital Health Care Equipment

No	Department	Item of equipment	Current state	Remarks
1	Emergency room	Patient Bed		
		Bedside Monitor		
		Defibrillator		
		Suction Unit		
		ECG	1 (2012)	DP aid
		Ambulance		
2	ICU	Patient Bed		
		Bedside Monitor		
		Ventilator		
		Phototherapy		
		Defibrillator		
3	MCH	Fetal Doppler		
		Ultrasound Monitor		
		Phototherapy		
4	Delivery room	Delivery Table	1 (2013)	
		Suction Unit		
		Ultrasound Monitor		
		Lamp	1 (2000)	DP aid
5	Operation theater	Operation Table		
		Electric Scalpel		
		Operation Light		
		Anesthesia Unit		
		Ventilator		
		Defibrillator		
6	Diagnostic imaging room	General X-Ray Unit		
		Mobile X-Ray Unit		
		СТ		
		MRI		
		Ultrasound Monitor	1 (2013)	In echography room
7	Examination room	Blood Cell Counter	1 (the year of purchase is not known)	
		Chemical Analyzer	1 (the year of purchase is not known)	
		Centrifuge	2 (the year of purchase is not known)	
		Autoclave	1 (2012)	DP aid
		Microscope	1 (the year of purchase is not known)	DP aid
		Sterilizer		
		Blood Glucose Meter	1 (2013)	
8	Dentistry treatment	Dental Chair		
	room	Dental X-Ray Unit		

Table Issues and Problems of Sanasomboun District Hospital

ltem	Description
Facilities	The hospital facility which was completed in 2010 by grant aid for grassroots project is a Type B
	district hospital, but the number of beds (10 beds) does not satisfy the requirements (15 beds), so at
	present a new ward building is being constructed out of the province's own budget. Apart from

	that shown on the left, equipment and space is lacking for dentistry diagnosis and treatment. An emergency generator has not been installed.
Equipment	As stated above, there is no dental chair.



Photos of Current State of Sanasomboun District Hospital

(15) Bachiangchaleunsouk District Hospital (District code: 16-03)

Bachiangchaleunsouk District Hospital is a 15-bed Type B district hospital located along Route 20 about 35km northeast of Pakse (distance by road), and the new district health office building is being constructed close to the south side of the outpatient building. The director of the hospital and the deputy director are both women, and the deputy director used to be an MCH specialist doctor. Pediatrics, which is one of the essential departments, is not provided at this hospital. Therefore they have been making efforts to secure health care staff, but to the annoyance of the director and deputy director of the hospital, they are unable to provide in the existing facility the required number of beds (15 beds) for a Type B district hospital, and the maximum is about 7 beds (previously the rule for a Type B hospital was 10 beds but in FY2014/2015 the number of beds was revised to 15). An overview of the hospital is shown below.

Table	Current State of Bachiangchaleunsouk District Hospital Management Structure, Health Care
	Services and Facilities

No	Item	Description				
1	Location, etc.	Nong Kok Village, Bachiengchaleunsouk District, Champasak Province (Neighboring main road) Route 20 (Phone no.) 030 935 7132/020 5563 9164, pook_st@hotmail.com				
	Improvement projects currently underway with Developing Partner aid	None (and none planned)				
	Hospital motto	None				
2	Organization chart	Director Deputy Director 1 Deputy Director 2 Internal Medicine and Tradional Medicine 2 Staffs 2 Staffs 2 Staffs 2 Staffs 2 Staffs 2 Staffs 2 Staffs 2 Staffs 2 Staffs 2 Staffs				
3	Area & population covered	94 villages, population 54,392				

4	Higher level referral	Champasak Provincial Hospital (approx. 35km by fully paved road)						
	hospital							
5	Outpatient hours	Monday – Frida	y, 8:00-11:30/	13:30-16:30				
6	Areas of treatment	Emergency care	, surgery, OB	JY, dentistry				
-7	Supporting departments	Pharmacy, labor	atory		1.		0.645	- 1
8	Health care personnel	1 specialist, 2 ge nurse/nurse mid	eneral practitic wife, 5 pharm	oners (MD), 3 acists, 3 lab te	echnicia	l assistant ns, 1 dent	ist (MA),	7 nurses, 1
9	No. of beds	15 (actual 7 to 8	beds)	,		,		
10	Annual number of	2012/2	2012/2013 2013/2014 2014/2015					
	outpatients	5.74	6	7.	7.815			6.360
	(persons/year)	,			,			,
	Reason for outpatient	No.1	No.2	No.	.3	No	.4	No.5
	visit (2013/2014)	Normal influenza: 2967	Normal influenza: Gastrointestinal Tonsillitis: 847 Diarrhea: 860		860	Hypertension: 320		
11	Annual number of	2012/2	013	2013	3/2014		-	2014/2015
	emergency patients	652		ç	940			1038
	(persons/year)							
	Reason for emergency	No.1	No.2	No	.3	No	.4	No.5
	visit (2013/2014)	Accident: 279	Small Operation	: Appendicit	tis: 33	Diarrhea:	45	
12	Annual number of	2012/2	013	2013	3/2014	ĺ		2014/2015
	referrals to higher level	42			44			90
	hospital (persons/year)							
	Reason for referral	No.1		N	lo.2			No.3
	(2013/2014)	Serious injury	by traffic	High-risl	k deliver	ries		
		accide	ent	U				
13	Annual number of births	2012/2	013	2013	3/2014	Í	4	2014/2015
	(births/year)	255		356				292
	No. of perinatal deaths	0 (2013/2014)						
	(persons/year)	, , ,						
14	Annual number of	2012/2013 2013/2014 2014/2015					2014/2015	
	hospitalizations	565		609				684
	(persons/year)							
	Total length of	2,56	7	1,	,706			2,936
	hospitalization							
	(days/year)							
	Average length of	4.54		2.80				4.29
	hospitalization							
	(days/person)							
	Bed occupancy (%)	71 (/10 t	peds)	47 (/1	47 (/10 beds)		54 (/15 beds)	
	Reason for hospitalization	No.1	No.2	No.	No.3 N		No.4 No.5	
	(2013/2014)	Delivery: 277	Diarrhea: 7	2 Tonsilli	tis: 56	Accide	nt: 24	Malaria: 16
	No. of patient deaths	0 (2013/2014)						
1.5	(persons/year)	0			DCV			Others
15	Annual number of	Surge	ry	0	BGY			Other
	(2012/2014)	0			24			245
16	(2015/2014) Annual number of	I Iltrecour 4	V rov	1	Ст	I	MDI	
10	diagnoses (cases/year)	Ultrasound		<u>s-ray</u>		0		
	(2013/2014)	578	υ 0		0		0	
17	Annual number of tests	Blood Urine			Urine Stool Oth		Other	
	(tests/year) (2013/2014)	2498	25 7		7			
18	Annual number of blood	0 (2013/2014)						
	transfusions (cases/year)							
19	No. of referral patients	Referred from another hospital Referred from a HC			n a HC			
	accepted (persons/year)	0 24						
	(2013/2014)							
20	Collaboration with	Outreach regard	ing MCH in th	ne villages un	der juris	diction		
	community health care							
	services							

	Table Current State	of Bachlangchaleunsouk District Hospital Facilities and Infrastructure				
No	Item	Description				
No 1	Item Condition of site and building	Site area: Approx. 1.2ha (estimated from existing fence and descriptions by staff) Total floor area: [Main building] One-story building. Emergency, outpatients, examination, pharmacy, ultrasound, MCH, delivery, etc., included. [Ward building] One-story building (10 beds). [Saymai House] One-story building. Accommodation for relatives of expectant mothers [District Hospital Office] An elevated floor one-story building located behind the hospital. Timber building that is significantly aged, at present a new office building (single-story) is being constructed along the front road within the site. Neighboring Main Road: National Road - Route 20 Gate ER/MCH District Health District Health District Health District Health District Health Bachiangchaleusouk District Hospital Estimated Total Land Area: Approx. 1.2 ha				
		Source: Created by Survey Team from simple surveying				
2	Electric power supply	Electricity is received from the public electricity mains (the main line is running alongside the front road of the hospital). The hospital facilities run on single-phase 220V/50Hz. Power outages do not occur. There is no emergency generator.				
3	Water supply facilities	Well water is used (No water shortage was observed). The hospital uses approximately 2 tons of water per day. There are no chlorine sterilization or filtration facilities. There is no water storage tank, an elevated tank (3 ton) only is provided.				
4	Toilets	Flush toilets are used. (The water for flushing is hand-pumped.)				
5	Sewage treatment facilities	A storage tank is installed, and periodically vacuuming is carried out.				
6	Public sewerage system	There is no sewerage system. Periodically the sewage is transported from the sewage storage tank by vacuum pump.				
7	Refuse and waste disposal	There is a refuse collection point and refuse is sorted for collection. There is no incinerator. There is no public collection service for general waste. Waste that is suspected of being contaminated is disposed of without incineration.				

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No	Department	Item of equipment	Current state	Remarks
1	Emergency room	Patient Bed	1 (2009)	
		Bedside Monitor		
		Defibrillator		
		Suction Unit	1 (2014)	
		ECG		
		Ambulance	1 (2014)	
		Nebulizer	1 (2014)	
2	ICU	Patient Bed		
		Bedside Monitor		
		Ventilator		
		Phototherapy		
		Defibrillator		
3	МСН	Fetal Doppler	2 (2014)	DP aid

		Ultrasound Monitor		
		Phototherapy		
		Examination Table	2 (2009)	
		Autoclave	1 (2015)	
4	Delivery room	Delivery Table	2 (2009)	DP aid
		Suction Unit		
		Ultrasound Monitor	Ultrasound Monitor	
		Lamp	1 (2009)	DP aid
5	Operation theater	Operation Table	1 (2009, with DP aid)	For minor surgery
	_	Electric Scalpel		
		Operation Light		
		Anesthesia Unit		
		Ventilator		
		Defibrillator		
6	Diagnostic imaging room	General X-Ray Unit		
		Mobile X-Ray Unit		
		СТ		
		MRI		
		Ultrasound Monitor	1 (2009, with DP aid)	In echography room
7	Examination room	Blood Cell Counter		
		Chemical Analyzer	1 (2015)	
		Centrifuge	1 (2012)	DP aid
		Autoclave	1 (2009)	DP aid
		Microscope	1 (2001)	DP aid
		Sterilizer		
8	Dentistry treatment room	Dental Chair	1 (2009, with DP aid)	No lighting or air
		Dental X-Ray Unit		

Table Issues and Problems of Bachiangchaleunsouk District Hospital

Item	Description
Facilities	According to a notification from the provincial health office, the required 15 beds are provided as
	expand the patients rooms. Also, an emergency generator has not been installed.
Equipment	In recent years the procurement of equipment has been better.

Photos of Current State of Bachiangchaleunsouk District Hospital

						Real Providence
Adjoining main road, I 20	Route	Entran	ce gate	O emerg diag	verall view of the gency and outpatients nosis and treatment building	Same as on the left, corridor
Emergency treatment room	Exam	ination room	Hospital w corridor	ard	Interior of hospital ward	Dentistry treatment room

(16) Paksong District Hospital (District code: 16-04)

Paksong District Hospital is a 30-bed Type A district hospital located along Route 16 about 50km east of Pakse (distance by road), and as of December 2015 two buildings are being constructed including operation theaters and recovery rooms, etc., on the east side of the existing building with assistance from Thailand. Since the hospital opened in 1975, in 2005 the existing emergency, outpatient, and inpatient building, in 2010 the hospital building (additional beds. Constructed with assistance from Australia), and in 2014 the obstetrics and gynecology building were constructed. In the case of the equipment also, an ambulance was obtained with assistance from Thailand, beds for emergency treatment rooms were acquired from a private Vietnamese company, the laboratory equipment was purchased with the hospital's budget, etc., continually making efforts not to rely on government budget. This is a Type A district hospital, but the X-ray unit has not been used since it broke down in 2005. An overview of the hospital is shown below.

No	Item		Description						
1	Location, etc.	Vatlouang Village, Paksong District, Champasak Province							
		(Neighboring main road) Route 16A							
		(Phone no.) 020	(Phone no.) 020 5527 9768 (Director Dr. Boualone)						
	Improvement projects	Construction of the operation building and provision of operation equipment with							
	currently underway with	assistance from	the Thai princes	3S					
	Developing Partner aid		1						
	Hospital motto	None	None						
2	Organization chart								
	-			Director	7				
				Denute Director					
				Deputy Director					
				Deputy Director					
		Internal Medicine and Traditional Medicine 4 staffs	ER/ ICU/ Anesthasia 3 statfs 4 statts	Pediatric ENT Der	staff 4 staffs 2 staffs	Echo Pharmacy Administration 4 staffs 2 staffs			
3	Area & population covered	88 villages, pop	ulation 78,003						
4	Higher level referral	Champasak Pro	vincial Hospital	(approx. 50km by	fully paved road)			
	hospital	-	-						
5	Outpatient hours	Monday – Frida	y, 8:00-11:30/12	3:30-16:00					
6	Areas of treatment	Emergency care	, internal medic	ine, OBGY, surger	y, pediatrics, oph	thalmology, ENT,			
		dentistry		_					
7	Supporting departments	Pharmacy, labor	Pharmacy, laboratory						
8	Health care personnel	2 specialists, 4 g	general practition	ners (MD), 4 media	cal assistants, 19	nurses, 2			
	_	nurse/nurse mid	wives, 4 pharma	acists, 1 lab technic	ian, 1 radiologist	t, 3 dentists, 1			
		hygienist, 2 PH	С						
9	No. of beds	30							
10	Annual number of	2012/2	013	2013/2014		2014/2015			
	outpatients			11,728		11,728			
	(persons/year)		<u> </u>			_			
	Reason for outpatient	No.1	No.2	No.3	No.4	No.5			
	visit (2014/2015)	Tonsillitis: 930	Gastrointestinal	Neuralgia: 459	Accident: 286	Influenza: 95			
11	Annual number of	2012/2	013	2013/2014		2014/2015			
11	emergency natients	2012/2	015	2013/2014		2014/2013			
	(persons/year)								
	Reason for emergency	No 1	No 2	No 3	No 4	No 5			
	visit $(2014/2015)$								
12	Annual number of	2012/2	013	2013/2014		2014/2015			
12	referrals to higher level			2015/2011		2014/2013			
	hospital (persons/year)					207			
	Reason for referral	No.1 Serious injury by traffic accident:		No 2		No 3			
	(2014/2015)				-				
	(======================================	23		Hypertension: 1:	0	Prieumonia: 9			
13	Annual number of births	2012/2013		2013/2014		2014/2015			
	(births/year)			893		893			
	No. of perinatal deaths (persons/year)	0 (2013/2014)							
14	· · · · · · · · · · · · · · · · · · ·	2012/2	013	2013/2014		2014/2015			

Table Current State of Paksong District Hospital Management Structure, Health Care Services and Facilities
	Annual number of								
	hospitalizations								3,365
	(persons/year)								
	Total length of								9,518
	hospitalization								
	(days/year)								
	Average length of								3.00
	hospitalization								
	(days/person)								
	Bed occupancy (%)								87
	Reason for hospitalization	No.1	No.2		No.	3	1	No.4	No.5
	(2014/2015)	OBGY: 1,616 Neuralgia: 549			Diarrhea: 286 Hype		Нуре	rtension: Dysentery: 90	
	No. of patient deaths (persons/year)	1 (2014/2015)					-		<u>.</u>
15	Annual number of	Surg	ery		OBGY		Other		
	operations (cases/year)	637 (including	minor surgery)	67				
	(2014/2015)								
16	Annual number of	Ultrasound		X-ra	X-ray CT		СТ		MRI
	diagnoses (cases/year)	958							
	(2014/2015)								
17	Annual number of tests	Blood		Urii	Jrine		Stool		Other
	(tests/year) (2014/2015)	1,748		65	65 80		47		
18	Annual number of blood	(2014/2015)							
	transfusions (cases/year)								
19	No. of referral patients	Referred from another h			ospital Re		ferred from	a HC	
	accepted (persons/year)								
	(2014/2015)								
20	Collaboration with	Maternal, neona	tal and child h	nealt	h activitie	s			
	community health care								
	services								

Table	Current State	of Paksong	District Hosp	ital Facilities :	and Infrastructure
Table		or r aksorig	District 103p		

No	Item	Description				
1	Condition of site and building	Site area: 23,130m ² (to be confirmed) Total floor area: Not known				
		 Existing building: [Four clinical buildings] To the side of the building constructed in 1975 (consisting of an operation theater, delivery room, examination room, ultrasonic diagnosis room) there is a building that has been expanded three times (emergency, outpatients, ENT, ophthalmology, dentistry, hospital ward, OBGY). [District Health Office] One-story building. [Two new buildings] Scheduled to contain operation theater, recovery room, pediatrics 				
		District Health Ob/Gy Dept. Office McH New Ward Conder Construction) Deliver// Deliver// OP New Ward Construction) Deliver// OP Conder Construction) Dentistry/ Echo/X-ray Gate Exettre twacine Validnal Road National Road Paksong District Hospital District Hospital 1 total Land Area: 2.3 ha District Hospital				

		Source: Created by Survey Team based on layout diagram displayed in the hospital and simple surveying
2	Electric power supply	Electricity is received from the public electricity mains (three-phase 380V from main power line, transformer capacity 100kVA). The hospital facilities run on three-phase 220V/50Hz. There are virtually no power outages. There is no emergency generator.
3	Water supply facilities	Well water is used (No water shortage was observed). The hospital uses approximately 10 tons of water per day. There is no water storage tank, an elevated tank (20 ton) is provided (with no chlorine sterilization or filtration).
4	Toilets	Flush toilets are used. (The water for flushing is hand-pumped.)
5	Sewage treatment facilities	There is a septic tank.
6	Public sewerage system	There is no sewerage system. A storage tank is installed, and periodically vacuuming is carried out.
7	Refuse and waste disposal	There is a refuse collection point and refuse is sorted for collection. There is an incinerator (incineration temperature not known, processing quantity 100kg/week). There is a public refuse collection service. Waste that is suspected of being contaminated is incinerated in the incinerator.

Table Installation State of Paksong District Hospital Health Care Equipment

No	Department	Item of equipment	Current state	Remarks
1	Emergency room	Patient Bed	1 (2012)	DP aid
		Bedside Monitor		
		Defibrillator		
		Suction Unit	1 (2005)	
		ECG		
		Ambulance	1 (2014)	DP aid
2	ICU	Patient Bed		
		Bedside Monitor		
		Ventilator		
		Phototherapy		
		Defibrillator		
3	МСН	Fetal Doppler	2 (2012, 2014)	DP aid (1 was provided with aid from JICA)
		Ultrasound Monitor	1 (2010)	Broke down in 2013
		Phototherapy		
4	Delivery room	Delivery Table	2 (2005)	DP aid
		Suction Unit		
		Ultrasound Monitor		
		Reanimation Table	1 (2005)	
5	Operation theater	Operation Table	1 (1998)	
		Electric Scalpel	1 (1998)	
		Operation Light	2 (1998)	1 is broken down
		Anesthesia Unit	1 (1998)	
		Ventilator		
		Defibrillator		
		Suction Unit	1 (1998)	
		Reanimation Table	1 (1998)	
6	Diagnostic imaging room	General X-Ray Unit	1 (1998)	Broke down in 2005
		Mobile X-Ray Unit		
		СТ		
		MRI		
		Ultrasound Monitor	1 (2005)	
7	Examination room	Blood Cell Counter	1 (2015)	
		Chemical Analyzer	1 (2012)	
		Centrifuge	1 (2005)	
		Autoclave	1 (2005)	
		Microscope	2 (2005, 2014)	
		Sterilizer	1 (2005)	
8	Dentistry treatment room	Dental Chair	1 (2005)	
		Dental X-Ray Unit		
9	Ophthalmology/ENT	Ear examiner	1 (2005)	Broke down in 2012
		Microwave	1 (2005)	For sterilization

Table Issues and Problems of Paksong District Hospital

Item	Description
Facilities	Since opening in 1975, it has been expanded and enhanced 3 times. In addition, the operation
	theater and recovery room within the aging building constructed in 1975 are scheduled to be
	moved to a new multipurpose building that will also include hospital wards that is currently as of
	December 2015 under construction with assistance from Thailand. Note that the minimum level of
	emergency generator equipment should be provided.
Equipment	Besides the equipment for each department provided with assistance from the Thai Royal family, a
	Vietnamese company, and JICA, efforts are continuing to procure using the hospital budget
	biochemical examination equipment, a centrifuge, and ultrasonic diagnostic equipment (which
	broke down in 2013), but the X-ray unit has now been broken down for 10 years. The operating
	equipment being used is old but is being repaired, but assistance from Thailand for supply of
	equipment is scheduled to be provided.

Photos of Current State of Paksong District Hospital



(17) Pathoumphone District Hospital (District code: 16-05)

Pathoumphone District Hospital is a 15-bed Type B district hospital located about 300m to the west of Route 13 about 40km south of Pakse (distance by road), on a site of about 2.7ha together with the district health office. The building is spacious (more than about 1,200m²), but the impression is that there is an unbalance in the health care and dental equipment. In other words, the examination room has biochemical analysis equipment but is lacking in a blood cell counter (CBC). In addition there is not a single ultrasonic examination device, but on the other hand they have an ambulance. An outline of the hospital is shown below.

Table	Current State of Pathoumphone District Hospital Management Structure, Health Care
	Services and Facilities

No	Item	Description				
1	Location, etc.	Lak 40 Village, Pathoumphone District, Champasak Province				
		(Neighboring main road) Route 13				
		(Phone no.) 020 5573 0417				
	Improvement projects	None (and none planned). However in the past financial cooperation was received from				
	currently underway with	HSS.				
	Developing Partner aid					
	Hospital motto	None				

2	Organization chart				Director				
		Deputy Director 1							
			Deputy Director 2						
		Internal Medicine and Tradtional Gyneco Medicine	Internal Medicine Obstetrics/ and Traditional Gynecology OPD Pediatrics Dental Laboratory Dianostic Imaging Pharmacy Administrative, HR,						
		3 Staffs 3 Staffs 3 Staffs 3 Staffs 3 Staffs 3 Staffs 4 Foreign involve							
								4 Staffs	
3	Area & population	93 villages, pop	ulation 6	1,251					
	covered								
4	Higher level referral	Champasak Prov	vincial H	ospital	(of the total lei	ngth of about	t 40 km c	of the route, only	
	hospital	about 0.8km of 1	oranch ro	ad fro	m Route 13 to t	he site is unp	baved, ai	nd remaining	
5	Outpatient hours	Monday Frida	$\frac{15}{2}$ $\frac{9}{2}$ $\frac{9}{2}$ $\frac{10}{2}$ $\frac{10}{2}$	$\frac{10a0}{1\cdot 20/1}$	2.20 16.20				
5	Areas of treatment	Emergency care	<u>y, 8.00-1</u> internal	1.30/1 medic	$\frac{3.30-10.30}{\text{open}}$	districs (ther	a is a tre	ditional health care	
0	Areas of treatment	department in th	e district	health	office)	ulatiles (tilei	c 15 a ti c		
7	Supporting departments	Pharmacy, labor	atory	neutr	(011100)				
8	Health care personnel	1 specialist, 1 ge	eneral pra	etitior	ner (MD), 8 meg	lical assistan	ts (MA)	. 11 nurses. 6	
	P	nurse/nurse mid	wives, 5	pharm	acists, 3 lab tec	hnicians, 2 c	ommuni	ty midwives	
9	No. of beds	15						2	
10	Annual number of	2012/20	013		2013/20)14		2014/2015	
	outpatients	21,39	8	1	8,791	[5,158	
	(persons/year)								
	Reason for outpatient	No.1	No	o.2	No.3	N	lo.4	No.5	
	visit (2013/2014)	Normal influenza	Tonsilliti	S	Neural problem	1 Gastroir	ntestinal	Diarrhea	
11	Annual number of	2012/20	013		2013/20)14		2014/2015	
	emergency patients	108		1	98			102	
	(persons/year)								
	Reason for emergency	No.1	No	o.2	No.3	N	lo.4	No.5	
	visit (2013/2014)	Injury by traffic	Gastroint	estinal	Deliveries	Pneumo	nia	Diarrhea	
12	Annual number of	accident $2012/20$	disease		2013/20)14		2014/2015	
12	referrals to higher level	118	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		198	/14		101	
	hospital (persons/year)	110			170			101	
·	Reason for referral	No.1			No.2			No.3	
	(2013/2014)	Serious injury by tr	affic accide	ent	Diarrhea			Pneumonia	
13	Annual number of births	2012/20	013		2013/2014			2014/2015	
	(births/year)	183			222			260	
	No. of perinatal deaths	0 (2013/2014)							
	(persons/year)								
14	Annual number of	2012/20)13		2013/20	014		2014/2015	
	hospitalizations	920			999			1,242	
	(persons/year)	2.75			2.57	-		2((1	
	l otal length of	3,/30	5		2,573	>		2,001	
	(days/year)								
	Average length of	4 08			2 57			2 14	
	hospitalization	1,00			2,37			-,- '	
	(days/person)								
	Bed occupancy (%)	68.63	3		47.03	3		48.60	
	Reason for hospitalization	No.1	No	o.2	No.3	N	lo.4	No.5	
	(2013/2014)	Diarrhea	Mal	aria	Traffic accide	ent Gynec	o-disease	Pneumonia	
	No. of patient deaths	0 (2013/2014)							
	(persons/year)			,					
15	Annual number of	Surge	ry		OBG	Y		Other	
	operations (cases/year)				222				
14	(2013/2014)	I Iltera a anno 1	Ĩ		rou	ĊТ	1	MDT	
10	Annual number of	Ultrasound		X	-ray	U		MKI	
	(2013/2014)								
17	Annual number of tests	Blood		T	Irine	Stool		Other	
1/	(tests/year) (2013/2014)			, c					
18	Annual number of blood	0 (2013/2014)	1		1		1		
	transfusions (cases/year)								
	,								

19	No. of referral patients	Referred from another hospital	Referred from a HC
	accepted (persons/year)		
	(2013/2014)		
20	Collaboration with	Maternal, neonatal and child health activitie	s only
	community health care		
	services		

No	Item	Description				
1	Condition of site and building	Site area: Approx. 2.7ha Total floor area: [District Hospital] The building is one-story and T-shaped in plan, and contains an outpatient building (emergency, examination, MCH,				
		pharmacy, vaccination room, conference room, etc.), and is connected via a connecting corridor to a hospital ward (15 bed) and delivery room and administration building. [District Health Office] Two one-story buildings are provided in an L-				
		shape to the south of the District Hospital (and connected to the District Hospital via a connecting corridor). [Accommodation for Night Shift Staff] There are two single-story buildings at the south end of the site.				
		Pelivery/ Pelivery/ Administration Uistrict Health Dept District Health Dept District Health Dept District Health Dept District Health Dept District Health Dept District Health Dept District Health Dept District Health Dept District Health Dept District Health Dept District Health Dept District Health Dept District Health Dept District Health District Health District Health District Health District Health District Health District Health District Health District Health District Health District Health District District Health District District District District District District District District District District District District District District Hospital Estimated Total Land Area: Approx 2.7 ha				
		Source: Created by Survey Team from simple surveying				
2	Electric power supply	Electricity is received from the public electricity mains (the main line is running alongside the front road of the hospital). The hospital facilities run on single-phase 220V/50Hz. There are no power outages. A small generator for camping is installed as an emergency generator.				
3	Water supply facilities	Well water is used (No water shortage was observed). The hospital uses approximately 2 tons of water per day. There are no chlorine sterilization or filtration facilities. There				
		is no water storage tank, an elevated water tank (2 ton) is provided.				
4	Toilets	Flush toilets are used. (The water for flushing is hand-pumped.)				
5	Sewage treatment facilities	None				
6	Public sewerage system	There is no sewerage system. Sewage is processed via a seepage pit. Miscellaneous wastewater is discharged into the side ditch on the front road.				
7	Refuse and waste disposal	There is a refuse collection point and refuse is sorted for collection. The hospital has no incinerator. There is no public collection service for general waste. Waste that is suspected of being contaminated is incinerated outdoors or is disposed of without incineration.				

Table Current State of Pathoumphone District Hospital Facilities and Infrastructure

	Table Inetal			quipinent
No	Department	Item of equipment	Current state	Remarks
1	Emergency room	Patient Bed	3 (the year of purchase is not known)	DP aid
		Bedside Monitor		
		Defibrillator		
		Suction Unit	1 (2012)	DP aid
		ECG		
		Ambulance	1 (2011)	
		Pulse-oxygen meter	1 (the year of purchase is not known)	DP aid
2	ICU	Patient Bed		
		Bedside Monitor		
		Ventilator		
		Phototherapy		
		Defibrillator		
3	МСН	Fetal Doppler	2 (2013)	DP aid
		Ultrasound Monitor		
		Phototherapy		
4	Delivery room	Delivery Table	3 (1 was procured in 2014, the other is not	DP aid
			known)	
		Suction Unit		
		Ultrasound Monitor		
		0		
5	Operation theater	Operation Table		
		Electric Scalpel		
		Operation Light		
		Anesthesia Unit		
		Ventilator		
		Defibrillator		
6	Diagnostic imaging	General X-Ray Unit		
	room	Mobile X-Ray Unit		
		СТ		
		MRI		
		Ultrasound Monitor		
7	Examination room	Blood Cell Counter		
		Chemical Analyzer	1 (2013)	
		Centrifuge	2 (2013)	1 was provided with DP aid
		Autoclave		
		Microscope	2 (2012, 2015)	DP aid
		Sterilizer		
		Autoclave	1 (the year of purchase is not known)	
8	Dentistry treatment	Dental Chair		
	room	Dental X-Ray Unit		

Tahle	Installation State of Pathoumphone District Hospital Health Care Equipmen	it –
rabic		1 L

Table Issues and Problems of Pathoumphone District Hospital

Item	Description
Facilities	Equipment and space is lacking for dentistry diagnosis and treatment (it is considered that space can be
	easily provided within the hospital). Note that the capacity of the emergency generator is extremely small.
Equipment	As stated above, there is no dentistry diagnosis and treatment equipment. Also, CBC and ultrasonic
	examination equipment should be provided.

Photos of Current State of Pathoumphone District Hospital

Adjoining main road, Route 13	Entrance gate	Overall view of emergency / laboratory / MCH building	Emergency treatment room



(18) Phonthong District Hospital (District code: 16-06)

Phonthong District Hospital is a 15-bed Type B district hospital located along Route 16 about 15km west of Pakse. On the site, which is about 100 m length along the national route and has a depth of more than 200m, buildings are arranged in the following order from the front: OBGY and hospital ward, followed by outpatient building and ultrasonic examination building, and further inside there are several small buildings that are facilities related to the district health office. Therefore to first-time visitors it does not look like hospital facilities (the local residents meeting facility close to the road within the site can be mistaken for the hospital). The current district hospital facility is a temporary facility developed as a camp for Chinese workers engaged in road construction. After completion of construction in 2002 it was converted as it was to the district hospital, and in 2015 a new ultrasonic examination facility building was constructed. An overview of the hospital is shown below.

No	Item	Description					
1	Location, etc.	Oupalath Group	Oupalath Group 3 Village, Phonthong District, Champasak Province				
		(Neighboring main road) Route 16					
		(Phone no.) 030 947 8873/020 5411 3634					
	Improvement projects	None (and none planned)					
	currently underway with		- ·				
	Developing Partner aid						
	Hospital motto	None					
2	Organization chart						
	C			Director			
				Deputy Director 1			
				Deputy Director 2			
		Internal Machines Control					
		and Tradtional Gyneco	logy OPD Pe	diatrics Dental Labora	atory Dianostic I	Imaging Pharm	Administrative, HR, Planing Financal &
		4 St 5 Staffs	affs 2	stans 2 stans 3 sta	ms I	otans o otan	Foreign involve
							3 Staffs
3	Area & population	119 villages, po	119 villages population 95 766				
-	covered	, F.	,				
4	Higher level referral	Champasak Provincial Hospital (approx, 15km by fully payed road)					
	hospital	1					
5	Outpatient hours	Monday - Frida	y, 8:00-12:00/13	3:00-16:00			
6	Areas of treatment	Emergency care, internal medicine, surgery, OBGY, pediatrics, dentistry					
7	Supporting departments	Diagnosis, phar	nacy, laboratory	τ			
8	Health care personnel	1 specialist, 4 ge	eneral practition	ers (MD), 4 medica	l assistan	ts (MA),	1 nurse, 5
	_	nurse/nurse mid	wives, 2 pharma	cists, 3 lab technici	ians, 2 de	ntists, 2 o	community
		midwives, 2 PH	C				
9	No. of beds	15					
10	Annual number of	2012/2	013	2013/2014			2014/2015
	outpatients	4,64	1	3,735			4,380
	(persons/year)						
	Reason for outpatient	No.1	No.2	No.3	No	o.4	No.5
	visit (2013/2014)	Tonsillitis: 832	Normal influenza:	Gastrointestinal	Neural pr	roblem:	Malaria: 293
11	Annual number of	2012/2	616	disease: 442	228		2014/2015
11	Annual number of	mber of 2012/2013		2015/2014		4	2014/2013
	(persons/weer)						
	Peason for emergency	No 1	No 2	No 3	N	<u>a 4</u>	No 5
	visit (2013/2014)	1NU.1	110.2	110.5	INC	0.4	110.5
1	visit (2013/2017)						

Table	Current State of Phonthong District Hospital Management Structure, Health Care Services
	and Facilities

12	Appual number of	2012/20	12	1 1	012/2014		2014/2015	
12	Alinual number of	2012/2015		2013/2014			2014/2013	
	he amital (name and hear)	42			36		41	
	nospital (persons/year)							
	Reason for referral	N0.1			No.2		N0.3	
	(2013/2014)	Serious injury by tra	affic accident		Shock		Pneumonia	
13	Annual number of births	2012/20	13	2	2013/2014		2014/2015	
	(births/year)	333			287		199	
	No. of perinatal deaths	0 (2013/2014)						
	(persons/year)							
14	Annual number of	2012/20	13	2	2013/2014		2014/2015	
	hospitalizations	665			435		696	
	(persons/year)							
	Total length of	2.066			1.533		2.045	
	hospitalization	· · · ·			<u> </u>		<u>)</u>	
	(davs/year)							
	Average length of	3.10			3.52		2.93	
	hospitalization				5.52		2.00	
	(days/person)							
	Bed occupancy (%)	38			28		37	
	Reason for hospitalization	No 1	No 2		No 3	No 4	No 5	
	(2013/2014)	Injury by Traffic	Shock	Pn	eumonia			
	(2013/2014)	accident	Shoon		- unioniu			
	No. of patient deaths	0 (2013/2014)						
	(persons/year)							
15	Annual number of	Surger	v		OBGY		Other	
	operations (cases/year)		*					
	(2013/2014)							
16	Annual number of	Ultrasound		X-ray		CT	MRI	
	diagnoses (cases/year)	91						
	(2013/2014)	-						
17	Annual number of tests	Blood		Urine	S	tool	Other	
	(tests/year) (2013/2014)	2641		26		6		
18	Annual number of blood	0 (2013/2014)	I		1	-		
	transfusions (cases/year)	• (_••••)						
19	No of referral patients	Referred from another hospital			Referred from a HC			
17	accepted (persons/year)							
	(2013/2014)							
20	Collaboration with	Outreach activiti	es for mater	nal neonata	al and child h	ealth only		
20	community health care			iui, neonau		cului only		
	services							
	SCIVICES							

Table Current State of Phonthong District Hospital Facilities and Infrastructure

No	Item	Description					
1	Condition of site and	Site area: Approx. 1.7ha (estimated from existing fence and descriptions by staff)					
	building	Existing building: [Emergency /OBGY/Ward building] The single-story building					
	_	includes an emergency room, a gynecological and MCH examination					
		room, delivery room, patients rooms, etc.					
		[Outpatient building] One-story building. Includes an outpatient					
		consulting room, examination room, pharmacy, etc.					
		[Ultrasonic examination building] Newly constructed one-story					
		building					
		[District Health Office] One-story building.					
		[Other Ancillary Facilities] Garage, warehouse, etc.					

		Neighboring Main Road: National Road - Route 16
		Gate Electric Mainline ER/ObGy/ Ward Community Hall OPD/Lab/ Pharmacy Echography District Health Dept. Gatage Alseninstration Office
		Phonthong District Hospital Estimated Total Land Area: Approx. 1.7 ha
		0 10m 50m 100m
		Source: Created by Survey Team from simple surveying
2	Electric power supply	Electricity is received from the public electricity mains (the main line is running alongside the front road of the hospital). The hospital facilities run on single-phase 220V/50Hz. There are no power outages. There is no emergency generator.
3	Water supply facilities	Well water is used (No water shortage was observed). The hospital uses approximately 2 tons of water per day. There are no chlorine sterilization or filtration facilities. There is no water storage tank, an elevated water tank (2 ton) is provided.
4	Toilets	Flush toilets are used. (The water for flushing is hand-pumped.)
5	Sewage treatment facilities	None
6	Public sewerage system	There is no sewerage system. Sewage is processed via a seepage pit. Miscellaneous water is discharged to the roadside ditch.
7	Refuse and waste disposal	There is a refuse collection point and refuse is sorted for collection. There is no incinerator. There is no public collection service for general waste. Waste that is suspected of being contaminated is disposed of without incineration.

Table Installation State of Phonthong District Hospital Health Care Equipment

No	Department	Item of equipment	Current state	Remarks
1	Emergency room	Patient Bed	1 (2015)	
		Bedside Monitor		
		Defibrillator		
		Suction Unit		
		ECG		
		Ambulance		
2	ICU	Patient Bed		
		Bedside Monitor		
		Ventilator		
		Phototherapy		
		Defibrillator		
3	MCH	Fetal Doppler		
		Ultrasound Monitor		
		Phototherapy		
4	Delivery room	Delivery Table	2 (the year of procurement is not known)	
		Suction Unit		
		Ultrasound Monitor		
5	Operation theater	Operation Table		
		Electric Scalpel		
		Operation Light]

		Anesthesia Unit		
		Ventilator		
		Defibrillator		
6	Diagnostic imaging	General X-Ray Unit		
	room	Mobile X-Ray Unit		
		СТ		
		MRI		
		Ultrasound Monitor	1 (2015)	In echography room
7	Examination room	Blood Cell Counter	1 (2015)	
		Chemical Analyzer	1 (2015)	
		Centrifuge	1 (2013, with DP aid)	
		Autoclave	1 (2013, with DP aid)	
		Microscope	1 (2013, with DP aid)	
		Sterilizer		
		Dry-clave	1 (2013, with DP aid)	
8	Dentistry treatment	Dontal Chair	1 (1988)	Lighting is broken,
	room	Demai Chalf		and removed
		Dental X-Ray Unit		

Table Issues and Problems of Phonthong District Hospital

Item	Description
Facilities	The hospital facilities are in the building that was constructed about the year 2000 for another
	purpose and then converted, and on the hospital side various operational measures were carried
	out. However, there is no covered connecting corridor between the three small buildings or paved
	road for transporting stretchers or wheelchairs, so the convenience of use is still poor. Considering
	normal function as a Type B district hospital, it is necessary to construct a new building suitable
	for hospital use. However, it is necessary to provide functions taking into consideration the
	location conditions of being very close to the Pakse Provincial Hospital (15km). Note that
	emergency generator equipment should be provided.
Equipment	Ultrasonic examination equipment and other examination equipment are generally provided, but
	there is almost no equipment for emergencies.

Photos of Current State of Phonthong District Hospital



(19) Champasak District Hospital (District code: 16-07)

Champasak District Hospital is a 20-bed Type A district hospital, located near the east side of Route 14 A about 60km south of Pakse (only about 1km adjacent to the hospital is unpaved, and the remaining about 59km is paved road). This hospital was completed in 2008 with Japanese grant aid cooperation. A new hospital building is under construction in the backyard on the south side of the existing facility. This is a measure taken in response to the large number of inpatients (the hospital bed occupancy rate in the last 2

years exceeded 80%), and this extension is clearly being carried out with awareness of the standard facility drawings for community hospitals indicated in the Ministry of Health "Standards of Community Hospitals and Small Hospitals". About 7 years has passed since commencement of operation, and although there are no major signs of degradation in the facilities, there have been some breakdowns in the equipment. An outline of the hospital is shown below.

			una r uomu	50					
No	Item	Description							
1	Location, etc.	Dontalath Village, Champasak District, Champasak Province							
		(Neighboring main road) Route 14A							
		(Phone no.) 031	(Phone no.) 031 216 024/020 2227 2125						
	Improvement projects	None (and none planned). However, a new hospital ward is under construction using							
	currently underway with	provincial budg	et.						
	Developing Partner aid		- ·						
	Hospital motto	None							
2	Organization chart	No organization	chart could be	obtained					
3	Area & population	74 villages, pop	ulation 61,753						
	covered								
4	Higher level referral	Champasak Pro	vincial Hospital	(total route length a	bout 60km. The	paved road section			
	hospital	is about 59km, a	and the unpaved	section about 1km.	There is no need	to cross the river			
		by ferry)							
5	Outpatient hours	Monday – Frida	y, 8:00-11:30/1	3:30-16:30					
6	Areas of treatment	Internal medicin	ne, surgery, OBC	GY, pediatrics, denti	stry				
7	Supporting departments	Diagnosis, phar	macy, laboratory	y and a second sec					
8	Health care personnel	3 specialists, 10	general practiti	oners (MD), 3 medi	cal assistants (M	A), 2 nurses, 24			
		nurse/nurse mid	wives, 3 pharma	acists, 4 lab technici	ans, X-ray techni	cians (being			
0		trained), 2 denti	sts, 1 PHC, 2 ph	iysiotherapist					
9	No. of beds	20	010	2012/2014		2014/2015			
10	Annual number of	2012/2	013	2013/2014		2014/2015			
	outpatients			9014		8443			
	(persons/year)	NT. 1		NL 2	N. 4	N. 5			
	v_{isit} (2013/2014)	INO.1	INO.2	INO.3	INO.4 Pody system: 205	IN0.5			
	VISIT (2013/2014)	disease: 2612	549	374	Body System. 295				
11	Annual number of	2012/2	013	2013/2014		2014/2015			
	emergency patients								
	(persons/year)					_			
	Reason for emergency	No.1	No.2	No.3	No.4	No.5			
	visit (2013/2014)								
12	Annual number of	2012/2	013	2013/2014		2014/2015			
	referrals to higher level	114		122		113			
	hospital (persons/year)								
	Reason for referral	No.	1	No.2		No.3			
	(2013/2014)	Serious injury	v by traffic	Hypertension: 4	18 He	art disease: 13			
		acciden	t: 17						
13	Annual number of births	2012/2	013	2013/2014		2014/2015			
	(births/year)			212		497			
	No. of perinatal deaths	0 (2013/2014)							
	(persons/year)					0011/001-			
14	Annual number of	2012/2	013	2013/2014		2014/2015			
	hospitalizations			2,220		2,224			
	(persons/year)			6.054		() ()			
	l otal length of	6,054 6,242							
	hospitalization								
	(uays/year)								
	Average length of	2.72 2.81							
	(deve/person)								
	Red accuracy (9/)			07		96			
	Beason for heapitalization	 No 1	No 2	63 No 2	No 4	00 No 5			
	(2013/2014)	Gastrointestinal	INU.2 Pneumonia: 5	Normal influenza:	Malaria: 3	Hypertension: 5			
	(2013/2014)	disease: 38	i neunoma. 5	<u>4</u>	iviaidila. J	Typercension. 5			
	No. of patient deaths	0 (2013/2014)							
1	(persons/year)								

Table Current State of Champasak District Hospital Management Structure, Health Care Services and Facilities

15	Annual number of	Surgery O		BGY	Other	
	operations (cases/year)	137	4	504		
	(2013/2014)					
16	Annual number of	Ultrasound	X-ray	СТ	MRI	
	diagnoses (cases/year)	26,012				
	(2013/2014)					
17	Annual number of tests	Blood	Urine	Stool	Other	
	(tests/year) (2013/2014)	9,509	301	217		
18	Annual number of blood	15 (2013/2014)				
	transfusions (cases/year)					
19	No. of referral patients	Referred from an	other hospital	Referred	from a HC	
	accepted (persons/year)	421 (total for hosp	421 (total for hospitals and HCs)		Same as left	
	(2013/2014)	_				
20	Collaboration with	MCH activity and healt	h equity fund for po	or people (governmer	nt system)	
	community health care					
	services					

 Table
 Current State of Champasak District Hospital Facilities and Infrastructure

No	Item	Description
	Condition of site and building	Site area: Approx. 1.3ha Existing building: [Outpatient, examination, and delivery building] Single-story building: Includes outpatient, examination, dentistry, X-ray, delivery and MCH departments, pharmacy, etc. Connected to the operation theaters and hospital building] A single-story building, that includes an operation theater, associated rooms, and hospital rooms (15 beds). [Other Ancillary Facilities] Garage
2	Electric power supply	Electricity is received from the public electricity mains (the main line is running alongside the front road of the hospital). The hospital facilities run on single-phase 220V, three-phase 380V/50Hz. There are no power outages. There is an emergency generator (200kVA).
3	Water supply facilities	Well water is used (No water shortage was observed). The hospital uses approximately 2 tons of water per day. There are no chlorine sterilization or filtration facilities. A 2 ton water storage tank and an elevated water tank (2 ton) are provided.
4	Toilets	Water flushing type.
5	Sewage treatment facilities	There is a sewage septic tank.
6	Public sewerage system	There is no sewerage system. Sewage is processed by seepage into the ground via a seepage pit.

7	Refuse and waste disposal	There is a refuse collection point and refuse is sorted for collection. The hospital has
	_	no incinerator. There is no public refuse collection service for normal waste. Waste
		that is suspected of being contaminated is incinerated outdoors or is disposed of
		without incineration.

No	Department	Item of equipment	Current state	Remarks
1	Emergency room	Patient Bed		
		Bedside Monitor		
		Defibrillator		
		Suction Unit	4 (2008)	Aid from JICA
		ECG		
		Ambulance		
2	ICU	Patient Bed		
		Bedside Monitor		
		Ventilator		
		Phototherapy		
		Defibrillator		
3	МСН	Fetal Doppler	2 (2013)	DP aid
		Ultrasound Monitor		
		Phototherapy		
		Reanimation Table	1 (2008)	Aid from JICA
4	Delivery room	Delivery Table	2 (2007, 2013)	DP aid
	5	Suction Unit	1 (2013)	DP aid
		Ultrasound Monitor	1 (2006)	DP aid
			, ,	
5	Operation theater	Operation Table	1 (2008)	Aid from JICA
	•	Electric Scalpel	1 (2008)	Aid from JICA
		Operation Light	1 (2008)	Aid from JICA
		Anesthesia Unit	1 (2008)	Aid from JICA
		Ventilator		
		Defibrillator		
6	Diagnostic imaging	General X-Ray Unit	1 (2008) Broke down in 2012	Aid from JICA
	room	Mobile X-Ray Unit		
		СТ		
		MRI		
7	Examination room	Blood Cell Counter	1 (2015)	
		Chemical Analyzer	1 (2009)	
		Centrifuge	3 (2008, 2009, 2012)	2 were provided with DP aid
		Autoclave	1 (2008)	Aid from JICA
		Microscope	2 (2008, 2012) 1 is broken down	1 was provided with DP aid
		Sterilizer		
8	Dentistry treatment	Dental Chair	1 (2008)	Aid from JICA
	room	Dental X-Ray Unit		

Table Installation State of Champasak District Hospital Health Care Equipment

Table Issues and Problems of Champasak District Hospital

Item	Description			
Facilities	No major degradation can be seen in the facility, and at present the hospital ward is being			
	extended.			
Equipment	There is scope for considering renewal of the X-ray unit.			

Photos of Current State of Champasak District Hospital

Adjoining main road, Route 14 A	Front road (unpaved)	Entrance gate	Overall view of the outpatient building



(20) Soukouma District Hospital (District code: 16-08)

Soukouma District Hospital is a 15-bed Type B district hospital about 70km (distance by road) from Pakse, located on the south side of the village that spreads from the west side of the main road. Its referral hospitals are the Champasak District Hospital, a Type A district hospital located about 16km to the north (time required during the dry season about 40 minutes), and Champasak Provincial Hospital in Pakse City (do., about 80 minutes). However about 8km from the hospital is unpaved road, so during the rainy season passage is more difficult and more time is required. There are two dentists but there is no dentistry treatment space and no dental chair, so other departments provide support. The director of the hospital states that a major problem is stability of the health care staff. An overview of the hospital is shown below.

Table Current State of Soukouma District Hospital Management Structure, Health Care Services and Facilities

No	Item	Description
1	Location, etc.	Soukouma Village, Soukouma District, Champasak Province (Neighboring main road) Road has no name (Rhome no.) 020 5525 (2008 (Director Dr. Bounkerg))
		(Phone no.) 020 5555 6908 (Director Dr. Bounnong)
	Improvement projects currently underway with Developing Partner aid	None (and none planned)
	Hospital motto	None
2	Organization chart	

		Director I Deputy Director 1 I Deputy Director 2						
		Internal Medicine and 5 starts						
3	Area & population covered	58 villages, popu	ilation 64,981					
4	Higher level referral hospital	Champasak Prov 8km is unpaved paved road and 8	vincial Hospit road), Champ 3km is unpave	al (tota asak I ed roac	al route 70km District Hospi l)	of which tal (total ro	62km is p oute 16km	aved road, and a of which 8km is
5	Outpatient hours	Monday – Friday	y, 8:00-12:00/	14:00	-16:00			
6	Areas of treatment	Emergency care,	internal med	icine,	OBGY, pedia	atrics, opht	halmolog	у
/	Supporting departments	Pharmacy, labor	atory (in addi	tion th	ere is a mino	r surgery r	00m)	
8	Health care personnel	midwives, 1 pha	rmacist, 3 lab	techn	icians, 2 dent	ists, 8 hyg	ienists, 3 I	PHC
9	No. of beds	15			0010/001			044/0045
10	Annual number of	2012/20)13		2013/2014	1	4	2014/2015
	(persons/year)				9,551			11,275
	Reason for outpatient	No.1	No.2		No.3	N	0.4	No.5
	visit (2013/2014)	Gastrointestinal	Pneumonia: 677	T	onsillitis: 439	Malaria:	236	Hypertension: 215
11	Annual number of	2.012/2.0)13	i	2013/2014	1		2014/2015
	emergency patients (persons/year)						-	
	Reason for emergency visit (2013/2014)	No.1	No.2		No.3	N	o.4	No.5
12	Annual number of	2012/20)13		2013/2014		2014/2015	
	referrals to higher level				94		113	
	Reason for referral	No.1			No.2			No.3
	(2013/2014)	Serious injury by tra 11	affic accident:		Hypertension	9		Infection: 7
13	Annual number of births	2012/20)13		2013/2014		2014/2015	
	(births/year)				216			262
	No. of perinatal deaths (persons/year)	0 (2013/2014)						
14	Annual number of	2012/20)13		2013/2014	4	2	2014/2015
	hospitalizations (persons/year)				2,440		2,351	
	Total length of hospitalization (days/year)				4,104			3,070
	Average length of hospitalization (days/person)	1.68 1.31			1.31			
	Bed occupancy (%)			-	75			56
	Reason for hospitalization	No.1	No.2		No.3	N	o.4	No.5
	(2013/2014)	Influenza: 187	Infection: 11	18 ^I	Hypertension	: Diarr	hea: 90	Obstetrics/
	No. of patient deaths (persons/year)	0 (2013/2014)						Gynecology. 07
15	Annual number of	Surger	ry .		OBGY			Other
	operations (cases/year) (2013/2014)							
16	Annual number of	Ultrasound		X-ray		СТ		MRI
	diagnoses (cases/year) (2013/2014)	1,029						
17	Annual number of tests	Blood		Urine	Jrine Stool			Other
	(tests/year) (2013/2014)	2,657		176		556		
18	Annual number of blood transfusions (cases/year)	0 (2013/2014)						

19	No. of referral patients	Referred from another hospital	Referred from a HC		
	accepted (persons/year)				
	(2013/2014)				
20	Collaboration with	Maternal, neonatal and child health activities			
	community health care				
	services				

No	Item	Description		
1	Condition of site and	Site area: 8,320m ² (estimated from existing fence and descriptions by staff)		
	building	Total floor area: 698.5m ²		
		Existing buildings: [Two main buildings] The building at the front gate entrance		
		(includes emergency, outpatients, examination, ultrasonic		
		examination, examination, delivery, MCH rooms, pharmacy,		
		small-scale operation theater, etc.) and building further inside		
		(nospital ward) are connected by a connecting corridor.		
		[District Health Office]		
		[Other Ancillary Facilities] Garage		
		Neighboring		
		Local Road		
		LGate		
		Hospital Garage		
		MCH/Lab/Pharmacy		
		Ward		
		District Health Dept. Office		
		N		
		Soukouma District Hospital		
		Total Land Area: 2 ha		
		0 10m 50m 100m		
		Source: Created by Survey Team from simple surveying		
2	Electric power supply	Electricity is received from the public electricity mains (three-phase 380V/50Hz from		
		main power line, transformer capacity 100kVA). The hospital facilities run on three-		
		phase $220V/50Hz$. During the rainy season there are some days when there are power outcomes of 2 hours any negative days but there is no emperator.		
3	Water supply facilities	Wall water is used (No water shortage was observed). The bosnital uses approximately		
5	water suppry facilities	1.5 tons of water per day. The water storage tank is broken and cannot be used an		
		elevated water tank (1.5 ton) only is used (no chlorine sterilization, filtration		
		equipment).		
4	Toilets	Flush toilets are used. (The water for flushing is hand-pumped.)		
5	Sewage treatment facilities	None		
6	Public sewerage system	There is no sewerage system. Sewage is processed via a seepage pit.		
7	Refuse and waste disposal	There is a refuse collection point and refuse is sorted for collection. There is an		
		incinerator (incineration temperature not known, processing quantity 5kg/day). There is no public collection service for general waste. Waste that is suggested of being		
		is no public contection service for general waste, waste that is suspected of being		
1		containinated is included outdoors.		

Table Current State Soukouma District Hospital Facilities and Infrastructure

Table	Installation State	of Soukouma	District Hospital	Health Care	e Equipment
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No	Department	Item of equipment	Current state	Remarks
1	Emergency room	Patient Bed		
		Bedside Monitor		

1	I	D (1 11)	1	
		Defibrillator		
		Suction Unit		
		ECG		
		Ambulance	2 (2000, 2014)	1 was provided with DP aid, broken down
2	ICU	Patient Bed		
		Bedside Monitor		
		Ventilator		
		Phototherapy		
		Defibrillator		
3	MCH	Fetal Doppler	1 (2012)	DP aid
		Ultrasound Monitor		
		Phototherapy	1 (2012)	
4	Delivery room	Delivery Table	2 (1990, 2002)	
		Suction Unit	1 (2013)	DP aid
		Ultrasound Monitor		
		Autoclave	1 (Not known)	
		Oxygen Pump	1 (2013)	DP aid
		Fetal Doppler	2 (2012, 2015)	DP aid, 1 is broken down
5	Operation theater	Operation Table	2 (1990, 2002)	
	(small-scale)	Electric Scalpel		
		Operation Light		
		Anesthesia Unit		
		Ventilator		
		Defibrillator		
		Sterilizer	1 (Not known)	
6	Diagnostic imaging	General X-Ray Unit		
	room	Mobile X-Ray Unit		
		СТ		
		MRI		
		Ultrasound Monitor	2 (2000, 2012)	1 was provided with DP aid, broken down
7	Examination room	Blood Cell Counter	1 (2015)	
		Chemical Analyzer		
		Centrifuge	2 (2011, 2014)	
		Autoclave		
		Microscope	1 (2002)	
		Sterilizer		
		Glucose analyzer	1 (2015)	
8	Dentistry treatment	Dental Chair		
	room	Dental X-Ray Unit		

Table Issues and Problems of Soukouma District Hospital

Item	Description
Facilities	There is sufficient space on the site, and the overall impression is that maintenance and cleaning is carried out well. Facilities other than the inpatients building are concentrated in the building at the entrance gate, and there are no problems at present regarding provision of services, however there is no space or equipment for dentistry treatment, so the criteria for a Type B district hospital are not satisfied. Also, an emergency generator should be provided.
Equipment	Old equipment such as the operation table and delivery table are being carefully used, but efforts are continuing to obtain maternal, neonatal and child health equipment from Developing Partners such as Médecins du Monde, etc. However, as described in the facilities column, even though a dentist is deployed, there is no dental chair, so this service cannot be provided, and the criteria for a Type B district hospital are not satisfied.

Photos of Current State of Soukouma District Hospital

Front road	Hospital entrance gate	Overall view of the hospital and car parking	Front entrance for outpatients (registration, accounts)



(21) Mounlapamok District Hospital (District code: 16-09)

Mounlapamok District Hospital is a 15-bed district hospital located about 2km from the Mekong River, about 100km (distance by road) south of Pakse, in 2014 it was moved into the village away from the Mekong River. According to Champasak Provincial Health Office, the aim is that it should become a community hospital, so it has been decided that it will be converted from the existing Type B to Type A, and although it is one building short, it has been constructed almost in conformance with the standard drawings for a community hospital. About one third of the total length of the road along the Mekong River to Pakse is unpaved, so when referring to the Champasak Provincial Hospital each ambulance crosses the Mekong River using a public boat, and then uses the paved road on the opposite bank. The referral time varies depending on the status of passengers on the boat. Also, there are several simple ambulances in which a pickup truck is installed with a cradle and a roof. New equipment that is necessary for the operation theater of the Type A hospital is scheduled to be provided, but there is no X-ray unit. Intern students and other staff that have been trained frequently do not return, so stability of health care personnel is a major problem, the same as for the other district hospitals in Champasak Province. An overview of the hospital is shown below.

Table	Current State of Mounlapamok District Hospital Management Structure, Health Care Services
	and Facilities

No	Item	Description									
1	Location, etc.	Veunkhen Village, Mounlapamok District, Champasak Province									
		(Neighboring main road) Route 14C									
		(Phone no.) 030 9643747/020 97194250 (Dr. Bouabay Phetou Thay)									
	Improvement projects	None (and none	None (and none planned)								
	currently underway with		· • •								
	Developing Partner aid										
	Hospital motto	None									
2	Organization chart										
				Director	7						
				Deputy Director 1	7						
				De la Directa d	7						
				Deputy Director 2							
		Internal Obstetrics/Gyne cology	Surgery Anesthasia/	ICU Pediatric Dental Unit I	ENT Laboratory X-Ray	Pharmacy Administration					
		5 staffs 6 staffs	4 staffs 2 staffs	3 staffs 2 staffs 1	staff 2 staffs 0 staff	3 staffs 3 staffs					
3	Area & population covered	36 villages, pop	ulation 39,343								
4	Higher level referral	Champasak Prov	vincial Hospita	al (2km unpaved road	$d \rightarrow cross$ the Mek	ong River by boat					
	hospital	(each vehicle ca	n board the bo	at) \rightarrow 98km paved ro	oad)	6 5					
5	Outpatient hours	Monday – Frida	y, 8:00-12:00/	13:30-16:30							
6	Areas of treatment	Emergency care	, internal med	icine, surgery, OBGY	7, pediatrics, denti	stry					
7	Supporting departments	Pharmacy, labor	atory (in addit	tion, there is a minor	surgery room)						
8	Health care personnel	0 specialists, 6 g	eneral practiti	oners (MD), 6 medic	al assistants (MA)), 10 nurses, 3					
		nurse/nurse mid	wives, 3 pharr	nacists, 2 lab technic	ians, 2 dentists, 1	MPH, 2 PHC					
9	No. of beds	20									
10	Annual number of	2012/2	013	2013/2014		2014/2015					
	outpatients (persons/year)					6,903					
	Reason for outpatient	No.1	No.2	No.3	No.4	No.5					
	visit (2014/2015)	Gastrointestinal disease: 1083	Malaria: 752	Tonsillitis: 540	Pneumonia: 447	Neuralgia: 289					

11	Annual number of	2012/2013			2013/2014		2014/2015	
	emergency patients (persons/year)							
	Reason for emergency	No.1	No.2		No.3	N	lo.4	No.5
	visit (2014/2015)	Stomachache: 415 Hypertension: 150		50	Serious injury by traffic accident: 127			
12	Annual number of	2012/2	013		2013/2014		2014/2015	
	referrals to higher level hospital (persons/year)						97	
	Reason for referral	No.1			No.2		No.3	
	(2014/2015)	Hypertensi	on: 28	Sei	rious injury by traffi 16	c accident:		Diarrhea: 12
13	Annual number of births	2012/2	013		2013/2014	1		2014/2015
	(births/year)							204
	No. of perinatal deaths (persons/year)	0 (2013/2014)						
14	Annual number of	2012/2	013		2013/2014	1		2014/2015
	hospitalizations (persons/year)							798
	Total length of hospitalization (days/year)			F		1,397		
	Average length of hospitalization (days/person)						1.75	
	Bed occupancy (%)							19
	Reason for hospitalization	No.1	0.1 No.2		No.3	No.4		No.5
	(2014/2015)	Pneumonia: 187	Hypertensio 43	n: Diarrhea: 18 Gastroir diseas		ntestinal Injury by traffic se: 11 accident: 5		
	No. of patient deaths (persons/year)	0 (2014/2015)						
15	Annual number of	Surgery			OBGY		Other	
	operations (cases/year) (2014/2015)	127 (minor	surgery)		158	8		
16	Annual number of	Ultrasound		X-ra	ay	СТ		MRI
	diagnoses (cases/year) (2014/2015)				-			
17	Annual number of tests	Blood	Blood		Jrine Stool		Other	
10	(tests/year) (2014/2015)	2,259		10	10 13		440	
18	transfusions (cases/year)	0 (2014/2015)						
19	No. of referral patients	Referred from another ho		ospi	ospital Re		eferred from a HC	
	accepted (persons/year) (2014/2015)							
20	Collaboration with community health care services	Maternal, neonatal and child health activities						

No	Item	Description							
1	Condition of site and	Site area: 30,330m ²							
	building	Total floor area: 2.622m ²							
		Existing building: [Two main buildings] The building at the front gate entrance							
		(includes emergency, outpatient, examination, ultrasonic							
		examination, examination rooms, pharmacy, office, etc.) and the							
		building further inside (includes 20 bed hospital ward, delivery							
		room, MCH room, small scale operation theater, etc.) are							
		connected by a connecting corridor (constructed in 2014).							
		Pond							
		Lab/Dentistry/							
		Pharmacy							
		Gatê							
		00000							
		Neighboring							
		Local Road:							
		Mounlapamok District Hospital To National Road Total Land Area: 3 ha Route 13 (approx							
		Total Land Area: 3 ha							
		0 10m 50m 100m River)							
		Source: Created by Survey Team from simple surveying							
2	Electric power supply	Electricity is received from the public electricity mains (the main line is three-phase							
		380V/50Hz). Within the hospital facility the electricity is 220V/50Hz. There are							
		virtually no power outages during the dry season, but during the rainy season power							
		outages frequently occur lasting more than 2 hours in one day. There is no emergency							
2	Water supply facilities	generator. Well water is used (Ne water shortege was chearwed). The hearital was emprovimetaly							
3	water suppry facilities	5 tons of water per day. There is no water storage tank an elevated water tank (20 ton)							
		is provided (There are no chlorine sterilization or filtration facilities)							
4	Toilets	Flush toilets are used. (The water for flushing is hand-pumped.)							
5	Sewage treatment	None							
	facilities								
6	Public sewerage system	There is no sewerage system. Sewage is processed via a seepage pit.							
7	Refuse and waste disposal	There is a refuse collection point and refuse is sorted for collection. There is an							
		incinerator (incineration temperature not known, processing quantity 20kg/day). There							
		is no public collection service for general waste. Waste that is suspected of being							

Table Current State of Mounlapamok District Hospital Facilities and Infrastruct

3.1	D			
No	Department	Item of equipment	Current state	Remarks
1	Emergency	Patient Bed	1 (2005)	
	room	Bedside Monitor		
		Defibrillator		
		Suction Unit		
		ECG		
		Ambulance	1 (2012)	
2	ICU	Patient Bed		
		Bedside Monitor		
		Ventilator		
		Phototherapy		
		Defibrillator		
3	МСН	Fetal Doppler	1 (2013)	Developing Partner aid
		Ultrasound Monitor		
		Phototherapy		· · · · · · · · · · · · · · · · · · ·
		Oxygen meter	1 (2010)	
4	Delivery	Delivery Table	2 (1995, 2015)	
	room	Suction Unit	2 (2013)	Developing Partner aid
		Fetal Doppler	1 (2013)	Developing Partner aid
5	Operation	Operation Table	1 (Not known)	
	theater	Electric Scalpel		
	(small-scale)	Operation Light		
	· · · · ·	Anesthesia Unit		
		Ventilator		
		Defibrillator		
6	Diagnostic	General X-Ray Unit		
-	imaging	Mobile X-Ray Unit		
	room	СТ		
		MRI		
7	Examination	Blood Cell Counter	1 (2015)	
	room	Chemical Analyzer	1 (2015)	Not in use: awaiting reagent
		Centrifuge	2 (2010)	1 each for biochemistry and blood counts
		Autoclave	1 (2010)	
		Microscope	6 (2005, 2014)	Developing Partner aid, 4 are broken down
		Sterilizer		
8	Dentistry		1 (2005)	Secondhand from Champasak Provincial
-	treatment	Dental Chair	()	Hospital, broken down at present
	room	Dental X-Ray Unit		

Table Installation State of Mounlapamok District Hospital Health Care Equipment

Table Issues and Problems of Mounlapamok District Hospital

Item	Description
Facilities	The building completed in 2014 was constructed in compliance of the community hospital
	standard drawings, and although it has one fewer building than the standard drawings it can satisfy
	the criteria for the number of hospital beds (30 beds) for a Type A district hospital (if they are
	squeezed into the space). During the rainy season on some days there can be power outages lasting
	2 hours or more per day, so a generator should be installed.
Equipment	New equipment has been provided in the examination rooms, the same as for other hospitals in
Equipment	New equipment has been provided in the examination rooms, the same as for other hospitals in Champasak Province, and some equipment for maternal, neonatal and child health is being
Equipment	New equipment has been provided in the examination rooms, the same as for other hospitals in Champasak Province, and some equipment for maternal, neonatal and child health is being supplied from DPs. Equipment for surgery is scheduled to be provided for the conversion to a
Equipment	New equipment has been provided in the examination rooms, the same as for other hospitals in Champasak Province, and some equipment for maternal, neonatal and child health is being supplied from DPs. Equipment for surgery is scheduled to be provided for the conversion to a Type A district hospital, but on the other hand there is no ultrasonic examination equipment, so the
Equipment	New equipment has been provided in the examination rooms, the same as for other hospitals in Champasak Province, and some equipment for maternal, neonatal and child health is being supplied from DPs. Equipment for surgery is scheduled to be provided for the conversion to a Type A district hospital, but on the other hand there is no ultrasonic examination equipment, so the criteria for a Type B district hospital are not satisfied. Also, the dental chair (obtained secondhand

Note: In some cases secondhand dental chairs are provided to district hospitals from Mahosot Hospital, the central educational hospital, and provincial hospitals. However, at the time that they are received or soon after use they break down, and many examples were seen in which they were just discarded without being repaired (Mounlapamok, Khong, Lao Ngam).

Photos of Current State of Mounlapamok District Hospital



(22) Khong District Hospital (District code: 16-10)

Khong District Hospital is a 30-bed Type A district hospital located on the east side of Khong Island, a sandbar in the Mekong River, about 130km (distance by road) south of Pakse. It was opened in 1943 through the efforts of a Vietnamese doctor, and before independence played the role as the provincial hospital. Now we can transfer to the east bank of the Mekong River using a bridge on the southeast part of the island, and the time required to travel to the referral destination of Champasak Provincial Hospital is about 2.5hours. At present it is located about 1km on the south side of the center of the town, but a new hospital is being constructed complying with the standard drawings for a community hospital in a location about 2km to the north of the present location, and in the near future the hospital is scheduled to be transferred. On the other hand, procurement of new health care equipment and renewal of existing equipment is not scheduled. Although it is a Type A district hospital, there is no X-ray unit similar to the other district hospitals, and in addition the equipment being used in the operation theater is very old. The building constructed with Japanese aid for carrying out research into the Mekong schistosome is currently being used as the district health office. An overview of the hospital is shown below.

No	Item	Description						
1	Location, etc.	Kangkhong Village, Khong District, Champasak Province (Neighboring main road) No name, from Route 132 on the right bank of the Mekong River cross the bridge onto Khong Island, and travel **km north (Phone no.) 031 213539/020 5559 6146						
	Improvement projects currently underway with Developing Partner aid	None (and none planned)						
	Hospital motto	None						
2	Organization chart	Deputy Director of Khong Detrict Health Office Deputy Director Deputy Director						
3	Area & population covered	114 villages, population 91,834						
4	Higher level referral hospital	Champasak Provincial Hospital (approx. 132km by fully paved road)						
5	Outpatient hours	Monday – Friday, 8:00-12:00/13:30-16:00						
6	Areas of treatment	Internal medicine, surgery, OBGY, pediatrics						

Table Current State of Khong District Hospital Management Structure, Health Care Services and Facilities

7	Supporting departments	Pharmacy, laboratory (in addition, there is an operation theater)							
8	Health care personnel	2 specialists, 8 general practitioners (MD), 1 medical assistant (MA), 21 nurses, 3							
		nurse/nurse midwives, 4 pharmacists, 5 lab technicians, 1 dentist							
9	No. of beds	30							
10	Annual number of	2012/20	13		2013	3/2014			2014/2015
	outpatients			12,		12,863		14.847	
	(persons/year)					,		1,017	
	Reason for outpatient	No 1	No 2	·	No	3	No 4		No 5
	visit $(2013/2014)$	Influenza: 1042	Gastrointestinal	1	Tonsillitis: 792		2 Diarrhea: 379		Hypertension: 297
	(2015/2011)		disease: 973		Tolisilitis. 792		Diamica. 579		51
11	Annual number of	2012/20	13		2013	8/2014			2014/2015
	emergency patients			•	•				
	(persons/year)								
	Reason for emergency	No.1	No.2		No.	3	No.4		No.5
	visit (2013/2014)								
12	Annual number of	2012/20	13		2013	3/2014			2014/2015
	referrals to higher level				_012	50			49
	hospital (persons/year)					00			10
	Reason for referral	No 1		1	N	0.2			No 3
	(2013/2014)	Serious injury by tra	ffic accident		Gastrointe	tinal dise	356		Hypertension
13	A number of hirths	2012/20	13	<u> </u>	2013	$\frac{1}{2}$			2014/2015
15	(hirths/waar)	2012/20	15		201.	27			2014/2013
	(Untils/year)			l	2	57			
	No. of perinatal deaths	3 (2013/2014)							
1.4	(persons/year)	2012/20	12	1	2012/2014				
14	Annual number of	2012/20	13		2013/2014			2014/2015	
	hospitalizations				2.277			2,003	
	(persons/year)				0.5(4			0.165	
	Total length of				8,564			9,165	
	hospitalization								
	(days/year)				27(4.50	
	Average length of				3.76				4.58
	hospitalization								
	(days/person)			ļ			1) 04		
	Bed occupancy (%)			L,	94 (25 beds)		L	84	
	Reason for hospitalization	No.1	No.2		No.3		No.4 No.5		No.5
	(2013/2014)	Gastrointestinal	Tonsillit	is:	Diarrhe	r 152	Infection: 120		Pneumonia: 116
		disease: 382	210		Diamic	1. 132	Infection: 120		
	No. of patient deaths	5 (2013/2014)							
	(persons/year)								
15	Annual number of	Surge	ry		(DBGY			Other
	operations (cases/year)	275 (including n	ninor surgery	/)		433			
	(2013/2014)								
16	Annual number of	Ultrasound		X-ra	ay		CT		MRI
	diagnoses (cases/year)	1,684			-				
	(2013/2014)								
17	Annual number of tests	Blood		Uri	rine		Stool		Other
	(tests/year) (2013/2014)	6,083		8			40	40 450	
18	Annual number of blood	5 (2013/2014)							
	transfusions (cases/year)								
19	No. of referral patients	Referred fro	m another h	osni	ital		Referred	fro	m a HC
	accepted (persons/vear)								
	(2013/2014)								
20	Collaboration with	Maternal neonate	al and child b	nealt	th activitie	S			
	community health care					~			
	services								

No	Item	Description			
1	Condition of site and	Site area: 12,500m ²			
	building	Total floor area: Not known			
	5	Existing huilding: [MCH/Outpatient huilding]			
		[Hospital ward (including operation theater, delivery room)] One-			
		story building			
		[Examination and administration building] Two-story building			
		[District Health Office] One-story building. The building			
		constructed with Japanese aid when carrying out the Mekong			
		schistosome research project is being used			
		[Other Ancillary Facilities] 2 garages			
		To National Road			
		Route 13-2			
		(approx. 700m) 个			
		/ District Health			
		Gate/ Mich Dept. Onice			
		Pharmacy			
		Garage			
		Coperation Mekong			
		Consultation/			
		Garbage HT Lab/Eebo/			
		Stock Administration Delivery/Ward			
		Vvarg			
		Khone District Hospital			
		Total Land Area: 1.25 ha			
		Ð			
		0 10m 50m 100m			
		Source: Created by Survey Team from simple surveying			
2	Electric power supply	Electricity is supplied from the public power mains (the main line is three phase			
2	Electric power suppry	380V/50Hz) Within the hospital facility the electricity is three-phase $220V/50Hz$			
		There are virtually no nower outgoes during the dry season but during the rainy season			
		power outages frequently occur lasting more than 2 hours in one day. The hospital has			
		a small emergency generator.			
3	Water supply facilities	City water and well water are used (No water shortage was observed). The hospital			
-	IFF 5	uses approximately 10 tons of water per day. There is no water storage tank, only an			
		elevated water tank (4 ton) is provided (There are no chlorine sterilization or filtration			
		facilities).			
4	Toilets	Flush toilets are used. (The water for flushing is hand-pumped.)			
5	Sewage treatment	None			
	facilities				
6	Public sewerage system	There is no sewerage system. Wastewater is stored in a storage tank which is emptied			
		periodically by vacuum truck.			
7	Refuse and waste disposal	There is a refuse collection point and refuse is sorted for collection. The hospital has			
		no incinerator. There is no public collection service for general waste. Waste that is			
		suspected of being contaminated is incinerated outdoors or disposed of off-site.			

 Table
 Current State of Khong District Hospital Facilities and Infrastructure

No	Department	Item of equipment	Current state	Remarks
1	Emergency	Patient Bed	1 (2000)	
	room	Bedside Monitor		C
		Defibrillator		
		Suction Unit		Contraction (1997)
		ECG		
		Ambulance	3 (1995, 2000)	2 are broken down (provided with DP aid)
2	ICU	Patient Bed		
		Bedside Monitor		
		Ventilator		
		Phototherapy		
		Defibrillator		
3	MCH	Fetal Doppler	1 (2012)	
		Ultrasound Monitor		
		Phototherapy		
4	Delivery	Delivery Table	1 (2012)	
	room	Suction Unit	1 (Not known)	On the point of breakdown
		Ultrasound Monitor		
		Sterilizer	1 (Not known)	
		Reanimation Table	1 (2009)	Developing Partner aid
		Fetal Doppler	1 (2012)	
5	Operation	Operation Table	1 (2010)	Developing Partner aid
	theater	Electric Scalpel	2 (1995)	1 is broken down
		Operation Light	1 (1995)	
		Anesthesia Unit	1 (2012)	
		Ventilator		
		Defibrillator		
		Suction Unit	1 (2012)	
6	Diagnostic	General X-Ray Unit		
	imaging	Mobile X-Ray Unit		
	room	СТ		
		MRI		
		Ultrasound Monitor	1 (2010)	
7	Examination	Blood Cell Counter	1 (2015)	
	room	Chemical Analyzer	1 (2010)	Contraction (1997)
		Centrifuge	3 (2012)	Partially with Developing Partner aid
		Autoclave	1 (2012)	
		Microscope	5 (2012, 2015)	Partially with DP aid, 2 are broken down
		Sterilizer		
8	Dentistry	Dental Chair	1 (2010)	A secondhand chair from Mahosot Hospital is
	room	Dental X-Ray Unit		
	100111	Domai A-itay Onit	1	

 Table
 Installation State of Khong District Hospital Health Care Equipment

Table Issues and Problems of Khong District Hospital

Item	Description			
Facilities	The fact is that there are aged buildings for clinical treatment dotted within the site, so it is judged			
	that the construction of a new hospital is appropriate. Although it is a Type A hospital at present			
	there is no plan for an X-ray room, but the new hospital will be constructed in accordance with the			
	community hospital standard drawings, so it is considered that this problem will be resolved. The			
	transfer location is just a short distance, but there is an unpaved front road of the hospital, so there			
	is a concern that during the rainy season the time to arrive at the hospital and the time to transfer to			
	a referral hospital will increase.			
Equipment	Efforts can be seen such as broken down surgery equipment being repaired by the hospital staff			
	and continuing to be used. However, although some of the equipment is being renewed with			
	donations from individuals, etc., apart from the examination room equipment all the equipment is			
	aged, so it is necessary that it be renewed. Nonetheless there are no plans for new procurement or			
	renewal of X-ray equipment or surgery equipment. Besides the fact that an X-ray unit has not			
	being installed, there is no ophthalmology or ENT treatment provided within the hospital (even			
	though the organization chart shows an ENT department), and also there is no equipment for			
	measuring hearing capacity, so the criteria for a Type A district hospital are not satisfied.			

Photos of Current State of Khong District Hospital

		No. of the second secon				
Front road and entranc	hospital ee	E adm	Examination and inistration building	Overall view of the hospital ward (including I delivery room / operation theater, etc.)		Distant view of garage and hospital ward
E STA						
Ultrasound examination room	Taking blood samples		Laboratory	Biochemical analyzer	Elevated tank	Dental chair
Delivery room (Above: delivery table, below: resuscitation table)	Operation th (from top, op lights: repair use, electric s broken down anesthesia	neater eration red for scalpel: n, and unit)	Top 2: Building constructed with Japanese aid (currently DHO), bottom 2: Equipment provided by JICA (desks, speakers)	Distant vie hospital construe	w of new (under etion)	Behind the ambulance, bridge crossing the Mekong River

[Attapeu Province]

(23) Xaysetha District Hospital (District code: 17-01)

Xaysetha District Hospital is a Type B district hospital located about 10km east after crossing the river from the market in the center of Attapeu. The hospital facilities were constructed in 1996, and it is a small scale one-story building hospital. An outline of the hospital is shown below.

Table	Current State of Xaysetha District Hospital Management Structure, Health Care Services and
	Facilities

No	Item	Description		
1 Location, etc. Fungdeang Village, Saysettha District, Attapeu province (Neighboring main road) Along Route 186 (Phone no.) 036 213 006				
	Improvement projects currently underway with Developing Partner aid	TB, malaria (global fund)		
	Hospital motto	None		
2	Organization chart	None		
3	Area & population covered	Tui Village (1169), Oudomxay (934), Sai Village (1941), Phoxay Village (1844), Fungdeang Village (1365), Kunmakkhong (1032), Por Village (2262), Xaysi Village (1801)		

4	Higher level referral	Attapeu Provincial Hospital (approx. 10km, 10 minutes)						
	hospital							
5	Outpatient hours	Monday – Friday	Monday – Friday, 8:00-11:30/13:00-16:00					
6	Areas of treatment	Emergency care, internal medicine, surgery, OBGY, pediatrics, ophthalmology, ENT						
7	Supporting departments	Consulting room	s, pharmacy,	laboratory, nutrition				
8	Health care personnel	9 general practiti	9 general practitioners (MD), 9 MAs, 13 nurses, 3 nurse/nurse midwives, 3					
		pharmacists, 3 la	pharmacists, 3 lab technicians, 1 dentist, 5 PHC					
9	No. of beds	20	20					
10	Annual number of	2012/20	13		2014/2015			
	outpatients (norsong/waar)	4,196	'	4,308		3,578		
	(persons/year)	No 1	l	No 2	No.4	No 5		
	v_{isit} (2013/2014)	Diarrhea (226)	Flu (879)	Pneumonia (306)	Tonsillitis (382)	Iniury(252)		
11	Annual number of	2012/20	12	2012/2014	10030002)	2014/2015		
11	Annual number of	2012/20	15	2013/2014		2014/2013		
	(persons/year)							
	Reason for emergency	No 1		No 3	No 4	No 5		
	visit $(2013/2014)$							
12	Annual number of	2012/20	13	2013/2014		2014/2015		
12	referrals to higher level	47	15	18		37		
	hospital (persons/year)	.,		10		57		
	Reason for referral	No.1		No.2		No.3		
	(2013/2014)							
13	Annual number of births	2012/20	13	2013/2014		2014/2015		
	(births/year)	226		227		245		
	No. of perinatal deaths							
	(persons/year)							
14	Annual number of	2012/2013		2013/2014		2014/2015		
	hospitalizations	1 728		1 527		1 101		
	(persons/year)	1,720		1,527		1,171		
	Total length of	6,956	6,956			3,573		
	hospitalization							
	(days/year)							
	Average length of	4.00		4.00		3.00		
	hospitalization							
	(days/person)	05		0.0		5.4		
	Bed occupancy (%)	93 No 1	l	98 No 2	Nr. 4			
	(2012/2014)	INO.1	1NO.2	N0.5	IN0.4	N0.5		
	(2013/2014)	NIA (2012/2014)						
	(persons/year)	NA (2015/2014)						
15	Annual number of	Surger	v	OBGY	1	Other		
15	operations (cases/year)	109	y					
	(2013/2014)	109						
16	Annual number of	Ultrasound		X-rav	CT	MRI		
10	diagnoses (cases/year)							
	(2013/2014)							
17	Annual number of tests	Blood		Urine	Stool	Other		
	(tests/year) (2013/2014)	338			162			
18	Annual number of blood	(2013/2014)						
	transfusions (cases/year)							
19	No. of referral patients	Referred fr	om another h	ospital	Referred f	rom a HC		
	accepted (persons/year)		NA		N	Α		
	(2013/2014)							
20	Collaboration with	MNCH, TB, AII), malaria					
	community health care							
	services							

ЪT		
NO	Item	Description
1	Condition of site and building	Site area: 1ha Existing building: When you enter the gate facing the road, a T-shaped single-story hospital can be seen ahead. The road is paved as far as the gate at the entrance of the hospital, but the roads are not paved within the site. The hospital facilities were constructed in 1996, and although some stains can be seen on the external walls and rusting on the roof, it is in a sufficient state to enable use.
2	Electric power supply	Power is supplied from the public power mains. The hospital facilities run on single- phase 220V/50Hz. There are virtually no power outages. Outages occur only in the rainy season. The hospital has no emergency generator.
3	Water supply facilities	Well water is used.
4	Toilets	Vault toilets are provided.
5	Sewage treatment facilities	Sewage storage tank and periodic retrieval.
6	Public sewerage system	There is no sewerage system.
7	Refuse and waste disposal	There is a place where waste is collected, sorted, and taken away. There is an
		incinerator, but incineration is not at high temperatures.

Table Current State of Xaysetha District Hospital Facilities and Infrastructure

Table Installation State of Xaysetha District Hospital Health Care Equipment

No	Department	Item of equipment	Current state	Remarks
1	Emergency room	Patient Bed	1 (1996)	Government budget
		Bedside Monitor		
		Defibrillator		
		Suction Unit		
		ECG		
		Ambulance		
2	ICU	Patient Bed		
		Bedside Monitor		
		Ventilator		
		Phototherapy		
		Defibrillator		
3	МСН	Fetal Doppler	1 (2006)	Developing Partner
		Ultrasound Monitor		
		Phototherapy		
4	Delivery room	Delivery Table	2 (2015)	Developing Partner
		Suction Unit	1 (2006)	Developing Partner
5	Operation theater	Operation Table		
		Electric Scalpel		
		Operation Light		
		Anesthesia Unit		
		Defibrillator		
6	Diagnostic imaging room	General X-Ray Unit		

		Mobile X-Ray Unit		
		СТ		
		MRI		
7	Examination room	Blood Cell Counter	1 (2015)	Government budget
		Chemical Analyzer	1 (2015)	Hospital budget
		Centrifuge	1 (2007)	Developing Partner
		Autoclave		Developing Partner
		Microscope	1 (2006)	
		Sterilizer	1 (2015)	Hospital budget
8	Dentistry treatment room	Dental Chair		
		Dental X-Ray Unit		

Table Issues and Problems of Xaysetha District Hospital

Item	Description
Facilities	Twenty years have passed since its construction in 1996, so it is considered that some repairs are
	necessary on the external walls and roof, but there are no practical problems. However, one
	problem is that there is no emergency generator.
Equipment	Apart from the beds for the patients provided in 1996, the equipment has mostly been procured
	comparatively recently, and sufficiently exhibit their function.

Photos of Current State of Xaysetha District Hospital

Front road and hospital gate		Overall view of the hospital from the gate		Automatic blood cell counter	Microscope	Delivery table
	F	A Contraction				
Infant warmer	Mic	roscope	Biochemical analyzer	Centrifuge	Fetal phonocardiograph	Blood-pressure gauge

(24) Attapeu Provincial Hospital (District code: 17-02)

Attapeu Provincial Hospital is located about 3km northwest from the market in the center of Attapeu, on the Route 11 bypass. The front road is paved, and a rotary and medians are installed. The hospital facilities were newly constructed in 2012. An outline of the hospital is shown below.

Table Current State of Attapeu Provincial Hospital Management Structure, Health Care Services and Facilities

No	Item	Description
1	Location, etc.	Vernkean Village, Samakkhixay District, Attapeu Province
		(Neighboring main road) Along Route 11
		(Phone no.) 036 214031
	Improvement projects	None (and none planned)
	currently underway with	
	Developing Partner aid	
	Hospital motto	None
2	Organization chart	None
3	Area & population	5 districts: Samakkhixay, Phouvong, Sanxay, Saysettha, Samnamxay (total population
	covered	132,327)
4	Higher level referral	Champasak Provincial Hospital (approx. 210km or 3 hours by fully paved road)
	hospital	
5	Outpatient hours	Monday – Friday, 8:00-12:00/13:00-16:00

6	Areas of treatment	Emergency care, internal medicine, surgery, OBGY, pediatrics, ophthalmology, ENT,					
		rehabilitation, tuberculosis					
7	Supporting departments	Consulting rooms, pharmacy, laboratory, blood transfusions, nutrition					
8	Health care personnel	10 specialists, 16 general practitioners (MD), 8 MAs, 32 nurses, 8 nurse/nurse					
	_	midwives, 5 pharmacists, 7 lab technicians, 4 X-ray technicians, 4 dentists, 2 MPH, 2					
		PHC, 3 physical therapists					
9	No. of beds	100					
10	Annual number of	2012/20)13	2013	/2014	2014/2015	
	outpatients	14,81	1	19,	504	20,111	
	(persons/year)						
	Reason for outpatient	No.1	No.2	No.3	<u>1 </u>	No.4	No.5
	visit (2013/2014)	Injury: 1,330	Tonsillitis: 1,21	10 Flu: 93	35 Gastrol	ogy: 896	Pneumonia: 730
11	Annual number of	2012/2013		2013	/2014		2014/2015
	emergency patients	NA	A		NA		NA
	(persons/year)			Į,			
	Reason for emergency	No.1	No.2	No.3	<u>3 1</u>	No.4	No.5
	visit (2013/2014)						
12	Annual number of	2012/20	013	2013	/2014		2014/2015
	referrals to higher level	98		6	67		82
	hospital (persons/year)						
	Reason for referral	No.1		N	0.2		No.3
	(2013/2014)	Injury		Operat	Operation care		
13	Annual number of births	2012/20)13	2013	2013/2014		2014/2015
	(births/year)	264		260		607	
	No. of perinatal deaths			NA	4		
	(persons/year)					1	
14	Annual number of	2012/20)13	2013	/2014		2014/2015
	hospitalizations	4,105	5	4,6	561		4,407
	(persons/year)	1,100		21.946			
	l otal length of	22,229		21,	846		25,079
	nospitalization						
	(days/year)	5.42			5.59		5 (0
	Average length of	5.42		5.	39		5.09
	(days/parson)						
	Red occupancy (%)	80.21		78	37		68.61
	Bed occupancy (76)	No 1	No 2	/0	. <i>31</i>	No.4	No 5
	(2013/2014)	10.1	110.2	110.2	N0.3		110.5
	No. of nationt doaths	NA (2012/2014)					
	(persons/year)	NA (2015/2014)					
15	Annual number of	Surger	-V	OB	GV		Other
15	operations (cases/year)	1 226	<u>, y</u>	1	10	Other	
	(2013/2014)	1,220)	1	10		
16	Annual number of	Ultrasound		X-ray	СТ	-	MRI
10	diagnoses (cases/year)	5 635		1 776			
	(2013/2014)	5,055		1,770			
17	Annual number of tests	Blood		Urine Stoo		ool Other	
- /	(tests/year) (2013/2014)	8.201		21 Stool		6	
18	Annual number of blood	106 (2013/2014)	:			1	
	transfusions (cases/year)	, , , , , , , , , , , , , , , , , , , ,					
19	No. of referral patients	Referred fr	om another h	nospital		eferred from	m a HC
-	accepted (persons/year)		NA	E		NA	
	(2013/2014)						
20	Collaboration with	PHC training					
	community health care						
	services						

Table Current State of Attapeu Provincial Hospital Facilities and Infrastructure

No	Item	Description
1	Condition of site and	Site area: 1.7ha
	building	Existing building: The building at the front entrance is a two-story building, and the
		was constructed in 2012 so the exterior and interior are both
		maintained.

		for the spiral for th
2	Electric power supply	Power is supplied from the public power mains. The hospital facilities run on single- phase 220V/50Hz. There are virtually no power outages. Outages occur only in the rainy season. The hospital has a 500kVA emergency generator.
3	Water supply facilities	Well water is used.
4	Toilets	The hospital is equipped with flush-type toilets.
5	Sewage treatment facilities	At present there is no processing equipment, but it is scheduled to be constructed.
6	Public sewerage system	There is no sewerage system.
7	Refuse and waste disposal	There is no refuse collection station. The public waste collection service is used.

Table Installation State of Attancy Provincial Heapital Health Care Equipment

No	Department Item of equipment		Current state	Remarks
1	Emergency room	Patient Bed	6 (2012)	Developing Partner
		Bedside Monitor	1 (2012)	Hospital budget
		Defibrillator	0	
		Suction Unit	1	Government budget
		ECG	0	
		Ambulance	4 (2015)	Government budget, DP
2	ICU	Patient Bed	6	Developing Partner
		Bedside Monitor	4	Developing Partner
		Ventilator	2 (2015)	Government budget
		Phototherapy	1	Developing Partner
		Defibrillator	1	Developing Partner
3	MCH	Fetal Doppler	2 (2015)	Hospital budget
		Ultrasound Monitor	1 (2012)	Developing Partner
		Phototherapy		
4	Delivery room	Delivery Table	2 (2012)	Developing Partner
		Suction Unit	1 (2012)	Developing Partner
		Ultrasound Monitor	1 (2012)	Developing Partner
5	Operation theater	Operation Table	2 (2012)	Developing Partner
		Electric Scalpel	2 (2012)	Developing Partner
		Operation Light	2 (2012)	Developing Partner
		Anesthesia Unit	2 (2012)	Developing Partner
		Defibrillator		

6	Diagnostic	General X-Ray Unit	1 (2013)	Developing Partner
	imaging room	Mobile X-Ray Unit		
		СТ		
		MRI		
7	Examination	Blood Cell Counter	3 (2014)	Developing Partner
	room	Chemical Analyzer	3 (2002)	Developing Partner
		Centrifuge	2 (2013)	Developing Partner
		Autoclave	4 (2005)	Developing Partner
		Microscope	4 (2008)	Developing Partner
		Sterilizer	1 (2012)	Developing Partner
8	Dentistry	Dental Chair	2 (2012, 2000)	Hospital budget
	treatment room	Dental X-Ray Unit	1 (2012)	Hospital budget

Table Issues and Problems of Attapeu Provincial Hospital

Item	Description
Facilities	Only a few years have passed since construction, so at present the facilities are sound. Note that there is a 3-story part in which there is no elevator, so this is a burden on the patients and health care staff.
Equipment	The health care equipment was mostly provided when the hospital was newly constructed, and there are no problems with its operational status. However, as with other provincial hospitals, the X-ray equipment is film type, so there is concern over supplies in the future, and it is desirable that the equipment be converted to digital type in the near future.

Photos of Current State of Attapeu Provincial Hospital

						6
Front road and hospital gate		Overall v fr	view of the hospital om the gate	X-ray unit	Operation table	Shadowless lamp
Blood cell counter	Micr	oscope	Defibrillator	Dental chair	Delivery table	Infant warmer

(25) Sanamxay District Hospital (District code: 17-03)

Sanamxay District Hospital is a Type B district hospital located about 45 minutes west by vehicle from the center of Attapeu. Immediately upon leaving Attapeu the roads become rough unpaved roads. On the way it becomes necessary to cross the river by a timber bridge several times, but the road is roller compacted and it is possible to drive at a speed of about 50km/h. When you enter Sanamxay Town, the roads are paved, and the access to the hospital is very good. An outline of the hospital is shown below.

Table Current State of Sanamxay District Hospital Management Structure, Health Care Services and Facilities

No	Item	Description
1	Location, etc.	Midsumpun Village, Sanamxay District, Attapeu Province
	Improvement projects	None
	currently underway with	
	Developing Partner aid	
	Hospital motto	None
2	Organization chart	None
3	Area & population	Midsumpun (1754), Tadeau (932), Hadyao (868), Tapad (675)
	covered	
4	Higher level referral	Attapeu Provincial Hospital (approx. 35km, 45 minutes)
	hospital	
5	Outpatient hours	Monday – Friday, 8:00-11:30/13:30-16:30

6	Areas of treatment	Internal medicine, OBGY, pediatrics					
7	Supporting departments	Consulting rooms, pharmacy, laboratory, nutrition					
8	Health care personnel	4 general practitioners (MD), 3 MAs, 12 nurses, 2 nurse/nurse midwives, 1 pharmacist,					
0	No of beds						
10	Annual number of	20	013	2013/2014			2014/2015
10	outpatients	4 70)	2013	1/7		367
	(persons/year)	4,702	-	5,7	r-r /		507
	Reason for outpatient	No.1	No.2	No.3		No.4	No.5
	visit (2013/2014)	Tonsillitis (1018)	Gastritis (504)	Pneumonia	. (258) Inju	ary (246)	Cold (177)
11	Annual number of	2012/20	2012/2013		/2014		2014/2015
	emergency patients						
	(persons/year)						
	Reason for emergency	No.1	No.2	No.3	8	No.4	No.5
	visit (2013/2014)						
12	Annual number of	2012/20	013	2013	/2014		2014/2015
	referrals to higher level	69		9	2		78
	hospital (persons/year)						
	Reason for referral	No.1		No	0.2		No.3
10	(2013/2014)		.1.2	-			
13	Annual number of births	2012/20)13	2013	/2014		2014/2015
	(births/year)	/6		1	112		133
	No. of perinatal deaths			0			
14	(persons/year)	2012/20	012	2013/2014		2014/2015	
14	hospitalizations	2012/20	J15	2013/2014		2014/2015	
	(persons/year)	1,137	7	1,1	.71		1,347
	Total length of	4,877	7	4,4	83		5,298
	hospitalization						
	(days/year)				-		
	Average length of	4		2	4		5
	hospitalization						
	(days/person)	(7.2)	7	()	2(_	72.50
	Bed occupancy (%)	0/.3	/L	62.26		No.4	/3.38 No 5
	(2013/2014)	Diarrhea	Tonsillitis	10.3	<u>Dne</u>	ino.4	110.5
	(2013/2014)	(167)	(113)	Gastritis	(106)	(86)	Malaria (70)
	No. of patient deaths	4 (2013/2014)	()			(00)	
	(persons/year)	× ,					
15	Annual number of	Surge	ry	OB	GY		Other
	operations (cases/year)						
16	(2013/2014)	T 71, 1		-	CT.	<u> </u>	
16	Annual number of	Ultrasound	2	K-ray	CI		MRI
	(2012/2014)	468					
17	(2013/2014) Annual number of tests	Blood	T	Irine	Stool		Other
17	(tests/year) (2013/2014)	Blood		Jrine St		82 Other	
18	Annual number of blood	5,170	1	(2013	6/2014)		
10	transfusions (cases/year)			(2015	/2014)		
19	No. of referral patients	Referred fi	rom another ho	ospital Re		eferred fro	m a HC
	accepted (persons/year)		NA			NA	
	(2013/2014)						
20	Collaboration with	Health Promotio	on Day				
	community health care						
	services						

No	Item	Description
1	Condition of site and building	Site area: 1.08ha Existing building: When you enter the site from the gate, a single-story hospital can be seen. The road is paved as far as the gate at the entrance of the hospital, but the roads are not paved within the site. The hospital facilities were constructed in 1998, there are no problems with the structure, and it is in a sufficient state to enable use.
		Source: Created by Survey Team from simple surveying
2	Electric power supply	Power is supplied from the public power mains. The hospital facilities run on single- phase 220V/50Hz. There are virtually no power outages, very short power outages occur about twice per month. The hospital has a 120kVA emergency generator.
3	Water supply facilities	Well water is used.
4	Toilets	Vault toilets are provided.
5	Sewage treatment facilities	None
6	Public sewerage system	There is no sewerage system.
7	Refuse and waste disposal	There is a place where waste is collected, sorted, and taken away.

 Table
 Current State Sanamxay District Hospital Facilities and Infrastructure

Table Installation State of Sanamxay District Hospital Health Care Equipment

No	Department	Item of equipment Current state		Remarks
1	Emergency room	Patient Bed	1 (2000)	Developing Partner
		Bedside Monitor		
		Defibrillator		
		Suction Unit		
		ECG		
		Ambulance		
2	ICU	Patient Bed		
		Bedside Monitor		
		Ventilator		
		Phototherapy		
		Defibrillator		
3	MCH	Fetal Doppler	1 (2000)	Developing Partner
		Ultrasound Monitor		
		Phototherapy	2 (2014)	Developing Partner
4	Delivery room	Delivery Table	1 (2000)	Developing Partner
		Suction Unit	1 (2009)	Developing Partner
		Phototherapy		
5	Operation theater	Operation Table		
		Electric Scalpel		
		Operation Light		
		Anesthesia Unit		
		Defibrillator		
6	Diagnostic imaging room	General X-Ray Unit		

		Mobile X-Ray Unit		
		СТ		
		MRI		
7	Examination room	Blood Cell Counter		
		Chemical Analyzer	1 (2015)	Developing Partner
		Centrifuge	1 (2000)	Government budget
		Autoclave	2 (2013)	Developing Partner
		Microscope	2 (2000)	Government budget
		Sterilizer	1 (2015)	Developing Partner
8	Dentistry treatment room	Dental Chair		
		Dental X-Ray Unit		

Table Issues and Problems of Sanamxay District Hospital

Item	Description
Facilities	The hospital was constructed in 1998, but there are no problems in practice.
Equipment	The equipment was procured comparatively recently, but there is no automatic blood cell counter
	necessary for examination, and this is an obstacle to the examination function.

Photos of Current State of Sanamxay District Hospital

Rough road on the way to the site	Road in front of the hospital	Overall view of the hospital	Delivery table	Infant warmer



(26) Sanxay District Hospital (District code: 17-04)

Sanxay District Hospital is a Type B district hospital located about 30km east-northeast after crossing the river from the market in the center of Attapeu. The hospital facilities were constructed in 2009, with 2 small scale one-story buildings side by side. An outline of the hospital is shown below.

Table	Current State of Sanxay District Hospital Management Structure, Health Care Services and
	Facilities

No	Item	Description				
1	Location, etc.	Someboun Village, Sanxay District, Attapeu Province				
		(Neighboring main road) Along Route 186				
		(Phone no.) 036 211 803				
	Improvement projects	None				
	currently underway with					
	Developing Partner aid					
	Hospital motto	None				
2	Organization chart	None				
3	Area & population	Someboun Village (1022), Vungxay Village (1403), Dakhiek Village (1322),				
	covered	Tadkhoun Village (451), Mainakok Village (605), Peikeo (405), Mixai Village (1202),				
		Phouxai Village (920), Hindam Village (258), Donkhean Village (161), Tadseang				
		Village (1016), Dakkied (311)				
4	Higher level referral	Attapeu Provincial Hospital (approx. 30km, 30 minutes)				
	hospital					
5	Outpatient hours	Monday – Friday, 8:00-11:30/13:30-16:00				
6	Areas of treatment	Emergency care, internal medicine, OBGY, pediatrics, TB				
7	Supporting departments	Consulting rooms, pharmacy, laboratory, nutrition				

-									
8	Health care personnel	4 general practitioners (MD), 6 nurses, 2 nurse/nurse midwives, 1 pharmacist, 2 lab							
0	No. of body	20(10 in use th)	a ramaindar	in at					
9	No. of beds	20 (10 in use, the remainder in storage)							
10	Annual number of	2012/20	013		2013/2014		2	014/2015	
	outpatients	4,932			4,429			4,440	
	(persons/year)								
	Reason for outpatient	<u>No.1</u>	No.2		No.3	1	No.4	No.5	
	visit (2013/2014)	Tonsillitis (651)	Flu (434)		Sepsis (391)	Diarrhe	a (211)	Injury (219)	
11	Annual number of	2012/2	013		2013/2014		2014/2015		
	emergency patients								
	(persons/year)					_			
	Reason for emergency	No.1	No.2		No.3	1	No.4	No.5	
	visit (2013/2014)								
12	Annual number of	2012/2	013		2013/2014	ļ	2	014/2015	
	referrals to higher level	0			19			0	
	hospital (persons/year)								
	Reason for referral	No.1	[No.2			No.3	
	(2013/2014)								
13	Annual number of births	2012/2	013		2013/2014		2	014/2015	
	(births/year)	61		1	51		-	77	
	No. of perinatal deaths				0				
	(persons/year)				Ū				
14	Annual number of	2012/2	013	1	2013/2014	2013/2014		2014/2015	
11	hospitalizations	2012/2	015		2013/2014 224 848		460		
	(persons/year)	227							
	Total length of	1.019	9						
	hospitalization	1,01	019		010		1,055		
	(days/year)								
	Average length of	1 / 8		-	3 44		2 79		
	hospitalization	т.т о			5.77		2.19		
	(days/person)								
	Red occupancy (%)	15		-	11 77		1	14.42	
	Become for hospitalization	No 1	No 2		No 2	N	I	No 5	
	(2013/2014)	N0.1 N0.2		-14	INU.5		NO.4 NO.5		
	(2013/2014)	Diarrhea (46)	(24)		(21)		(51) Tonsillitis (17)		
	No. of actions double	(24) (21) (3)					51)		
	No. of patient deaths	NA (2015/201	4)						
15	(persons/year)	C		1	ODCV		1	Other	
15	Annual number of	Surge	I y		OBG1		Other		
	(2013/2014)								
16	(2013/2014)	Liltragound		V	V CT			MDI	
10	diagnosos (apsos/yoor)	Olitasouliu		Л- І	X-ray CI		MIKI		
	(2012/2014)								
17	(2013/2014)	Dlasd		T Ini	Urina Staal			Other	
17	(tests/seer) (2012/2014)	B1000		UII					
10	(lests/year) (2013/2014)	1,427			162				
18	Annual number of blood	1 (2013/2014)							
10	transfusions (cases/year)						110		
19	No. of referral patients	Referred from another he			ospital Re		eterred from a HC		
	accepted (persons/year)	NA			NA				
0 ^	(2013/2014)								
20	Collaboration with	IEC, EPI							
	community health care								
1	services	1							
No	Item	Description							
----	-----------------------------------	---							
1	Condition of site and building	Site area: 1.0ha Existing building: When you enter the gate facing the Route, 2 single-story are arranged side by side. The road is paved as far as the gate at the entrance of the hospital, but the roads are not paved within the site. The hospital facilities were constructed in 2009, there are no cracks in the external walls, etc., and it is in a sufficient state to enable use.							
		Neighboring Lacal Road OPD/ER/ Pharmacy/ Administraten Deliver/ MCH/Lab/ Ward							
		Sanxay District Hospital Total Land Area: 1 ha 0 20m 100m 200m							
		Source: Created by Survey Team from simple surveying							
2	Electric power supply	Power is supplied from the public power mains. The hospital facilities run on single-phase 220V/50Hz. There are virtually no power outages, and they only occur during the rainy season.							
3	Water supply facilities	Well water is used.							
4	Toilets	Vault toilets are provided.							
5	Sewage treatment facilities	There is no processing equipment.							
6	Public sewerage system	There is no sewerage system.							
7	Refuse and waste disposal	There is a place where waste is collected, sorted, and taken away.							

Table Current State of Sanxay District Hospital Facilities and Infrastructure

Table Installation State of Sanxay District Hospital Health Care Equipment

No	Department	Item of equipment	Current state	Remarks
1	Emergency room	Patient Bed	3 (2011)	Developing Partner
		Bedside Monitor		
		Defibrillator		
		Suction Unit		
		ECG		
		Ambulance		
2	ICU	Patient Bed		
		Bedside Monitor		
		Ventilator		
		Phototherapy		
		Defibrillator		
3	MCH	Fetal Doppler	2 (2005)	Developing Partner
		Ultrasound Monitor		
		Phototherapy		
4	Delivery room	Delivery Table	2 (2006)	Developing Partner
		Suction Unit	1 (2011)	Developing Partner
5	Operation theater	Operation Table		
		Electric Scalpel		
		Operation Light		
		Anesthesia Unit		
		Defibrillator		
6	Diagnostic imaging room	General X-Ray Unit		

1		Mobile X-Ray Unit		
		СТ		
		MRI		
7	Examination room	Blood Cell Counter	1 (2013)	Developing Partner
		Chemical Analyzer	2 (2015)	Developing Partner
		Centrifuge	1 (2013)	Developing Partner
		Autoclave		Developing Partner
		Microscope	1 (2012)	
		Sterilizer		
8	Dentistry treatment room	Dental Chair		
		Dental X-Ray Unit		

Table Issues and Problems of Sanxay District Hospital

Item	Description		
Facilities	The hospital was constructed in 2009, there are few signs of degradation (cracks in the external		
	walls and rusting of metal sheets), but there are no problems in practice.		
Equipment	The equipment has mostly been procured comparatively recently, and sufficiently exhibit their		
	function.		

Photos of Current State of Sanxay District Hospital

Front road and hos	spital	Overall view of the hospital		Automatic blood	Mieroscopo	Weighing scale
gate		fr	om the gate	cell counter	wheroscope	for newborn baby
Infant warmer	Deliv	very table	Centrifuge			

(27) Phouvong District Hospital (District code: 17-05)

Phouvong District Hospital is a Type B district hospital located about 30km south after crossing the river from the market in the center of Attapeu. The hospital facility was constructed in 1996, and is a one-story building. An outline of the hospital is shown below.

Table	Current State of Phouvong District Hospital Management Structure, Health Care Services
	and Facilities

No	Item	Description				
1	Location, etc.	Vongsumpun Village, Phouvong District, Attapeu Province				
	Improvement projects	None				
	currently underway with					
	Developing Partner aid					
	Hospital motto	None				
2	Organization chart	None				
3	Area & population	Vongsumpun Village (1608),	Vangyang Village (1173), Vo	ngvilaytay (456),		
	covered	Vongvilayneau (597), Makkieng (533), Palai (452)				
4	Higher level referral	Attapeu Provincial Hospital (approx. 30km, 45 minutes)				
	hospital					
5	Outpatient hours	Monday – Friday, 8:30-11:30/13:30-16:30				
6	Areas of treatment	Emergency care, internal med	icine, OBGY, pediatrics			
7	Supporting departments	Consulting rooms, pharmacy, laboratory, nutrition				
8	Health care personnel	5 general practitioners (MD), 1 MA, 13 nurses, 3 nurse/nurse midwives, 1 pharmacist,				
		3 lab technicians				
9	No. of beds	20				
10	Annual number of	2012/2013	2013/2014	2014/2015		
	outpatients	4,126	2,881	2,974		

	(persons/year)							
	Reason for outpatient	No.1	No.2		No.3	N	lo.4	No.5
	visit (2013/2014)	Cold (389)	Pneumonia (36	3)	Gastritis (160)	Neurosi	s (129)	Malaria (102)
11	Annual number of	2012/20	013		2013/2014		2014/2015	
	emergency patients							
	(persons/year)							
	Reason for emergency	No.1	No.2		No.3	N	lo.4	No.5
	visit (2013/2014)							
12	Annual number of	2012/20	013		2013/2014			2014/2015
	referrals to higher level	19			18			31
	hospital (persons/year)	NT 1			NL 0			NL 2
	Reason for referral	No.1			No.2			No.3
10	(2013/2014)		012					
13	Annual number of births	2012/20)13		2013/2014			2014/2015
	(births/year)	52			/5			64
	No. of perinatal deaths				0			
14	(persons/year)	2012/20	012		2012/2014		,	2014/2015
14	hospitalizations	2012/20	J15		2013/2014			2014/2013
	(persons/year)	1,118	8		1,109			989
	Total length of	651			6590		6427	
	hospitalization	0.51			0570			0457
	(days/year)							
	Average length of	5		6		6		
	hospitalization	C C						
	(days/person)							
	Bed occupancy (%)	35.13	3		21.17			78
	Reason for hospitalization	No.1	No.2		No.3	N	lo.4	No.5
	(2013/2014)	Diarrhea	Pneumonia	ı	Tonsillitis	Malar		Demonstration (20)
		(156)	(124)		(120)	Malar	na (119)	Dysenteria (38)
	No. of patient deaths	NA (2013/2014))					
	(persons/year)						-	
15	Annual number of	Surge	ry		OBGY			Other
	operations (cases/year) (2013/2014)							
16	Annual number of	Ultrasound		X-ray		СТ		MRI
	diagnoses (cases/year)	468						
	(2013/2014)							
17	Annual number of tests	Blood		Urine		Stool	l Other	
	(tests/year) (2013/2014)	2,257			21			
18	Annual number of blood transfusions (cases/year)	(2013/2014)						
19	No of referral patients	Referred fi	rom another h	ospital		Re	ferred from	n a HC
	accepted (persons/vear)		NA			1.0	NA	
	(2013/2014)		. 17 .				1 17 1	
20	Collaboration with	Health Promotio	on Day		i			
	community health care		2					
	services							

No	Item	Description
1 1	Condition of site and building	Description Site area: 1.0ha Existing building: When you enter the site from the gate, the hospital is the 2 buildings in front. The road is paved as far as the gate at the entrance of the hospital, but the roads are not paved within the site. The hospital facilities were constructed in 1996, there are no problems with the structure, and it is in a sufficient state to enable use. Neighboring Gate Heighboring CONTRACH Gate Phouvong District Hospital Total Land Area: 1 ha 0 10m 50m 100m
		Source: Created by Survey Team from simple surveying
2	Electric power supply	Power is supplied from the public power mains. The hospital facilities run on single- phase 220V/50Hz. There are virtually no power outages, and they only occur during the rainy season.
3	Water supply facilities	Well water is used.
4	Toilets	Vault toilets are provided.
5	Sewage treatment facilities	Sewage is stored in a storage tank, and periodically removed.
6	Public sewerage system	There is no sewerage system.
7	Refuse and waste disposal	There is a place where waste is collected, sorted, and taken away.

Table Current State of Phouvong District Hospital Facilities and Infrastructure

Table Installation State of Phouvong District Hospital Health Care Equipment

No	Department	Item of equipment	Current state	Remarks
1	Emergency room	Patient Bed	2 (1999)	Developing Partner
		Bedside Monitor		
		Defibrillator		
		Suction Unit		
		ECG		
		Ambulance		
2	ICU	Patient Bed		
		Bedside Monitor		
		Ventilator		
		Phototherapy		
		Defibrillator		
3	МСН	Fetal Doppler	1 (2012)	Developing Partner
		Ultrasound Monitor	1 (Not known)	
		Phototherapy		
4	Delivery room	Delivery Table	1 (1999)	Developing Partner
		Suction Unit	1 (2014)	Developing Partner
		Phototherapy	1 (2014)	Developing Partner
5	Operation theater	Operation Table		
		Electric Scalpel		
		Operation Light		
		Anesthesia Unit		
		Defibrillator		
6	Diagnostic imaging room	General X-Ray Unit		

		Mobile X-Ray Unit		
		СТ		
		MRI		
7	Examination room	Blood Cell Counter		
		Chemical Analyzer		
		Centrifuge	1 (2015)	Hospital budget
		Autoclave		Developing Partner
		Microscope	2 (1999)	Developing Partner
		Echo	1 (2012)	Developing Partner
8	Dentistry treatment room	Dental Chair		
		Dental X-Ray Unit		

Table Issues and Problems of Phouvong District Hospital

Item	Description
Facilities	The hospital was constructed in 1996, but there are no problems in practice.
Equipment	The equipment was procured comparatively recently, but there is no automatic blood cell counter or biochemical analysis equipment necessary for examination, and this is an obstacle to the examination function.

Photos of Current State of Phouvong District Hospital

	and the second se					
Rugged land befor hospital	re the	Road in fro	ont of the hospital	Overall view of the hospital	Fetal phonocardiograph	Delivery table
	******	b s e sd	The second se			
Infant warmer	Ul dia eq	trasound agnostic uipment	Microscope			

4. Results of the Survey on the Health Centers

From December 7 to 18, 2015 the Survey Team collected information regarding all the health centers in each province from the provincial health offices of Salavan, Sekong, Champasak and Attapeu Provinces. The Survey Team tried to obtain as a minimum the number of villages, population, and health care personnel (types, numbers, etc.), as well as the annual number of patients (outpatients, inpatients) for each health center, but the information that could be obtained varied with each province. The materials obtained for each province were as follows.

4.1 Salavan Province

(1) Jurisdiction of the health centers (number of villages, population, etc., 2015/2016)

HC and district hospital covered in Salavan province in fiscal year 2015-2016

No:	Salavanh Province	Name of service place	Population coverage	Target group of children	Number of village under
				under 5 year	service of HC
1	Salavanh District	Province Hospital	12,433	1,724	5
2		Nadon (Public Health Office of SLV)	7,837	1,087	12
3		Nakoisao (Public Health office of SLV)	6,780	940	14
4		Viengkham HC	6,572	912	11
5		Naxay HC	8,941	1,240	19
6		Bengoudom HC	5,863	813	8
7		Khuased HC	6,758	937	11
8		Sayhuaylard HC	2,885	400	5
9		Bongkham HC	7,397	1,026	9
10		Bongxay HC	8,851	1,288	18
11		Kangsim HC	5,399	749	11
12		Kasa HC	9,839	1,365	17
13		Nadonkuang HC	9,280	1,287	15
14		Phukkha HC	7,030	975	14
15		Nongbua HC	3,313	459	8
16		Napho HC	2,613	362	6
17	Taouy District	Public Health office camp as	2,074	382	2
18		District Hospital	4,658	858	7
19		Tahuak HC	4,804	885	0
20		Pajudon HC	2,615	482	0
21		Phortung HC	2,780	512	0
22		Toumlythong HC	2,777	511	0
23		Tan HC	2,390	440	0
24		Bongnam HC	1,741	321	0
25		Thongkahai HC	1,780	328	0
26		Kokbok HC	2,245	413	0
27		Huayngau HC	2,226	410	0
28	Toumlarn District	Public Health office	4,035	710	8
29		District Hospital	4,478	788	10
30		Tambang HC	4,697	827	12
31		Kokmuang HC	2,109	371	7
32		Nadou HC	4,457	784	11
33		Doikhay oung HC	2,435	429	8
34		Taey or HC	4,071	716	9
35		Sano HC	3,012	530	7

Salavanh, 17th Nov, 2015

Number of village

No:	Salavanh Province	Name of service place	Population coverage	Target group of children under 5 year	Number of village under service of HC
36	Lakhonepheng District	District Hospital	6,383	766	15
37		Nonsavang Group	5,492	659	15
38		Nanglao Group	6,367	764	10
39		Phonsoun HC	3,944	473	13
40		Taphan HC	5,563	668	15
41		Nongseng HC	4,466	536	16
42		Nadou HC	4,753	568	8
43		Luk 90 HC	3,753	450	6
44		Darn HC	4,891	587	15
45		Ban tha HC	1,783	214	4
46	Vapy District	Cabinet	1,882	245	3
47		District Hospital	7,635	993	17
48		Saphard HC	7,770	1,010	17
49		Huaykon HC	7,964	1,035	15
50		Konsaiy HC	8,908	1,158	15
51		Nasiet HC	3,009	391	9
52		Nalan HC	1,112	145	5
53	Khongsedon District	Cabinet	6,770	806	9
54		District Hospital	10,801	1,285	16
55		Tanpiew HC	3,966	472	8
56		khamthong HC	4,713	561	9
57		Thaluang HC	4,855	578	9
58		Nanong HC	6,111	727	13
59		Namuang HC	5,063	603	11
60		Kanghuad HC	4,205	500	8
61		kangkhon HC	5,254	625	10
62		Namek HC	11,535	1,373	15
63	Laowngarm District	District Hospital	17,131	2,707	21
64		Dongyai HC	8,366	1,322	17
65		Vungpeuy HC	9,214	1,456	23
66		Phorkhem HC	3,212	507	4
67		Dasia HC	6,362	1,005	7
68		Nongkae HC	8,766	1,385	12
69		Vungkhanan HC	6,724	1,062	11
70		Unnoi HC	12,155	1,920	22
71	C	Nabon HC	8,487	1,341	14
72	Samuay District	Samuay District Hospital	4,929	9/1	16
/3		Asing HC	932	184	/
/4		Talor HC	3,040	599	11
/5			2,013	397	8
76		Avao HC	1,728	340	10
77			1,788	352	15
/8		Amen HC	1,418	279	9
79	T - 4 - 1	ASOK HU	2,264	446	8
	1 otal		418,633	60,667	754

Director of public heath department of Salavanh province Chief of administration office Reporter

(2) Number of outpatients and inpatients examined at health centers (2014/2015)

Data information on medical check up at each HC for in patient and out patient in Salavanh province for fiscal year 2014-2015

Name of Health Center	Number of medical check up for outpatient	Number of medical check up for inpatient
Kasa	921	202
Kokbock	3,998	156
Kuaseset	1,021	87
Khonsa	1,918	717
Khamthong	664	218
Dasia	2,761	161
Dan nanglao	1,070	136

	Number of	Number of
Name of Health Center	medical check	medical check up
	up for outpatient	for inpatient
Taphan	734	106
Tabuen (Haonghoa)	2,448	145
Talo (Kaleng)	3,571	117
Tahuar	5,869	339
Tanpei	1,622	251
Tambang	1,438	104
Toomlethong	1,776	193
Thongkahai	2,243	147
Tha luanag	1,536	270
Namuangnhai	1,090	206
Namong	1,760	384
Nasay	1,510	173
Nadu	1,172	89
Nameck	1,059	200
Buengkham	949	117
Buengsay	936	132
Pachudone	2,852	160
Pasoom (Bongnam)	2,266	159
Bakkha	678	82
Photang	2,594	283
Vonskhonon	2,725	220
Vangkhanan	3,273	199
Sephet	832	245
Saphat	1,124	543
Huakhon (Vany)	1 756	220
A sing	1,750	80
Atoock	3 484	114
Avao (Alat)	2 919	146
Asock	2,309	90
Acha (Amin)	1.824	97
Innoi	1,633	153
Kengkhom	691	181
Kengsim	820	141
Kenghuat	2,514	360
Beangudom	1,277	92
Phonsung	1,280	122
Nongseng	925	80
Nongbua	909	65
Nongkee	3,167	200
Kinae	1,282	152
Kokmuang	821	92
Donkhanhung	680	81
Dongyai	1,275	43
Thakhunsoumsuan	447	75
Nadonkhouang	198	23
Nadu	1,798	104
Nabon	3,197	167
Nalun	729	107
Napho	178	12
vangpeu	855	47
Sano V seel see lat	763	74
Aay neuniat	817	99
INASIAL Technologi	579	201
1 eay or	1,533	181

(Continued from previous page)

4.2 Sekong Province

Number of health care staff deployed at health centers, status of jurisdiction, distances to district hospitals, numbers of patients, etc. (2014/2015)

Sekong Province Total Staff Number, Coverage, and Patient Number of HC for Fiscal Year of 2014-2015

District	Name of HC	Total Number of HC Staff	Coverage village	Number of population	Distance to District Hospital (km) (Maximum)	Number of outpatient	Number of inpatient
Lamam District							
	Phon	6	6	-	24	3403	35
	Donchane	5	9	-	18	1034	49
	Kasangkang	5	5	-	40	2750	195
	Naver	4	6	-	66	1679	79
	Took ong keo	3	3	-		1838	134
	Took saming	2	1		24		
Dakchueng District							
	Xiengluang	5	16	-	57	2105	5
	Dakdin	2	9	-	18	1222	31
	Dakmouan	3	8	-	36	1966	64
	Dakduem	2	6	-	15	619	0
	Ayun	3	9	-	70	662	0
	Tangyeung	2	8	-	59	1898	6
	Tatue	2	3	-	41	1356	14
	Dakpa	2	6	-	150	918	39
Kaluem District							
	Chalea	3	7	-	32	3201	174
	Ounkao/vangpanhgo	2	9	-	67	610	11
	Songkhon	3	9	-	28	2098	100
	Panoom	3	9	-	190	-	-
Thateang District	Thateang District						
	Nongnock	6	14	-	17.8	4892	181
	Thongvai	3	5	-	25.9	3676	169
	Kokphungnue	3	5	-	25.9	2719	126
	Thon noi tay	8	5	-	-	5816	124
	Ban yueb(Tonnoy)	6	7	-	31.7	4151	107
	Nong Kan	3	4	-	27.4	2697	-
	Total HC	86	169			51310	1643

4.3 Champasak Province

(1) Jurisdiction of the health center (number of villages, population), distances to district hospitals, years established, etc., 2012/2013)

						p				Type of HC	;
Name of District	No:	Name of HC	Coverage village	Number of population	Number of family	Distance from HC distrct hospital	The year build	Donor	A	в	Number of bed
									23	40	226
Pakse										3	9
	1	Phonsykhai	5	9,664	1,557	14	1975	gov		В	3
	2	Nonsavang	6	7,033	1,226	8	2012	people		В	3
	3	Bansong	7	6,200	927	8	1996	gov		В	3
Sanasomboun		, , , , , , , , , , , , , , , , , , ,		55 550	11 209			č	4	2	26
	1	Khampeng	9	5.040	1.074	8	2007	Catholic	А		5
	2	Nakeo	11	10 276	1 977	9	2000	America	А		5
	3	Saphay	14	12.313	2,500	14	1958	20V	А		5
	4	Nalong	14	16.399	3,337	8	1981	20V		В	3
				.,,				French			
	5	Nakham	11	6,894	1,279	20	2010	Foundation	А		5
	6	Vungvern	7	4,628	1,042	90	1955	gov		В	3
	7	Solo						-			
Bachiengchaleunsouk			55	28,649	5,588				1	4	16
-	1	Luk 21	12	5,573	1,183	12	1984	Unicef		В	3
	2	Banti 8	13	4,538	874	16	2006	gov		В	3
	3	Kangyao	12	7,522	1,527	13	1980	Unicef		В	3
	4	Kuangsy	5	4,470	753	21	1996	world vision		В	3
	5	Kangkia	12	6,546	1,251	26	2008	gov	Α		4
Paksong			74	53,580	7,251				5	2	31
	1	Etou	8	7,448	1003	15	1997	WB	Α		5
	2	Phukkhoud	10	9,229	1371	27	1997	WB		В	3
	3	Phoumon	8	8,440	1216	27	1997	WB	A		5
	4	Parkbong	8	7,889	1063	17	1997	WB		В	3
	5	Chansavang	9	5,154	699	17	1997	WB	A		5
	6	Thongkalong	8	3,603	473	24	2007	Viet-gov	A		5
	7	Huaykong	23	11,817	1426	33	1995	gov	Α		5
	8	Etou									
Patoumphone			49	41,597	13,984				1	6	22
	1	Luk 24	9	8037	653	16	2006	gov		В	3
	2	Dondeng	5	3830	947	8	1998	gov		B	3
	3	Patoumphone	6	5595	1395	8		No building		В	3
	4	Banboon	8	8752	1213	26	2012	Green zone	A	D	4
	3	Dhanka	12	6993	919	30	2010	Mayno by		D	2
	7	Nonmakhead	2	2860	14 236	40	1981	Beligion		B	3
	8	Kaalaa	2	2000	14,250	10	1700	Religion		Б	5
Phonthong	Ū	reaction		80.015	1854				3	6	30
	1	Kaokeung	13	11614	1297	10	1978	Belgium		B	3
	2	Banphon	11	7793	1646	8	1998	people		В	3
	3	Khodiik	13	8969	1622	14	1978	neonle		B	3
	4	Phonthong	10	10078	1720	3	1975	20V		B	3
	5	Nonghaikhok	8	9385	1948	9	2003	people	А		4
	6	Dongyang	14	10295	1265	13	1993	gov	Α		4
	7	Nonkhoun	12	6979	1754	21	2000	gov		В	3
	8	Khanard	10	8892	1129	25	2000	Gov	Α		4
	9	Vernsai	8	6009	6,174	29	0	No building		В	3
Champasak				46,954	1466				2	2	16
	1	Champasak	13	9,250	1677	15	2008	gov	A		5
	2	Nongvien	19	12,611	1994	10	1985	HCR		В	3
	3	Nongtae	13	11,217	1037	34	1984	gov		В	3
	4	Nongphum	16	13,876		27	1996	HCR	A		5
-	5	Huayngern									
Soukhouma		Outeum	38	36,896	4,738		2007			4	12
	1	Nonmhunuer-	12	11305	1558	12	2007	gov		D D	3
	2	Noigpnunvong	10	(945	10/5	12	2007	gov		D D	3
	3	rajau Banhiena	8	0242	829	12	2004	8 ⁰ V		D P	2
Moonlanamok	4	Danneng	30	22 646	14/6	28	2007	8 ^{0 V}	1	ت ح	د 10
moonapanion				22,040	4,400			urban	1	5	19
	1	Nong nga	5	4013	834	42	2000	develop ment		в	3
			5	.015	0.04	12	2000	Poverty	1		
	2	Kadun	5	4406	867	20	2006	reduction fund	[в	3
			-					Poverty	-		
	3	Nonghoy	5	3908	848	10	2004	reduction fund		В	3
	4	Nady	5	3377	699	25	2001	Belgium	Α		4
	5	Vernyang	6	2831	488	29	1990	H G R		В	3
								Laos -French			
	6	Thahae	4	4111	724	15	2009	fund		В	3
10	7	I hanong									
Knong		NL C	119	65,530	11,208				7	5	45
	1	Nafung	9	6,066	1067	45	1983	gov & people		В	3
	2	r nonsaard	8	6,413	1056	38	2005	roverty reduction	A		4
	3	riuaknong	9	5440	934	12	2005	1 nai	A	P	2
	4	Ballooung	10	3764	624	26	2012	People Medicine conc		D	3
	-	Kynark	0	7447	1227	12	2000	frontier	٨		5
	5	Bansod	9	2661	461	12	1998	Poverty reduction	Δ		4
	0		+	2001	401	40	1778	Don Khong			, ,
	7	Nakasung	13	8478	1512	18	2005	friendship fund	А		4
	,				2		2000	M edicine sans			<u> </u>
	8	Bankhon	12	5858	925	22	2005	frontier	А		4
	9	Donsom	15	7668	1289	18	1975	people		В	3
								M edicine sans			
	10	Lopparkdy	11	4969	941	20	2005	frontier		В	3
	11	Donthan	10	3255	553	18	2008	Poverty reduction	A		4
1	12	Hethad	8	3511	619	14	2006	Poverty reduction	fund	В	3

Outline of HC, conditions, type, distance between each district and HC and others those covered by HC

Pakse: / /2013 Director of public heath department of the province Chief of treatment and functioning rehabilitation unit Reporter

(2) Status of health center facilities and infrastructure, etc. (2012/2013)

	1	1				Conditio	no of UC				Dhorm	a concernante	og fund			~
					se	Conditio	INS OF HC	_	5 H		Pharma	acy revolvi	ig iuna .⊆	ower	l water le	n baby y
Name of District	No:	Name of HC	nent se	orany se	hou	hou	e HC ling	iding	ory fo	ence	ø		box llage	city p	ound	elp or
			erma	empe	erma	empo	build	o bui	edica	Vith fo	¥e	ž	t aid he vi	ectric ave	ergro	ld he de
			ũ.	-	₫ Ň	T NOW	Da	z	βĔ	>			E E	ū	Dud	Cou
Pakse	1	Phonsykhai		1			1		N	N	2			N	N	N
	2	Nonsavang	1						N	N	1			Y	Y	N
Sanasambaun	3	Bansong						1	N	N	0		0	N	N	N
Ganasoniboun	1	Khampeng	1						N	Y	1		0	1	1	Y
	2	Nakeo	1						N	Y	1		3	1	1	Y
	4	Nalong				1			N	N	1		1	1	0	Y
	5	Nakham	1						N	Y	1		3	1	1	Y
	6	Vungvern Solo	1						N	Y	1		2	1	1	Y
Bachiengchaleunsouk																
	1	Luk 21				1				N	1			Y		N
	3	Kangyao	1			1				N	1			Y		N
	4	Kuangsy	1						Y	N	1			Y		N
Paksong	5	⊾angkia	1			-			Y	Ŷ	1			Y		N
Ŭ	1	Etou	1						N	1	1			Y	Y	Y
	2	Phukkhoud	1						N	1	1			Y	Y	Y
	4	Parkbong	1						N	1	1			Y	Y	Y
	5	Chansavang Thongkalon-	1						N	1	1			Y	Y	Y
	7	I nongkaiong Huaykong	1						N	1	1			Y	Y	Y
	8	Etou														
Patoumphone	1	Luk 24	1						N		Y		N	1	N	N
	2	Dondeng	1						N		Y		N	1	Y	N
	3	Patoumphone						1	N		Y		N	1	N	N
	5	Sanote	1						N		Y		N	1	Y	N
	6	Phapho					1		N		Y		N	N	N	N
	8	Nongpakhead Kaelae	1						N		Y		N	1	Ŷ	N
Phonthong																
	1	Kaokeung	1	1					N	Y	Y			Y	Y	Y
	3	Khodjik				1			N	Y	Y			Y	Y	Y
	4	Phonthong	1				1		v	Y	Y			N	N	N
	6	Dongyang	1						N	Y	Y			Y	N	Y
	7	Nonkhoun		1					N	Y	Y			Y	Y	N
	8	K hanard Vernsai		1				1	N	Y Y	Y			Y N	Y N	Y N
Champasak																
	1	Champasak	1						N	Y	Y			Y	Y	Y
	3	Nongtae				1			N	Y	Y		Y	Y	Y	Y
	4	Nongphum Huayngern	1		-				N	Y	Y			Y	Y	Ŷ
Soukhouma		riany light li														
	1	Outoum	1						0	N				Y	Y	Y
	3	Najan	1						0	N				Y Y	Y	Y Y
	4	Banhieng	1						0	Ν				Y	Y	Y
Moonlapamok	1	Nong nga	1						1		1			1	1	Y
	2	Kadun	1						1		1			1	1	Ŷ
	3	Nonghoy Nady	1						1		1			1	1	Y
	5	Vernyang		1			1		1		1			1	0	Y
	6	Thahae	1						1		1			1	1	Y
Khong	/	1 nationg														
Ĭ	1	Nafung						1			1		1			N
	2	Phonsaard Huakhong	1						1	1	1		1	1		Y
	4	Banboung			1				1		1		1	1		N
	5	Kynark Bancod	1	1					1	1	1		2	1	1	Y
	7	Nakasung	1							1	1		1	1		Y
	8	Bankhon	1							1			2	1		Y
	9	Donsom Lopparkdy		1				1	1	1	1	1	3	1	1	Y
	11	Donthan	1							1	1		3			Y
	12	Hethad	1							1		1		1	1	N

Outline of HC, conditions, type, distance between each district and HC and others those covered by HC

Pakse: / /2013 Director of public heath department of the province Chief of treatment and functioning rehabilitation unit Reporter

(3) Deployment of health care staff at health centers (doctors, nurses, nurse/midwives, 2013/2014) Medical staff working at HC

				te	vel	a
No:	Organizations		Ð	sdia	y le	Tot
			Eo	Ĕ -	าลก	. pu
		ЗA	IdiC	nte eve	Prin	Gra
Ι	Pakse district	1	0	14	7	21
1	Bansong HC	1		4	2	7
2	Nonsavang HC			4	3	7
3	Phonsykhai HC			6	2	8
II	Xanasomboun district	0	7	24	19	50
1	Khampheng HC		1	2	5	8
2	Saphay HC		1	5	3	9
3	Naknam HC		1	4	2	10
4	Nakeo HC		1	4	3	7
6	Vungvern HC		1	5	,	6
7	Solo HC		1	1	1	3
III	Bachieng district	0	5	13	8	26
1	Kuangsy HC		1	1	1	3
2	8 HC		1	5	1	7
3	Thongkim (Kangyao) HC		1	3	2	6
4	Luk 21 HC		1	2	3	6
5	kangkia HC		1	2	1	4
1V	Paksong distrit	1	7	28	8	44
1	Chansavang HC		1	3	2	4
3	Thongkalong HC		1	2	2	5
4	Pakbong HC		1	5	1	6
5	Phukkhoud HC			6	1	7
6	Phoumon HC			3	1	4
7	Huaykong HC		1	3	1	5
8	Etou HC	1	2	4		7
V	Pathoumphone district	0	6	30	10	46
1	Sanod HC		1	4	2	7
2	Dondeng HC			4		4
3	Banboun HC		1	4	2	/
4	Phanho HC		1	0	2	8
6	Luk 24 HC		1	5	1	7
7	Nongnakhead HC			1	1	2
8	Kaelae HC		1	3	1	5
VI	Phonthong distict	0	8	31	20	59
1	Khoudjik HC		1	3	2	6
2	Khanard HC		1	4	1	6
3	Dongy ang HC		1	2	4	7
4	Banphon HC		1	3	4	8
5	Nonghaikhok HC		1	6	1	8
7	Vernsei HC		1	4	3	6
8	Nonkhoun HC		1	3	1	5
9	Phonthong HC		1	3	3	7
VII	Champassak district	0	8	12	16	36
1	Champasak HC		2	5	3	10
2	Huayngern HC			1	2	3
3	Nongpham HC		2	2	4	8
4	Nongvien HC		2	3	3	8
5	Nongtae HC		2	1	4	7
VIII	Soukhouma district	1	3	10	8	22
1	Inajatti nu Banhieng HC	1	1	2	1	4
2	Nongnhanyong HC	1	1	3	2	6
4	Outhoumphon HC		1	2	3	5
IX	Mounlapamok disstrict	1	3	21	6	31
1	Kadun HC		1	3		4
2	Thanong HC			1		1
3	Thahae HC			4	1	5
4	Nady HC	1		3	2	6
5	Nong nga HC		1	3	2	6
6	Nonghoy HC		1	4		5
7 X	Ventyang HC Khong district	- -		3	1	4
A 1	Kunark HC	2	4	27	21	54
2	Donthan HC	2	1	1	2	3
3	Donsom HC			3	1	4
4	Nakasung HC			3	2	5
5	Nafung HC			2		2
6	Nakhon HC		1	1	3	5
7	Banboung HC			3	2	5
8	Bansod HC		1	2	3	6
9	Loppakdy HC			1	1	2
10	Huakhong HC			2	4	6
11	Phonsaard HC		1	2	1	3
12	Constant Tetal	6	51	210	123	200

4.4 Attapeu Province

(1) Jurisdiction of the health center (number of villages, population, etc., 2014/2015)

The number of village coverage of the district and HC in Attapeu province in fiscal year 2015

No:	Name of Organization	Population coverage	Target group of children under five years	Number of village
1	Saysetth District	38,054	5,708	
	Response Area of DH	11,257	1,689	9
	Wat neau HC	5,501	825	7
	Kengyai HC	8,003	1,200	6
	Markkheau HC	3,530	530	4
	Sakhae HC	5,541	831	4
	Sapuan HC	4,222	633	5
2	Samakysay District	37,353	5,603	
	Response Area of DH	19,845	2,977	22
	Bangphoukham HC	2,404	361	3
	Khoumkham HC	4,639	696	6
	Layao HC	6,267	940	6
	Somsanouk HC	4,198	630	5
3	Sanamsay District	33,802	5,070	
	Response Area of DH	5,153	773	7
	Bankhung HC	4,876	731	5
	Oudomsouk HC	5,722	858	6
	Banmai HC	3,567	535	7
	Sompoi HC	4,111	617	6
	Parkbor HC	2,359	354	4
	Banbeang HC	1,933	290	5
	Say donkhong HC	2,338	351	4
	Banbok HC	3,743	561	4
4	Sansay District	21,528	3,229	
	Response Area of DH	9,029	1,354	12
	Ban Moon HC	965	145	3
	Ban Chalernxai HC	2,165	325	5
	Ban Daksommor HC	2,338	351	5
	Ban Namngon HC	2,252	338	12
	Samluang HC	2,091	314	8
	Yiengdark HC	540	81	3
	Vangtud HC	1,294	194	4
	Kaiock HC	854	128	3
5	Phouvong District	13,207	1,981	
	Response Area of DH	2,857	429	6
	Phouhom HC	2,117	318	3
	Phouseuk HC	3,180	477	3
	Viengxai HC	2,268	340	4
	Somboun HC	1,693	254	3
	Lamong HC	381	57	3
	102 HC	442	66	3
	Total	287,619	43,143	205

Direc Director of Public Health Department of the province

(2) Deployment of health care staff at health centers (2014/2015)

Personnel in each HC Name of offical worked in each HC of Attapeu province in fiscal year 2014-2015

									Staff on s	hort term			
							ion		trair	ning		s	
					Ę		rcat	ible		jo.	_	e e	
No:	District	HC name	No:	Name and Surname	g.	juic	edt	suc	<u>م</u> ک	trat	eve	G	Remark
					te	击	ō	de	iver	inis	a f	ial re	
					õ		svel	ar B	alis del	, mp	atio	offic	
							Ľ		aby	C ≥	quo	aff	
-	Constant of	1.0.1				-			sp	Ĩ	Ш.	t ts	
1	Saysettha	1. Sakae	1	Mr. Bouasone CHAMPALAD	6.6.64	Lao	Intermediate	Chief	1	1	Grade 6	2001	
			2	Mr. Singsay SYLAPHET	4.4.85	Lao	Advance	Technical staff	1		Grade 6	2009	
			3	Ms. Phetsamai SIVILAY	3.5.88	Lao	Intermediate	Technical staff	1		Grade 6	2013	
		0. W	4	Ms. Phitsamai DEANGXAYAVONG	15.5.67	Lao	Advance	I echnical staff			Grade 6	2013	
		2. Kengyai	1	Mr. Bounyong Kengyaisy	9.3.84	Cheng	Intermediate	Chief	1	1	Grade 6	2012	
		2 Common	2	Mr. Kitsana Sayaseng	6.4.88	Lao	Intermediate	Technical staff	1		Grade 6	2012	
		5. Sapuan	1	Mr. Sisangop Maysuanthong	8.8.87	Oy	Intermediate	Chief	1	1	Grade 6	2011	
			2	Mr. Sinsanguan Senvolabourn	3.3.88	Uy Lu	Intermediate	Technical staff			Grade 6	2013	
			3	Ms. Davady Keonaknone	17.11.92	Lao	Advance	Technical starr			Grade 6	2013	
		A Kanomarkhaua	4	Ms. Phonesamay Chansysamouth	27.7.89	Lao	Intermediate	rechnical starr			Grade 6	2013	
		4. Kengharkheua	2	Mr. Prietsouphann Chanthavisouk	18.2.85	Lao	Intermediate	Cnier Tashniasl staff	1	1	Grade 6	2008	
			2	Mr. Khomkhok Vanalathtiana	17.10.84	Drag	Intermediate	Technical staff	1		Crada 6	2011	
			5	Mr. Khankhak vongathteng	12.6.00	Biao	Advance	Technical staff	1		Grade 6	2011	A. J
			4	Mis. I hongsone Nammavong	12.5.90	Lao	Advance	i ecnnicai stari			Grade 6	2013	Advance nurse
1		5. Wat neau	5	Ms. Relating vongatition	15.10.70	Lao	Intermediate	Chief	1	1	Grada 6	2012	v mage volunteer
1			2	Me. Bhateakhona Chanthayong	14 5 92	Lao	Intermediate	Tachnical staff	1	4	Grada 6	2013	-
1	1		2	Mr. Watyay Sombound	4 2 82	Lao	Intermediate	Technical staff			Grada 6	2013	
1			3	Ms. Olayone Kanhayong	6.8.83	Lao	Primary	Technical staff			Grada 6	2013	
	Total 1		-	10	0.0.00	1.00	· · · · · · · · · · · · · · · · · · ·	i comicai statt	11	5	Grade 0	2013	
2	Samakysay	 Khoumkham 	1	17 Ms. Phoutsamone Keonhanoshith	5 5 68	Ov	Intermediate	Chief	1	5	Grada 2	2000	
Ĩ			2	Ms. Phouseng Vongeilay	15 5 67	Ov.	Primary	Technical staff	1		Grada 2	1094	
1			3	Ms. Sansany Phasouk	26.1.92	Lao	Intermediate	Technical staff	-		Grade 6	2014	
1	1		4	Ms Phonoray Homehamna	16 5 83	Ov	Intermediate	Technical staff	1		Grade 6	2014	Continue study
			5	Me. Chanthaly	15.2.85	Oy Ov	Intermediate	Technical staff			Grada 6	2008	Villaga voluntaar
		2 Benenhoukham	1	Ma Daugh Naumalaun hanh	13.3.63	Lan	Intermediate	Chief	1	1	Crada 6	2013	vitage volunteer
		2. Deng/nouknam	2	Me. Sauphone	29.4.80	Lao	Intermediate	Cilici Tachnical staff	1	1	Grada 6	2007	
			2	Me. Sayphone	12.5.81	Lao	Drimary	Technical staff			Grada 6	2013	
			4	Me. Laty Singesleith	28 11 85	Lao	Intermediate	Technical staff	1		Grada 6	2014	Continue etudy
			5	M's. Early Singsaksini M's. Phouthasine Soulichane	1 1 88	Lao	Intermediate	Technical staff			Grade 6	2007	Continue study
			6	Ms. Sousada Vannavong	13.8.85	Lao	Intermediate	Technical staff			Grade 6	2014	
		3. Somsanouk	1	Ms. Soukvilay Yokmiyay	95.67	Ov	Advance	Chief	1	1	Grade 3	2000	
			2	Ms. Thinnhasone Volachak	7787	Lao	Intermediate	Deputy Chief	1		Grade 6	2000	
			3	Ms. Nouphone Sisa Ath	11.6.86	Lao	Intermediate	Technical staff	1		Grade 6	2013	
			4	Ms. Xone Souliyachak	5787	Lao	Intermediate	Technical staff	1		Grade 6	2011	
		4. Lavao	1	Ms. Soukplathai Vonovilav	2 10 87	Ov	Advance	Chief	1	1	Glade o	2009	
			2	Ms Phouthasine		~)							
			3	Ms. Manivone									
			4	Mr. Inthayong									
			5	Ms. Thittavanh									
	Total 2	4		20					11	3	0		
3	Sanamxay	1. Ban Khang	1	Ms. Chanthala Kongkasanh	26.7.88	Ov	Intermediate	Chief	1	1	Grade 6	2010	Continue study
1		-	2	Ms. Phoxay Chanthasena	7.7.67	Lao	Primary	Deputy Chief	1		P 5	1984	
1	1		3	Ms. Some Keovongsa	16.5.80	Lao	Primary	Technical staff	1		Grade 6	2014	
1			4	Ms. Khanlaty Silaphet	14.4.91	Lao	Intermediate	Technical staff	1		Grade 6	2014	
1		2. Oudomsouk	1	Ms. Nivone Phanthavong	17.8.84	Lao	Intermediate	Chief	1	1	Grade 6	2009	
1	1		2	Ms. Lithsamay Sengsouliya	12.12.86	Lao	Intermediate	Deputy Chief	1		Grade 6	2009	
1	1		3	Ms. Kongchay Mouneluang	23.2.84	Lao	Intermediate	Technical staff	1		Grade 6	2014	
1			4	Ms. Phetsamone Tanpadith	2.10.80	Lao	Intermediate	Technical staff	1		Grade 6	2014	
1		Bengvilay	1	Mr. Khamphieng Heuangviseth	3.6.68	Та Оу	Intermediate	Chief	1	1	Grade 6	2002	
1	1		2	Mr. Ketsong Chimouaseng	7.5.88	Hmong	Intermediate	Deputy Chief	1		Grade 6	2011	
1			3	Ms. Ketmany Phouthasangvanh	4.6.90	Lao	Intermediate	Technical staff	1		Grade 6	2013	
1	1	4. Ban Mai	1	Ms. Sonnapha Souankoulap	22.9.84	Lao	Intermediate	Chief	1	1	Grade 6	2007	
1			2	Mr. Kham Oth Luangoudom	3.3.82	Oy	Intermediate	Deputy Chief	1		Grade 6	2012	
1	1		3	Ms. Nguay Many Nouan asa	15.4.89	Oy	Intermediate	Technical staff	1		Grade 6	2012	
1		Ban Thae	1	Ms. Bouakeo Senvongsa	13.12.86	Oy	Intermediate	Chief	1	1	Grade 6	2010	
1	1		2	Mr. Kavin Xaybounmy	12.10.70	Oy	Primary	Deputy Chief	1		P 5	2014	
1			3	Ms. Phomany Xayaseng	6.6.90	Oy	Advance	Technical staff	1		Grade 6	2013	
1	1		4	Ms. Detdavone keophoxay	3.5.86	Lao	Primary	Technical staff	1		Grade 6	2014	
1			5	Ms. Khambone Southaly	4.10.88	Lao	Primary	Technical staff	1		Grade 6	2014	
1	1	6. Pakbo	1	Mr. Sithone Thammavong	24.8.87	Lu	Intermediate	Chief	1	1	Grade 6	2011	
1	1		2	Ms. Timphone Inthavong	24.11.90	Оу	Intermediate	Technical staff	1		Grade 6	2013	
1	1	7. Sompoy	1	Mr. Khonsavanh Sonviyaketh	8.8.87	Xu	Intermediate	Chief	1	1	Grade 6	2012	
1	1		2	Ms. Vine Chanthanith	27.3.89	Lao	Intermediate	Technical staff	1		Grade 6	2012	
1			3	Mr. Bouasavanh Luang Oudom	6.2.90	Lao	Advance	Technical staff	1		Grade 6	2014	
1	1	Xaydonkhong	_1	Mr. Bounsavang Inthavong	14.8.91	Lao	Intermediate	Chief	1	1	Grade 6	2011	
1			2	Ms. Pathoummany Sisounthone	9.5.92	Lao	Intermediate	Technical staff	1		Grade 6	2012	
1	1		3	Mr. Somphanh Phanvandy	13.6.88	Oy	Advance	Technical staff	1		Grade 6		Village volunteer
L			4	Ms. Souksamay	15.6.91	Oy	Advance	Technical staff	1		Grade 6	2013	
	Total 3	8		28					28	8			

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							ы		Staff on short term training			s	
No:	District	HC name	No:	Name and Sumame	Date of birth	Ethnic	Level of educati	Responsible	specialist on baby delivery	HC Administrator	Education level	The year recruite a staff official	Remark
4	Xanxay	1. Ban Moune	1	Ms. Yi Souliyem	29.11.84	Talieng	Intermediate	Chief	1	1	Grade 6	2009	
			2	Ms. Lone Vilayxi	12.10.86	Alak	Intermediate	Deputy Chief	1		Grade 6	2011	
			3	Ms. Souvannan Saypalong	5.5.91	Talieng	Advance	Technical staff			Grade 6	2014	
			4	Mr. Dao Keomanyxay	14.9.92	Talieng	Advance	technical staff			Grade 7		Village volunteer
		Nam xu	1	Mr. Khamsoth Khammaniyout	4.10.82	Talieng	Intermediate	Chief	1	1	Grade 6	2010	
			2	Ms. Hatphouthai Leunsamai	8.8.86	Lao	Intermediate	Deputy Chief	1		Grade 6	2011	
			3	Mr. Khambonh Singkhone	5.5.93	Talieng	Advance	Technical staff	1		Grade 6		Village volunteer
			4	Mr. Somvang Keomanixay	25.9.93	Talieng	Advance	Technical staff			Grade 7		Village volunteer
		Daksamor	1	Mr. Engthong Inthasome	5.12.88	Lao	Intermediate	Chief	1	1	Grade 6	2011	
			2	Mr. Khammoune Mekmouangxay	8.8.84	Talieng	Advance	Technical staff	1		Grade 6	2011	
		 Nam Ngone 	1	Mr. Vanphet Vilaython	14.5.79	Talieng	Intermediate	Chief	1		Grade 6	2010	
			2	Mr. Khamle Yuangyayia	19.11.88	Talieng	Advance	Deputy Chief	1		Grade 6	2012	
			3	Ms. Toudavanh Xayathep	4.4.91	Talieng	Intermediate	Technical staff			Grade 6		Village volunteer
			4	Mr. Kheo Viengnaxay	18.7.92	Talieng	Advance	Technical staff			Grade 7		Village volunteer
		5. Vangtat Noy	1	Mr. Thongla Philavanh	6.6.70	Yae	Primary	Chief		1	P 5	2004	
			2	Mr. Phongsavanh Seng Adeth	10.1.89	Talieng	Intermediate	Deputy Chief	1		Grade 6	2009	
			3	Mr. Sithisack Vonghanam	13.5.91	Lao	Intermediate	Technical staff	1		Grade 6	2013	
			4	Mr. Vathkham Keokhammaniyath	5.7.77	Yae	Intermediate	I echnical staff			Grade 6		Village volunteer
		6 Viene Dels	5	Mr. Somtha Seng Alounxay	28.8.88	Yae	Intermediate	Technical staff			Grade 6		Village volunteer
		0. Trang Dak	1	Ms. Knaniy Sisouath	3.1.8/	Lao	Intermediate	000			Grade 6	2012	
		7 Nonskavock	2	Ms. Noutvady SOMBOUN	5.8.88	Lao	Intermedate	Starr	1		Grade 6	2013	
		7. Hongauy oeu	2	MERMEINGYAY	20.2.86	Taliana	Intermedate	Buss Staff	1		Grada 6	2011	
			2	SEAMATH	4.4.86	Taliang	Intermedate	Staff			Grada 6	2011	
		8. Samluang	1	CHANKHAMMANY	14 4 87	Talieng	Intermedate	Boss	1	1	Grade 6	2013	
			2	XAYMANY	25.6.91	Talieng	Advance	Staff			Grade 7	2011	Village volunteer
			3	BITAVANH	13.3.92	Talieng	Advance	Staff			Grade 7		Village volunteer
	Total 4	8		27					15	6			, i i i i i i i i i i i i i i i i i i i
5	Phouvong	1. Naseuk	1	Mr. Khamlay SENGSOMPHAN	4.4.84	Blao	Advance	Boss	1	1	Grade 6	2011	
	district		2	Ms. Setmixay PHIMMATANG	25.10.82	Blao	Intermedate	Vice boss	1		Grade 6	2009	
			3	Ms. Phetsamai XAYALATH	15.10.90	Laoloum	Advance	Staff	1		Grade 6	2014	
			4	Ms. Sengchan	5.10.91	Laoloum	Intermedate	Staff	1		Grade 6	2013	
		2. Phouhom	1	Ms. Phoungern PHOM MASYHA	19.3.82	Laoloum	Intermedate	Boss	1	1	Grade 6	2009	
			2	Mr. Souksanguan KOMMADAM	7.8.88	Laoloum	Intermedate	Vice boss	1		Grade 6	2014	
			3	Ms. Vongphachan	14.4.89	Laoloum	Intermedate	Staff	1		Grade 6	2014	
		Viengxay	1	Mr. Sython VONGCHANTHA	20.9.82	Blao	Intermedate	Boss	1	1	Grade 6	2011	
			2	Mr. Somphet MALAVONG	15.4.82	Blao	Intermedate	Vice boss	1		Grade 6	2011	
		4.11 - 1	3	Ms. Inphong XAYALAM	17.7.87	Blao	Intermedate	Staff	1		Grade 6		Village volunteer
		 Huay keo 	1	Mr. Thidsavanh VANSILA	5.3.83	Blao	Advance	Boss	1	1	Grade 6	2009	
			2	Mr. Khamdee SANLUNG	2.10.81	Blao	Advance	Vice boss	1		Grade 6	2011	
		5 Dhoukanu	3	Mr. Bounxay PHORVONGDEUN	9.4.86	Blao	Intermedate	Staff	1		Grade 6	2012	
		5. i noukcau	1	MT. KOTIAKAN INTHALUKSA	12.1.85	Laoloum	Intermedate	Boss	1	1	Grade 6	2012	Villees veluntees
		6 Lamong	2	MIL Daisy TUNMAN YUNG	15.0.8/	Diao	Advense	VICC DOSS	1	1	Grade 6	2000	v mage volunteer
		o. camong	2	Mr. Ninbat	13.4.89	Dia0	Intermedate	DUSS Vice boss	1	1	Grade 6	2009	Villaga voluntear
			2	Mr. Dountauk SVI A DHONE	15.0.90	Diau	Advance	vice DOSS Staff	1		Grade 3		Villaga volunteer
	Total 5	6	5	18	12.7.87	Diau	Auvance	3(4)1	18	6	Graue 3		v mage volunteer
_		10		10					02	- 20		-	

(3) Number of outpatients and inpatients at health centers (2013/2014)

Organisation Unit	Total OPD visits	Total IPD vistis
Phovong District	6,668	1,197
Naseuk HC	633	30
Phouvong district hospital	2,886	994
Phouhom HC	510	2
Lamong HC	142	3
VienxayHC	1,332	28
Health center 102 (Phoukeau)	376	56
Huaykeo (Somboun) HC	789	84
Sanamxay	8,981	1,940
Bankhang HC	656	93
Sompoi HC	1,075	17
Udomsouck HC	550	40
Bengvilay HC	603	62
MayHC	827	55
Saydonekhong HC	309	18
Sanam xay district hospital	3,264	1,408
Bantae HC	959	190
Parkbo HC	738	57
Sanxay	6,968	836
Dakbong HC		
Dacksapo HC	239	36
Tatseng (Banmoon) HC	344	24
Namnghon HC	312	126
Namsu HC	219	65
Yienddack HC	179	20
Vangtutnoi HC	453	59
Nongkayock HC	311	71
Sanxay district hospital	4,440	371
Samluang HC	471	64
Samakkyxay	7,161	1,027
Khumkham HC	1,961	330
Laonhao HC	1,922	377
Somsanouck HC	1,293	202
Bengphukha (Lak 52) HC	1,985	118
Saysettha	8,526	2,296
Bansai HC		
Sapuan HC	635	132
Khetphamueng HC	570	329
Kengmakkhue HC	1,240	242
Kengnhai HC	354	130
Phonnham HC	1,412	202
Saysettha District hospital	4,315	1,261

Data information on medical check up at each HC for in patient and out patient in Attapeu province for fiscal year 2013-2014