Ministry of Health
The Kingdom of Cambodia

# THE PROJECT FOR DEVELOPMENT OF SOCIAL HEALTH INSURANCE FOR THE INFORMAL SECTOR IN THE KINGDOM OF CAMBODIA

## FINAL REPORT

**OCTOBER 2018**

**JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)**

**GLOBAL LINK MANAGEMENT, INC.**

| HM |
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| JR |
| 18-060 |

Exchange Rate

1 USD = 113.029 JPY

1 KHR (Cambodian Riel) = 0.02796 JPY

(JICA Rate in October 2018)

1 USD = 4,000 KHR (Cambodian Riel)

# LIST OF ACRONYMS/ABBREVIATIONS

| Acronyms/ Abbreviations | Standard Nomenclature |
|---|---|
| **AD** | Administrative District |
| **AFD** | Agence Française de Développement |
| **CARD** | Council for Agriculture and Rural Development |
| **CBHI** | Community-based Health Insurance |
| **CPA** | Complementary Package of Activities |
| **CRS** | Catholic Relief Services |
| **DFAT** | Department of Foreign Affairs and Trade |
| **FGD** | Focus Group Discussion |
| **GDP** | Gross Domestic Product |
| **GIZ** | Deutsche Gesellschaft für InternationaleZusammenarbeit/ German Corporation for International Cooperation |
| **GRET** | Group de Recherche et Déchanges Technologiques |
| **HEF** | Health Equity Fund |
| **H-EQIP** | Health Equity and Quality Improvement Project |
| **HIP** | Health Insurance Project |
| **ILO** | International Labour Organization |
| **JCC** | Joint Coordinating Committee |
| **JICA** | Japan International Cooperation Agency |
| **KfW** | Kreditanstalt für Wiederaufbau Bankengruppe/German Development Bank |
| **KHANA** | Khmer HIV/AIDS NGO Alliance |
| **KII** | Key Informant Interview |
| **KOICA** | Korea International Cooperation Agency |
| **L4UHC** | Leaders for Universal Health Coverage |
| **MEF** | Ministry of Economy and Finance |
| **MOH** | Ministry of Health |
| **MOI** | Ministry of Interior |
| **MOLVT** | Ministry of Labour and Vocational Training |
| **MOSVY** | Ministry of Social Affairs, Veterans and Youth Rehabilitation |
| **MOP** | Ministry of Planning |
| **MPA** | Minimum Package of Activities |
| **NGO** | Non-Governmental Organization |
| **NSPC** | National Social Protection Council |
| **NSPPF** | National Social Protection Policy Framework |
| **NSSF** | National Social Security Fund |
| **OD** | Operation District |
| **PCA** | Payment Certification Agency |
| **P4H** | Providing for Health |
| **PHD** | Provincial Health Department |
| **PPMC** | Provider Payment Mechanism Committee |
| **R/D** | Record of Discussion |
| **SDG** | Service Delivery Grant |
| **SHIP** | Social Health Insurance for the Informal Population |
| **SHPA** | Social Health Protection Association |
| **SOA** | Special Operating Agency |
| **SPTWG** | Social Protection Technical Working Group |

| | |
|---|---|
| **TBA** | Traditional Birth Attendance |
| **TWG** | Technical Working Group |
| **TWG-SHIP** | Technical Working Group for Social Health Insurance for the Informal Sector Population |
| **UHC** | Universal Health Coverage |
| **USAID** | United States Agency for International Development |
| **WB** | World Bank |
| **WHO** | World Health Organization |

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# Chapter 1. Project Overview

## 1-1 Project Background

Universal Health Coverage (UHC) is defined as "all people can use the promotive, preventive, curative, rehabilitative and palliative health services they need, of sufficient quality to be effective, while also ensuring that the use of these services does not expose the user to financial hardship" by the World Health Organization (WHO). In Cambodia, the proportion of out-of-pocket spending in total health expenditure exceeds 60%, indicating a serious economic burden for people in this country. Given this context, the Japan International Cooperation Agency (JICA) conducted a Data Collection Survey on the Social Health Protection System in the Kingdom of Cambodia between October 2015 and May 2016 to clarify the current state of health protection in Cambodia.

The survey found that there is a health insurance scheme operated by the National Social Security Fund (NSSF) for private employees and civil servants in Cambodia. There is also a social protection scheme for the poor, namely Health Equity Fund (HEF); however, there is no social health protection program for the non-poor informal sector,[1] a large share of the total population who are vulnerable to health risks due to unstable employment arrangements.

The government of Cambodia has utilized the National Social Protection Policy Framework (NSPPF) to announce its goal of health insurance coverage for the informal sector by the year 2025. To accomplish this goal, the Ministry of Health (MOH) requested the government of Japan technical assistance to design a health insurance scheme with an action plan for its full-scale implementation. JICA conducted the Detailed Planning Survey on this matter in June 2016 and signed the Record of Discussion (R/D). This project is a Technical Cooperation for Development Planning documented in the R/D.

## 1-2 Purpose of the project

The purpose of this project is to design an insurance model for the informal sector who are not covered by any health insurance scheme currently existing in Cambodia, and to formulate an action plan for its introduction including a pilot project.

## 1-3 Target areas of the project

All areas in Cambodia

[1] According to International Labour Organization (ILO), the informal sector is defined as "any economic activities carried out by workers and economic units whose official arrangements have not been fully applied, and who are not subject to legal or practical official arrangements ”Informal sector” is defined as “all people who are not covered by any employees’ insurance” in this report.

## 1-4 Government counterpart

Department of Planning and Health Information, Ministry of Health in Cambodia

## 1-5 Main activities of the project

The activities of this project were carried out according to the work plan presented in Figure 1-1.

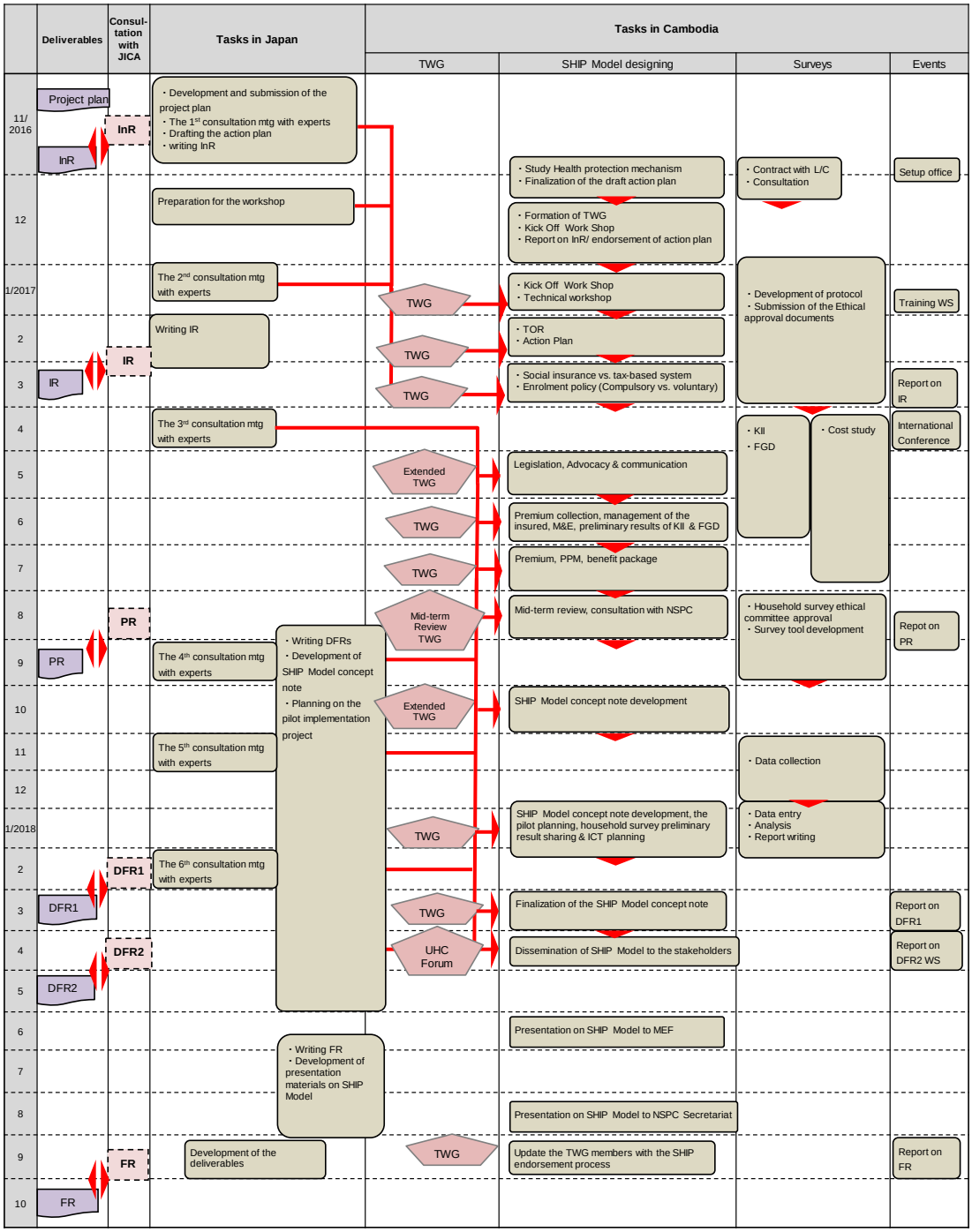



**Figure 1- 1 Flow of the Project Work**

### (1) Formation of Technical Working Group (TWG)

Based on the consultation with the project counterpart, the Department of Planning and Health Information of the Ministry of Health, the Technical Working Group for Social Health Insurance for the Informal Sector Population (TWG-SHIP) was formed in December 2016 to design a health insurance scheme for the informal sector. TWG-SHIP is composed of the Cambodian officials who participated in the study tours to Japan and Thailand conducted as part of the Data Collection Survey, the predecessor of this project. Participating government agencies include MOH, Ministry of Economy and Finance (MEF), NSSF/Ministry of Labor and Vocational Training (MOLVT), Ministry of Interior (MOI), Ministry of Social Affairs, Veterans and Youth Rehabilitation (MOSVY), Ministry of Planning (MOP), and the Council for Agriculture and Rural Development (CARD) (See Table 1-1). The reasons for selecting these agencies are as follows.

**Table 1- 1 TWG-SHIP Member List (March 2017)**

| | Name | Agency | Title in Profession | |
|---|---|---|---|---|
| **1** | Dr. Lo Veasnakiry | MOH | Director of Department of Planning and Health Information (DPHI) | Chair |
| **2** | Dr. Sok Kanha | MOH | Deputy Director of DPHI | |
| **3** | Mr. Ros Chhun Eang | PCA/ MOH | Deputy Director of Payment Certification Agency (PCA) | |
| **4** | Dr. Loun Mondol | MOH | Chief of Bureau of Policy, Planning and Health Sector Reform, DPHI | |
| **5** | Dr. Bun Samnang | MOH | Vice Chief of Bureau of Health Economics and Financing, DPHI | Secretary |
| **6** | Mr. Phu Sphea | MOH | Officer of Health Economics and Financing, DPHI | |
| **7** | Mr. Chab Sath | MOH | Officer of Health Information, DPHI | |
| **8** | Mr. Pheakdey Sambo | MEF | Deputy Director General of Insurance and Pension Department | |
| **9** | Mr. Heng Sophannarith | NSSF/ MOLVT | Deputy Director of Health Insurance Division | |
| **10** | Mr. Meas Vou | MOSVY | Deputy Director of National Social Security Fund for Civil Servants | |
| **11** | Mr. Kamphorn Sathya | MOI | Deputy Director of Management Information System Department | |
| **12** | Mr. Keo Ouly | MOP | Director of Identification of Poor Household Department | |
| **13** | Mr. Maun Chansarak | MOP | Director of Social Plan Department and Deputy Program Manager of ID Poor | |
| **14** | Dr. Say Ung | CARD | Director of Department, Health, Food Security and Nutrition | |

- MOH is responsible for health care provision and health protection for the informal sector population.
- MEF is the supervisory ministry on finance in Cambodia and the core of the National Social Protection Council (NSPC).
- NSSF/MOLVT is operating the social security system for private employees, and it is going to be the operating agency of the health insurance for the informal sector.
- MOI is responsible for the information required for identification of the eligible population, enrolment promotion, insurance premium collection and management of the insured, and the local administrative agencies which are going to be the basis of the insurance operation.
- MOSVY is currently in charge of social security for civil servants and veterans.
- MOP oversees identifying and managing information of HEF beneficiaries, who are part of the informal sector population.
- CARD is a government agency undertaking all matters related to Cambodia's social assistance.

**(2) Capacity Development of TWG-SHIP members**

After the formation of TWG-SHIP, a kick-off workshop was held in January 2017 with the purpose of promoting team spirit, understanding JICA and its projects, and discussing future activity plans. This workshop also offered technical training for designing health insurance systems by Professor Yasuo Uchida of Kobe University, an expert in health economics / public finances and Dr. Tomohiko Sugishita of Tokyo Women's Medical University, an expert in team-building. Since February 2017, TWG-SHIP has met almost monthly, and TWG-SHIP members have had discussions based on the resource documents prepared by the JICA SHIP project team, and gradually built consensus.

In April 2017, the World Bank (WB), the German International Cooperation Corporation (GIZ) and Providing for Health[2] (P4H) jointly held the 3rd training workshop for the Leaders for Universal Health Coverage in Asia (L4UHC in Asia) in Tokyo, Japan. The project supported nine government officials in Cambodia (3 of whom were TWG-SHIP members) to participate in

[2] P4H is a global partnership proposed at the G8 Summit 2007 in Heiligendamm aiming at improving social health protection and strengthening health financing systems to promote universal coverage in low and middle-income countries. To date the P4H network includes Germany, France, Switzerland, Spain, USA, Morocco, Kazakhstan, ILO, WHO, Global Fund, World Bank, African Development Bank and Asian Development Bank. JICA is a member of P4HC+ which was developed as an extended partnership in Cambodia.

the workshop. L4UHC in Asia is a one-year program consisting of three workshops and tours to train leaders for building social health protection schemes. Three countries- Nepal, Lao PDR and Cambodia, participated in this program.

**(3) Survey on potential beneficiaries of the health insurance scheme**

To collect information and opinions of the potential health insurance beneficiaries, to design the social health insurance model for the informal sector population (SHIP Model), Key Informant Interview (KII) and Focus Group Discussion (FGD) were conducted in Phnom Penh and Kampong Speu province between April and June 2017 by sub-contracting with Khmer HIV/AIDS NGO Alliance (KHANA) research center. In addition, a household survey was also conducted from October 2017 to January 2018, including 1,036 households in Battambang province and Kampong Speu province. See Chapter 3 for details of the findings.

**(4) Cost study for designing the health insurance scheme for the informal sector population**

In the process of setting insurance premiums in the SHIP Model, a cost analysis was conducted from April to July 2017 to estimate benefit costs, insurance premiums and affordability of the insured. See Chapter 4 for details on the study findings.

**(5) Designing the health insurance scheme for the informal sector population**

At the above-mentioned TWG-SHIP regular meetings, each component of the SHIP Model was discussed, and the model was gradually designed. In May and October 2017, the extended TWG-SHIP meetings were convened to share the up-to-date SHIP model with development partners and hear their comments about the model. The way of operating the health protection schemes for the informal sector population was widely discussed in the meetings.

At the meeting in August 2017, the team summarized the SHIP Model designed at the previous regular meetings, reported it to the chairperson candidate of the NSPC Executive Committee, and requested her feedback. Moreover, the team called meetings in October 2017, and January and March 2018 to discuss the concept note and pilot plan of the SHIP Model. The SHIP Model was presented to the Cambodian government officials and development partners at the World Health Day and Cambodia UHC Forum co-organized by WHO, GIZ and JICA on April 5 and 6. On 23 August 2018, the TWG-SHIP chair presented the concept paper of the SHIP Model to the NSPC Secretariat. See Chapter 5 for details of the SHIP model.

### (6) Formulation of the pilot-implementation plan (draft)

After formation of the SHIP Model, the pilot-implementation plan was formulated to test Model. See Chapter 6 for details of the implementation framework (draft).

### (7) Joint Coordinating Committee (JCC) Meetings

In June 2017, the 1st JCC meeting was held to confirm the plans and progress of the project activities among the stakeholders, such as project counterparts, JICA officers and JICA project members. The government counterpart shared the progress they have been making on establishment of the social protection system in Cambodia, and the project team presented the concept and progress of the SHIP project. In the end, the Cambodian government requested JICA for a technical cooperation project that will support piloting the health insurance model developed under this project.

Towards the end of the project, the 2nd JCC meeting was held in April 2018. The project team reviewed the project activities and accomplishment that the TWG-SHIP had made. The government counterpart subsequently presented a product of the project, the SHIP Model. Finally, the project team shared the implementation plan of the SHIP Model with the participants. JICA Cambodia acknowledged the cooperation received by the government counterpart and showed its intension to continuously cooperate with the government of Cambodia in the area of social health protection.

# Chapter 2. Current Status of Cambodian Health Protection

## 2-1 Cambodian health system

### (1) Health service delivery

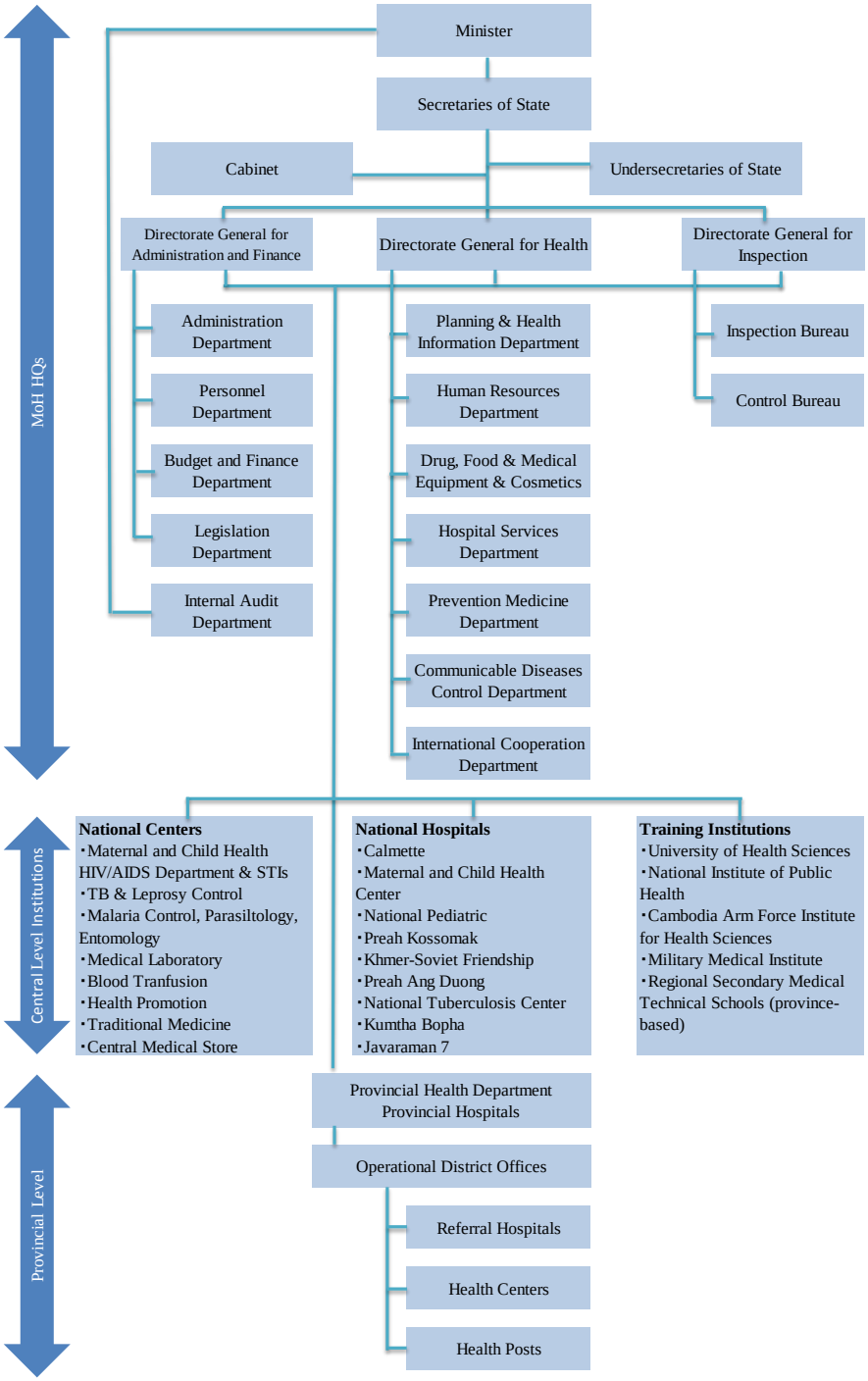



**Figure 2- 1 Organogram of the MOH and public health facilities in Cambodia**

Source: The Kingdom of Cambodia Health Systems Review, Annual Health Financing Report and Health Sector Progress in 2016

Currently, public health service in Cambodia is provided through health administrative districts, Operational Districts (OD), based on the Health Coverage Plan formulated in 1995 (Figure 2-1). OD covers a population of 100,000 to 200,000, and it is obliged to establish at least one referral hospital and one health center for every 10,000 to 20,000 people. A health post is a public health facility installed in an area 15 km or more away from the nearest health center, covering 2,000 to 3,000 people. In Cambodia, although there has been an effort made to promote decentralization since 2001, the central ministry retains authority for enforcement of health care delivery.

Public health facilities provide services according to a level specified by the MOH. Minimum Package of Activities (MPA) are provided by health centers and health posts, and Complementary Package of Activities (CPA) are offered by hospitals. CPA is further divided into CPA1, CPA2 and CPA 3, not depending on the level of facility, such as a national hospital, a provincial hospital and a referral hospital, but depending on the level of service provided at each health facility (See Table 2-1).

**Table 2- 1 Levels and functions of public health services in Cambodia**

| Level of health services | Functions required |
|---|---|
| **MPA** | Preventive and basic curative services supplemented by virtical programs |
| **CPA 1** | With 40-60 beds, basic obstetrics care, but no major surgery (no general anaesthesia) and no blood bank. |
| **CPA 2** | With 60-100 beds, CPA 1 services, major surgery with general anaesthesia, and other specialized services, such as blood transfusion |
| **CPA 3** | With 100-250 beds, major surgery and more activities than CPA 2 including various specialized services |

Source: The Kingdom of Cambodia Health System Review

The potential establishment of a new public health facility is considered based on a request from a village chief or representative. A village requesting the establishment of a new public health facility applies to the designated Commune/Sangkat Council. After being resolved at the Commune/Sangkat Council, an approval procedure goes to OD, the Provincial Health Department (PHD) and the final decision is made at MOH. In case of the establishment of a new private health facility, an application is submitted to the designated provincial government if a health facility only provides outpatient service, and to MOH if it includes inpatient service. Regarding the provision of health service in communities, PHD, OD and health centers set up a committee to discuss the status of activities and challenges health facilities are facing, while

exchanging ideas regularly with the provincial/district government, government agencies in other sectors and development partners. PHD conducts assessments of health centers and health posts and streamlines provision of health service deliveries together with MOH. Furthermore, PHD visits private health facilities to provide technical support in the area of monitoring. PHD even facilitates medical treatments in collaboration with private health facilities when necessary.

The number of ODs and public health facilities in each province of Cambodia as of December 2017 are presented in Table 2-2.

**Table 2- 2 Number of ODs and public health facilities in Cambodia (December 2017)**

| Province | OD | National Hospital | Provincial Hospital | Refferral Hospital | Health Center (with beds) | Health Center (without beds) | Health Post |
|---|---|---|---|---|---|---|---|
| Banteay Meanchey | 4 | 0 | 1 | 6 | 3 | 62 | 11 |
| Battambang | 5 | 0 | 1 | 5 | 6 | 71 | 6 |
| Kampong Cham | 9 | 0 | 1 | 6 | 1 | 87 | 0 |
| Kampong Chhnang | 3 | 0 | 1 | 2 | 3 | 39 | 1 |
| Kampong Speu | 4 | 0 | 1 | 3 | 3 | 52 | 4 |
| Kampong Thom | 3 | 0 | 1 | 2 | 5 | 47 | 4 |
| Kampot | 4 | 0 | 1 | 4 | 3 | 59 | 0 |
| Kandal | 10 | 0 | 1 | 10 | 9 | 90 | 2 |
| Koh Kong | 2 | 0 | 1 | 1 | 4 | 9 | 8 |
| Kratie | 2 | 0 | 1 | 2 | 2 | 28 | 14 |
| Mondul Kiri | 1 | 0 | 1 | 1 | 4 | 7 | 15 |
| Phnom Penh | 7 | 9 | 1 | 6 | 0 | 39 | 9 |
| Preah Vihear | 1 | 0 | 1 | 0 | 9 | 19 | 17 |
| Prey Veng | 12 | 0 | 1 | 11 | 2 | 111 | 4 |
| Pursat | 4 | 0 | 1 | 3 | 0 | 40 | 2 |
| Ratanakiri | 2 | 0 | 1 | 1 | 7 | 18 | 7 |
| Siem Reap | 4 | 0 | 1 | 4 | 3 | 88 | 2 |
| Sihanoukville | 1 | 0 | 1 | 0 | 0 | 14 | 2 |
| Stung Treng | 1 | 0 | 1 | 0 | 2 | 10 | 1 |
| Svay Rieng | 4 | 0 | 1 | 4 | 2 | 41 | 2 |
| Takeo | 6 | 0 | 1 | 6 | 1 | 77 | 4 |
| Oddar Meanchey | 2 | 0 | 1 | 1 | 0 | 34 | 2 |
| Kep | 1 | 0 | 1 | 0 | 0 | 5 | 0 |
| Paillin | 1 | 0 | 1 | 0 | 0 | 6 | 2 |
| Tbong Khmum | 7 | 0 | 0 | 6 | 0 | 68 | 0 |
| Total | 100 | 9 | 24 | 84 | 69 | 1,121 | 119 |

Source: Department of Planning and Health Information, MOH

The total number of private health facility licensees by the end of 2017 was 10,191 (See Table 2-3). Considering that the number of public health facilities is 1,426, it is clear that the portion of private health facilities is large in Cambodia and widely accessible to the residents. In addition, there is a tendency of increasing private health facilities. 1,577 private facilities were

newly licensed in 2016 and 1,569 were added in 2017. However, MOH has not been able to adequately manage private facilities as they have not retained updated information related to the facilities. To provide sufficient health service to the public, it is necessary to build a solid management system of health facilities including the private sector.

**Table 2- 3 Number of private health facilities in Cambodia (December 2017)**

| Health Facilities | Number |
|---|---|
| Hospital | 16 |
| Polyclinic | 56 |
| Pediatric clinic | 281 |
| Maternity clinic | 11 |
| Dental clinic | 47 |
| Medical laboratory | 54 |
| Esthetic center | 10 |
| Medical communication office | 7 |
| Pregnancy care room | 1,156 |
| Nursing care room | 3,959 |
| Kynetherapy room | 19 |
| Consultation cabinet | 3,695 |
| Dental cabinet | 760 |
| Ophthalmic cabinet | 24 |
| Ear-Nose-Throat cabinet | 28 |
| Dermatology cabinet | 23 |
| Mental health cabinet | 11 |
| Medical laboratory room | 34 |
| **Total** | **10,191** |

Source: Department of Planning and Health Information, MOH

Cambodia has been gradually introducing the national graduation examination system for the medical professionals since 2013. Moreover, since 2016 it has been obligatory that doctors, dentists, nurses, midwives, pharmacists who have passed this examination join the designated professional council.

Table 2-4 presents an overview of Cambodian medical personnel in 2016. 3,995 doctors, 11,211 nurses, and 6,475 midwives worked at public health facilities in Cambodia. Although the total number of medical professionals is increasing, the medical professional-population ratio is 1.2 per 1,000; and therefore, further efforts are required to reach the 2020 target of 2.0 per 1,000, set by the WHO Cambodia. While nurses and midwives are more evenly distributed, physicians, especially medical specialists, tend to practice in the capital. Moreover, most doctors are working in hospitals (CPA 1-3) and nurses and midwives are the main work force at many health centers. This has raised the issue that part of the treatment that is supposed to be provided

at a health center is not available. At the same time, close attention should be paid to the fact that physicians at public facilities also work at private facilities.

**Table 2- 4 Medical personnel in Cambodia (2016)**

| | Capital City | | Other areas | | Total | Per 1000 population |
|---|---|---|---|---|---|---|
| | Number | % | Number | % | | |
| **Medical practitioners** | 1,619 | | 2,376 | | 3,995 | 0.2 |
| **Special medical practitioners** | *566* | *82.0* | *124* | *18.0* | | |
| **Genaral medical practitioner** | *836* | *31.5* | *1,819* | *68.5* | | |
| **Physician assistants** | *217* | *33.4* | *433* | *66.6* | | |
| **Nurses** | 2,636 | 23.5 | 8,575 | 76.5 | 11,211 | 0.6 |
| **Midwives** | 404 | 6.2 | 6,071 | 93.8 | 6,475 | 0.4 |
| **Total** | | | | | | 1.2 |

Source: Data Collection Survey on the Health Human Resources and Facilities in the Kingdom of Cambodia

Results of international comparison of health service provision are shown in Table 2-5. Service coverage index for the level of access to health service in Cambodia is on the average of Southeast Asia, but higher than Indonesia and Lao PDR. However, the country's international health regulations core capacity index is the lowest in the region.

**Table 2- 5 Health service provision in Cambodia and other countries**

| | SDG-UHC Indicator 3.8.1 Service coverage index | Hospital beds per 10,000 population | Physicians per 1000 population | International Health Regulations core capacity index (%) |
|---|---|---|---|---|
| **Cambodia** | 55.0 | 8.3 | 0.2 | 51.0 |
| **Indonesia** | 49.0 | 12.1 | 0.2 | 96.0 |
| **Thailand** | 75.0 | 21.0 | 0.4 | 98.0 |
| **Philippines** | 58.0 | 5.0 | 1.1 | 84.0 |
| **Vietnum** | 73.0 | 25.6 | 1.2 | 99.0 |
| **Malasia** | 70.0 | 18.6 | 1.3 | 99.0 |
| **Myanmar** | 60.0 | 9.0 | 0.6 | 86.0 |
| **Lao PDR** | 48.0 | 15.0 | 0.2 | 74.0 |
| **World average** | 64.0 | — | — | — |
| **Southeast Asian average** | 55.0 | — | — | — |

Source: 2017 Global Monitoring Report

### (2) Utilization of health service

In Cambodia, people have free access to health services, and patients are allowed to select health care providers. As mentioned above, physicians are often absent from health centers and health posts; and therefore, patients who need medical treatment tend to visit a referral hospital directly. As a result, patients are concentrated in hospitals with good reputations. These popular hospitals end up exceeding the number of patients they can accommodate by arranging beds in the hallways (See Figure 2-2). On the other hand, the HEF beneficiaries are required to go through the referral process of visiting the nearest health center/health post first and seeking further treatment at higher level health facilities only if referred by the health center/health post. In case of an emergency, the regional focal health facility (e.g. Calmette Hospital in Phnom Penh) receives calls and assigns each case to a health facility.

**Figure 2- 2 Overflow patients accommodated in the hallway**

**(Referral Hospital in Angkor Chum OD in Siem Reap province)**

Health facilities in Cambodia are open all day for providing health consultations, but patients are more likely to visit the facilities in the morning. There are health centers providing outreach services in remote villages. In Cambodia, practice of Traditional Birth Attendant (TBA) was abolished in 2009, and the proportion of institutional delivery is reportedly as high as 83% at the national level.[3, 4]

The type of health facility most frequently utilized for the first treatment by urban residents when they were sick or injured in the past 30 days prior to the survey was private pharmacies (40.6%), followed by private clinics (22.6%) and central hospitals (6.5%). Meanwhile, the most frequently utilized health facility for the first treatment by rural residents was private clinics (17.2%), followed by trained health worker/nurse (15.0%) and home/office of trained health worker/nurse (14.4%) (See Table 2-6).

[3] In Cambodia, efforts were made to pay 1.25 USD when TBA and residents took pregnant women to a medical facility, and facility delivery slowly penetrated.

[4] Cambodia Demographic and Health Survey (2014).

**Table 2- 6 Utilization status of health facilities in Cambodia* (%)**

| Health facility used | Urban | Rural |
|---|---|---|
| **Did not seek treatment** | **3.9** | **5.1** |
| **Public sector** | **14.9** | **23.5** |
| National Hospital | 6.5 | 3.6 |
| Provincial Hospital | 2.2 | 3.1 |
| Referral Hospital | 0.5 | 2.9 |
| Health Center | 0.0 | 12.8 |
| Health Post | 0.0 | 0.2 |
| Others | 0.7 | 0.2 |
| **Private sector** | **78.1** | **64.7** |
| Private Hospital | 3.3 | 3.6 |
| Private Clinic | 22.6 | 17.2 |
| Private Pharmacy | 40.6 | 12.7 |
| Home/office of trained health worker/nurse | 5.4 | 14.4 |
| Visit of trained health worker/nurse | 4.7 | 15.0 |
| Other private medical | 1.5 | 1.7 |
| **Non-medical sector** | **1.0** | **5.3** |
| **Outside of country** | **2.1** | **1.5** |
| **Total** | **100.0** | **100.0** |

*Utilization of health facilities for the first treatment in the past 30 days prior to the survey
Source: Demographic and Health Survey 2014

### (3) Strategic measures to improve the quality of health care

MOH has adopted the Special Operating Agency (SOA) system to improve the quality of health care. SOA is a system legislated in 2006 to improve the quality and supply of public services. Requirements for becoming a SOA are stipulated by each Ministry. As for MOH, it is a service providing agency under the jurisdiction of MOH, including the provincial hospitals and ODs.

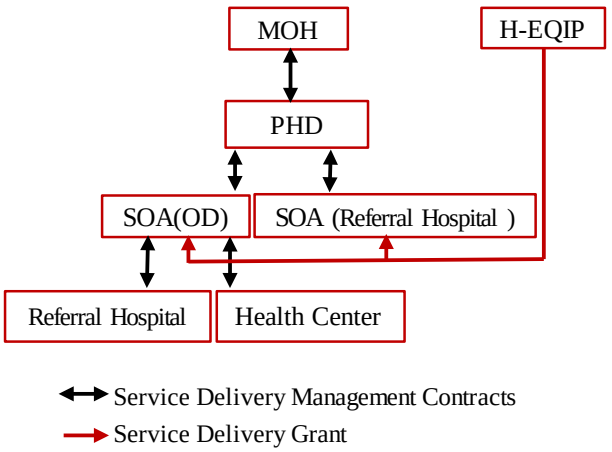



**Figure 2- 3 SOA system and SDG payment**
Source: Health System Review and Service Delivery Grants – Operational Manual

To become a SOA, a provincial hospital or an OD signs an internal contract with MOH through PHD. The OD, which became a SOA, sub-contracts with a referral hospital, a health center or a health post in the region (See Figure 2-3). PHD, OD and a provincial hospital contracted by MOH must meet the Readiness Criteria formulated by MOH.

PHDs sign Service Delivery Management Contracts with ODs and provincial hospitals that are approved to be SOAs. SOAs can receive budgets for each program and the Service Delivery Grant (SDG) that is discretionary budget for the health facilities. The financial source of SDG is the pool fund of the Health Equity and Quality Improvement Project (H-EQIP) jointly managed by MOH and development partners. The allocation of SDG is determined according to criteria, such as the population in the area, revenues from government subsidies, geographical location, and the number and level of health facilities. 80% of the total allocation is prepaid as a basic allocation and 20% is provided based on the assessment of the services offered. Up to 65% of SDG can be used as an incentive (salary) to the health staff and the remainder covers operational expenses. This performance-based incentive system has reportedly improved the ownership and responsibility of staff providing health services.[5]

**(4) Health finance**

Table 2-7 shows the trends in the health finance situation in Cambodia during the five years from 2012 to 2016. The government's health budget has increased from USD 199.3 million in 2012 to USD 268.6 million in 2016. However, the share of the health budget in the Gross Domestic Product (GDP) and in the national budget remained constant. Although the proportion of government expenditure in the total health expenditure increased from 19.4% in 2012 to 22.4% in 2016, improvement in reduction of out-of-pocket expenditure on health was not seen, since the contribution from development partners decreased from 19.4% to 16.7% during the period. Health expenditure per capita in fact has increased by USD 6.2 over the five years.

[5] Khim K. & Annear P. L. (2013). “Strengthening district health service management and delivery through internal contracting: Lessons from pilot projects in Cambodia.” Social Science & Medicine, Volume 96 (November 2013), pp. 241-249.

**Table 2- 7 Health financing in Cambodia (2012 and 2016)**

| | 2012 | | 2013 | | 2014 | | 2015 | | 2016 | |
|---|---|---|---|---|---|---|---|---|---|---|
| **1 Macroeconomic indicator *** | | | | | | | | | | |
| GDP（Million USD） | 14,054 | | 15,228 | | 16,703 | | 18,050 | | 20,017 | |
| Population（Million） | 14.8 | | 15.0 | | 15.3 | | 15.5 | | 15.8 | |
| GDP per capita（USD） | 951 | | 1,014 | | 1,094 | | 1,163 | | 1,270 | |
| **2 Government Funding for Health **** | | | | | | | | | | |
| Government Funding for Health (Million USD） | 199.3 | | 216.2 | | 209.0 | | 245.5 | | 268.6 | |
| Ratio of GDP (%) | 1.4 | | 1.4 | | 1.2 | | 1.3 | | 1.3 | |
| Ratio of Government Expenses (%) | 6.4 | | 6.4 | | 5.9 | | 6.3 | | 6.4 | |
| **3 Health Expenditures **** | | | | | | | | | | |
| Current Health Expenditures （Million USD） | 1,028.9 | | 1,060.1 | | 1,049.9 | | 1,115.8 | | 1,207.0 | |
| Ratio of GDP (%) | 7.3 | | 7.0 | | 6.3 | | 6.1 | | 6.0 | |
| **4 Breakdown of Health Expenditures (Million USD) **** | | | | | | | | | | |
| Government | 199.3 | 19.4% | 216.2 | 20.4% | 209.0 | 19.9% | 245.5 | 22.1% | 268.6 | 22.4% |
| Donor | 199.8 | 19.4% | 180.8 | 17.1% | 176.7 | 16.8% | 210.3 | 19.0% | 200.1 | 16.7% |
| OOP | 629.8 | 61.2% | 663.1 | 62.5% | 664.2 | 63.3% | 653.3 | 58.9% | 728.5 | 60.9% |
| **5 Health Expenditures per capita by resources (USD) **** | | | | | | | | | | |
| Government | 14.2 | | 14.8 | | 14.1 | | 16.4 | | 17.7 | |
| Donor | 14.3 | | 12.3 | | 12.0 | | 14.5 | | 13.8 | |
| OOP | 44.9 | | 45.4 | | 44.9 | | 43.6 | | 48.1 | |
| Current Health Expenditures per capita | 73.4 | | 72.5 | | 71.0 | | 74.5 | | 79.6 | |

* World Development Indicators

** Estimating Health Expenditure in Cambodia: National Health Accounts Report (2012-2016 Data). *Unpublished*

Source: National Health Accounts Report, MOH and World Bank

Table 2-8 is an international comparison of the impact of health expenditures on households. In 2009, about 20% of Cambodians spent more than 10% of total household consumption or income and 5.6% spent more than 25% to cover their health expenses. Cambodia has a substantially high percentage of households suffering from catastrophic health expenditures among countries in Southeast Asia (See Figure 2-4). Moreover, the incidence rate of poverty due to the high level of out-of-pocket expenditures on health (See Figure 2-5) and the poverty gap indicating its degree of poverty (See Table 2-8) in Cambodia are prominent in the region. It is clear that the impact of out-of-pocket health expenditures on households is significant and extremely serious in Cambodia.

**Table 2- 8 International comparison of the impact of health expenditure on households**

| | | SDG 3.8.2 Incidence of catastrophic expenditure (%) | | Incidence of impoverishment due to out-of-pocket health spending (%) | | Poverty gap due to out-of-pocket health spending expressed in cents of international dollars at 2011 PPP factors | |
|---|---|---|---|---|---|---|---|
| | Data | at 10% of household total consumption or income | at 25% of household total consumption or income | Poverty line: at 2011 PPP $1.90-a-day | Poverty line: at 2011 PPP $3.10-a-day | Poverty line: at 2011 PPP $1.90-a-day | Poverty line: at 2011 PPP $3.10-a-day |
| **Cambodia** | 2009 | 19.97 | 5.64 | 2.99 | 6.15 | 8.19 | 13.94 |
| **Indonesia** | 2015 | 3.61 | 0.41 | 0.07 | 0.66 | 0.01 | 0.39 |
| **Lao PDR** | 2007 | 2.98 | 0.26 | 0.40 | 0.99 | 0.18 | 1.21 |
| **Malaysia** | 2004 | 0.74 | 0.04 | 0.09 | 0.23 | 0.02 | 0.13 |
| **Philippines** | 2015 | 6.31 | 1.41 | 0.83 | 1.44 | 0.41 | 1.86 |
| **Thailand** | 2010 | 3.38 | 0.68 | 0.12 | 0.34 | 0.83 | 1.09 |
| **Viet Nam** | 2014 | 9.81 | 2.07 | — | — | — | — |
| **Average (Worldwide)** | 2010 | 11.70 | 2.60 | 1.40 | 1.80 | — | — |
| **Average (Southeast Asia)** | 2010 | 12.80 | 2.90 | 3.10 | 3.40 | — | — |

Source: WHO and International Bank for Reconstruction and Development/WB (2017)

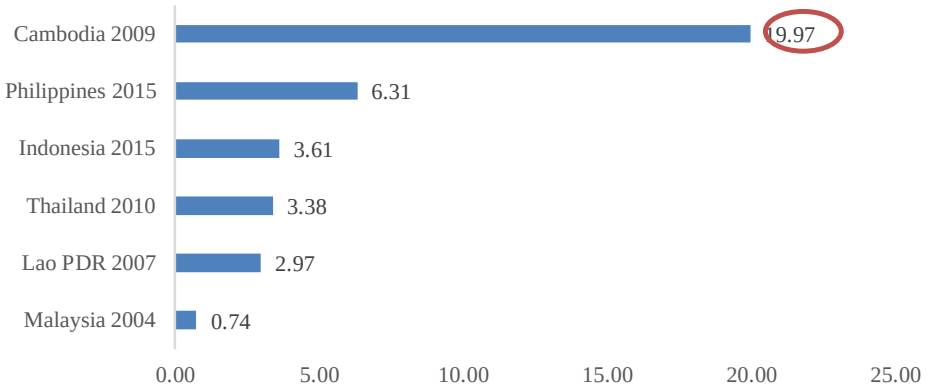



**Figure 2- 4 Incidence of catastrophic health expenditure**

Source: WHO & International Bank for Reconstruction and Development/WB (2017)

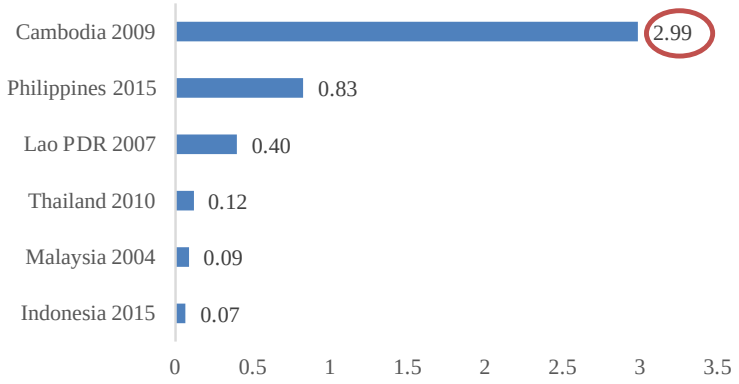



**Figure 2- 5 Incidence of impoverishing health expenditure**

Source: WHO & International Bank for Reconstruction and Development/WB (2017)

Cambodia's health budget for 2018 was announced to be USD 485 million, an increase of 16% from 2017. Its growth rate is limited compared to 25% increase in education and the 3 times increase in agriculture, forestry and fisheries. However, it exceeds the increase rate of the entire national budget by 15%, and the proportion of the health budget in the national budget has reached to 8.1%. This is much larger than the average proportion of the health budget in the national budget, 6.3% in the period of between 2012 and 2016.[6]

[6] Draft budget for 2018 approved by the Council of Ministers reported in the Phnom Penh Post (30 October 2017).

## 2-2 Health Protection System in Cambodia

### (1) Social Security Law

In Cambodia, the Paris Peace Accords were signed in 1991, and the Constitution of Kingdom of Cambodia [7] was promulgated in September 1993 when the United Nations Transitional Authority in Cambodia commenced its transitional administration. Regarding health protection, it is stipulated in Article 36, Chapter 3 and Article 72, Chapter 6 as shown in BOX 2-1.

**BOX 2- 1 Regulation of health protection under the Constitution of the Kingdom of Cambodia**

CHAPTER 3: ON THE RIGHTS AND DUTIES OF KHMER CITIZENS

Article 36: The Khmer citizens of both sexes have the right to enjoy the social security and social benefits prescribed by law.

CHAPTER 6: ON THE EDUCATION, THE CULTURE AND THE SOCIAL AFFAIRS

Article 72: The health of the people shall be guaranteed. The State shall give full consideration to disease prevention and medical cares. Poor people shall receive free medical consultations in public hospitals, infirmaries and maternities. The State shall establish infirmaries and maternities in rural areas.

In September 2002, the first Social Security Law in Cambodia[8] was enacted. It shows guidelines on social security mainly concerning the pension insurance and the employment injury insurance for laborers. It is stated that additional social security schemes should be added by Sub-Decrees.

As of September 2018, under the technical support of ILO, NSSF is proceeding with amendment of the Social Security Law. This is intended to legislate the social security of workers whose applications and scope are increasingly extended. This draft originally stated that informal sector workers are to join health insurance voluntarily. However, the legal section of NSPC advised NSSF to delete the statement "voluntary enrolment" to make the law consistent with the SHIP Concept Note which proposes the compulsory enrolment of the informal sector population. The new Social Security Law is supposed to be enacted by the end of 2018.

Meanwhile, NSPC has been drafting the Social Protection Law for all citizens under the support of GIZ, aiming to establish it in 2019. This is the comprehensive social protection law, generally called the “umbrella law” in Cambodia, which is the foundation of all social protection

[7] The Constitution of the Kingdom of Cambodia. (2010).
[8] Social Security Law (2002).

schemes, including social assistance. Efforts have been made to legislate the compulsory enrolment in a social protection scheme in this process.

**(2) National Social Protection Policy Framework (NSPPF)**

The Social Protection Technical Working Group (SPTWG) under the leadership of MEF formulated a draft policy framework of Cambodia's social security system in 2015. In the original policy framework, external consultants suggested the full use of the private sector. However, stakeholders including development partners repeatedly explained the importance of public social security to the SPTWG chairperson, and finally the current NSPPF[9] based on the public social security system was created. The NSPPF, approved by the Congress in March 2017, is now the basic policy pertaining to Cambodia's social security system.

The Cambodian government aims to move up to the upper-middle income country status by 2030, and a high-income country by 2050. The government is aware that the social security system reduces poverty and income disparity and develops human capital, and it is a useful tool that greatly contributes to economic growth of the country. In addition, NSPPF clearly states that Cambodia will establish a health protection system for all citizens striving for UHC.

NSPPF is composed of policy frameworks of social security and social assistance. The policy of social assistance includes (1) emergency support, (2) human resource development, (3) vocational training, and (4) assistance for vulnerable people. The policy of social security includes (1) pension insurance, (2) health insurance, (3) employment injury insurance, (4) unemployment insurance, and (5) insurance for the disabled. Cambodia positions social assistance as part of social security.

Regarding pension insurance, there is the National Social Security Fund for Civil Servants (NSSF-C) and the National Fund for Veterans (NFV), and in 2019, NSSF plans to introduce it for the private employees. Regarding employment injury insurance, NSSF operates for private employees, but civil servants will also be targeted in the future. For health protection, there are several programs, such as HEF, the Community-based Health Insurance (CBHI) and private health insurance, and NSSF has introduced health insurance for private employees in 2016. However, no program covers the Cambodian population extensively.

According to NSPPF, NSSF will become the single payer for pension and health insurance, and gradually cover not only private employees, but also civil servants, retired veterans and civil servants, informal sector workers and dependents (See Figure 2-6). It is stated in NSPPF that the Cambodian government will subsidize health protection to the poor and socially vulnerable but

[9] National Social Protection Policy Framework (2016).

expect other citizens to pay the appropriate insurance premiums. Regarding health insurance for the informal sector, the feasibility study will be conducted between 2018 and 2020. A voluntary enrolment scheme will be piloted sometime between 2020 and 2025 and possibly converted into a compulsory scheme.

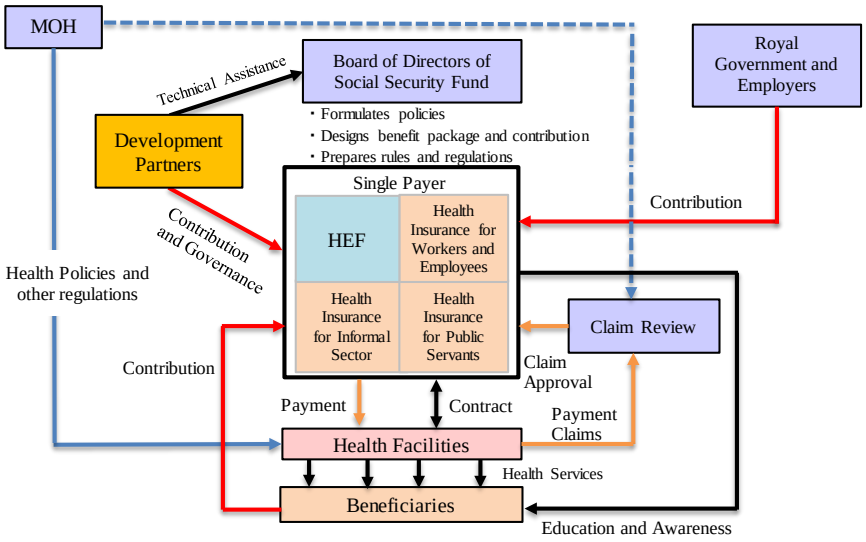
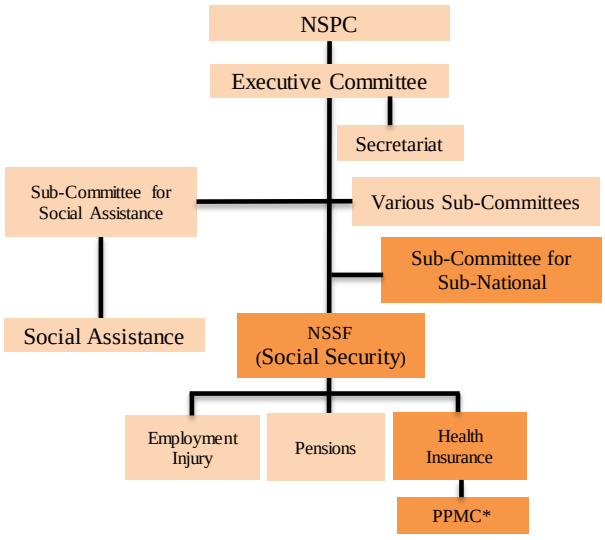



**Figure 2- 6 Proposed management structure of the public health insurance system**

Source: National Social Protection Policy Framework

### (3) National Social Protection Council (NSPC)

In July 2017, the Royal-Decree for the establishment of NSPC was enacted (See Figure 2-7).




* Provider Payment Mechanism Committee comprised of MOH and MOLVT (See 5-5 for details
Dark orange components have relations with SHIP.

**Figure 2- 7 Organogram of National Social Protection Council**

Source: The Roles and Functions of the NSPC

In the Royal-Decree mentioned above, the members of NSPC are stipulated as shown in Table 2-9. However, it is possible to increase the number of members by the Sub-Decree.

**Table 2- 9 Members of the National Social Protection Council**

| | Members | Title |
|---|---|---|
| 1 | Prime Minister | Honorary Chair |
| 2 | Minister of MEF | Chair |
| 3 | Minister of MOLVT | Vice-Chair |
| 4 | Minister of MOSVY | Vice-Chair |
| 5 | Minister of Health | Vice-Chair |
| 6 | Vice-Chair of CARD | Vice-Chair |
| 7 | Minister of Education Youth and Sport | |
| 8 | Secretary of State of Office of Council of Minister | |
| 9 | Minister or Secretary of State of Civil Services | |
| 10 | Minister or Secretary of State of Women Affairs | |
| 11 | Minister or Secretary of State of Planning | |
| 12 | Secretary of State of Interior | |
| 13 | Secretary of State of National Defense | |

Source: The Roles and Functions of NSPC

The main roles and functions of NSPC are:

1. Decision-making on NSPPF's social security policy implementation
2. Development of a detailed long-term strategy regarding the social security system
3. Selection of social security priority program/project and budget allocations to the departments in charge
4. Selection and appointment of government representatives at the Board of Directors of social security operating organizations
5. Construction of the performance measurement system for social security operating agencies
6. Performance monitoring of all social security operating agencies
7. Establishment of the province/district-level social security platform
8. Formulation of concrete policies on social security operations
9. Delegation of authority to the Executive Committee

The Executive Committee was established in April 2018, aiming to make the NSPC functional, to formulate social security policies, and to order and coordinate executive operations. The following officials listed in Table 2-10 were appointed as Executive Committee members.

**Table 2- 10 Members of the Executive Committee, National Social Protection Council**

| | Members | Title |
|---|---|---|
| 1 | Secretary of State of MEF | Chair |
| 2 | Secretary of State or under-Secretary of State of MOLVT | Vice-Chair |
| 3 | Secretary of State or under-Secretary of State of MOSVY | Vice-Chair |
| 4 | Secretary of State or under-Secretary of State of MOH | Vice-Chair |
| 5 | Secretary General of CARD | Vice-Chair |
| 6 | Representative from the Council of Minister | Member |
| 7 | Representative from the Ministry of Interior | Member |
| 8 | Representative from the Ministry of Defense | Member |
| 9 | Representative from the Ministry of Planning | Member |
| 10 | Representative from the Ministry of Justice | Member |
| 11 | Representative from the Ministry of Women Affairs | Member |
| 12 | Representative from the Ministry of Education, Youths and Sports | Member |
| 13 | Representative from the Ministry of Civil Services | Member |
| 14 | Director General of Tax Department, MEF | Member |
| 15 | Director General of Policy Department, MEF | Member |
| 16 | Director General of Budget Department, MEF | Member |
| 17 | Director General of Financial Industry Department, MEF | Member |
| 18 | General Secretariat of the National Social Protection Council | Permanent Member |

Source: The Roles and Functions of the NSPC

The NSPC Executive Committee has a coordination mechanism that links policies and operations and assists NSPC in its operations. Specific roles and functions of the NSPC Executive Committee are as follows:

1. Proposal of the long-term strategy of social security, the remuneration system of operating agencies, member selection of the Board of Directors of operating agencies, and the policy-formulation pertaining to operational management of NSPC
2. Adjustments, monitoring and evaluation of social security policy and strategy
3. Establishment of subcommittees (social assistance, social security, development partners, local administration, etc.) and task forces (pensions, informal sector, information system, etc.), and the invitation of representatives of subcommittees to the Executive Committee meetings
4. Annual assessment of the social security status and public opinion
5. Implementation of public relations activities to increase public awareness of social security
6. Performance supervision of operating agencies based on the performance evaluation system and risk matrix
7. Instruction for the NSPC Secretariat

As mentioned above, the Sub-Committees are established in NSPC with the aim of assisting the NSPC Executive Committee. The main functions of each Sub-Committee are to coordinate various activities in each field, to formulate an action plan, and to implement and monitor the action plan once the Executive Committee approves the plan.

In NSPPF, the Cambodian government proclaims that the social security system will be gradually introduced according to the degree of socioeconomic development of the country. In the future, it is proposed that all social assistance-related projects will be under MOSVY and all social security-related projects will be integrated into NSSF. However, with respect to health insurance, there are two options: i) being integrated under NSSF; and ii) being independent from NSSF (technically MOH is responsible, and the administration is carried out by the NSPC Executive Committee). The latter is proposed since health insurance is short-term insurance and it requires close coordination with health facilities. If the latter is selected, the NSSF will focus on administering pension and employment injury insurance.

The NSPC Secretariat has been set up to assist the NSPC and NSPC Executive Committee. At the initial establishment, about 20 full-time staff members will be placed, and departments of social assistance, social security and general affairs and legal affairs will be set up. The TWG-SHIP members, representing MEF, have been appointed as the Deputy Director General of the NSPC Secretariat and the Head of the Legal Affairs Department. A new building is being constructed on the premises of MEF and the NSPC Secretariat will move into the building once it is complete.

**(4) National Social Security Fund (NSSF)**

Having received technical support from the International Labor Organization (ILO), the Korean government and other development partners since 2003, NSSF was founded under the Ministry of Social Affairs, Labor, Vocational Training and Youth (current Ministry of Labor and Vocational Training) in 2007.

The headquarters of the NSSF is in the capital, Phnom Penh, and the branches are in all provinces except Kep province (the smallest province with population of around 40,000) and the new province, Tboung Khumum, which was established in 2013. There are two branch offices in Kampong Cham province, Kampong Speu province and Kandal province, and there is a plan to expand branches in other provinces. The headquarters has 11 divisions in administration, finance/accounting, IT, registration/premium collection, benefits, inspection/law,

internal audit, policy, health insurance, pension insurance, and rehabilitation.[10] The NSSF branch office carries out registration, payment of employment injury insurance, promotion of enterprise registration, and confirmation of enterprise registration information.[11] As of 6 March 2018, NSSF had 1,306 staff, of which 193 were civil servants, and the rest were contracted employees.[12]

NSSF introduced employment injury insurance for private employees in December 2008. This program was initially implemented in Phnom Penh, Kandal province and Kampong Speu province, where economic development has been more pronounced, and gradually expanded nationwide over three years. As employment injury insurance premiums, 0.8% of the employee's salary is contributed by employers. As of January 2018, 1,470,842 private employees, equivalent to 9.8% of all citizens, working at 11,778 companies/establishments were insured by NSSF.[13]

With regard to health insurance, MOLVT and Garment Manufacturers Association in Cambodia implemented a pilot Health Insurance Project (HIP) from 2009, targeting factory workers with financial assistance from the French government. HIP was eventually handed over to NSSF and institutionalized in 2016. Regarding insurance premiums, 1.3% of salaries of employees used to be collected from employees and employers at the time of introducing the program. However, since January 2018, all employers have been obliged to make the full contribution for the insurance premiums of their employees (2.6% of employees' salaries). Although all the NSSF members are supposed to be the health insurance members, 608,965 members paid the health insurance premiums in 2017. The total premiums collected in that year were 154,75 billion riels (approximately 38.69 million USD) and the average monthly premium per person was 5.29 USD.[14] NSSF provides basic medical services[15] with cased-based payment and selected high-cost medical services[16] through fee-for-service payment. Costs of corpse transportation and referral, daily allowance for absentees from work due to illness or child birth, and essential drugs prescribed at public health facilities are also part of the benefit package.

[10] There is no Employment Injury Insurance Division in NSSF because it started as the employment injury insurance agency. Now that diversified insurance is in operation, it has been suggested to establish the Employment Injury Insurance Division in NSSF.
[11] International Labour Organization (2017).
[12] NSSF (2018). Achievement over the period of 10 years (2008-2017) And Direction for 2018.
[13] NSSF (2018). Achievement over the period of 10 years (2008-2017) And Direction for 2018.
[14] NSSF (2018). Achievement over the period of 10 years (2008-2017) And Direction for 2018.
[15] Basic medical treatment includes consultation, birth control, general medicine, surgery, TB treatment, delivery, gynecology, abortion and emergency/referral.
[16] Selected high-cost medical services are hemodialysis, MRI, CT Scan, radiotherapy, cancer cell analysis, metal osteosynthesis, trepanation, cardiovascular surgery and emergency treatment for heart disease.

**Table 2- 11 Eligible population of the NSSF health protection (January 2018)**

| Eligible population | Benefit package | |
|---|---|---|
| Civil servants | NSSF | Maternal benefit for a birth delivery (100USD) |
| Workers with employment contracts for work of 8 hours or more per week | | |
| Workers with employment contracts for work up to 8 hours per week | HEF Health Care Benefit | |
| Village chief, Deputy village chief, Assistant village chief (Member) | | |
| Commune/Sangkat council members | | |
| Athletes supported by Government | | |
| Land-mine cleaners | | |
| Cycle rickshaw (Cyclo) drivers | | |

Source: MOH Prakas and MOLVT Document

The NSSF eligible population is employees who worked in private companies with eight or more employees until December 2017. However, the eligible population was extended to employees working at private companies with one or more employees becoming effective in January 2018. In addition, civil servants, retired civil servants and veterans have also become eligible for this scheme. Meanwhile, workers with employment contracts of up to 8 working hours per week, village chief, deputy village chief, village assistant (Member), commune/Sangkat members, national athletes, land-mine cleaners and cycle rickshaw (Cyclo) drivers also came to be registered at NSSF to receive HEF medical benefits and maternal benefits for childbirth (See Table 2-11).[17] As of 22 February 2018, 205,721 people (approximately 1.4% of the population) were registered at NSSF and received the above benefits.[18] While HEF for the poor is co-funded by the Cambodian government and development partners, HEF for the above-mentioned selected groups is fully funded by the government. In Cambodia, no co-payment is required by any type of health protection scheme.

As of February 2018, 1,295 public facilities (90.8% of the total public facilities) and 15 private facilities (0.1% of the total private facilities) were authorized to treat patients covered by NSSF insurance.[19, 20] Although NSSF primarily intends to apply health insurance to public facilities, some private facilities are designated as NSSF service providers, where insured patients have limited access to public facilities, public facilities are unable to provide some specific medical services, and public facilities are too crowded.

[17] Documents of Ministry of Labor and Vocational Training (December 31, 2017) and Ordinance of Ministry of Health MOH 001 (January 3, 2018).
[18] NSSF (2018). Achievement over the period of 10 years (2008-2017) And Direction for 2018.
[19] NSSF (2018). Achievement over the period of 10 years (2008-2017) And Direction for 2018.
[20] Health facilities are contracted with NSSF based on the guidelines in which MOH requires types of health services to be provided at MPA and CPA 1-3.

### (5) Health Equity Fund (HEF)

While programs subsidizing medical expenses of the poor have been tried out in various areas of the country with assistance from development partners, HEF is the only program officially institutionalized. Since the introduction of the program in 2000, HEF has been providing benefits, including health services and essential medicines, refund of transportation expenses to health facilities, food expenses of care givers, and funeral expenses.[21]

**Table 2- 12 ID Poor identification**

| | Pre-ID Poor | Post-ID Poor |
|---|---|---|
| **Place of certification** | Community | Health Facility |
| **Certification frequency** | Every 3 years | At any time |
| **Issued card** | Equity Card | Priority Access Card |
| **Expiration period** | 3years | 1year |

Source: JICA SHIP based on the information from MOP

It is estimated that HEF beneficiaries number approximately 3 million people which is about 20% of the total population of Cambodia. To receive HEF benefits, in principle, beneficiaries are required to be certified as Pre-ID Poor by MOP. As Pre-ID Poor certification is implemented in eight provinces a year, it takes three years to cover 25 provinces. Therefore, it is conducted in each province only once every three years. For the Pre-ID Poor certification, a group of volunteers consisting of 5 to 7 people from each village visits candidates of poor households and conducts an interview based on the ID-Poor questionnaire. The results of the interviews are quantified and consulted among the villagers for their validity. The final list of the Pre-ID Poor households is submitted to Commune Council, while posted in public space for a fixed period. If no villager strongly disagrees with results, the Pre-ID Poor households are certified based on the interview scores and receive an Equity Card that is valid for three years. On the other hand, those who are not identified as Pre-ID Poor household members, but in fact, who are in need, can also receive Post-ID Poor status that is effective for one year through a simple questionnaire survey at health facilities (See Table 2-12). Subsequently, these certified Post-ID Poor households are to be registered in the ID-Poor registration system along with the Pre-ID Poor households.

As mentioned above, household income level is reviewed every three years. However, the once-in-three-year review can hardly identify households falling into poverty between intervals in three years. Moreover, if household heads are absent at the time of the survey, the review process has occasionally not taken place. In addition, it has become obvious that the Post-ID

[21] Jordanwood, T., Grundmann C. (2015). “Health Equity Fund System Technical Brief” USAID Social Health Protection Project implemented by University Research Co., LLC. August 2015.

Poor households were not properly registered through the ID-Poor registration system. Hence, MOP is currently undertaking a pilot study to amend the system in which a household can apply for the ID Poor at the commune/Sangkat office at any time and the commune/Sangkat conducts interviews to certify the ID-Poor households on demand.

The financial source of the HEF is the pool fund of Health, Equity and Quality Improvement Project (H-EQIP), trusted by multiple development partners to the World Bank.

### 2-3 The status of development partners' support in social health protection[22]

#### (1) World Bank[23]

The Work Bank has been implementing H-EQIP, a pooled-fund project supporting the health sector in Cambodia since July 2016 for a duration of five years. Although pooled funds have been provided to the health sector in Cambodia since 2003, H-EQIP is scheduled to be the last one. Aside from the Work Bank, the German Reconstruction Finance Corporation (Kreditanstalt für Wiederaufbau: KfW), the Australian Department of Foreign Affairs and Trade (DFAT) and the Korea International Cooperation Agency are the H-EQIP contributing partners. In addition, the United States International Development Agency (USAID) is funding through earmarking for specific purposes, and the Japanese government contributes 1 million USD (about 111 million yen) through the Japan Policy and Human Resources Development Fund (PHRD)[24] for activities to improve monitoring and evaluation capacity.[25] Currently, 40% of the pooled fund is contributed by development partners and 60% by the Cambodian government.[26] It is planned to gradually reduce the contribution rate by development partners and the program will be fully financed by the government by the time that H-EQIP ends.

H-EQIP supports the operation of HEF, quality assessment of the services provided by the health providers contracting with H-EQIP on the output basis, evaluation of effectiveness of the Service Delivery Grant (SDG), and improvement of the Patient Management Registration System of HEF. In 2017, Payment Certification Agency (PCA) was established as an independent body responsible for HEF's claim examination. A nutrition improvement program for HEF recipients and a health financing assessment are planned for 2019.

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[22] Overview Health Care Financing Activities 2017 (updated October 2017).
[23] Interview with the World Bank (1 March 2018).
[24] PHRD was established on 7 May 1990 under the partnership between the Japanese government and the World Bank, based on the belief that human resource and development and implementation of appropriate policies are indispensable for enhancing the effect of financial cooperation for developing countries.
[25] Information provided by JICA Cambodia Office (4 April 2017).
[26] Bureau of Health Economics and Financing of Department of Planning and Health Information, MOH with support from the World Health Organization. (2018). Estimating Health Expenditure in Cambodia: National Health Accounts Report (2012-2016 Data).

In addition to H-EQIP, the World Bank promotes aid coordination in multiple countries including Cambodia, assists financial management in health care, supports implementation of Socio-Economic Surveys, and provides training and analysis of UHC.

### (2) International Labour Organization (ILO)[27]

Having received a request from the Ministry of Social Affairs, Labor, Vocational Training and Youth Rehabilitation, the present MOLVT, ILO has been providing technical assistance for the establishment and operation of NSSF since 2003, while providing a wide range of other supports, such as protection of workers and legislation on pension insurance. As technical support to the NSSF, it was decided to contract with a media company, called the 17 Triggers, to prepare health insurance awareness materials (communication kits) using NSSF's budget (approximately 100,000 USD) in 2018.

Currently, ILO is conducting various research to make the NSSF health insurance that currently targets formal sector employees more extensive to include some informal sector workers. In 2017, ILO conducted research on the employment mechanism and working environment of day construction workers. Subsequently, in 2018, a survey of self-employed tuk-tuk (motorcycle taxi) drivers and domestic workers, such as house-keepers and drivers employed by households, was conducted. The results will be shared with development partners in 2018.

### (3) German Government[28]

The German government, through KfW and GIZ, provides long-term support in the field of social protection in Cambodia, and it is one of a few development partners supporting the non-poor informal sector population.

In addition to providing funding to H-EQIP, KfW has begun to provide technical assistance to PCA in 2017. On the other hand, the voucher scheme that provided specific health care services, such as free maternal and child health care in exchange for a voucher distributed to the community, was closed down in February 2018.[29] Besides sending an advisor to MOH, GIZ provides a wide range of technical supports, including strengthening the capacity of NSSF: human resource development, health insurance management, public relations, IT systems; establishing NSPC, ID-Poor identification, strengthening the cost information system at health facilities, integration of the systems for managing quality of health services, analysis of health protection benefit packages and out-of-pocket payment, implementation of the Cambodia Socio-

[27] Interview with ILO (22 February 2018).
[28] Interview with GIZ (23 March 2018).
[29] The Voucher Scheme will be integrated to HEF.

Economic Survey, and legislation of social health protection. In September 2018, GIZ plans to place a social insurance advisor in the MEF.

### (4) United States Agency for International Development (USAID)[30]

Having supported the establishment of HEF, USAID is supporting the establishment of PCA, that has a primary function for HEF, analytical work on HEF, strengthening HEF management based on the community, and exploring the possibility of HEF covering the non-poor informal sector population. It also provides various supports for NSSF's capacity building, including human resource development, health insurance management, public relations, and IT systems development, health financing and information systems, and financial analysis of the HIV/AIDS and TB programs.

Social protection is a pillar of the Health Policy Plus (HP+), which began in August 2017 and will be completed by September 2020 in Cambodia. USAID expects the project to produce a synergetic effect with previous support contents. The activities of HP+ include (1) legislation of health facility accreditation including the private sector, (2) support to HEF, (3) support for sustainable management of NSSF and (4) dispatching an advisor in health financing to MEF.

### (5) World Health Organization (WHO)[31]

WHO dispatches the staff to MOH and mainly provides technical support for health financing. It also supports the National Health Accounts, public/health financial management, budget allocation corresponding to needs, the Socio-Economic Survey analysis, health management and information systems, strategic health finance management, and rehabilitation cost survey. Following the arrival of an expert in health economics in August 2018, WHO intends to actively cooperate with MOH in the field of health insurance in the future.

### (6) Agence Française de Développement (AFD)[32]

Since the establishment of the NSSF, the AFD has provided support mainly for health insurance. However, as the French government has shifted their assistance to Cambodia from grant aid to loans in recent years, its support has been limited to activities such as financing for the establishment of NSSF provincial offices.

[30] Interview with USAID Consultant (22 February 2018).
[31] Interview with WHO (27 February 2018).
[32] Interview with AFD (22 February 2018).

### (7) Australian Department of Foreign Affairs and Trade (DFAT)[33]

Along with the World Bank, DFAT promotes aid coordination and supports financial management of health protection for multiple countries including Cambodia. It also supports ID-Poor identification with GIZ. DFAT is currently planning to support disabled people and vulnerable women, such as those suffering from domestic violence, to be targeted by HEF through H-EQIP.

### (8) Swiss Agency for Development and Cooperation (SDC)

SDC provides financial assistance to the Kantha Bopha hospital, established by a Swiss pediatrician, providing health care services for free. Since it was decided that this hospital will be nationalized, SDC is currently supporting this process.

### (9) Social Health Protection Association (SHPA)[34]

SHPA provides consultation to non-governmental organizations (NGOs) for their financial management and awareness-raising activities. In addition, SHPA carries out activities conveying lessons learned from CBHI to the Cambodian government in an effort of contributing in moving towards UHC.

### (10) Group de Recherche et Déchanges Technologiques (GRET)[35]

Given the results of the above survey of ILO, GRET (French NGO) will implement a three-year health insurance pilot project in Phnom Penh, targeting approximately 9,000 self-employed tuk-tuk (motorcycle taxi) drivers and 400 domestic workers, such as house-keepers and drivers from November 2018. The budget is at maximum 800,000 Euros for three years, of which 90% is contributed by AFD and 10% will be solicited from private companies interested in NSSF call center support.

The pilot study is designed to enroll tuk-tuk drivers and domestic workers in NSSF on association and union basis with some individual enrolment options. GRET is considering a similar benefit package as the NSSF health insurance for private sector employees with adjustment in consideration of the payment capacity of the target population. GRET will maximize the use of media tools, such as video and social network service (SNS), developed by NSSF with the support of ILO, for promotion of social health insurance. GRET also proposes to conduct satisfaction surveys of the insured by a third party.

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[33] Interview with DFAT (28 February 2018).
[34] Interview with SHPA (2 March 2018).
[35] Interview with GRET (1 June 2018).

GRET plans to hold a workshop once a year and wishes to share and confirm the progress of the pilot project with stakeholders, including government officials and development partners. GRET wishes to share the results of the pilot project with relative partners to be utilized for the rest of informal sector population.

GERT has conducted the Health Insurance Project (HIP), the predecessor of NSSF Health Insurance, in which approximately 11,000 factory workers were enrolled. Therefore, the organization is familiar with the structure of NSSF, type of health services, social protection programs and health information system in Cambodia. In recent years, GRET has also supported the establishment of a call center at NSSF.

**(11) Catholic Relief Services (CRS)[36]**

Since July 2017, CRS has been implementing a three-year CBHI pilot project at Bakan OD in Pursat province. Based on the lessons learned from the preceding CBHI, enrolment is a household basis in this project. Insurance premium is uniform: 2,500 Riel per person per month. However, there are two types of insurance contracts: six-month and one-year. The six-month contract provides a benefit package that covers basic treatment of injuries and diseases, while the one-year contract covers surgery and health services related to childbirth on top of the basic treatment of injuries and diseases. The project is aiming to expand the enrolment by covering 10% of the population in the target ODs in one year from the start of the project.

[36] Interview with CRS (1 February 2018).

# Chapter 3. Qualitative/Quantitative Analyses of Potential Beneficiaries of the Social Health Insurance Scheme

KHANA research center was sub-contracted to conduct the Key Informant Interviews (KII) and the Focus Group Discussions (FGD) between April and June 2017, and the household survey between October 2017 and February 2018. The purpose of these studies was to understand the potential beneficiaries' socioeconomic situation, health service utilization, and knowledge and expectation towards the health insurance.

## 3-1 Key Informant Interviews and Focus Group Discussions

KIIs and FGDs were carried out in Phnom Penh special municipality and Kampong Speu province. Sub-groups of the informal sector population located in two target locations: Prey Speu village in Chom Chau commune, Por Sen Chey district, Phnom Penh, and Na village in Chhung Rok commune, Kong Pisey district, Kampong Speu province were selected by the non-probability sampling method[37] (See Table 3-1 and Table 3-2).

**Table 3- 1 Target Groups of KIIs**

| Target Group | Target Sub-Groups | N |
|---|---|---|
| Community Leaders | The Eldery, Principals, School Teachers, Health Center Directors, Monks, Nuns | 13 |
| Community Organizations | Saving Group Leaders, The Youth Group Leaders, Pagoda Committee Officials | 7 |
| Local Authorities | Commune/Sangkat Directors, Village Leaders, Security Guard Leaders | 9 |
| Total | | 29 |

**Table 3- 2 Target Groups of FGDs**

| Target Groups | N |
|---|---|
| High-income Earners | 11 |
| Farmers and Fishermen | 10 |
| Small-Business Owners | 12 |
| Self-Employees | 11 |
| Land Owners | 12 |
| Migrant Workers | 12 |
| Women | 12 |
| The Near-Poor | 12 |
| Total | 92 |

**Figure 3- 1 FGD (Small-Business Owners)**

**Figure 3- 2 KII (Monk)**

[37] An urban district was selected from Phnom Penh and a rural district was selected from Kampong Speu. In the selected districts, areas where relatively large informal-sector subgroups (farmers, fishermen, sellers, women, the near poor and the rich) reside were selected.

Participation in the survey was voluntary. The purpose, risks and benefits of the survey were explained to the candidates in advance. The interviews were recorded. The outcome of the interviews was organized by major themes and analyzed based on the survey purpose. The main findings are presented in BOX 3-1.

**[BOX 3- 1 Key Findings from the Key Informant Interviews and Focus Group Discussions**

- The survey respondents reside within 5 km from public or private health facilities
- It is considered that medical fees are generally lower at public facilities than private facilities, but attitude of the staff, and quality of service and equipment are better at the private facilities than public facilities.
- Types of health facilities, including pharmacies, to be used is often determined by type and severity of injury or illness.
- Some people have knowledge and experience of health insurance, but only few understand it correctly.
- Some people refuse to join the insurance because they do not understand it.
- There is an opinion that the wealthy individuals do not want to join the insurance because they can afford to pay for health service.
- Regarding collection of insurance premiums, there is an advantage of monthly collection since the amount collected monthly at a time is smaller than the amount annually collected. However, for those without regular income, it is more convenient to collect the premium collectively at one time or twice in a year after harvest seasons or non-ceremonial seasons.
- There are many opinions that insurance premiums should be set according to services to be received, not income level.
- Many residents desire for electronic remittance if it is possible from the perspectives of transparent fund management. Meanwhile, collection through home visit has an advantage as the insured have a chance to ask a collector question.
- It would be easier for the village representatives to manage the insured if 10 households are bundled as one group and a premium collector is assigned to each group. The village representative can have the collectors report the situation monthly at a meeting. The collector must be a person who is literate, straightforward with good understanding of the residents, and trusted by residents.
- Many people believe that it is appropriate a village chief or a commune chief manages the insurance premium collection.
- To promote insurance enrolment, it is important to increase the people's awareness of health insurance and trust in the insurance. Social marketing campaigns on health insurance should be conducted at the village level, using effective media, such as television, radio, concerts, insurance promoters and social network service, such as the Facebook.
- It should be considered to provide the premium collectors and the insurance promotors with incentives, such as premium exemption and remuneration derived from 1-10% of collected premiums.
- It should be considered to integrate the health insurance scheme with existing social support programs in a community.

## 3-2 Household Survey

### (1) Purpose

Based on the results of the KIIs and FGDs, the household survey was conducted with the following four purposes:

1. To understand health conditions, health service utilization, knowledge of and enrolment status in health protection schemes
2. To understand people's preferences over a health protection system
3. To confirm whether the SHIP Model meets expectations of Cambodian citizens
4. To confirm that the community has a decent mechanism to collect insurance premiums and to promote enrolment in health insurance

### (2) Implementation period

In October 2017, survey tools were developed, enumerators were trained, and a pre-test was conducted. Data collection took place between November and December 2017 and data entry and data analysis were conducted from December 2017 to January 2018. Based on the results of the survey, a report was prepared in January and February 2018.

### (3) Target areas and households

Battambang province, which is a relatively rich rural area, and Kampong Speu province, a suburban area near Phnom Penh, were selected as the survey target provinces. These provinces are also potential SHIP Model pilot sites. In each province, three ODs were selected. Based on the probability proportional sampling method, the number of households interviewed in each OD was determined to be proportional to the population size, considering a 10% response refusal rate as shown in Table 3-3.

**Table 3- 3 Survey Target area and the number of households**

| Suvey target area | | No. of HH |
|---|---|---|
| Battambang | | 537 |
| OD | Battambang | 154 |
| | Sangke | 248 |
| | Thmar Kaul | 135 |
| Kampong Speu | | 499 |
| OD | Kampong Speu | 228 |
| | Kong Pesey | 184 |
| | Oudong | 87 |
| Total | | 1,036 |

Note: Battambang OD and Kampong Speu OD are urban ODs and the rest are rural ODs.

**(4) Sampling methodology**

A multi-stage sampling method was applied to extract representatives in the target area and pursue cost effectiveness. First, urban ODs that have provincial capitals (Battambang OD and Kampong Speu OD) were selected on purpose, and two rural ODs were randomly selected using the OD list for each province. Next, three communes were randomly selected from each OD. Since the ODs with provincial capitals have urban communes, only the rural communes were sampled for other ODs. Subsequently, two villages were randomly selected from each commune using a list of villages in communes. Finally, target households were selected using a systematic random sampling method based on a village map obtained from village heads or community health workers. The number of households surveyed in each village was determined based on population size.

**(5) Data collection team and training**

A gender balanced data collection team was formed with well-trained 2 supervisors and 6 enumerators. They worked under the direction of the principal investigator, the KHANA Research Center Director, and the co-principal investigator, the JICA SHIP expert in health system. One of the co-principal investigators served concurrently as a field coordinator.

A two-day training was held for data collection supervisors and enumerators. The training focused on survey protocols, data collection procedures, research ethics and interview methods. A one-day pretest was held in one of the survey sites.

**(6) Survey tools**

The structured survey questionnaire was developed based on the results of the qualitative analysis conducted as part of this project and the SHIP Model, and referring to preceding empirical research, existing policies and guidelines and related project documents. The questionnaire includes questions asking the target households' socio-economic background, health service utilization, knowledge of and experience with health protection, and willingness to join and expectation for the health insurance. A draft questionnaire was developed through consultations with TWG-SHIP members and experts on Cambodia's health system and health financing. Questionnaires (refer to Attachment 1) were used for interviewing adults representing each household face-to-face for about 30 minutes.

**(7) Data input and analysis**

The data were double entered using Epi-Data Version 3 (EpiData Association, Odense, Denmark). Descriptive analyses of socio-economic background, health service utilization,

knowledge of and experience with health protection, and willingness to join and expectation for the health insurance were derived from means and standard deviations of numerical variables, and frequencies of nominal and ordinal variables. Additionally, principal component analysis was carried out to construct a wealth index of participating households to analyze disparities according to the economic status of the households. Based on the analyses, the households were classified into five wealth quintiles. For statistical analysis, Stata 13 (Stata Corp, Texas, USA) was used.

**(8) Ethical considerations**

The survey protocols and tools were approved by the National Ethics Committee for Health Research, the Ministry of Health in Cambodia (258NECHR). Prior to the field work, an official letter requesting cooperation was sent out to each PHD, and consent was received. Before interviewing, the purpose and contents of survey were explained to each household representative and interview was conducted to those who agreed with the explanation. After collecting the data, personal information was protected by assigning a code to each respondent and deleting all information that could identify individuals.

**(9) Results**

The socio-economic characteristics of surveyed households and income earners of each household are shown in Table 3-4. Although the sample size was determined by considering a 10% response refusal rate, the response rate was in fact 100%.

**Table 3- 4 Summary statistics of the surveyed households and income earners**

| Household level variables（N = 1,036） | Cambodia （N = 1,036） | Battambang （N = 537） | Kampong Speu （N = 499） | Urban OD （N = 475） | Rural OD （N = 561） |
|---|---|---|---|---|---|
| Number of income earners per household mean* (SD) | 2.08（0.74） | 1.96(0.74) | 2.19(0.71) | 2.09(0.73) | 2.07(0.74) |
| Number of dependents under 18 years of age in the household mean (SD) | 1.67（1.34） | 1.81(1.38) | 1.52(1.27) | 1.71(1.40) | 1.64(1.29) |
| Number of dependents between ages 18 to 64 years in the household mean (SD) | 0.77（0.95） | 0.93(1.02) | 0.59(0.82) | 0.72(0.90) | 0.80(0.98) |
| Number of dependents aged 65 or older in the household mean (SD) | 0.22（0.49） | 0.25(0.52) | 0.19(0.46) | 0.24(0.49) | 0.21(0.49) |
| Number of households with at least one income earner being self-employed (%) | 735（71.0%） | 386(71.88) | 349(69.94) | 316(66.53) | 419(74.69) |
| Number of households with all income earners being self-employed (%) | 384（37.1%） | 257(47.86) | 127(25.45) | 153(32.21) | 231(41.18) |
| Number of household members mean (SD) | 4.73（1.78） | 4.96(1.91) | 4.49(1.61) | 4.75(1.85) | 4.72(1.73) |
| Annual household income per capita mean (SD) in USD (Monthly average household income ×12 divided by total number of household members) | US$ 1,008.66（1,213.72） | 878.62(1,298.61) | 1,148.63(1,099.38) | 1,195.71(1,176.60) | 850.96(1,223.14) |
| Number of households with access to electricity (%) | 950（91.7%） | 484(90.13) | 466(93.39) | 458(96.42) | 492(87.70) |
| Number of households residing in urban areas (%) | 473（45.7%） | 471(46.00) | 684(45.69) | 475(100.00) | 0(0.00) |
| Number of households with possession of bank account (%) | 201（19.4%） | 90(16.76) | 111(22.24) | 143(30.11) | 58(10.34) |
| **Income earners individual level variables（N = 2,150）** | **Cambodia** | **（N = 1,055）** | **（N = 1,095）** | **（N = 991）** | **（N = 1,159）** |
| Number of female income earner (%) | 1,026 (47.7%) | 448(42.46) | 578(52.79) | 493(49.75) | 533(45.99) |
| Income earner´s age mean (SD) | 37.92（13.95） | 39.12(14.15) | 36.76(13.66) | 38.11(13.92) | 37.75(13.97) |
| Number of income earner who is married and lives together with spouse (%) | 1,510（70.2%） | 752(71.28) | 758(69.22) | 651(65.69) | 859(74.12) |
| Number of income earners whose highest education level achieved is primary school or less, including no education (%) | 2,135（99.3%） | 1,028(98.67) | 1,049(99.90) | 938(99.79) | 1,139(98.87) |

Notes: *Up to three income earners per household; SD: standard deviation

### Characteristics of surveyed household

The average household size was estimated to be 4.73 by adding the total number of income earners and the number of dependents. The average number of income earners per household was 2.08. The average number of dependents under 18 years of age was 1.67 persons, 0.77 persons ages 18 to 64 years, and 0.22 persons aged 65 or older. 71% of households had at least one self-employed income earner, and 37.1% had all three self-employed income earners. The average annual household income per capita was estimated to be 1,008.66 USD based on the average household monthly income. This is comparable to 1,093.46 USD, the average Cambodian annual income per capita estimated by CEIC[38] in 2015. 45.7% of the surveyed households reside in urban areas, 91.7% had access to electricity, and 19.4% had bank accounts.

### Characteristics of income earners

This survey captured up to 3 income earners per household and consequently the data of 2,150 income earners was collected. More than half of the income earners were self-employed, and the remainder were employed by private firms, including private enterprises, establishments and NGOs, and the government (See Figure 3-3). Battambang province (58.2%) has a larger proportion of the self-employed than Kampong Speu province (45.4%).

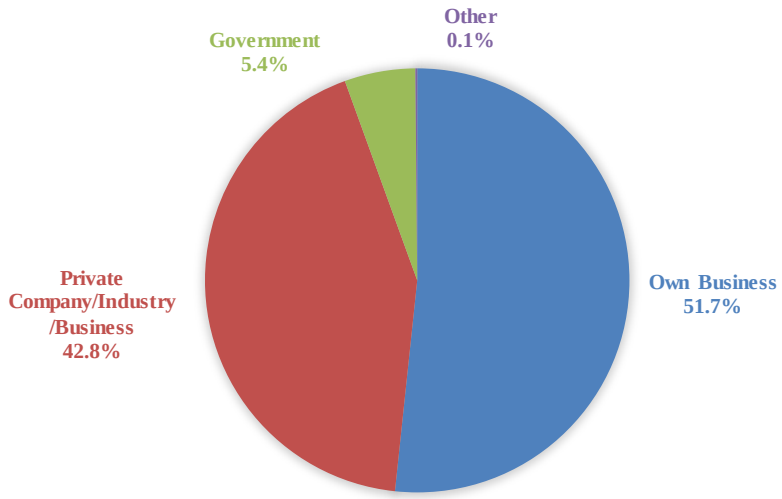



**Figure 3- 3 Type of the income earners' employment (N=2,150)**

[38] CEIC is a product of the Euromoney Institutional Investor, which is a summary of macroeconomic time series data and micro economic time series data covering more than 195 countries.
https://www.ceicdata.com/en/indicator/cambodia/annual-household-income-per-capita

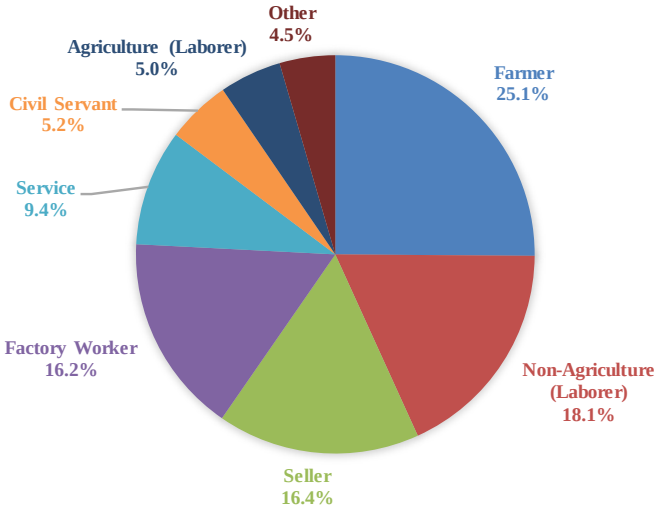



**Figure 3- 4 Occupation of the income earners (N=2,150)**

Regarding the major occupations of the income earners, 25.1% are farmers, 18.1% are non-agricultural workers, 16.4% are sellers, 16.2% are factory workers, 9.4% are in service industries, 5.2% are civil servants, and 5.0% are agricultural workers. The agriculture sector accounts for a relatively large share (See Figure 3-4). The service industry includes hotels, tourism, food industry, taxi drivers, hairdressers and mechanics. Most agricultural workers and sellers are self-employed, and the majority of workers are categorized as working at private firms. Most of the agricultural workers are residing in Battambang province, whereas majority of factory workers live in Kampong Speu province.

**Characteristics of income earners' occupation**

263 households (25.4%) had at least one factory worker, and the majority (96.2%) of these households were in Kampong Speu province. Meanwhile, 392 households (37.8%) had at least one farmer and 34.5% of them were in Battambang province, while 41.5% in Kampong Speu province. Households in which all three income earners are farmers accounted for 13.8% of the total, 19.6% in Battambang province and 7.6% in Kampong Speu province.

**Household economic level**

To analyze the economic disparity of the households, principal component analysis was conducted based on the preceding empirical studies[39, 40], using 26 binary variables attributing to 14 questions[41] pertaining to use of electricity, drinking water source, type of toilet facility, main materials for the house, ownership of motorcycles, televisions and refrigerators and type of cooking fuels (See Table 3-5), and wealth index was constructed. Based on the wealth index and the household size, wealth quintiles were constructed, as presented in Table 3-6.

**Table 3- 5 Variables used for principal component analysis**

| Variables | Description | Mean | SD |
|---|---|---|---|
| c9electricity | Household has electricity | 0.917 | 0.28 |
| c10tv | Household has a TV | 0.817 | 0.39 |
| c11fridge | Household has a refrigerator | 0.124 | 0.33 |
| c12cd | Household has a CD/DVD player | 0.187 | 0.39 |
| c13wardrobe | Household has a wardrobe | 0.557 | 0.50 |
| c14generator | Household has a generator/battery/solar panel | 0.198 | 0.40 |
| c15moto | A household member owns a motorcycle | 0.819 | 0.39 |
| c16watch | A household member owns a watch | 0.277 | 0.45 |
| c17bank | A household member owns a bank account | 0.194 | 0.40 |
| c18piped | Main source of drinking water: pipe into dwelling | 0.226 | 0.42 |
| c18rain | Main source of drinking water: rain | 0.404 | 0.49 |
| c18mineral | Main source of drinking water: mineral water purchase | 0.127 | 0.33 |
| c18well | Main source of drinking water: well | 0.221 | 0.42 |
| c19ceramic | Main material of the floor: ceramic tile | 0.218 | 0.41 |
| c19wood | Main material for the floor: wood planks | 0.509 | 0.50 |
| c19cement | Main material for the floor: cement | 0.174 | 0.38 |
| c20cement | Main material of exterior walls: cement block | 0.234 | 0.42 |
| c20thatch | Main material for the floor: palm/bamboo/thatch | 0.058 | 0.23 |
| c20wood | Main material for the floor: wood | 0.511 | 0.50 |
| c20zinc | Main material for the floor: zinc | 0.188 | 0.39 |
| c21LPG | Main type of cooking fuel: LPG | 0.207 | 0.41 |
| c21wood | Main type of cooking fuel: wood | 0.778 | 0.42 |
| c21elec | Main type of cooking fuel: electricity | 0.014 | 0.12 |
| c22notoilet | Household toilet facility: no facility/bush/field | 0.159 | 0.37 |
| c22flushpipe | Household toilet facility: flush to piped sewer system | 0.018 | 0.13 |
| c22flushseptic | Household toilet facility: flush to septic tank | 0.785 | 0.41 |

[39] Chakraborty NM, Fry K, Behl R, Longfield K. Simplified Asset Indices to Measure Wealth and Equity in Health Programs: A Reliability and Validity Analysis Using Survey Data From 16 Countries. Global Health: Science and Practice. 2016; 4(1):141-154. doi:10.9745/GHSP-D-15-00384.

[40] Seema Vyas, Lilani Kumaranayake; Constructing socio-economic status indices: how to use principal components analysis, Health Policy and Planning, Volume 21, Issue 6, 1 November 2006, Pages 459–468, https://doi.org/10.1093/heapol/czl029

[41] http://www.equitytool.org/cambodia/

**Table 3- 6 Wealth quintiles**

| | N | % |
|---|---|---|
| Q1 | 222 | 21.43 |
| Q2 | 202 | 19.5 |
| Q3 | 203 | 19.59 |
| Q4 | 207 | 19.98 |
| Q5 | 202 | 19.5 |
| Total | 1,036 | 100 |

※Q1 is the poorest and Q5 is the richest

Figure 3-5 indicates the distribution of wealth in Battambang province and Kampong Speu province. The result shows that Battambang province has a larger proportion of poor households.

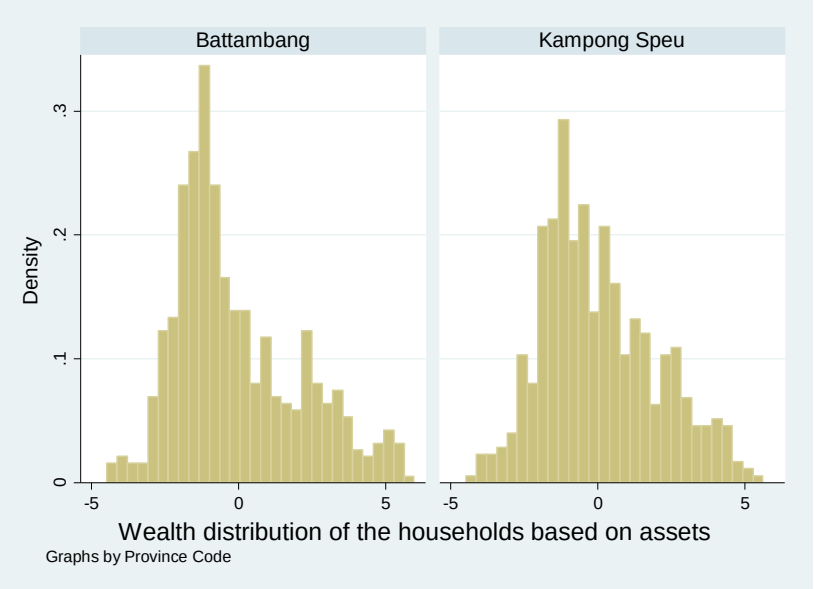



**Figure 3- 5 Wealth distribution by province (N=1,033)**

**Funding for medical expenses**

Regarding financial resources for medical expenses, most of the surveyed households are depending on their income (See Figure 3-6). However, rich households are more likely to use savings to pay for health care services while poor households are more likely to borrow money to receive treatments.

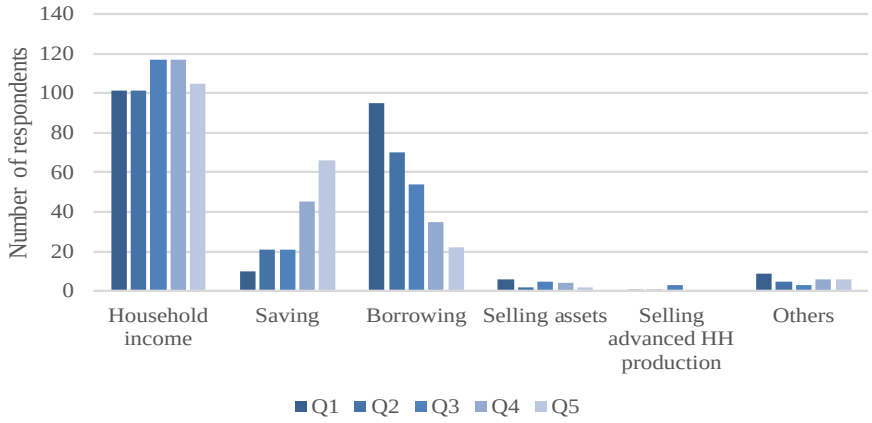



**Figure 3- 6 Source of financing for medical expenses by wealth quintiles (N=1,033)**

**Utilization and satisfaction level with health facilities**

When a household member got sick or injured in the past 12 months, 897 out of 1,036 households (86.58%) responded that they sought health care. The utilization rate was significantly higher in Kampong Speu OD (92.1%) and significantly lower in Oudong OD (77.0%) (See Table 3-7).

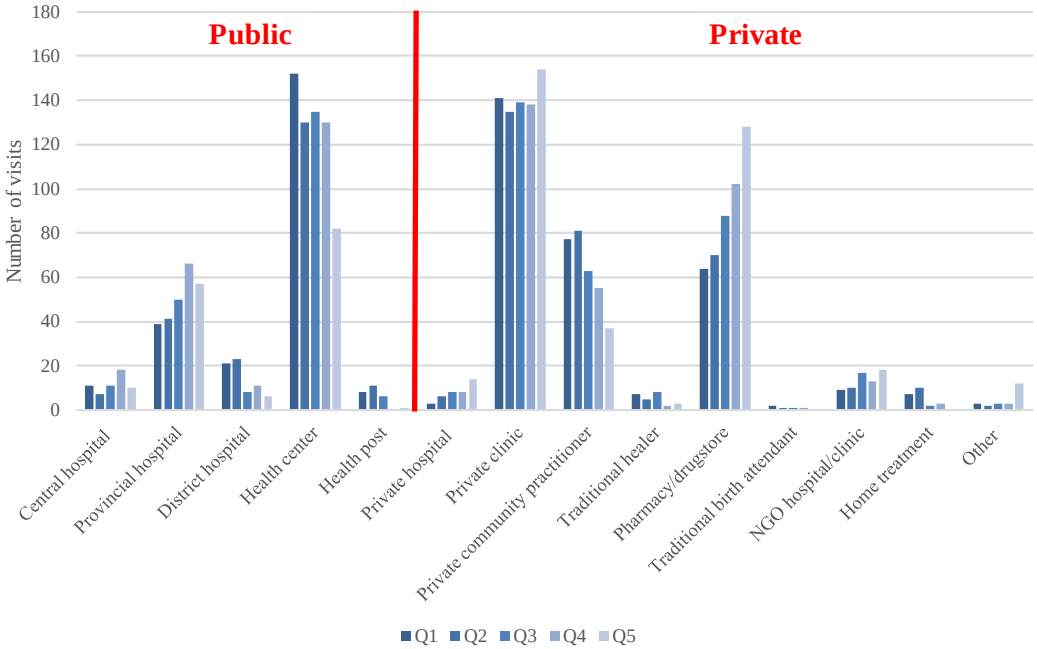
**Table 3- 7 Health service utilization rate among ODs in the past 12 months (N=1,036)**

| | Tmar Kaul | BTB | Sangke | Kg Speu | Kong Pesey | Oudong | Total |
|---|---|---|---|---|---|---|---|
| **Used** | 139(89.7) | 216(87.5) | 112(83.0) | 210(92.1)* | 153(83.2) | 67(77.0)* | 139 |
| **Not used** | 16(10.3) | 31(12.5) | 23(17.0) | 18(7.9)* | 31(16.8) | 20(23.0)* | 897 |
| **Total** | 155 | 247 | 135 | 228 | 184 | 87 | 1,036 |

Frequency (%) is described in the table.
* Adjusted residual > ±1.96

Regarding where the household member sought care for the most recent illness episode in the past 12 months, 61.5% responded that their household members received medical treatments at private health facilities, while 38.5% sought health care at public health facilities.

Among the public health facilities, a health center was most frequently used (60.8%), followed by a provincial hospital (24.5%). Among the private health facilities, private clinics were most frequently used (42.8%), followed by pharmacy/drug stores (27.3%) and private community practitioners (18.9%). The wealthier households tended to use provincial hospitals and pharmacies more frequently than the poorer households, while the poorer households tended to use health centers and private community practitioners more frequently (See Figure 3-7). Among the 897 households who sought care when a household member got sick or injured in the past 12 months, 55 households sought two or more health services and 10 of them sought two or more health services from the public health facilities.




*Multiple selections are allowed.

**Figure 3- 7 Utilization of health facilities for the most recent illness episode by wealth quintiles (N=2,687)**

Among the 803 households that used a public health facility in the last 12 months, satisfaction with the care received was generally high (See Figure 3-8). Main reasons for not going to a public health facility were: long waiting times, inconvenience, and perceived low quality of care.

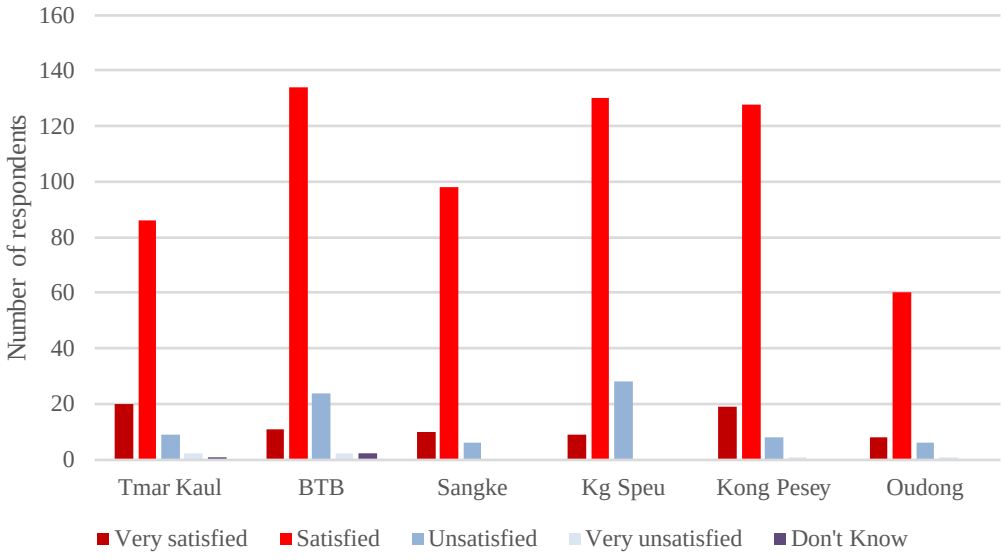



**Figure 3- 8 Satisfaction of public health facility service by OD (N=803)**

In terms of general utilization preference over health facilities (public vs private), 63.4% (656 households) of respondents preferred to go to a private health facility. This trend was more visible in Kampong Speu province (68.1%) than Battambang province (59.0%) (See Figure 3-9). Moreover, there was significant difference in utilization preference among different ODs (See Table 3-8). Households in Battambang OD (43.5%) are more likely to prefer public health facilities, while those in Kong Pesey OD (29.4%) are less likely to prefer public health facilities than those who reside in other ODs. On the other hand, households in Kong Pesey OD (70.6%) are more likely to prefer private health facilities and those in Battambang OD (56.5%) and Sangke OD (56.6%) are less likely to prefer private health facilities. The respondents chose private health facilities mainly for convenience and quality of care, while the others chose public health facilities due to affordability.

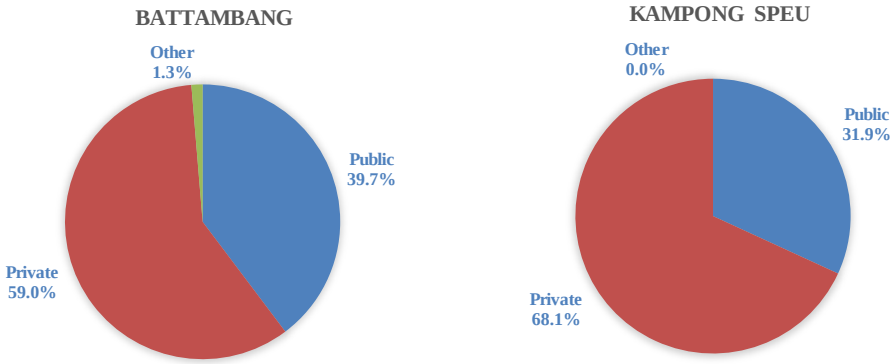



**Figure 3- 9 Utilization preference by province: public or private health facility (N=1,035)**

**Table 3- 8 Utilization preference by OD: public or private health facility (N=1,035)**

| | Tmar Kaul | BTB | Sangke | Kg Speu | Kong Pesey | Oudong | Total |
|---|---|---|---|---|---|---|---|
| **Public facility** | 52(33.6) | 107(43.5)* | 54(40.0) | 79(34.6) | 54(29.4)* | 26(29.9) | 372(35.9) |
| **Private facility** | 102(65.8) | 139(56.5)* | 75(55.6)* | 149(65.4) | 130(70.6)* | 61(70.1) | 656(63.4) |
| **Others** | 1(0.6) | 0(0.0) | 6(4.4)* | 0(0.0) | 0(0.0) | 0(0.0) | 7(0.7) |
| **Total** | 155 | 246 | 135 | 228 | 184 | 87 | 1,035 |

Frequency (%) is described in the table.
* Adjusted residual > ±1.96

### Social health protection coverage and satisfaction

30.9% (320 households) of the households responded that at least one household member was covered by a social health protection scheme. Among these households, 57.6% were covered by NSSF, 23.6% were by HEF, and 11.9% were by private insurance (See Figure 3-10). The coverage in Kampong Speu province was 47.7%, much higher than Battambang province (15.3%). Although HEF beneficiaries are more likely to be poorer households and the private

insurance policyholders are more likely to be wealthier households, the analysis found that there was no association between the household economic status and the health insurance coverage at this time. Among households with all three self-employed (384 households), 10.4% reported that one or more household members were covered by insurance, whereas 86.1% of households with one or more income earners working as factory workers (263 households) replied that some household members were eligible for NSSF.

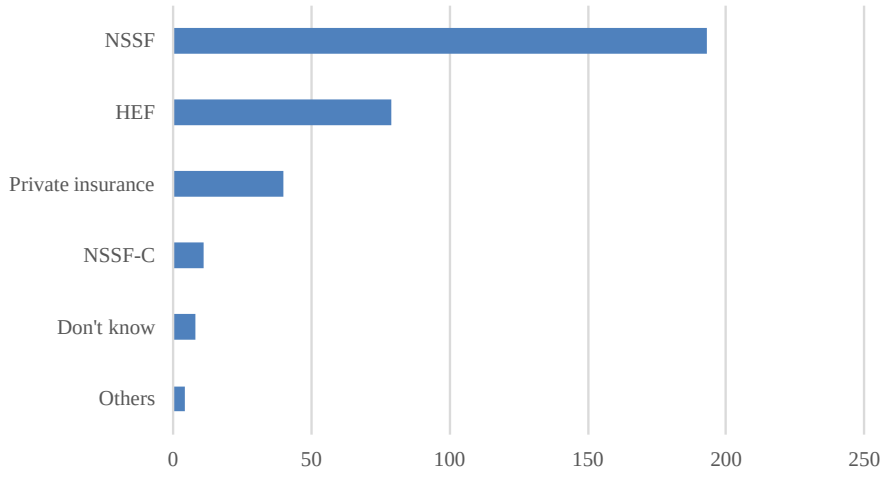



**Figure 3- 10 Social health protection coverage (N=335)**

Among those who were covered and used the scheme during the last 12 months, the satisfaction with their experience was generally high for both NSSF (62 households) and HEF (57 households) (See Figure 3-11).

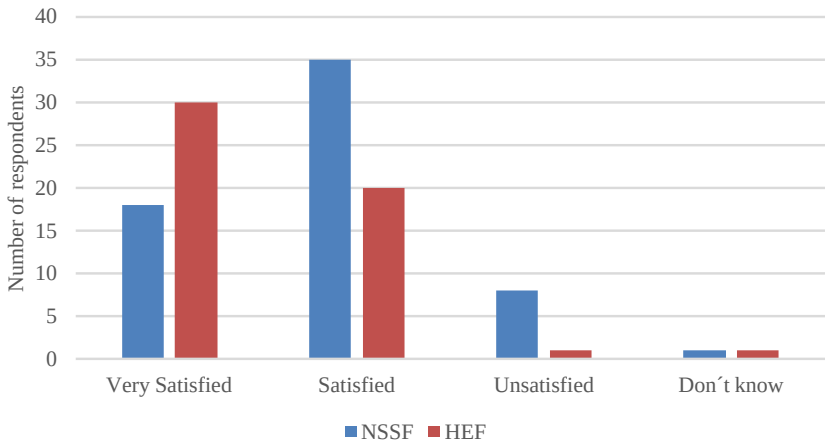



**Figure 3- 11 Satisfaction with NSSF and HEF (N=119)**

### Knowledge of social health protection and health insurance

In this survey, the enumerators requested the respondents to explain the keywords, such as "premium," "insurance benefit," "co-payment at the health facility," to measure the respondents' knowledge of social health protection/health insurance. The results showed that the majority of respondents had little understanding of health insurance: 53.3% had no knowledge of health insurance, 32.4% had some knowledge of health insurance, and only the remaining 14.3% knew what health insurance was. When the respondent had little understanding about health insurance, the enumerator gave a brief explanation of health insurance to move on to subsequent questions. Compared with respondents in Battambang province, those in Kampong Speu province were more knowledgeable about health insurance (See Figure 3-12).

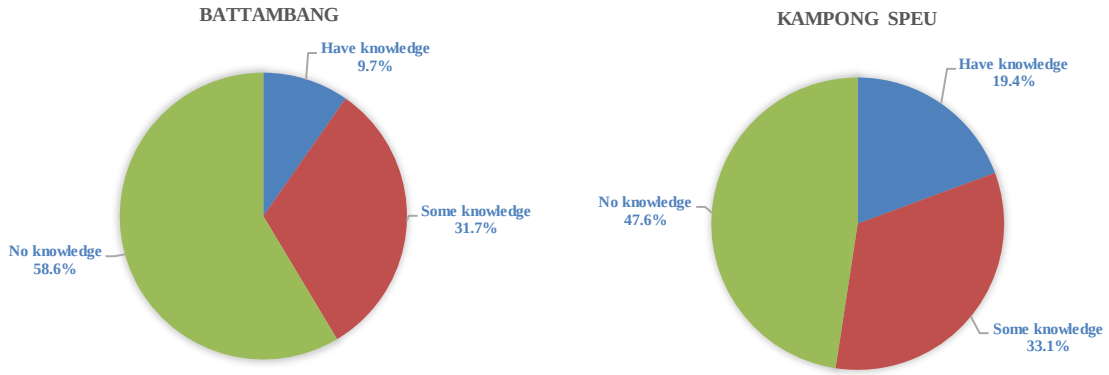



**Figure 3- 12 Knowledge on social health protection/health insurance by province (N=1032)**

Among households whose members are not covered by any health protection scheme, 6.4% had knowledge on social health protection/health insurance, 29.3% had some knowledge, and 64.3% had no knowledge, while 32.4% had knowledge, 39.6% had some knowledge and 28.0% had no knowledge on social health protection/health insurance among households whose members are covered by health protection scheme (See Table 3-9).

**Table 3- 9 Knowledge on social health protection/health insurance by insurance enrolment status of household members (N=1,032)**

| | Enrolled | Not enrolled | Don't know | Total |
|---|---|---|---|---|
| **Have knowledge** | 103(32.4)* | 45(6.4)* | 0(0.0) | 148 |
| **Some knowledge** | 126(39.6)* | 205(29.3)* | 3(21.4) | 334 |
| **No Knowledge** | 89(28.0)* | 450(64.3)* | 11(78.6)* | 550 |
| **Total** | 700 | 318 | 14 | 1,032 |

Frequency (%) is described in the table.
* Adjusted residual > ±1.96

It was only private health insurance among different health protection schemes that showed significant difference between level of knowledge on social health protection/health insurance and insurance enrolment status of household members. While 30.5% of households whose members are not covered by private health insurance scheme had no knowledge on social health protection/health insurance, it was only 8.3% among households whose members are covered by private health insurance (See Table 3-10).

**Table 3- 10 Knowledge on social health protection/health insurance by household members' enrolment status in private health insurance (N=318)**

| | Enrolled | Not enrolled | Total |
|---|---|---|---|
| **Have knowledge** | 16(44.4) | 87(30.9) | 103 |
| **Some knowledge** | 17(47.2) | 109(38.6) | 126 |
| **No knowledge** | 3(8.3)* | 86(30.5)* | 89 |
| **Total** | 36 | 282 | 318 |

Frequency (%) is described in the table.
* Adjusted residual > ±1.96

There were some answers that revealed the respondents' limited knowledge on social health protection/health insurance. In an earlier question on eligibility and type of social health protection, some respondents answered that they were eligible, but gave an irrelevant insurance scheme, such as an education insurance. Although all members in households with an Equity Card (15.2% of the interviewed households) legally have access to health care through HEF, 59.2% of them responded that they are not covered by any health protection scheme.

**Enrolment of health insurance and willingness to pay insurance premium**

When asked which health insurance scheme they would like to join, 49.7% answered public health insurance, 18.9% preferred community health insurance, and 12.9% responded private health insurance (See Figure 3-13). The main reasons for choosing public health insurance were: i) it is presumably not necessary to pay insurance premium; ii) it has a good reputation; iii) patients receive high quality health services; and iv) insurance premiums are presumably cheaper than private insurance. The main reason for preferring private insurance was that patients could receive better medical services. 13.4% of respondents replied that they do not want to join health insurance and the main reasons were: i) they are unable to pay insurance premiums; ii) they do not trust health insurance; and iii) they do not understand health insurance.

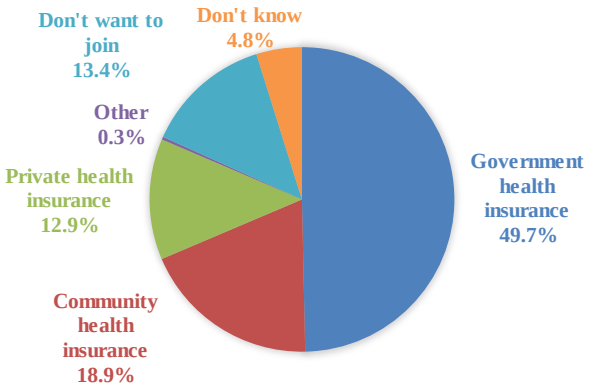



**Figure 3- 13 Preferred health insurance scheme to join (N=1,035)**

While there was no relationship between economic level of household and willingness to join the government health insurance or a community health insurance, those who are willing to join private health insurance are more likely to be in the wealthier three quintiles (QIII to QV). On the other hand, those who are not willing to join private health insurance are more likely to be either in QII or QV (See Table 3-11).

**Table 3- 11 Preferred health insurance scheme to join by economic level (N=1,033)**

| | Wealth quintiles | | | | | |
|---|---|---|---|---|---|---|
| | Ⅰ | Ⅱ | Ⅲ | Ⅳ | Ⅴ | Total |
| **Government health insurance** | 113(47.9) | 81(45.3) | 109(52.9) | 105(50.7) | 106(51.2) | 514 |
| **Community health insurance** | 52(22.0) | 29(16.2) | 41(19.9) | 34(16.4) | 40(19.3) | 196 |
| **Private health insurance** | 22(9.3) | 19(10.6) | 18(8.7)* | 36(17.4)* | 38(18.4)* | 133 |
| **Other insurance** | 1(0.4) | 0(0.0) | 1(0.5) | 1(0.5) | 0(0.0) | 3 |
| **Don't want to join insurance** | 39(16.5) | 41(22.9)* | 22(10.7) | 20(9.7) | 17(8.2)* | 139 |
| **Don't know** | 9(3.8) | 9(5.0) | 15(7.3) | 11(5.3) | 6(2.9) | 50 |
| **Total** | 236(100.0) | 179(100.0) | 206(100.0) | 207(100.0) | 207(100.0) | 1,033 |

Frequency (%) is described in the table.
* Adjusted residual > ±1.96

When respondents were asked if they would agree with a mandatory registration required by a public health insurance program (payment of insurance premiums is not required), 93.1% responded that they would agree to register (See Figure 3-14).

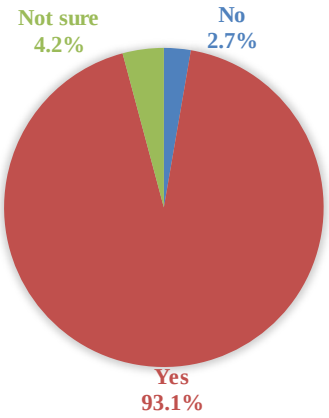



**Figure 3- 14 Agree to mandatory registration (N=1,033)**

Regarding a mandatory participation required by the public health insurance system (payment of insurance premiums is required), 68.9% replied that they would agree, whereas 12.0% were neutral and 15.0% would not agree (See Figure 3-15).

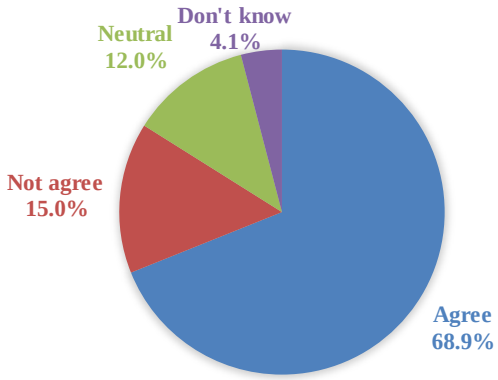



**Figure 3- 15 Agreement to mandatory enrolment (N=1,033)**

The households in Kampong Speu province (78.1%) were more likely to agree to mandatory enrolment than households in Battambang province (60.4%) (See Table 3-12).

**Table 3- 12 Agreement to mandatory enrolment by province (N=1,033)**

| | Battambang | Kampong Speu | Total |
|---|---|---|---|
| **Agree** | 323(60.4)* | 389(78.1)* | 712 |
| **Don't agree** | 98(18.3)* | 57(11.5)* | 124 |
| **Neutral** | 83(15.5)* | 41(8.2)* | 155 |
| **Don't know** | 31(5.8)* | 11(2.2)* | 42 |
| **Total** | 36(100.0) | 282(100.0) | 1,033 |

Frequency (%) is described in the table.
* Adjusted residual > ±1.96

The percentage of households who agreed to mandatory enrolment was significantly higher in Kong Pesey OD (85.3%) and significantly lower in Battambang OD (59.2%) and Sangke OD (59.3%). Likewise, the percentage of households who do not agree to mandatory enrolment was significantly higher in Tmar Kaul OD (23.2%) and significantly lower in Kong Pesey OD (8.2%) (See Table 3-13).

**Table 3- 13 Agreement to mandatory enrolment by OD (N=1,033)**

| | Battambang | | | Kampong Speu | | | Total |
|---|---|---|---|---|---|---|---|
| | Tmar Kaul | BTB | Sangke | Kg Speu | Kong Pesey | Oudong | |
| **Agree** | 98(63.2) | 145(59.2)* | 80(59.3)* | 167(73.6) | 157(85.3)* | 65(74.7) | 712 |
| **Don't agree** | 36(23.2)* | 38(15.5) | 24(17.8) | 26(11.5) | 15(8.2)* | 16(18.4) | 124 |
| **Neutral** | 18(11.6) | 47(19.2)* | 18(13.3) | 34(15.0) | 4(2.2)* | 3(3.5)* | 155 |
| **Don't know** | 3(1.9) | 15(6.1) | 13(9.6)* | 0(0.0)* | 8(4.4) | 3(3.5) | 42 |
| **Total** | 155(100.0) | 245(100.0) | 135(100.0) | 227(100.0) | 184(100.0) | 87(100.0) | 1,033 |

Frequency (%) is described in the table.
* Adjusted residual > ±1.96

While 66.0% of households whose members are not covered by NSSF agreed to mandatory enrolment, 82.3% of those whose members are covered by NSSF did. On the other hand, while 16.2% of households whose members are not covered by NSSF disagreed to mandatory enrolment, it was only 9.9% among those whose members are covered by NSSF (See Table 3-14).

**Table 3- 14 Agreement to mandatory enrolment by enrolment status in NSSF (N=1,033)**

| | NSSF | | | Total |
|---|---|---|---|---|
| | Enrolled | Not enrolled | Don't know | |
| **Agree** | 158(82.3)* | 546(66.0)* | 8(57.1) | 712 |
| **Don't agree** | 19(9.9)* | 134(16.2)* | 2(14.3) | 155 |
| **Neutral** | 15(7.8)* | 106(12.8) | 3(21.4) | 124 |
| **Don't know** | 0(0.0)* | 41(5.0)* | 1(7.1) | 42 |
| **Total** | 192(100.0) | 827(100.0) | 14(100.0) | 1,033 |

Frequency (%) is described.
* Adjusted residual > ±1.96

Among households whose members are covered by HEF, 51.9% agreed to mandatory enrolment, 22.8% disagreed, 15.2% answered that they did not know. Whereas 70.5% of those whose members are not covered by HEF agreed to mandatory enrolment and 3.1% said that they did not know (See Table 3-15). There was no significant difference in intension towards mandatory enrolment between households whose members are covered by either NSSF-C or private health insurance and those whose members are not covered by those social protection schemes.

**Table 3- 15 Agreement to mandatory enrolment by enrolment status in NSSF (N=1,033)**

| | HEF | | | |
|---|---|---|---|---|
| | **Enrolled** | **Not enrolled** | **Don't know** | **Total** |
| **Agree** | 41(51.9)* | 663(70.5)* | 8(57.1) | 712 |
| **Don't agree** | 18(22.8)* | 135(14.4) | 2(14.3) | 155 |
| **Neutral** | 8(10.1) | 113(12.0) | 3(21.4) | 124 |
| **Don't know** | 12(15.2)* | 29(3.1)* | 1(7.1) | 42 |
| **Total** | 79(100.0) | 940(100.0) | 14(100.0) | 1,033 |

Frequency (%) is described in the table.
* Adjusted residual > ±1.96

The respondents were asked whether they would enroll health insurance in which they would pay insurance premiums regularly, but which support their payment when sick or injured. 78.3% of them answered that they would (See Figure 3-16).

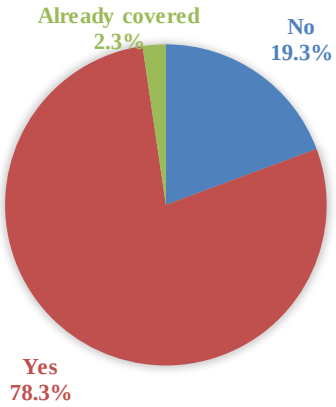



**Figure 3- 16 Would you like health insurance? (N=1,034)**

There was significant difference in answer between the two provinces. In Kampong Speu province, 86.1% of the respondents said they would like to join health insurance while in Battambang province, it was a smaller proportion at 71.1% (See Table 3-16).

**Table 3- 16 Agreement to mandatory enrolment by provinces (N=1,034)**

| | **Battambang** | **Kampong Speu** | **Total** |
|---|---|---|---|
| **Willing to join** | 318(71.1)* | 429(86.1)* | 810 |
| **Don't want to join** | 149(27.8)* | 51(10.2)* | 200 |
| **Already joined** | 6(1.1)* | 18(3.6)* | 24 |
| **Total** | 536(100.0) | 498(100.0) | 1,034 |

Frequency (%) is described in the table.
* Adjusted residual > ±1.96

When they were, however, asked about hypothetical health insurance with a premium set at 14,000 KHR (USD 3.5)[42] per person per month (with free access to public health facilities and assistance with private sector payment), 29.3% answered that they would be able to pay the insurance premiums, 16.2% answered that they would not be able to pay the insurance premiums for all of the household members at this cost, and 53.2% answered that they would not be able to pay the insurance premiums (See Figure 3-17).

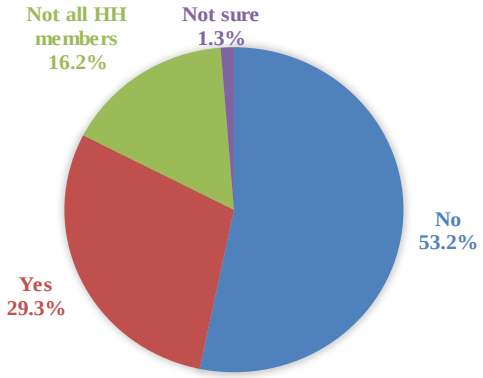



**Figure 3- 17 Ability to pay 14,000 KHR per person per month for a health insurance (N=1,033)**

While 47.6% of the wealthiest quintile answered that they could pay premiums for all household members, it was only 21.6% among the poorest quintile. On the other hand, 34.0% of households in the wealthiest quintile said that they cannot pay premiums for all household members, it rose up to 64.8% among the poorest quintile (See Table 3-17).

**Table 3- 17 Ability to pay premiums by economic level of households (N=1,033)**

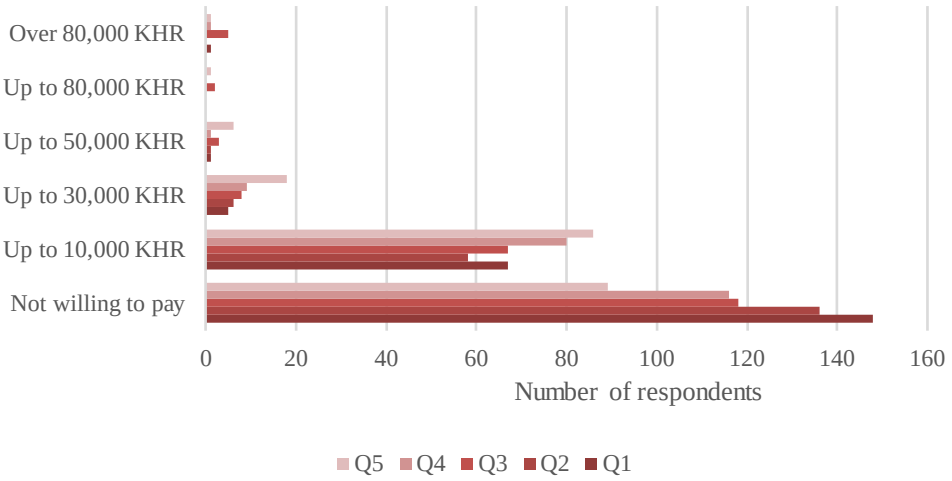
| | Wealth quintiles | | | | | |
|---|---|---|---|---|---|---|
| | Ⅰ | Ⅱ | Ⅲ | Ⅳ | Ⅴ | Total |
| **Able to pay** | 51(21.6)* | 44(24.7) | 52(25.2) | 58(28.0) | 98(47.6)* | 550 |
| **Unable to pay** | 153(64.8)* | 103(57.9) | 122(59.2) | 102(49.3) | 70(34.0)* | 303 |
| **Able to pay for some HH members** | 26(11.0)* | 31(17.4) | 31(15.1) | 43(20.8)* | 36(17.5) | 167 |
| **Don't know** | 6(2.5)* | 0(0.0) | 1(0.5) | 4(1.9) | 2(1.0) | 13 |
| **Total** | 236(100.0) | 178(100.0) | 206(100.0) | 207 | 206 | 1,033 |

Frequency (%) is described in the table.
* Adjusted residual > ±1.96

When the respondents were asked whether they would still visit a private health facility if the insurance required a patient to pay the difference between the medical expenses covered by the insurance and the amount charged at the private health facility, while the medical expenses are

[42] Average monthly per capita premium of Option A and Option B calculated in the cost survey of Chapter 4

fully covered by the health insurance at a public health facility, 51.9% responded they would refrain from utilizing a private health facility under this circumstance.




*Amount per person per month

**Figure 3- 18 Willingness to pay for public health insurance (N=1,034)**

When respondents were asked about their willingness to pay the premiums for public and private health insurance, a larger proportion of respondents (41.3%) reported that they would be willing to pay for public health insurance, while 37.3% did for private health insurance. However, many of those who would be willing to pay for public health insurance expected that public health insurance premiums were set lower than private health insurance premiums. The wealthier quintiles were generally more likely to be positive about paying the premiums. However, the majority, including the respondents from the wealthiest households, would be willing to pay up to 30,000 KHR (7.5 USD) per person per month (See Figure 3-18). In Kampong Speu Province, 40.2% of households responded that they could pay the premium of public health insurance if they were up to 10,000 KHR per person per month, and 5.8% up to 30,000 KHR, significantly exceeding Battambang province. On the other hand, 64.6% of respondents in Battambang province reported that they would not be willing to pay the premium at all and it was significantly higher than 52.4% in Kampong Speu province (See Table 3-18).

**Table 3- 18 Willingness to pay premiums (N=1,034)**

| | Battambang | Kampong Speu | Total |
|---|---|---|---|
| **More than 80,001 KHR** | 5(0.9) | 3(0.6) | 8 |
| **50,001-80,000 KHR** | 1(0.2) | 2(0.4) | 3 |
| **30,001-50,000 KHR** | 9(1.7) | 3(0.6) | 12 |
| **10,001-30,000 KHR** | 17(3.2)* | 29(5.8)* | 46 |
| **up to 10,000** | 158(29.5)* | 200(40.2)* | 358 |
| **Don't want to pay** | 346(64.6)* | 261(52.4)* | 607 |
| **Total** | 536(100.0) | 498(100.0) | 1,034 |

Frequency (%) is described in the table.
* Adjusted residual > ±1.96

### Setting and collecting insurance premiums

Responding to a question of how the premiums should be set, 55.8% reported that a uniform premium should be applied for all households. Among those who responded that insurance premiums should not be equal to all, 86.8% said household income should be considered, and 31.1% responded that the number of dependents in a household should be considered for setting the premiums. Regarding the frequency of insurance premium collection, 63.7% of the respondents preferred monthly payments over seasonal or annual payments (See Figure 3-19).

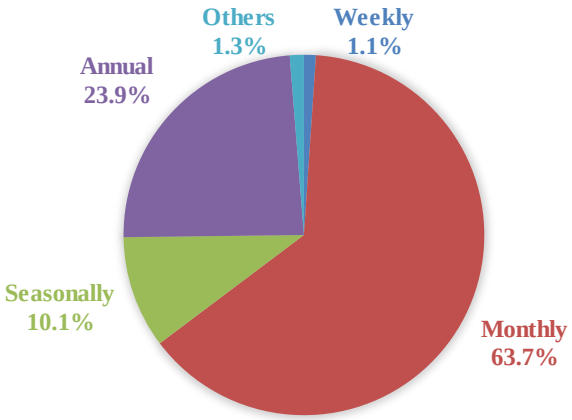



**Figure 3- 19 Preference of premium collection frequency (N=1,032)**

Even among households with at least one farmer as the main income earner, 54.5% of them still chose monthly collection over seasonal (14.4%) or annual (29.9%) (See Figure 3-20).

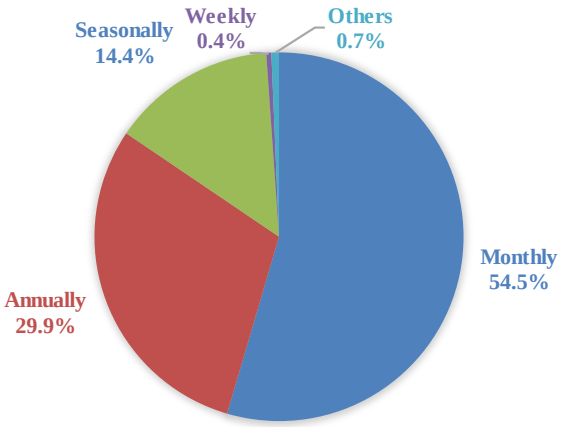
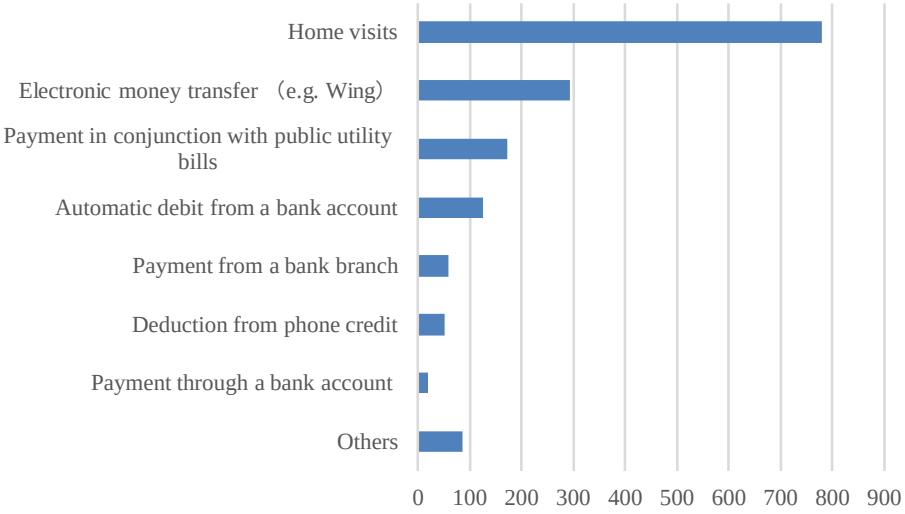



**Figure 3- 20 Preference of premium collection frequency among households who has at least one farmer as a main income earner[43] (N=451)**

Regarding the means of collecting insurance premiums, home visits were the most popular option followed by paying by electronic money transfer and payment in conjunction with public utility bills (See Figure 3-21). Since only 19.4% of the respondents had bank accounts, payment through bank accounts was not favored. However, the majority responded that they would like the option of automatic debit from the bank account if it was available. The major reason for those who did not want automatic debit was that they anticipated that the procedure could be cumbersome.




* Multiple choices were allowed

**Figure 3- 21 Preference of premium collection means (N=1,582)**

[43] Farmers, agricultural laborers and fish/animal raisers are included.

**Best suited person to promote insurance enrolment**

49.8% chose the village chief when asked who the best-suited person was to conduct public relations on health insurance and insurance premium payment in the area (See Figure 3-22). This proportion was particularly large in rural areas (52.2%). Meanwhile, in urban areas, 19.4% listed administrative staff of health facilities, far exceeding the rural areas of 3.7%.

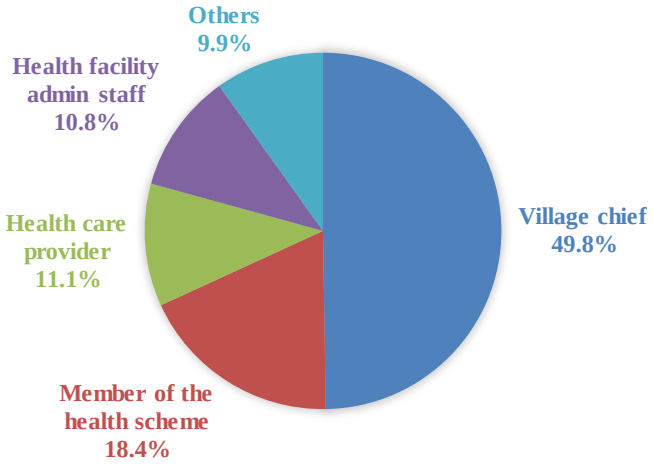



**Figure 3- 22 Best-suited person to communicate with (N=1,033)**

**Information media**

Most households sought daily information from television (63.1%), followed by social media (21.2%) and radio (15.2%) (See Figure 3-23). The social media usage rate among respondents who are knowledgeable about health insurance is relatively high. In contrast, among respondents who are unfamiliar with health insurance, the usage rate of radio is relatively high.

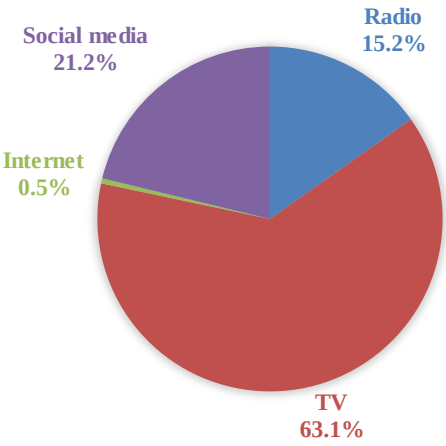



**Figure 3- 23 Source of daily information (N=1,033)**

## (10) Discussion

The survey led to some important findings that could inform the ongoing work on social health insurance for the informal sector population (SHIP Model) and the broader policy of social health protection in Cambodia.

### Target of SHIP Model

The survey revealed that the social health protection coverage was generally low at 30.9%, and the coverage is even lower among households with income earners who are all self-employed (10.4%). As the coverage was based on at least one person in the household being covered by a social health protection scheme, the coverage is expected to be even lower at the individual level. Whereas insurance enrolment among private employees such as factory workers in Kampong Speu province is increasing, the vulnerability of self-employed is more evident than ever before as they have limited access to health insurance. The SHIP Model targeting the informal sector captures the current needs in Cambodia.

### Health service utilization and satisfaction

The majority of respondents reported that they prefer private health services, but in some areas, people prefer public health facilities. Satisfaction level of those who used public health facilities is generally high. In this case, if health insurance provides free health care at the public health facilities and requires the insured to pay the difference between the medical fee and the insurance coverage at the private health facilities, the number of people using the public health facility might increase. Health insurance may change the health seeking behavior of the insured depending on its design, and this would ultimately affect the quality of care at the health facilities.

### Demand for health insurance

The household survey found that in general, knowledge of health insurance was very limited. On the other hand, the survey also confirmed that in Kampong Speu province, where there were more individuals covered by a social health insurance scheme, people are more likely to be knowledgeable about health insurance, interested in joining health insurance, and willing to pay premiums compared to those in Battambang province. In addition, once the mechanism of health insurance was explained, many respondents showed both willingness to join an insurance program and pay the premium. These findings suggest that the demand for health insurance could be increased with appropriate social marketing activities and setting affordable insurance premiums.

**Mandatory registration and enrolment**

It has been argued that there would be strong resistance from the public against mandatory health insurance. However, the survey results showed that resistance may not be strong. Based on these findings, it could be worthwhile to reexplore the option of introducing mandatory registration and enrolment in the pilot sites.

## (11) Limitation

As this household survey was conducted concurrently with the formulation of the SHIP Model concept note and the pilot plan, the questionnaire was designed within a limited timeframe. Therefore, there is an issue with the order and clarity of the questions and a subsequent lack of information; i.e., there is no accurate information on the individual access to health insurance, socio-economic background of respondents and their relationship with income earners. In addition, the enumerators briefly explained the mechanism of health insurance before they asked the respondents about health insurance because the majority had little knowledge of it, which could have caused bias in their responses as there was no fixed format of the explanation.

## (12) Conclusion

The conclusions derived from this household survey are as follows:

**To promote understanding of health insurance among people is the most important goal**

- Citizens' knowledge of health insurance is currently limited, but if they are covered by insurance or have opportunities to get to know about health insurance through people around them, their understanding and interest in enrolment increases.

**People are confident about public service in Cambodia**

- Many citizens are satisfied with the public health service and the public health protection schemes.

**Setting up an appropriate insurance premium based on actuarial analysis and the government subsidy is key**

- Setting proper insurance premiums will be leading to increased enrolment and sustainability of the insurance system.

**Utilization and quality of health services should be constantly monitored and evaluated**

- Since the insurance system affects the trend of health service utilization, the pilot project should constantly monitor the utilization and quality of the health service and evaluate the impact of the health insurance on health services.

**Mandatory registration and enrolment should be explored**

- Public resistance to mandatory registration and enrolment in the health insurance is minimal. Therefore, if the SHIP Model ultimately aims for mandatory enrolment, it is better to consider introduction of mandatory registration and enrolment in the health insurance in the pilot project to test its feasibility.

# Chapter 4. Cost study for designing the SHIP Model

Although the SHIP Model is a health insurance scheme for the informal sector, it needs to be developed in accordance with the health insurance system for private employees, stipulated by Ministerial Order (Prakas) of MOLVT in March 2016 (NO. 109 LV/PrK.), as it will be integrated into the NSSF health insurance system in the future. In principle, the SHIP Model follows the provider payment mechanism of NSSF that collects insurance premiums from the insured as the main source of the fund and covers medical fees charged at the health facilities. NSSF currently collects 2.6% of the insured's salary. However, under this project, uniform insurance premiums were estimated for the informal sector population based on two kinds of benefit packages, due to the nature of the informal sector population who do not receive regular income. In the meantime, the SHIP Model recommends that the government subsidizes the insurance fund, as it is expected that insurance premiums might not be adequately collected by the informal sector population. The subsidy options for the pilot project as well as the nation-wide implementation were also calculated in this project. The insurance premiums were estimated with the consistent methodology used by ILO when the health insurance premium for private employees was calculated in 2015.[44]

## 4-1 Data and methodology

To estimate the per capita premium amount in the SHIP Model, first the per capita medical benefit cost was calculated, and administration costs and a capital buffer were added, assuming that the premium collection might be incomplete. The following seven data were utilized to estimate the SHIP Model premiums:

1) **NSSF case-based payment schedule for private employees**: the current NSSF case-based payment schedule for health insurance stipulated in the Inter-ministerial Prakas between MOLVT and MOH (NO. 327 LV/PrK. NSSF) in August 2017.

2) **Assumed case-mix, relative share by type of provider and benefit category**: the estimate made by ILO when the NSSF health insurance premium rate was calculated for private employees.

3) **Care-seeking behavior – assumed provider share by benefit category**: the estimate made based on the data collected through the Health Insurance Project (HIP), the NSSF health insurance pilot project, conducted since 2009 that targeted at garment factory workers.

[44] International Labour Organization (2015). CAMBODIA Technical Note Estimation of Contribution Rates for the Health Insurance, Maternity, and Sickness benefits' branch of the National Social Security Fund (NSSF).

4) **Assumed utilization rates**: the same as above.

5) **Assumed transportation costs (referral on health care and corpse transportation)**: the working assumption is that 10% of hospitalized patients would need to be transferred, and 10% of the referred cases are transfers to other provinces. The distance was assumed to be 20 km if it is within the province, and 400 km for transportation between provinces.

6) **Per capita unit cost of nine high-cost items**: the average medical cost per capita of the fee-for-service nine high-cost items. These fee-for-service items are payable only if it is determined to be necessary by the designated health facility as a follow-up case covered by the NSSF case-based payment method.

7) **Average disposable income by wealth quintiles from 2009 to 2016**: the data obtained from the reports of Cambodia Socio-Economic Survey 2009 to 2016.

1) through 6) are data used when calculating the health insurance premium rate for the NSSF health insurance for private employees, though 1) was updated in 2017.

The per capita premium for the SHIP Model was estimated as follows:

1. Table 4-1 shows the NSSF case-based payment schedule for private sector employees by the health care provider level. Based on this payment schedule and the assumed case-mix, relative share by type of provider and benefit category shown in Table 4-2, the assumed unit cost of the insurance benefit per capita is calculated.

**Table 4- 1 NSSF case-based payment schedule for the private employees**

| Case Description | MPA | CPA1 | CPA2 | CPA3 | NH |
|---|---|---|---|---|---|
| **Consultation** | 6,000 | 12,000 | 16,000 | 24,000 | 60,000 |
| **Birth Control (short-term)** | 10,000 | | | | |
| **Birth Control (long-term)** | 30,000 | | | 400,000 | 600,000 |
| **Minor Surgical Activities** | 12,000 | 20,000 | 240,000 | 40,000 | 100,000 |
| **Surgery** | | | 150,000 | 200,000 | 600,000 |
| **Moderate Suregical Intervention** | | | | 600,000 | 1,000,000 |
| **Major Suregical Intervention** | | | 400,000 | 1,000,000 | 1,500,000 |
| **Emergency/Referral** | 20,000 | 120,000 | 240,000 | 320,000 | 800,000 |
| **Adult General Medicine** | | 100,000 | 120,000 | 160,000 | 400,000 |
| **Child General Medicine** | | 92,000 | 108,000 | 128,000 | 350,000 |
| **Tuberculosis** | | 160,000 | 180,000 | 200,000 | 300,000 |
| **Delivery** | 80,000 | 100,000 | 120,000 | 160,000 | 400,000 |
| **Gyneacology** | | 100,000 | 150,000 | 200,000 | 400,000 |
| **Abortion** | | 100,000 | 120,000 | 150,000 | 400,000 |

Source: National Social Security Fund

**Table 4- 2 Assumed case-mix, relative share by type of provider and benefit category**

| | MPA | CPA1 | CPA2 | CPA3 | NH |
|---|---|---|---|---|---|
| **Outpatient care (OPD)** | | | | | |
| **Consultation** | 95% | 96% | 92% | 88% | 90% |
| **Minor Surgical Activities** | 2% | 4% | 8% | 12% | 10% |
| **Emergency/Referral** | 3% | | | | |
| **Total** | **100%** | **100%** | **100%** | **100%** | **100%** |
| **Inpatient Care (IPD)** | | | | | |
| **Emergency/Referral** | | 2% | 2% | 2% | 2% |
| **Surgery** | | | 5% | 15% | 10% |
| **Major Surgical Activities** | | | 10% | 30% | 50% |
| **Adult general Medicine** | | 97% | 82% | 52% | 37% |
| **Tuberculosis** | | 1% | 1% | 1% | 1% |
| **Total** | | **100%** | **100%** | **100%** | **100%** |
| **Maternity-related care (admissions)** | | | | | |
| **Delivery** | 100% | 60% | 60% | 60% | 60% |
| **Gynecology** | | 20% | 20% | 20% | 20% |
| **Abortion** | | 20% | 20% | 20% | 20% |
| **Total** | **100%** | **100%** | **100%** | **100%** | **100%** |
| **Others** | | | | | |
| **Birth Control (short-term）** | 100% | | | | |
| **Total** | **100%** | | | | |
| **Birth control （long-term）** | 100% | | | 100% | 100% |
| **Total** | **100%** | | | 100% | 100% |
| **Moderate Surgical Intervention** | | | | 100% | 100% |
| **Total** | | | | **100%** | **100%** |
| **Child General Medicine** | | 100% | 100% | 100% | 100% |
| **Total** | | **100%** | **100%** | **100%** | **100%** |

Source: Technical Note: Estimation of Contribution Rates for the Health Insurance, Maternity, and Sickness benefits' branch of NSSF

2. The sum of the insurance benefit unit cost by type of health provider and benefit category is obtained.

**Table 4- 3 Care-seeking behavior–assumed provider share by benefit category**

| Benefit category | MPA | CPA1 | CPA2 | CPA3 | NH | Total |
|---|---|---|---|---|---|---|
| **Outpatient care (OPD)** | 10% | 10% | 10% | 20% | 50% | 100% |
| **Inpatient care (IPD)** | | 5% | 10% | 15% | 70% | 100% |
| **Maternity-related care** | 25% | 5% | 5% | 5% | 60% | 100% |

Source: International Labour Organization

3. Based on the care-seeking behavior–assumed provider share by benefit category in Table 4-3, the weighted average of the insurance benefit unit cost by benefit category is calculated (See Table 4-4).

**Table 4- 4 Unit cost of care by type of provider and weighted average**

| | MPA | CPA1 | CPA2 | CPA3 | NH | Weighted Average |
|---|---|---|---|---|---|---|
| **Outpatient care (OPD)** | 6,540 | 12,320 | 16,640 | 25,920 | 64,000 | 40,734 |
| **Inpatient care (IPD)** | | 101,000 | 152,500 | 421,600 | 977,000 | 767,440 |
| **Maternity-related care** | 80,000 | 100,000 | 126,000 | 166,000 | 400,000 | 279,600 |
| **Child general medicine** | | 92,000 | 108,000 | 128,000 | 350,000 | 279,600 |
| **Birth Control (Short-term)** | 10,000 | | | | | 10,000 |
| **Birth Control (Long-term)** | 30,000 | | | 400,000 | 600,000 | 387,500 |
| **Moderate surgical intervation** | | | | 600,000 | 1,000,000 | 790,000 |

Source: Technical Note: Estimation of Contribution Rates for the Health Insurance, Maternity, and Sickness benefits' branch of NSSF

**Table 4- 5 Assumed utilization rates[45]**

| Benefit category | Annual utilization rates (case) | |
|---|---|---|
| | Male | Female |
| **Outpatient care (OPD)** | 1.5 | 1.5 |
| **Inpatient care (IPD)** | 0.06 | 0.06 |
| **Maternity-related care** | | 0.03 |

Source: International Labour Organization

4. The annual health insurance benefit cost per capita is calculated by benefit category and gender, based on the assumed utilization rates as shown in Table 4-5 and the weighted average is estimated considering the sex ratio[46] (See Table 4-6).

**Table 4- 6 Estimated annual cost of care by benefit category**

| | Unit cost (KHR) | Utilization rates (case) | | Annual cost per capita (KHR) | |
|---|---|---|---|---|---|
| | | Male | Female | Male | Female |
| **Outpatient care (OPD)** | 40,734 | 1.50 | 1.50 | 61,101 | 61,101 |
| **Inpatient care (IPD)** | 767,440 | 0.06 | 0.06 | 46,046 | 46,046 |
| **Maternity-related care** | 279,600 | | 0.03 | | 8,388 |
| **Child general medicine** | 279,600 | 0.06 | 0.06 | 7,381 | 7,381 |
| **Birth Control (Short-term)** | 10,000 | | 0.03 | | 300 |
| **Birth Control (Long-term)** | 11,625 | | | | 349 |
| **Moderate surgical interventio** | 47,400 | 0.06 | 0.06 | 2,844 | 2,844 |
| **Total** | | | | 117,372 | 126,409 |
| **Weighted Average** | | | | 122,018 | |

Source: Technical Note: Estimation of Contribution Rates for the Health Insurance, Maternity, and Sickness benefits' branch of NSSF

[45] Number of times that one person utilizes medical service in a year through health facilities in Cambodia
[46] 2008 Population Census in Cambodia

5. Assumed per capita transportation cost of health care referral and corpse (See Table 4-7) is added to the assumed annual cost of care.

**Table 4- 7 Assumed transportation cost**

| | Estimated cost per case | Annual unit cost | Annual cost per capita |
|---|---|---|---|
| **Local transportation** | 80,000 | 0.0054 | 432 |
| **Tranfer/referral from province** | 1,600,000 | 0.0006 | 960 |
| **All items** | | | 1,392 |

Source: International Labour Organization

6. The average per capita unit cost of nine high-cost fee-for-service items is estimated (See Table 4-8).

**Table 4- 8 Per capita unit cost of nine high-cost items**

| Case description | Estimated cost per case | Annual incidence rate (case) | Cost per capita (KHR) |
|---|---|---|---|
| **Hemodialysis** | 320,000 | 0.00028 | 90 |
| **MRI** | 600,000 | 0.00200 | 1,200 |
| **CT scan** | 480,000 | 0.00400 | 1,920 |
| **Raiotherapy** | 60,000 | 0.00341 | 205 |
| **Cancer Cell Analysis** | 100,000 | 0.00100 | 100 |
| **Trepanation** | 2,800,000 | 0.00018 | 492 |
| **Cardiovascular surgery** | 16,000,000 | 0.00020 | 3,200 |
| **Emergency treatment for heart disease** | 600,000 | 0.00050 | 300 |
| **Total** | | | 7,507 |
| **Material Osteosynthese (+20%)** | | | 9,008 |

Source: Technical Note: Estimation of Contribution Rates for the Health Insurance, Maternity, and Sickness benefits' branch of NSSF

7. The benefit package of Option A is estimated by including case-based medical benefits and transportation costs, whereas that of Option B is estimated by adding the unit cost of nine high-cost fee-for-service items to the Option A benefit package. 10% of the total benefit cost is added as administrative cost to each option[47] (See Table 4-9)

8. The premium is increased, assuming that premium collection rate is 95% (See Table 4-9).

9. The premium is further increased by taking the density factor into consideration, assuming that the actual collection period is 90% of that obligated[48] (See Table 4-9).

[47] The Cambodia Social Security Act enacted in 2002 stipulates that the operating expenses cannot exceed 10% of the benefits.
[48] Technical Note: Estimation of Contribution Rates for the Health Insurance, Maternity, and Sickness benefits' branch of NSSF. (2015).

**Table 4- 9 SHIP Model – Health insurance premium per capita**

| Case description | Option A | Option B |
|---|---|---|
| **Comprehensive payment medical benefit** | 122,018 | 122,018 |
| **Medical transfer cost** | 1,392 | 1,392 |
| **Fee-for-service** | | 9,008 |
| **Total insurance benefit** | 123,410 | 132,418 |
| **Administration cost (10%)** | 12,341 | 13,242 |
| **Collection rate of insurance premiums (95%)** | 135,731 | 145,660 |
| **Density factor (90%)** | 142,896 | 153,326 |
| | 158,773 | 170,362 |

Source: Technical Note: Estimation of Contribution Rates for the Health Insurance, Maternity, and Sickness benefits' branch of NSSF

## 4-2 Results of insurance premium estimates

In the SHIP Model, it is encouraged to enroll in the health insurance on the household basis. A premium payer is decided by each household and the premium payer pays premiums for oneself and one's dependents. In this system, however, the burden on families with multiple children would be incremental. Therefore, the amount of insurance premium for children under the age of 18 was set at 80% of the insured/adult dependent premium to avoid emerging child labor as a result of financial hardships that a large family might face.

The insurance premiums of Option A and Option B are suggested depending on the benefit packages.

### (1) Option A

**Benefit package:** case-based medical benefit and transportation costs for health care referral and corpse

**Insurance premium:**

Table 4-10 shows the per capita premium of Option A proposed in the SHIP Model. The insurance premium for the insured and adult dependents is 174,100 KHR (43.53 USD) annually, and 15,000 KHR (3.63 USD) monthly. The insurance premium for child dependents is 139,300 KHR (34.83 USD) annually, and 11,000 KHR (2.90 USD) monthly. For average households in Cambodia, that is a married couple with three children,[49] insurance premium is at a rate of 63,000 KHR (15.75 USD) per month.

[49] The average household size in Cambodia was 4.6 in 2013 according to the Inter-censal Population Survey.

**Table 4- 10 Option A - Insurance premium per capita**

| | | Annual rates | | Monthly rates | |
|---|---|---|---|---|---|
| | | KHR | USD | KHR | USD |
| **SHIP model premium rates** | **Insured/ Adult dependents** | 174,100 | 43.53 | 15,000 | 3.63 |
| | **Child dependents** | 139,300 | 34.83 | 11,000 | 2.90 |

Source: JICA SHIP Project

### (2) Option B

**Benefit package**: case-based medical benefit, transportation costs for health care referral and corpse, and fee-for-service medical benefit for nine high-cost items

**Insurance premium:**

Table 4- 11 presents the per capita premium of Option B proposed for the SHIP Model. The insurance premium for the insured and adult dependents is 186,900 KHR (46.73 USD) annually, and 16,000 KHR (3.89 USD) monthly. The premium for child dependents is 149,500 KHR (37.38 USD) annually, and 12,000 KHR (3.11 USD) monthly. In the case of a couple with three children, they are to pay the premium of 68,000 KHR (17.00 USD) per month.

**Table 4- 11 Option B - Insurance premium per capita**

| | | Annual rates | | Monthly rates | |
|---|---|---|---|---|---|
| | | KHR | USD | KHR | USD |
| SHIP model premium rates | Insured/Adult dependents | 186,900 | 46.73 | 16,000 | 3.89 |
| | Child dependents | 149,500 | 37.38 | 12,000 | 3.11 |

Source: JICA SHIP Project

Table 4- 12 shows share of the Option A and B premiums in average disposable income by quintile groups. The average disposable income for each quintile group in 2019, the year the SHIP Model pilot project commences, was projected based on the Cambodia Socio-Economic Survey 2009-2016. It was assumed that the lowest quintile group does not pay premium as this quintile is supposed to be covered by the Health Equity Fund. As compared with the premium rate of the private-sector employees: 2.6% of salary, the suggested premiums of both options are somewhat higher for the second lowest and the middle quintiles, but lower for the second highest and the highest quintiles.

**Table 4- 12 Share of Option A and B premiums in average household disposable income by quintile groups[50]**

| | Average disposable monthly income in 2016 (Thousand Riels) | 2009-2016 average income growth rates | Projected disposable monthly income in 2019 (Thousand Riels) | Share of Option A premuim in average disposable income in 2019 | Share of Option B premuim in average disposable income in 2019 |
|---|---|---|---|---|---|
| I | 251.0 | 9.5% | 327.6 | — | — |
| II | 812.7 | 17.3% | 1,310.5 | 4.8% | 5.2% |
| III | 1,289.3 | 16.0% | 2,012.6 | 3.1% | 3.4% |
| IV | 1,910.5 | 14.6% | 2,876.4 | 2.2% | 2.4% |
| V | 4,569.9 | 9.9% | 6,067.6 | 1.0% | 1.1% |

Source: Cambodia Socio-economic Survey 2009-2016

Table 4- 13 shows the simulation of premiums set based on the ability to pay. It presents how the burden on a household changes if the premiums are equitably set for each quintile. As a result, the insurance premium could be 1.9% for Option A and 2.1% for Option B of the disposable income of all quintiles, indicating that the burden on households can be maintained at the minimum level. This simulation suggests that it is desirable to establish an insurance scheme with a fair premium setting considering the household income level. Such a system could be possible if income tax collection becomes available in the future. However, even without the refined tax system, it should be worth trying to explore a means to estimate the household income level to set equitable insurance premiums.

**Table 4- 13 Simulation of the premiums set based on ability to pay**

| | Projected disposable monthly income in 2019 (KHR) | Income distribution | Option A Premium of an average household based on income distribution (Thousand KHR) | Proportion of premium in income | Option B Premium of an average household based on income distribution (Thousand KHR) | Proportion of premium in income |
|---|---|---|---|---|---|---|
| **I** | 354.2 | — | — | — | — | — |
| **II** | 1,416.8 | 11% | 26.9 | 1.9% | 29.1 | 2.1% |
| **III** | 2,175.8 | 16% | 41.3 | 1.9% | 44.6 | 2.1% |
| **IV** | 3,109.6 | 23% | 59.1 | 1.9% | 63.8 | 2.1% |
| **V** | 6,559.6 | 49% | 124.6 | 1.9% | 134.5 | 2.1% |

Source: Cambodia Socio-economic Survey 2014

[50] The average household size in Cambodia was assumed as 4.255 in accordance with Cambodia Socio-Economic Survey 2016.

### 4-3 Calculation of subsidy in SHIP pilot project

Given the experience in other countries, public subsidy is essential when covering the informal sector population with social insurance. Particularly, when the enrolment rate is low, there is a possibility that per capita benefit cost would go up and the near poor cannot afford to pay the premium.

**Table 4- 14 Estimated annual subsidy**

| Option | Subsidy rate (%) | Monthly premium of a couple with 3 children (USD) | Enrollment rate (%) | Annual subsidy for the pilot (million USD) | Annual subsidy for the nation-wide implementation (million USD) |
|---|---|---|---|---|---|
| Option A | 0 | 15.75 | 20 | 0 | 0 |
| | | | 50 | | |
| | | | 100 | | |
| | 15 | 13.90 | 20 | 0.33 | 10.73 |
| | | | 50 | 0.82 | 26.80 |
| | | | 100 | 1.64 | 53.60 |
| | 30 | 11.03 | 20 | 0.65 | 21.44 |
| | | | 50 | 1.64 | 53.60 |
| | | | 100 | 3.27 | 107.20 |
| | 50 | 7.88 | 20 | 1.09 | 35.73 |
| | | | 50 | 2.73 | 89.33 |
| | | | 100 | 5.45 | 178.66 |
| Option B | 0 | 17.00 | 20 | 0 | 0 |
| | | | 50 | | |
| | | | 100 | | |
| | 15 | 14.45 | 20 | 0.35 | 11.51 |
| | | | 50 | 0.88 | 28.77 |
| | | | 100 | 1.76 | 57.53 |
| | 30 | 11.90 | 20 | 0.70 | 23.01 |
| | | | 50 | 1.76 | 57.53 |
| | | | 100 | 3.51 | 115.06 |
| | 50 | 8.50 | 20 | 1.17 | 38.35 |
| | | | 50 | 2.93 | 95.89 |
| | | | 100 | 5.85 | 191.77 |

Source: The Royal Government of Cambodia and the World Bank

It was reported by the Cambodian Association for Assistance to Families and Widows that the enrolment rate increased from less than 10% to about 20% when 50% of the premium was

supplemented in Banteay Meanchey province.[51] The level of subsidy and the subsidization period are subject to negotiation between MEF and the TWG-SHIP. Table 4- 14 shows estimated annual subsidies required for the pilot (3 ODs) and the nation-wide implementation by the subsidy rates 15%, 30% and 50% and the enrolment rates of 20%, 50% and 100%.

Assuming that the target of HEF currently is approximately 20% of the population, 13% is already registered in NSSF, 7% has been newly registered at NSSF and covered by HEF since January 2018, and the target of SHIP is about 60% of the population, the target population of the SHIP pilot project is estimated to be 274,568, of which 44% is under 18 years old.

**Table 4- 15 Proportion of subsidy in the national budgets and GDP of 2018**

| | | | | | | |
|---|---|---|---|---|---|---|
| **Health sector budget (million USD) in 2018** | 485 | | | | | |
| **Total national budget (million USD) in 2018** | 6,018 | | | | | |
| **Projected GDP (million USD) in 2018** | 22,854 | | | | | |
| **Option A** | | | | | | |
| **Subsidy rate** | **50%** | **30%** | **15%** | **50%** | **30%** | **15%** |
| **Pilot / Nation-wide** | **Pilot** | | | **Nation-wide** | | |
| **Government subsidy (million USD)** | 5.45 | 3.27 | 1.64 | 178.66 | 107.20 | 53.60 |
| **Government subsidy in health sector budget (%)** | 1.12 | 0.67 | 0.34 | 36.84 | 22.10 | 11.05 |
| **Government subsidy in national budget (%)** | 0.09 | 0.05 | 0.03 | 2.97 | 1.78 | 0.89 |
| **Government subsidy in GDP (%)** | 0.02 | 0.01 | 0.01 | 0.78 | 0.47 | 0.23 |
| **Option B** | | | | | | |
| **Subsidy rate** | **50%** | **30%** | **15%** | **50%** | **30%** | **15%** |
| **Pilot / Nation-wide** | **Pilot** | | | **Nation-wide** | | |
| **Government subsidy (million USD)** | 5.85 | 3.51 | 1.76 | 191.77 | 115.06 | 57.53 |
| **Government subsidy in health sector budget (%)** | 1.21 | 0.72 | 0.36 | 39.54 | 23.72 | 11.86 |
| **Government subsidy in national budget (%)** | 0.10 | 0.06 | 0.03 | 3.19 | 1.91 | 0.96 |
| **Government subsidy in GDP (%)** | 0.03 | 0.02 | 0.01 | 0.84 | 0.50 | 0.25 |

Source: The Royal Government of Cambodia and the World Bank

Table 4- 15 shows proportion of the estimated subsidies in the national budget, the health sector budget and GDP of the year 2018. Currently the total health sector budget is approximately 2.12% of GDP, and it would be 2.15%, if the 50% insurance subsidy of Option B is added to the pilot. The GDP share of the health sector budget would go up to 2.96%, if the 50% insurance subsidy of Option B is added for the nation-wide implementation. However, it is still much lower than the WHO's recommendation that 5% of GDP should be spent on health.[52]

Cambodia maintained an average economic growth rate of 7.6% between 1994 and 2016, and this is ranked as the sixth in the world. Furthermore, economic growth of 6.8% is expected in

[51] Osawa, S., & Walker DG. (2009). Trust in the context of community-based health insurance schemes in Cambodia: villagers' trust in health insurers. Advances in Health Economics and Health Services Research. 21:107-32.

[52] World Health Organization (2003). How Much Should Countries Spend on Health? DISCUSSION PAPER NUMBER 2.

2017 and 6.9% in 2018 due to the recovery of the tourism industry and growth in export of clothing items and construction industry.

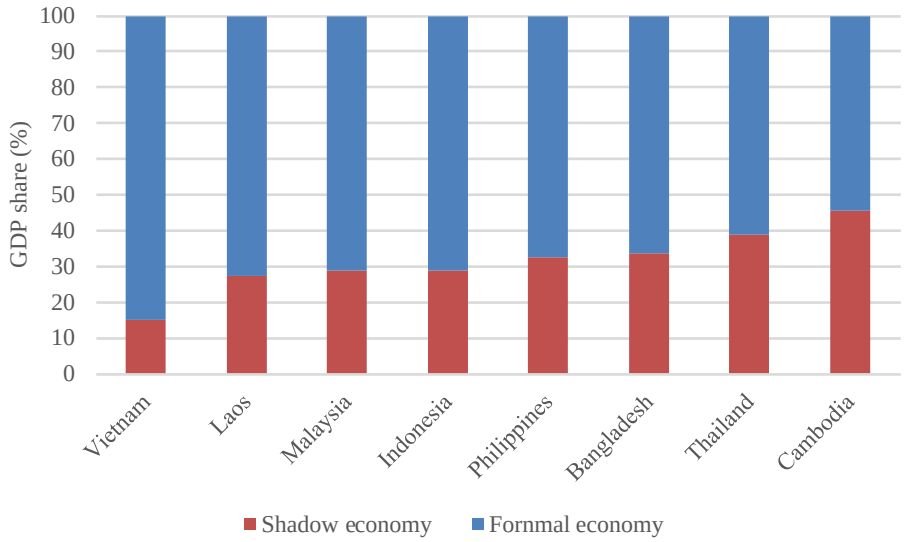



**Figure 4- 1 Average share of shadow economy contributing to GDP of Southeast Asian countries from 2000 to 2014**

Source: New Estimation for the Shadow Economies of 11 Asian Countries from 2000-2014, Cash in East Asia (2017).

Figure 4-1 shows the average share of shadow economy[53] contributing to GDP of Southeast Asian countries from 2000 to 2014. According to the survey results, in Cambodia, on average, 45.5% of GDP consists of shadow economy production over the above 15 years, and this proportion is higher than other Southeast Asian countries. In other words, the Cambodian economy is largely depending on the shadow economy engaged by the informal sector population. Therefore, allocating additional government budget to subsidize health care provision for the informal sector population is investment in further economic and social development in Cambodia since it leads to the increased number of healthy and high-quality workers in the labor market which increases the country's productivity.

[53] All unregistered economic activities that contribute to the officially calculated Gross National Product

# Chapter 5. Social Health Insurance for the Informal Sector (Draft)

Under this project, the Social Health Insurance for the Informal Sector Population Model (SHIP Model) was designed based on consultations held at TWG-SHIP meetings. On August 23, 2018, the Chairman of the TWG-SHIP presented the concept note of the SHIP Model to the NSPC Secretariat (See Annex 4 and Annex 5). As of September 2018, the TWG-SHIP is preparing for the presentation to the NSPC Executive Committee. Details of the SHIP model are as follows.

## 5-1 Basic principles

Conforming to NSPPF, the SHIP Model maximizes utilization of existing mechanisms, i.e. the social insurance system and the local administration, and minimizes cost and time. The SHIP Model ensures that all citizens of Cambodia, regardless of employment status, have access to essential, quality health services while protecting against financial risk. Taking advantage of the lessons learned from CBHI, the SHIP Model pools the fund at the national level into a single payer and pursues mandatory enrolment of the informal sector population on a household basis to avoid adverse selection.[54]

## 5-2 Target population

The target population of SHIP is all citizens not covered by public health protection schemes, namely NSSF and HEF.

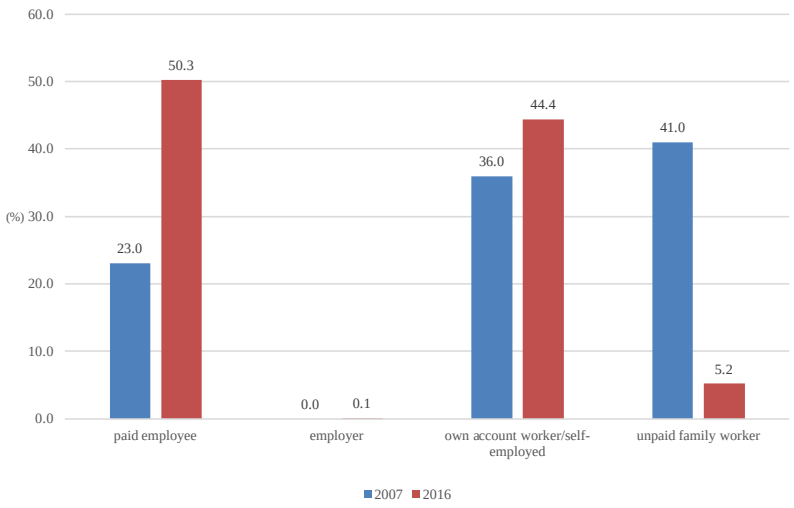



**Figure 5- 1 Trends in employment (2006/7 and 2016)**

Source: Cambodia Socio-economic Survey 2006/7 and 2016

[54] People with high risks, such as those who are concerned about health or those engaged in dangerous occupations, tend to voluntarily join insurance. Furthermore, they tend to hide important information, such as medical history, health condition, family environment, occupation, trying to make a contract that is advantageous to himself/herself.

It is estimated that working age population (between 15 and 64) in 2016 was about 10,265,000, labor force participation among working age 15-64 was 8,624,000, of which 99.8% were employed.[55] Figure 5-1 shows the trends in employment in Cambodia in 2006/7 and 2016. For the decade from 2006/7 to 2016, percentage of unpaid family workers in total employment sharply declined from 41.0% to 5.2%, while share of paid employees and own account workers/the self-employed, who belong to the informal sector, increased from 23.0% to 50.3% and from 36.0% to 44.4%, respectively. Due to economic development in the decade, many individuals who were previously unpaid workers turned into paid employees or the self-employed. Although a share of paid employees has exceeded that of the self-employed by 2016, the proportion of informal sector workers is still large, and it is concerning that they remain extremely vulnerable under unstable employment conditions, particularly when they face a health risk.

## 5-3 Enrolment and registration

The SHIP Model pursues compulsory enrolment by the household defined by the insured identifying their dependents in response to the lessons learned from other countries as well as CBHI in Cambodia (See Table 5- 1).[56] In reality, most of the countries that chose social insurance as the health protection system for the informal sector population made the enrolment policy compulsory either at the time of introduction or later to pursue financial sustainability.

**Table 5- 1 Enrolment policies of social insurance for the informal sector population and current social protection enrolment rates in eight countries**

| Country | Enrolment policy of social insurance for the informal sector | Current enrolment rate* |
|---|---|---|
| **Japan** | Voluntary (1938)→Compulsory (1961) | 90-100% |
| **South Korea** | Compulsory (1989) | 90-100% |
| **Taiwan** | Compulsory (1995) | 90-100% |
| **The Philippines** | Compulsory (1995) | 80-90% |
| **Vietnam** | Voluntary (1995) | 60-70% |
| **Rwanda** | Voluntary (2000)→Compulsory (2008) | 90-100% |
| **Indonesia** | Tax-based→Social Insurance: Compulsory (2014) | 60-70% |
| **Cambodia** | *50+ CBHIs: Voluntary (2000～)* | *30-40%* |

* Enrolment rates of the total population

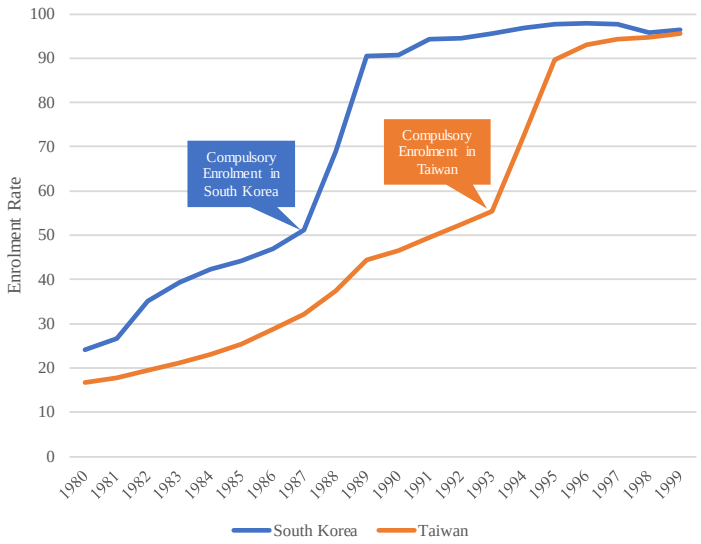
Source: JICA (2012),[57] International Labour Organization (2012),[58] National Centre for Global Health and Medicine (2015)[59] and Lee R. (2007)[60]

[55] Asian Development Bank (2015). Key Indicators for Asia and the Pacific 2015.

[56] A cluster randomized trial in Vietnam suggested limited opportunities to raise voluntary health insurance enrolment through information campaigns or subsidies, and that these interventions exacerbate adverse selection. (Encouraging Health Insurance for the Informal Sector: A Cluster Randomized Trial, Policy Research Working Paper 6910. World Bank, 2014).

[57] Japan International Cooperation Agency & Mitsubishi UFJ Research and Consulting Co., Ltd. (2012). Data Collection Survey on social security sector in Asia final report: country report. Tokyo: Japan International Cooperation Agency.

Figure 5- 2 shows how legislation of compulsory enrolment sharply increased enrolment rates in South Korea and Taiwan.




Source: Korea Health Insurance Association Annual Reports and Republic of China Social Indicators Statistics

**Figure 5- 2 Enrolment policy of social health insurance for the informal sector and the insurance enrolment rates in South Korea and Taiwan (1980-1999)**

As shown in Chapter 3, the household survey conducted in Battambang and Kampong Speu provinces for 1,033 households in 2017 found that 93% of the respondents were willing to be registered for the health insurance (without obligation to pay premiums) if it is compulsory and nearly 70% of them are also for compulsory enrolment (with obligation to pay premiums). This indicates that resistance of the general public against compulsory enrolment is not strong.

Under the SHIP Model, every citizen is registered in the first place regardless of one's willingness to pay premiums or health protection scheme enrolment status. This would enable the insurer to track down people making a transition from the informal sector to the formal sector or becoming ID-Poor recipients due to unemployment, and to ensure not to miss or duplicate anyone in a health protection scheme (See Figure 5- 3). There is also an intention to increase enrolment rates through this practice by informing the people benefits of the health insurance at the time of registration.

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[58] International Labour Organization (2016). Rwanda: Progress towards Universal Health Coverage. Social Protection in Action: Building Social Protection Floors.

[59] National Centre for Global Health and Medicine (2015). Health Protection Systems: How can Japan utilize own experience for achieving UHC in developing countries? Symposium conducted in Tokyo.

[60] Lee, R. (2007). Comparative Analysis on the Public Health Insurance Policy in South Korea and Taiwan: Industrialization, Democratization, and Social Policy in Late-comer Societies. Unpublished Doctoral Dissertation, Washeda University, Tokyo.

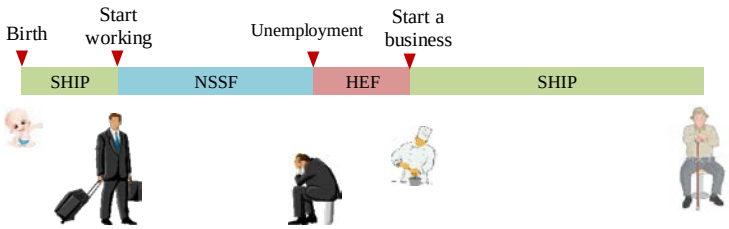



**Figure 5- 3 Flexible health protection system based on the lifestyle of each citizen**

Currently, NSSF is using the registry that was originally built by HIP. There are the ID Poor registry and the registry of HEF patients, called the Patient Management and Registration System (PMRS). Under the SHIP Model, it is suggested to establish an integrated registry, linking with other social protection registry systems. The insurance database containing personal data will be centrally managed at the NSSF headquarters to allow the insurer to flexibly change the insured's status, such as one's address, marital status and type of work, which determines the type of one's health protection scheme. The centrally managed database would also allow all staff members to refer to the same updated information online and provide unified services throughout the country.

At the time of registration, a resident presents Khmer ID, Family Book, Residential Book or Birth Certificate, and fill out the registration application form (See Attachment 2) with necessary information. If there is no problem in the contents of the application, the data will be digitalized and the insurance card number that is valid for the lifetime, will be given to each resident. The health insurance number is suggested to be replaced by the Khmer Identity Code (Kid-C),[61] the lifetime unique ID proposed by Prime Minister Hun Sen, when it becomes available.

To register enormous numbers of data within a certain period without overlaps, it is efficient to use a personal computer, or a tablet connected to the health insurance registry system. Once operational and administrative information is collected and managed in the health insurance registry system, future projection could be made based on statistical analysis. If prospects for health financing are solid, it is possible to revise the insurance premium rates and the medical fee schedule at an appropriate time. It also enables the Cambodian government to plan for budget allocation of health facilities by referring to regional disparities and utilization rates of health facilities in each region. On the other hand, by disclosing information on the insurance

[61] MOI developed the National Strategic Plan on Identification 2017-2026 (NSPI) "Guide acceleration of government efforts to increase the birth registration rate and identification in Cambodia" (2016). The NSPI states that a Khmer Identity Code (Kid-C) is to be distributed to every citizen, which could be utilized for a social health insurance system through the Integrated Population Identification System (IPIS).

through the internet, it is possible to promote understanding of the health insurance system and to improve access to health services.

## 5-4 Laws and regulations

Cambodia's law and regulation structure includes the Constitution, the Law, the Royal Decree, the Sub-Decree, the Ministerial Order, the Notification (Circular), and the Local Regulation as shown in Figure 5- 4.

Cambodian law usually consists of primary law (Primary Legislation) and secondary law (Secondary Legislation). Since there has been no relevant law related to social security for the informal sector, it is essential to establish a Law or Royal Decree stipulating the basic principles of health insurance as primary law and a Sub-Decree or Ministerial Order (Prakas) as secondary law with more concretized contents.

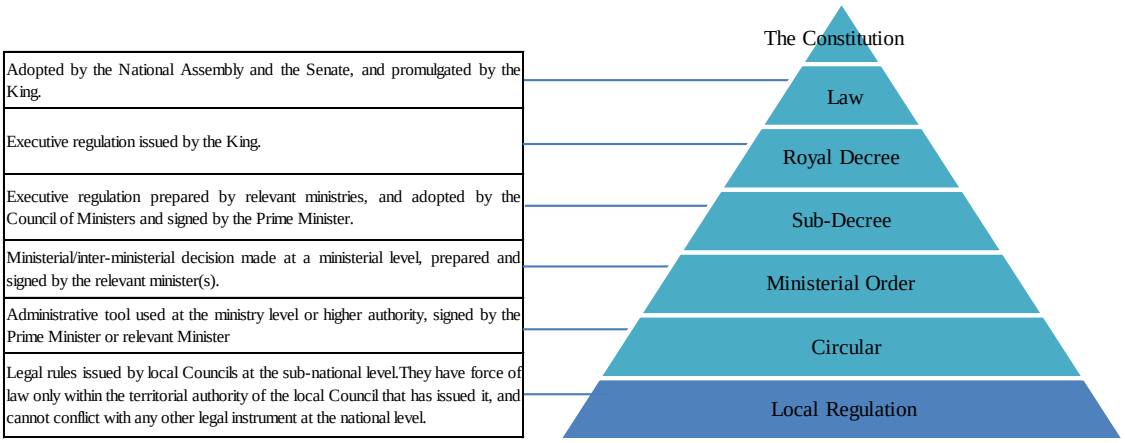



**Figure 5- 4 Cambodia's laws and regulations**

Source: The Cambodian Law Library: http://en.chbab.net/about-cambodian-law

In carrying out the SHIP pilot project, it is necessary to undergo the enactment procedure of Sub-Decree based on the Social Security Law for employees currently undergoing NSSF's revision procedure or the Social Protection Law for all citizens which NSPC is currently drafting, as the primary law if compulsory enrolment will be piloted. If the project starts with voluntary enrolment, no legal framework will be required.

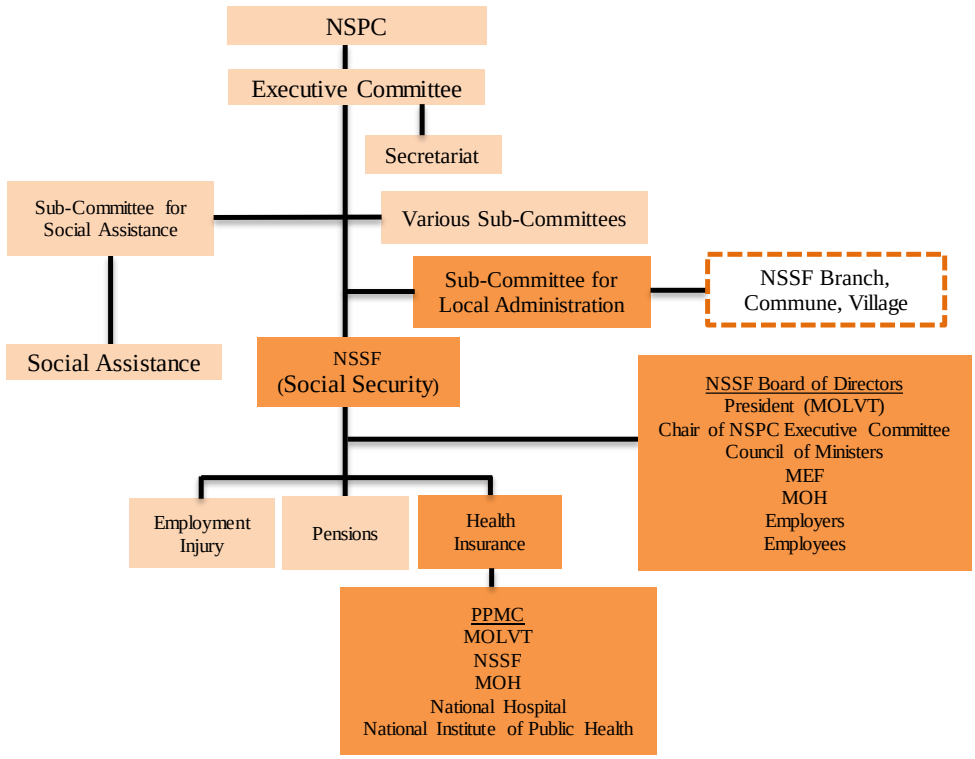
## 5-5 Governance structure

As mentioned above, NSSF will be responsible for the future social security of Cambodian citizens as a single payer. However, social insurance will be controlled technically by MOLVT and financially by MEF. A Board of Directors is established at NSSF. The MOLVT

representative is the President of the Board, and MEF, Council of Ministers, MOH, 2 representatives of employers and 2 representatives of workers and the NSPC Executive Committee Chairperson are the Board members (See *Dark orange-colored sections are related to the SHIP Model

Figure 5- 5).

At the NSSF Board of Directors, employers, workers and the government officials have equal voting rights. The main functions of the Board are (1) approval of insurance premium rates for each scheme of NSSF, (2) investment planning, and (3) establishment of internal regulations, personnel regulations and organizational management systems. NSSF is a legally and financially independent administrative agency.




*Dark orange-colored sections are related to the SHIP Model

**Figure 5- 5 The Tentative Governance Structure of the SHIP Model**

Source: The Roles and Functions of NSPC

In September 2012, the Provider Payment Mechanism Committee (PPMC), consisting of MOH and MOLVT, was established by inter-ministerial Prakas (No. 194 LV/PrK). PPMC currently

consists of 11 members: MOLVT 1, NSSF 4, MOH 3, Central Hospital (Kosamak Hospital) 2, and National Institute of Public Health 1. The main roles of PPMC are as follows:

1. To decide medical payment schedules and payment methods for the health facilities
2. To determine the criteria for an insured health facility, the method of monitoring health service quality and the provider payment mechanism for health facilities.
3. To determine application procedures of the NSSF insured to receive medical benefits.

In the SHIP Model, the above-mentioned NSSF governance structure including PPMC will be utilized. Efforts will be made to have representatives of the communes/Sangkats and villages in the target areas become members of the NSPC sub-committee.

## 5-6 Benefit packages

The SHIP Model follows NSSF in terms of the medical fee schedule to avoid administrative complications. NSSF provides basic health care through the case-based payment method with no co-payment (See Table 4-1 in Chapter 4). If the designated medical doctor determines that it is necessary to provide a high-cost treatment listed in Table 5-2, a hospital room with air conditioning or rehabilitation as a follow-up of the basic care, the cost for these services are covered through the fee-for-service payment method. The insurance also covers transportation costs when transferring to a more equipped health facility or carrying a corpse and 70% of the standard daily allowance in case of absence from work due to sickness, injury or childbirth. For public health facilities, the essential drugs are also provided. However, 14 health services in Table 5-3 are not covered by the insurance.

**Table 5- 2 Fee-for-service high-cost items of NSSF health insurance for private employees**

| | High-cost fee-for-sevice items |
|---|---|
| 1 | Hemodialysis |
| 2 | MRI |
| 3 | CT Scan |
| 4 | Radiotherapy |
| 5 | Cancer Cell Analysis |
| 6 | Metal osteosynthesis |
| 7 | Trepanation |
| 8 | Cardiovascular surgery |
| 9 | Emergency treatment for heart disease |

Source: NSSF

**Table 5- 3 14 items not covered by the NSSF health insurance**

| | Items |
|---|---|
| 1 | Free services as stipulated in the public health policy |
| 2 | Dental care (teeth cleaning, teeth filling, and teeth implant) |
| 3 | Sexual surgery and care |
| 4 | Organ transplantation |
| 5 | Artificial fertilities |
| 6 | Self-treatment |
| 7 | Plastic Surgery |
| 8 | Aid artificial eyes tools and laser-therapy |
| 9 | Alcoholism treatment and Drug abuse treatment |
| 10 | Barren treatment |
| 11 | Artificial glow surgery |
| 12 | Coronary and heart surgery |
| 13 | Hemodialysis |
| 14 | Cancer treatment by Chemotherapy |

Source: NSSF

Under the SHIP Model, case-based medical payments and transportation costs in the benefit package of the current NSSF health insurance for private employees are included in the benefit package of Option A, and payments for the nine high-cost fee-for-service items in addition to the benefit package of Option A, are the benefit package of Option B (See

Figure 5- **6**).

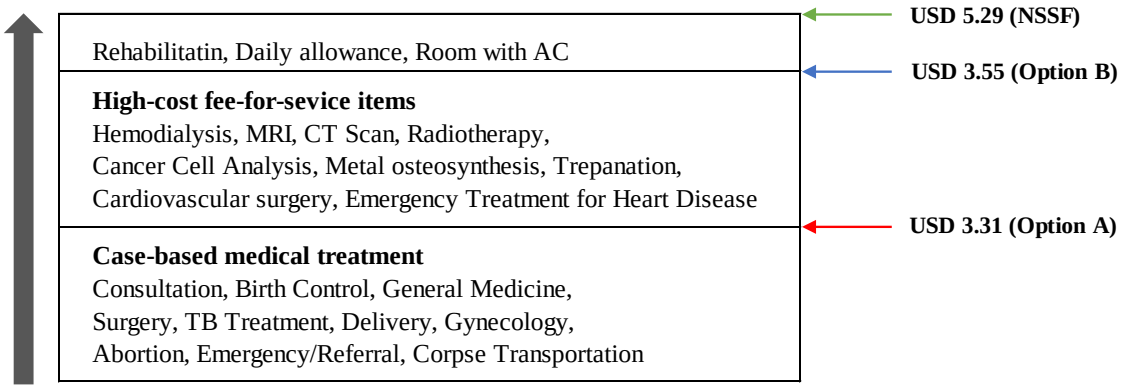



**Figure 5- 6 SHIP suggested benefit packages: Options A and B**

The SHIP Model suggests NSSF to expand the insurance coverage to health services provided at private facilities because the private health facilities are more popular than the public facilities in Cambodia, and citizens may refuse to enroll the insurance scheme if only the public health services are to be insured. Moreover, it would also bring about the situation that the public facilities become extremely crowded if the number of the insured increases. Indeed, as the

number of insured private employees increased, public facilities have been busy particularly on weekends because the private employees work on weekdays and visit health facilities on weekends. In the SHIP Model, it is suggested to cover the medical treatment at private facilities with the same case-based fee schedule and to have the insured pay the difference between the insurance coverage and the medical fees charged at a health facility (co-payment), if the medical fees of the private health facility are higher than the insurance coverage.

**Table 5- 4 Simulated co-payment at a private health facility (CPA2)**

| Health Facility | Case Description | Insurance Coverage | Medical expenses | Co-payment |
|---|---|---|---|---|
| **Private Health Facility (CPA2)** | **Outpatient consultation** | 16,000 (4USD) | 7,200 (1.8USD) | 0 |
| | **Major Surgical Intervention** | 400,000 (100USD) | 800,000 (200USD) | 400,000 (100USD) |
| | **Minor Surgical Activities** | 240,000 (60USD) | 300,000 (75USD) | 60,000 (15USD) |
| | **Adult General Medicine** | 120,000 (30USD) | 100,000 (25USD) | 0 |

Source: NSSF Prakas and Information from Private Health Facilities

Table 5-4 presents the simulated co-payments at a CPA 2 private health facility. If a patient receives outpatient consultation at this private health facility without insurance, one must pay 7,200 KHR (1.8 USD) at the facility, while an insured patient receives the same service for free as the insurance coverage exceeds medical expenses for outpatient consultation. When undergoing major surgery, an uninsured patient pays 800,000 KHR (200 USD), but an insured patient is paid 400,000 KHR (100 USD) by NSSF, so the difference of 400,000 KHR (100 USD) is charged at the facility. Likewise, in the case of minor surgery, an uninsured patient pays 300,000 KHR (75 USD), but an insured pays 60,000 KHR (15 USD). Under this system, the insured chooses whether to use a private health facility and taking on the co-payment, or to use a public health facility which provides free health care. As a result, it is assumed that some people who do not usually use a public facility might decide to use a public facility to avoid co-payment at a private facility, and consequently the utilization rate of the public health facilities might increase. In addition, it is expected that the revenue of the public health facilities would increase, and the increased revenue may help improve the quality of health services. When introducing this system, it is necessary to prepare guidelines setting the standard user-fee schedule for private health facilities.

Currently, NSSF is paying private health facilities up to 1.5 times as much as public health facilities because private health facilities are not subsidized with the public budget. In addition, private health facilities are contracted with NSSF for employment injury primarily to complement public health facilities when there is no public health facility near the workplace. Therefore, it is currently not easy to make the patient (worker) pay the difference between the insurance coverage and the medical fees charged at a private health facility due to the nature of the scheme. Therefore, these recommendations by the SHIP Model would be made on a long-term basis.

## 5-7 Examination of insurance claims

Examination of insurance claims is also performed in accordance with NSSF (See Figure 5- 7). NSSF has an insurance office, called a Hospital Agent, and the regular staff working for 24 hours a day within a CPA level health facility. When an insured person receives medical treatment at a health facility, a medical doctor fills out the treatment details in a medical fee claim form (See Attachment 3) and submits it to the NSSF staff at the Hospital Agent. The Hospital Agent staff sends the medical fee claim forms to the NSSF headquarters. The medical fee claim form is examined by medical doctors working at NSSF headquarters. If no problem is found, the medical expenses are reimbursed to the health facility in approximately a month from submission. When there is a problem found in the medical fee claim form, the above-mentioned PPMC members are convened and deliberations on the claim are carried out.

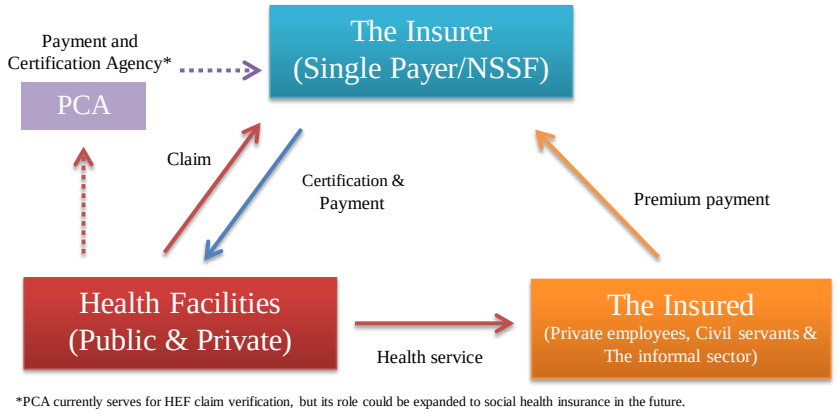



**Figure 5- 7 The insurance payment mechanism**

Source: JICA SHIP Project

Meanwhile, as part of the H-EQIP activities, the Payment Certification Agency (PCA) was established in 2017 as an independent examination body of HEF. It is currently under consideration that examination should be carried out through PCA even for NSSF future claims, and the SHIP Model would follow that determination.

## 5-8 Premium options

The premium options calculated in Chapter 4 are as follows:

### (1) Option A

**Benefit package:** case-based medical benefit and transportation costs for health care referral and corpse

**Premium:** Table 5-5 shows the per capita premium of Option A proposed in the SHIP Model. The insurance premium for the insured and adult dependents is 174,100 KHR (43.53 USD) annually, and 15,000 KHR (3.63 USD) monthly. The insurance premium for child dependents is 139,300 KHR (34.83 USD) annually and 11,000 KHR (2.90 USD) monthly. For average households in Cambodia, that is a married couple with three children, the insurance premium is 63,000 KHR (15.75 USD) per month.

**Table 5- 5 Option A - Insurance premium per capita**

| | | Annual rates | | Monthly rates | |
|---|---|---|---|---|---|
| | | KHR | USD | KHR | USD |
| SHIP model premium rates | Insured/ Adult dependents | 174,100 | 43.53 | 15,000 | 3.63 |
| | Child dependents | 139,300 | 34.83 | 11,000 | 2.90 |

Source: JICA SHIP Project

### (2) Option B

**Benefit package**: case-based medical benefit, transportation costs for health care referral and corpse, and fee-for-service medical benefit for nine high-cost items (See Table 5-2).

**Premium:** Table 5-6 presents the per capita premium of option B proposed for SHIP Model. The insurance premium for the insured and adult dependents is 186,900 KHR (46.73 USD) annually, and 16,000 KHR (3.89 USD) monthly. The premium for child dependents is 149,500 KHR (37.38 USD) annually and 12,000 KHR (3.11 USD) monthly. In the case of a couple with three children, they are to pay 68,000 KHR (17.00 USD) per month.

**Table 5- 6 Option B - Insurance premium per capita**

| | | Annual rates | | Monthly rates | |
|---|---|---|---|---|---|
| | | KHR | USD | KHR | USD |
| SHIP model premium rates | Insured/Adult dependents | 186,900 | 46.73 | 16,000 | 3.89 |
| | Child dependents | 149,500 | 37.38 | 12,000 | 3.11 |

Source: JICA SHIP Project

As shown in Chapter 3, the household survey suggested that nearly one half of the population in Battambang and Kampong Speu provinces would be willing to pay the suggested premiums for some household members and one third for all household members.

On the other hand, if NSPC requires, the premiums could be adjusted to the current NSSF average premium of 5.29 USD per person per month. In this case, the monthly rates would be 23,200 KHR (5.80 USD) for the insured/adult dependents and 18,600 KHR (4.64 USD) for child dependents.

Given the experience in other countries, public subsidy is essential when covering the informal sector population with social insurance. However, MEF intends to limit the supplementary public funding for the poor and socially vulnerable, considering the current Cambodian fiscal space, as the tax system is still inadequate in Cambodia (See BOX 5-1). Moreover, it is also reluctant to introduce sin taxes[62] and apply the tax revenue to health care as a specific financial source. According to MEF, it is difficult for the ministry to explain the needs of the health sector to other sectors while other sectors also need additional budget. However, it seems possible that negotiations will take place one step at a time to finance the health insurance scheme partially with public funds if the empirical evidence could support positive impact of the proposed scheme, and actuarial cost calculations will be provided under the SHIP pilot project.

**BOX 5- 1 Profit tax in Cambodia[63]**

The main taxation in Cambodia is Profit Tax and taxpayers are divided into the following three groups. Firms with the profit less than 250 million KHR (about 65,200 USD) per year are exempted from paying the corporate tax.

- High taxpayer: annual turnover of more than 2 billion KHR (about 500,000 USD)
- Medium-sized taxpayer: Annual turnover of 700 million KHR (about 175,000 USD) or more and less than 2 billion KHR (500,000 USD)
- Small taxpayer: annual turnover is 250 million KHR (about 65,200 USD) or more and less than 700 million KHR (about 175,000 thousand USD)

As of December 2016, 150 firms were high taxpayers, paying 70% of the total tax revenue. About 5,000 to 6,000 companies were medium-sized taxpayers, and about 20,000 were small taxpayers. Although there are penalties for tax delinquencies, in practice, they are not actually imposed.

In 2016, the taxation method for small taxpayers has changed from estimated taxation system (the system applied when the actual amount of income cannot be grasped because there is no book keeping, or the contents of books are inaccurate and poorly managed in practice) to declaration tax payment system (the taxpayer himself/herself declares the firm profit to a tax office). The General Department of Taxation (GDT) enlightens taxpayers to make the appropriate tax payments.

[62] An excise tax specifically levied on certain goods deemed harmful to society, for example tobacco, alcohol and gambling

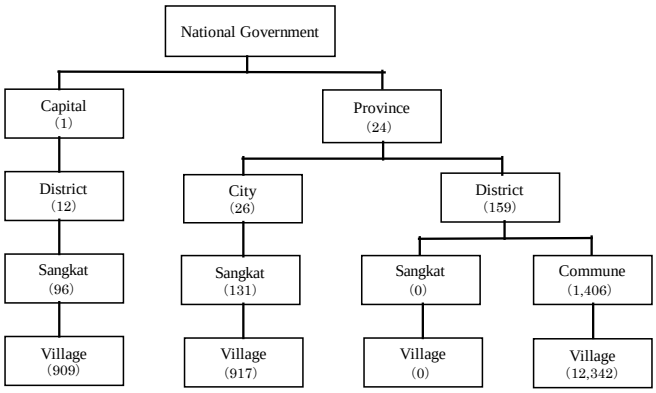
[63] Interview with experts of the JICA Taxation General Administration Capacity Building Project Phase 2 (9 December 2016).

## 5-9 Management of the insured

In the case of formal sector insurance, one can identify the target population through companies and government agencies. However, for informal sector insurance, it is necessary to establish a system to identify the enrolment status of all people, as all citizens are potential targets of SHIP. Therefore, the SHIP Model expects the NSSF branch offices to closely collaborate with local administration bodies, i.e. villages and communes/Sangkats which are the only systems with the latest residential information of all citizens of Cambodia (See BOX 5- 2). While the operator of the insurance is NSSF, communes/Sangkats and villages will assist NSSF for enrolment promotion, registration, registration data management, reminder and collection of insurance premiums in the case of delinquency in payment.

**BOX 5- 2 Cambodia's local administrations**

The administrative body of Cambodia is composed of three layers consisting of (1) the Capital, Province; (2) City, District, Township; and (3) Commune, Sangkat (See Figure 5- 8). The council members of the cities and districts are elected by indirect voting of the council members in the Communes and Sangkats. The council members of Communes and Sangkats are elected by direct voting of the villagers.




Source：JICA Cambodia Office

**Figure 5- 8 Administrative Body of Cambodia (as of January 2016)**

Residents notify birth and death of their family members and complete the resident registration at commune/ Sangkat. Information on the couple and their children is recorded in the family registry (Family Book), information on household members is listed in the Resident Book (Resident Book), and they are managed by the police. Each household possesses a copy of the same content of the registries. Registration information is updated monthly. Commune/ Sangkat has a council, and in addition to Commune /Sangkat chief, village chief, deputy village chief and assistant village chief attend the parliament as village representatives. The village chief is selected by a voting at the Commune/Sangkat council, and a term of the office is lifetime.

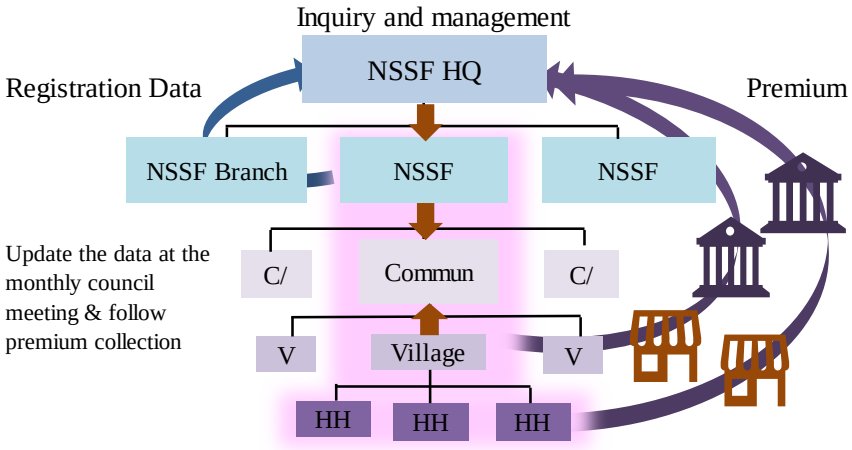



**Figure 5- 9 Conceptual framework of the insured management**

The registration will be scheduled for each village and proceeded in turn under the supervision of village chiefs. The NSSF branch office staff registers the villagers at commune/Sangkat offices and update the data at the commune/Sangkat council monthly meetings (See Figure 5-9).

At the monthly commune/Sangkat council meetings, a representative of each village will be requested to report on insurance coverage and change of the villagers, and in return receive information on the status of their insurance premium payment. Based on the reports, the information will be updated, and the health insurance scheme will be changed. When there is a person who is not paying the insurance premium, the village chief, together with the NSSF branch office staff, will urge the insured to make a payment. On the other hand, providing incentives, such as a discount in premiums or a telephone credit in case of not being delinquent, should be considered as a way of promoting the premium payment.

## 5-10 Method of premium collection

Unlike insurance for private employees, in the case of the informal sector population, it is necessary to collect insurance premiums from individuals and enforce payment if they are delinquent. The appropriate payment method and frequency of premium collection should depend on the residential environment and the nature of the occupation. Therefore, in the SHIP Model, multiple options are presented and selected by each village. The options for premium payment methods are as follows:

1) Representative of the village collects the insurance premiums from the villagers and collectively sends the money to the NSSF headquarters through the bank. After that, the representative submits the remittance record to the NSSF branch office.

2) The insurance premiums are automatically subtracted from the bank account of each household.

3) Each household pays premium using a bank or an electronic money transfer system and hands the remittance record to the village representative. The village representative collectively submits the remittance records to the NSSF branch office. Village representatives oversee and provide the villagers with necessary support when requested.

Currently, employers pay the employees' monthly premiums to the NSSF headquarters. They transfer the insurance premiums through the Acleda Bank and submit remittance records to NSSF. In the SHIP Model, a similar method in which a village representative collects villagers' insurance premium and remits the money through the bank is Option 1. Money collection through a person as suggested in Option 1 may cause problems, such as loss of cash or embezzlement. However, delegating payment of insurance premiums to individuals can cause delinquency. Therefore, automatic debit of the insurance premium from the bank account will be provided as Option 2. The employees of the nearest bank office are invited to the SHIP registration in the commune/Sangkat office to encourage residents to open a bank account along with the insurance registration. Especially it is recommended for those who have irregular incomes, such as farmers. In case of a farmer, after harvesting crops, the income can be deposited in one's bank account, so that the insurer can automatically withdraw insurance premium from one's bank account, while the savings are prevented from encountering a theft and the deposit can be increased by accumulating the interests. For example, a saving account can be opened by depositing 10,000 KHR (2.5USD) at the Acleda Bank. Therefore, the burden on households should not be significant. However, some people might refuse to open a bank account, as there is no custom of depositing. For such a case, Option 3 that is a method by which each household pays premium using the nearest bank branch, ATM, or a mobile money transfer system will be available. However, in this case, it is assumed that the village representatives need to follow up with the villagers on the payment of insurance premiums. Each household remits money by themselves, but they need to hand in the remittance record to the village representative. The village representatives summarize the remittance records of the villagers and submit them to the NSSF branch office.

## 5-11 Grievance mechanism

With the introduction of health insurance in late 2016, NSSF has established hot lines to respond to complaints and inquiries. In addition, a call center was established with the support of GIZ and GRET to cope with frequent inquiries. It is assumed that the hotlines and the call center will handle complaints of the SHIP beneficiaries, as well.

## 5-12 Advocacy and Communication

For promotion of the insurance enrolment, the holistic approach that includes advocacy for public leaders and policy makers, communication for individuals and small groups, and social mobilization for communities will be taken. The communication strategy for these activities is as shown in BOX 5-3 and Figure 5- 10.

**BOX 5- 3 SHIP Communication Strategy**

- Clarify means of communication, implementation method and monitoring guidelines
- Increase awareness of the SHIP Model among related organizations (government, development partners, etc.)
- Promote collaborations between organizations that conduct communication activities
- Train and nurture advocacy and communication practitioners at each level
- Promote enlightenment activities through families and communities

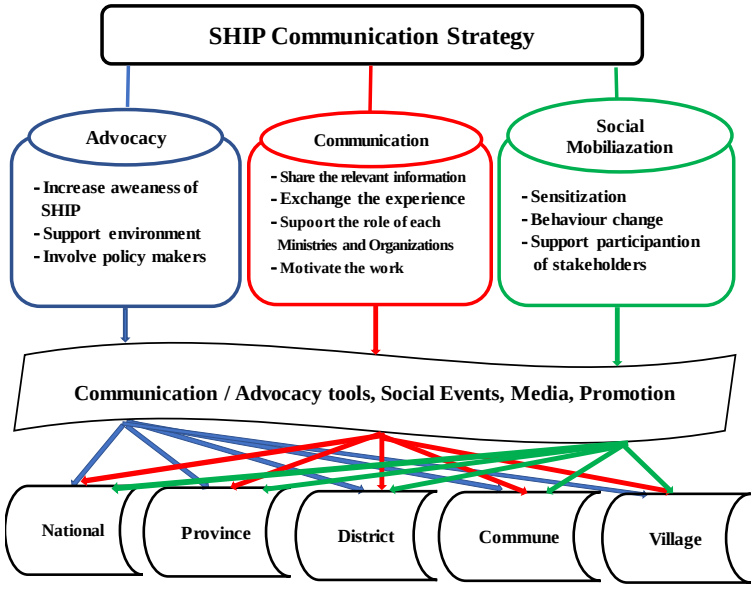



**Figure 5- 10 Concept of SHIP Communication Strategy**

The target groups for each advocacy/communication activity are shown in Table 5-7. The most effective message, medium and timing should be determined based on the purpose and target of the activity. The existing social systems, such as the commune/Sangkat council meetings, Buddhist events and village volunteers should be fully utilized, and collaboration with related organizations and the media should be actively sought. Furthermore, when implementing communication activities, capacity development of the implementing agency will be addressed.

**Table 5- 7 Targets of Communication/Advocacy**

| | Target Organizations | Target Population |
|---|---|---|
| **National** | NSPC | Executive Committee, Secretariat members |
| | Related Ministries | MOH, MOLVT, MEF, MOI, MOP, etc. |
| | NSSF | Hospital Staff, Hospital Agent |
| | National Hospitals, Praivate Health Facilities | Health Providers, Administration staff |
| | Development Partners | GIZ, USAID, ILO, WHO, etc. |
| **Province** | PHD | Director, Staff |
| | Related Ministries' Provincial Offices | MOLVT, MEF, MOI, MOP, etc. |
| | NSSF Branch offices | Director, PHD Staff |
| | Provincial Hospitals, Private Health Facilities | Health Providers, Administration staff |
| **District** | ODs | In charge of NSSF |
| | NSSF Branch offices | Director, Staff |
| | Referral Hospitals, Private Health Facilities | Health Providers, Administration staff |
| **Commune/Sangkat** | Commune/Sangkat | Commune/Sangkat Cheif, Committee members |
| | Healt Centers, Private Health Facilities | Health Providers, Administration staff |
| **Village** | | Village Chief, Deputy Village Chief, Assistant Village Chief, Village Volunteer |

Source: JICA SHIP

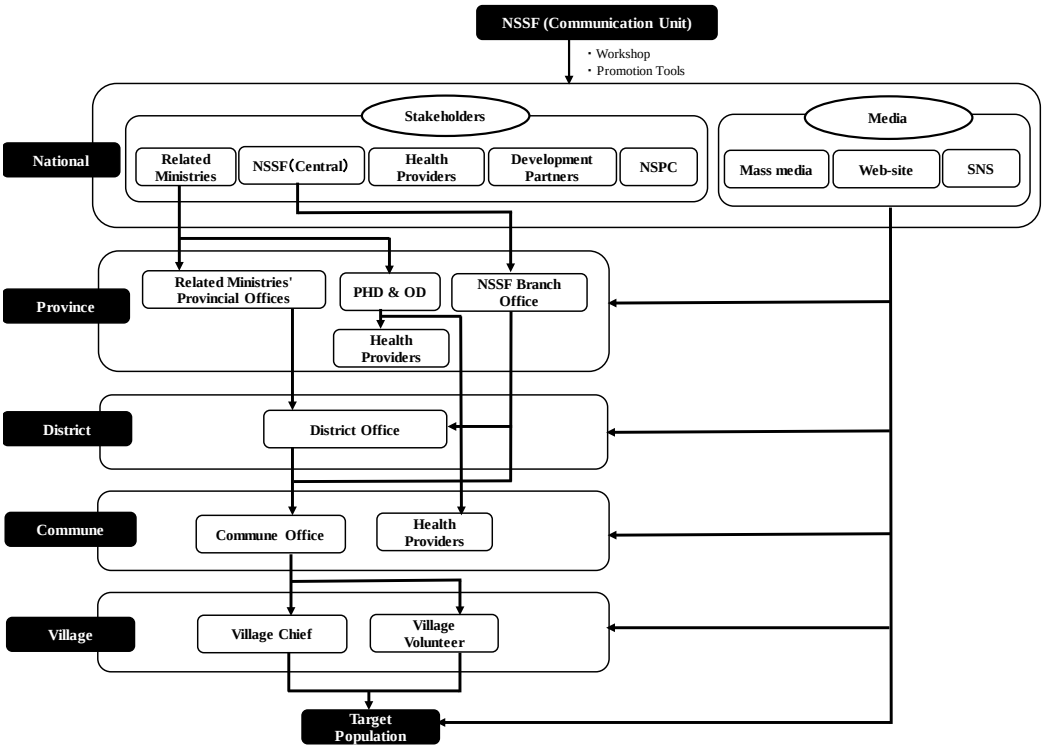



**Figure 5- 11 Implementation flow of advocacy/communication activities**

While the Policy Division currently oversees advocacy and communication activities in NSSF, establishment of the Communication Unit is under preparation to implement more effective communication and advocacy activities for social health insurance in Cambodia. If the

Communication Unit is established, the capacity of the Unit staff will be developed in collaboration with development partners. Once the NSSF Communication Unit becomes functioned, the information should be transmitted through the Unit, and communication and advocacy activities will be carried out sequentially targeting the groups as presented in Table 5-7. Workshops and trainings will be jointly conducted by the NSSF Communication Unit, the NSSF branch office and commune/Sangkat offices. In addition, a direct measure to each target audience will be also undertaken through effective utilization of the mass media (See Figure 5-11).

The above strategy for advocacy/communication will be applied to both the pilot project in which messages are delivered to selected areas of the country, and the nation-wide implementation of the scheme. However, it is effective to utilize a message or a media tool that fits for the selected areas in the pilot project. It is vital to think out a method to deliver message effectively to the prospective SHIP insured to make them understand the contents of SHIP Model correctly without being confused with other schemes, such as the NSSF health insurance for the private employees and civil servants and HEF.

# Chapter 6 Implementation Framework of Social Health Insurance for the Informal Sector Population Pilot Study

Based on the results of the Data Collection Survey conducted between 2015 and 2016, a concept model of social health insurance for the informal sector population (SHIP Model) has been developed. The SHIP Model will be piloted and if it functions well, a health insurance policy will be officially formulated. Subsequently, the health insurance system will be phased in, targeted for nationwide expansion (See Figure 6-1). The target sites, target population, implementation period, counterpart and activities are suggested as follows.


**Figure 6- 1 JICA's assistance in the introduction of social health insurance for the informal sector population in Cambodia**

## 6-1 Target Sites

### (1) Selection of Target Provinces

The SHIP Model pilot project will be implemented in a maximum of 3 ODs in 3 provinces (one OD of each province): Battambang province, Kampong Speu province and Prey Veng province, while insurance registration and social marketing activities will be conducted nationwide in the early stage of the project. Selection criteria for target areas are:

**Population Size**

To measure effectiveness as accurately as possible, it is desirable to select provinces with population size of medium to large. Therefore, based on the Inter-censal Population Survey 2013, provinces with populations over 750,000 were selected. However, the capital city, which has an extremely high population density, and Tboung Khmum, a newly established province with currently limited data, were excluded as potential candidates. Based on this criterion, Battambang province, Kampong Cham province, Kampong Speu province, Kandal province, Prey Veng province, Siem Reap province and Takeo province, highlighted in orange in Table 6-1, were identified as candidates.

**Table 6- 1 Population in Provinces of Cambodia (2013)**

| | Province | Population | | Province | Population |
|---|---|---|---|---|---|
| 1 | Banteay Meanchey | 729,569 | 14 | Prey Veng | 1,156,739 |
| 2 | Battambang | 1,121,019 | 15 | Pursat | 435,596 |
| 3 | Kampong Cham | 1,757,223 | 16 | Ratanak Kiri | 183,699 |
| 4 | Kampong Chhnang | 523,202 | 17 | Siem Reap | 922,982 |
| 5 | Kampong Speu | 755,465 | 18 | Preah Sihanouk | 250,180 |
| 6 | Kampong Thom | 690,414 | 19 | Stung Treng | 122,791 |
| 7 | Kampot | 611,557 | 20 | Svay Rieng | 578,380 |
| 8 | Kandal | 1,115,965 | 21 | Takeo | 923,373 |
| 9 | Koh Kong | 122,263 | 22 | Otdar Meanchey | 231,390 |
| 10 | Kratie | 344,195 | 23 | Kep | 38,701 |
| 11 | Mondul Kiri | 72,680 | 24 | Pailin | 65,795 |
| 12 | Phnom Penh | 1,688,044 | 25 | Tboung Khmum* | 754,000 |
| 13 | Preah Vihear | 235,370 | | | |

*The newly estimated Tboung Khmum was excluded due to the lack of data

Source: Inter-censal Population Survey 2013

### Variation in Income Level

In the pilot project, health insurance needs to be introduced holding aside household income level. Table 6-2 shows the distribution of households by income quintiles[64] in seven provinces with large to medium populations. A province with a low standard deviation indicates little difference in the number of households in each quintile, that is, an area where households of relatively diverse economic levels reside. Based on this criterion, the possible provinces were narrowed down to Battambang province, Kampong Cham province, Kampong Speu province, and Prey Veng province, highlighted in orange in Table 6-2.

**Table 6- 2 The Number of Households in Each Quintile in the Selected Seven Provinces (2014)**

| | Wealth Quintiles | | | | | | |
|---|---|---|---|---|---|---|---|
| | I | II | III | IV | V | mean | SD |
| Kampong Cham | 254 | 208 | 200 | 117 | 186 | 193 | 44 |
| Prey Veng | 339 | 434 | 381 | 272 | 253 | 336 | 67 |
| Battambang | 194 | 187 | 299 | 359 | 365 | 281 | 77 |
| Kandal | 84 | 156 | 366 | 438 | 395 | 288 | 141 |
| Takeo | 108 | 340 | 383 | 518 | 189 | 308 | 145 |
| Siem Reap | 532 | 404 | 233 | 207 | 448 | 365 | 125 |
| Kampong Speu | 417 | 362 | 453 | 458 | 272 | 392 | 69 |

Source: Cambodia Socio-Economic Survey 2014

[64] I is the poorest 20% of population, while V is the wealthiest 20% of population.

### Job Variation

The pilot project should be implemented in provinces with a variety of jobs, such as agriculture, manufacturing and service industries, so that the pilot can be tested for a population with a variety of occupations. Table 6-3 shows the number of households in job types of main income earners for urban and rural households in the four provinces with relatively diverse income levels. In all provinces it seems that there are biases in rural areas rather than urban areas; however, jobs in Battambang province are the most diverse, followed by Prey Veng province and Kampong Speu province. Therefore, it is proposed to select these three provinces as project target sites.

**Table 6- 3 The Number of Households and Job Types of Main Income-earners in Urban/Rural Areas of the Selected Four Provinces (2014)**

(the number of households)

| Province | | Job types in Urban/Rural Areas of Fou Provinces (2014) Job Types | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Salaried | Agri-culture | Fishing | Manu-facture | Service | Others | Total | Mean | SD | Province SD |
| Kampong Cham | urban | 73 | 76 | 6 | 1 | 60 | 23 | 239 | 40 | 74 | 285 |
| | rural | 342 | 573 | 34 | 8 | 69 | 59 | 1085 | 181 | 496 | |
| Prey Veng | urban | 13 | 16 | 0 | 0 | 16 | 3 | 48 | 8 | 17 | 189 |
| | rural | 147 | 437 | 35 | 4 | 37 | 57 | 717 | 120 | 360 | |
| Battambang | urban | 69 | 53 | 5 | 1 | 71 | 41 | 240 | 40 | 28 | 67 |
| | rural | 122 | 307 | 27 | 0 | 31 | 27 | 514 | 86 | 106 | |
| Kampong Speu | urban | 90 | 31 | 0 | 4 | 39 | 15 | 179 | 30 | 73 | 246 |
| | rural | 258 | 480 | 15 | 6 | 42 | 35 | 836 | 139 | 418 | |

Source: Cambodia Socio-Economic Survey 2014

### Geographical variation

Battambang province is located in the northwest of Cambodia, close to the Thai border, Kampong Speu province is to the west of Phnom Penh, and Prey Veng province is in the southeast of the country, bordering Vietnam. There are urban and rural settings in all three provinces (See Figure 6-2).


**Figure 6- 2 Project target area candidate**

**The Utilization Rate of the Public Health Facilities**

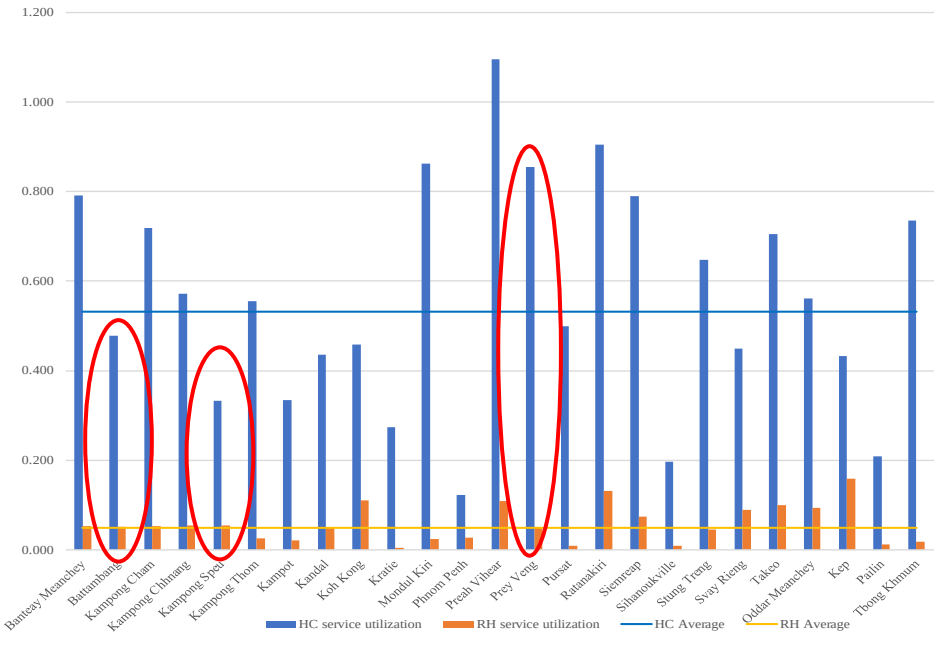



**Figure 6- 3 Public medical facility utilization rate in Cambodia (2016)**

Source: JICA SHIP based on the data obtained from the Ministry of Health of Cambodia

The utilization rate of the public health facilities in Cambodia in 2016 is as shown in Figure 6-3. Utilization rate of referral hospital outpatient clinics is close to the average of all three provinces. The outpatient clinic at the health center has a slightly different trend, but all three provinces do not differ much from the average of the country.

### Variation in quality in public health facilities

Results of the client satisfaction survey[65] indicate that Battambang province is a model for large provinces.[66] Kampong Speu province, on the other hand, scored slightly lower than the national average and was one of the eight provinces recommended for priority improvements. Prey Veng province is in line with the national average. This makes the package of three provinces ideal for the pilot project.

### Market for private health facilities

Since extension of insurance contracts with private health facilities is possibly explored under the SHIP Model, it is desirable to implement the pilot in areas where there is an active private health provider market. Figure 6-4 presents the number of large private health facilities in each province registered at MOH in 2017. In Battambang province, Kampong Speu province and Prey Veng province, it seems that the private health sector market is relatively large.

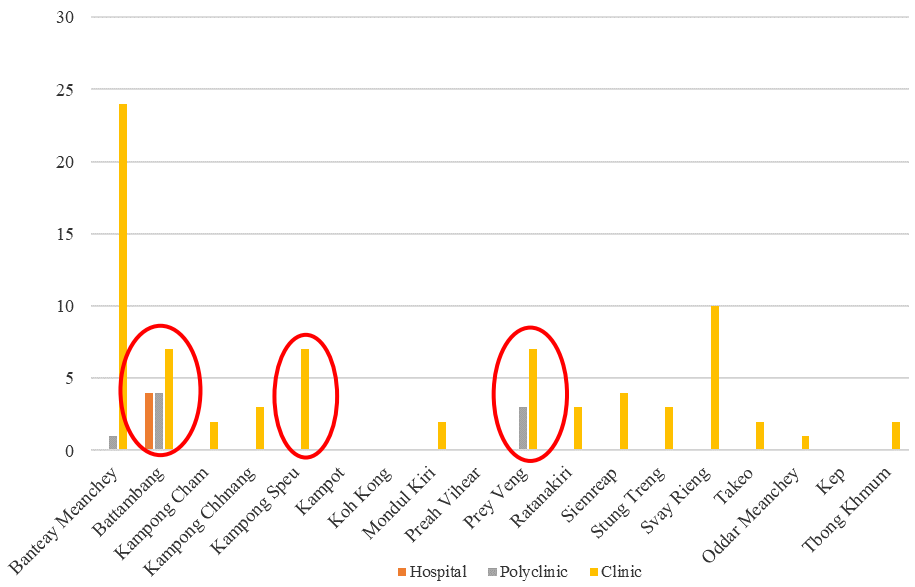



**Figure 6- 4 Number of large private health facilities registered by province (2017)**

Source: MOH

[65] MSD. Peou E. and Depasse J-P. (2012). National Client Satisfaction Survey: Healthcare Services at Public Health Facilities in Cambodia Baseline Report for Ministry of Health.

[66] Provinces whose population is larger than one million

**Capacity of NSSF Branch Office**

Since the operational base of the SHIP Model is at NSSF, it is essential to confirm that the NSSF branch office in the target provinces are functioning properly and the staff has sufficient capacity and commitment to work with the informal sector population at the time of finalizing the target provinces.

### (2) Selection of Target ODs

As mentioned above, since health care in Cambodia is administered in ODs, it is proposed to conduct the pilot project on the ground in ODs. The criteria for selecting ODs in each province are the same as selecting provinces. TWG-SHIP proposes the highlighted ODs in orange in Table 6-4: Maung Russei OD in Battambang province, Ou Dongk OD in Kampong Speu province and Pearaing OD in Prey Veng province. However, it might be necessary to make a final decision based on consultations with stakeholders at the central, provincial and district levels during the project preparation period.

**Table 6- 4 ODs and the Population of the Three Candidate Provinces**

| Province | OD | Population | Province | OD | Population |
|---|---|---|---|---|---|
| Battambang | Thmar Koul | 235,376 | Prey Veng | Kamchay Mear | 96,467 |
| | Maung Russei | 206,480 | | Kampong Trabek | 139,274 |
| | Sampov Luon | 170,735 | | Mesang | 123,585 |
| | Battambang | 379,787 | | Peam Ror | 68,785 |
| | Sangkae | 208,267 | | Pearaing | 118,063 |
| Kampong Speu | Kampong Speu | 347,916 | | Preah Sdach | 131,442 |
| | Kong Pissey | 281,617 | | Svay Antor | 118,880 |
| | Ou Dongk | 133,071 | | Sithor Kandal | 75,701 |
| | Phnom Srouch | 113,753 | | Krong Prey Veng | 82,700 |
| | | | | Baphnom | 97,471 |
| | | | | Peam Chor | 75,367 |
| | | | | Kanhchriech | 72,804 |

Source: Ministry of Health in Cambodia

In SHIP Model, since it is assumed that all residents in the target areas are to be registered, considerable time and personnel input will be required. Therefore, if it is difficult to implement the pilot in all three ODs in three provinces within the timeframe and budget, it is suggested to implement through the Administrative Districts (AD)[67] used by all other sectors. However, in such a case, it is important to ensure that the target ADs include at least one referral hospital, for equitable health service provision.

[67] Normally an AD is smaller than its OD, and most ODs have multiple ADs.

**Motivation of commune/Sangkat staff and village officers**

Since it is challenging to enroll the informal sector, the health insurance operation staff must have strong motivation and perseverance. Therefore, it would be desirable to utilize commune/Sangkat officials and village representatives with a strong commitment to provide equitable health services to residents as a criterion of site selection.

## 6-2 Target Population

The number of communes/Sangkats, villages, households, and population of the proposed 3 ODs target sites are estimated as shown in Table 6-5.

**Table 6- 5 The Estimated Target Population of the Pilot Project**

| Province<br>OD | Battambang<br>Maung Russei | Kampong Speu<br>Ou Dongk | Prey Veng<br>Pearaing | Total |
|---|---|---|---|---|
| **Commune/Sangkat** | 20 | 15 | 9 | 44 |
| **Village** | 175 | 244 | 74 | 493 |
| **Households** | 44,105 | 28,929 | 26,236 | 99,270 |
| **Population** | 206,480 | 133,071 | 118,063 | 457,614 |

Source: Cambodian Ministry of Health

## 6-3 Implementation Period

The proposed pilot implementation period is April 2019 to March 2022.

## 6-4 Counterpart government bodies

The formation of SHIP Model was undertaken with MOH as it is the principle ministry working on health protection for the informal sector. However, social insurance was designed for the informal sector under the SHIP Model and NSSF is assigned to cover all the population, including the informal sector. In 2017, the National Social Protection Council (NSPC) was established. In these circumstances, if JICA continues to support in the field, it is recommended that the agency work not only with MOH, but also with NSSF, an implementation agency of SHIP, NSPC, a decision-making body for health protection policy, and MEF, a core ministry of NSPC, as counterparts, as coordination with all these new stakeholders has been increasingly important in Cambodia.

## 6-5 Project Activities

Activities of the pilot project consist of: (1) SHIP Model piloting, (2) Registration System Building and Human Resource Development and (3) advocacy and communication. SHIP Model will be piloted in the target areas, and the insurance scheme will be rolled out over time.

However, the registration system-building, human resource development, and social marketing activity will be undertaken nationwide simultaneously at the start of the SHIP Model pilot (See Figure 6-5). As part of the SHIP pilot project, a single registration process for the social protection system will be introduced to NSSF and all citizens will be registered. Currently, the existing NSSF registration system is linking with the civil registration managed by MOI. When registering people at NSSF, the system checks the consistency of the data entered and the civil registration information. In the future, NSSF will promote civil registration in connection with health insurance. It also enables NSSF to capture who are registered in the MOI, so that it can encourage citizens to be enrolled in health insurance individually.

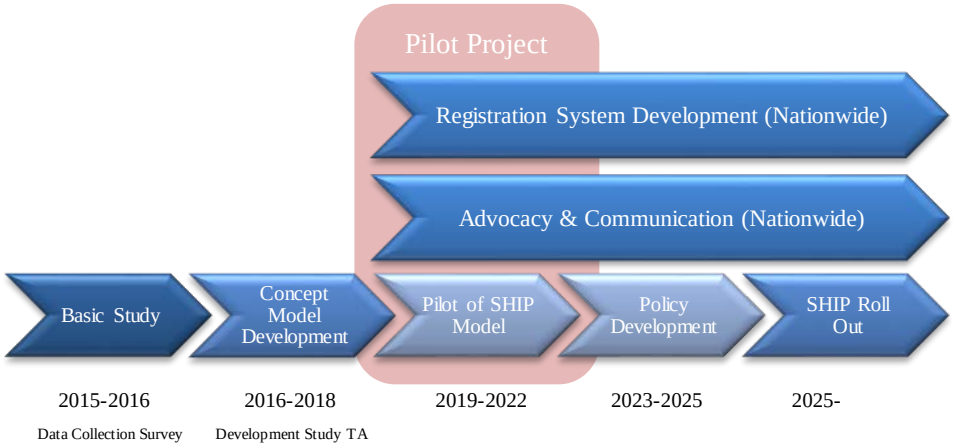



**Figure 6- 5 Conceptual diagram (draft) of SHIP Model pilot project**

### (1) SHIP Model Piloting

SHIP Model will be piloted for its functionality in the target ODs. These activities include preparation of implementation guidelines and establishing a management mechanism for the insured. Implementation guidelines will be prepared based on the actuarial analyses by experts. The guidelines include insurance premiums, benefit packages, options for premium collection methods, and a monitoring evaluation framework. At the time of introducing SHIP, staff in charge of SHIP at NSSF branch offices will be hired and trained. Moreover, a management system for the SHIP insured will be established at the NSSF branch offices, in cooperation with the commune/Sangkat staff and the village representatives.

### (2) Registration System Building and Human Resource Development (Nationwide)

The target of SHIP is the informal sector population; however, as mentioned earlier, a worker's shift from informal sector to formal sector and formal sector to informal sector frequently

occurs, and households currently receiving ID-Poor certification could become members of the informal sector population in the future. In other words, all citizens are potential targets of SHIP; and therefore, all residents will be registered.

As the project starts, the IT information system will be introduced, and a training-manual for IT engineers and users will be developed. After that, training workshops on registrations will be held for the staff at the NSSF headquarters, the NSSF branch offices, and at communes/Sangkats and village representatives, so that the insurance registration of residents will be processed consistently in each region.

**(3) Advocacy and Communication (Nationwide)**

Social marketing activities will be carried out not only for residents, but also for health workers and health insurance administration staff to have a better understanding of health insurance. Since this activity promotes insurance registration, it will be implemented simultaneously with registration.

# References


Annear, P. L. et al. (2015). The Kingdom of Cambodia Health System Review. (WHO Health Systems in Transition, Vol. 5, No.2). Geneva: WHO Press.

Asian Development Bank. (2017). Key Indicators for Asia and the Pacific 2017. Retrieved January 30, 2018, from https://www.adb.org/publications/key-indicators-asia-and-pacific-2017

The Cambodian Law Library (2017). Retrieved June 10, 2017, from http://en.chbab.net/about-cambodian-law

Chakraborty NM, Fry K, Behl R, Longfield K. Simplified Asset Indices to Measure Wealth and Equity in Health Programs: A Reliability and Validity Analysis Using Survey Data From 16 Countries. Global Health: Science and Practice. 2016; 4(1):141-154. doi:10.9745/GHSP-D-15-00384.

De Quiros, Emilio Jr. (2017). Report to the Royal Government of Cambodia The Roles and Functions of the National Council for Social Protection (NSPC), the Executive Committee, Sub-Committees and the Secretariat.

Directorate-General of Budget, Accounting and Statistics, the Republic of China (1980-1999). Social Indicators 1980-1999.

Equitytool. (2017). Retrieved January 15, 2018, from http://www.equitytool.org/cambodia/.

Euromoney Institutional Investor. (2017). CEIC Database. Retrieved December 10, 2017, from https://www.ceicdata.com/en/indicator/cambodia/annual-household-income-per-capita

Federation of Korean Medical Insurance Societies. ((1980-1999). Annual Report of Korean National Health Insurance 1980-1999.

Inter-Ministerial Prakas on Revision of Annex I of Inter-Ministerial Prakas No. 173 LV/PRK., DATED 05 May 2016, on Provider Payment Methods for Health Care.

International Labour Organization (2017). Operational Review of the Cambodian National Social Security Fund - Recommendations for Institutional Reforms.

International Labour Organization (2016). Rwanda: Progress towards Universal Health Coverage. Social Protection in Action: Building Social Protection Floors.

International Labour Organization (2015). CAMBODIA Technical Note Estimation of Contribution Rates for the Health Insurance, Maternity, and Sickness benefits' branch of the National Social Security Fund (NSSF).

Japan International Cooperation Agency (JICA) & Global Link Management, Inc. (2016). Data Collection Survey on the Social Health Protection System in the Kingdom of Cambodia.

Japan International Cooperation Agency (JICA), the Research Institute of Tuberculosis, Japan Anti-Tuberculosis Association, Azusa Sekkei Co. & La Estrella Co., Ltd. (2017). Data Collection Survey on Health Human Resources and Facilities in the Kingdom of Cambodia.

Japan International Cooperation Agency & Mitsubishi UFJ Research and Consulting Co., Ltd. (2012). Data collection survey on social security sector in Asia final report: country report. Tokyo: Japan International Cooperation Agency.

Jordanwood, T., Grundmann C. (2015). "Health Equity Fund System Technical Brief" USAID Social Health Protection Project implemented by University Research Co., LLC. August 2015

Khim K. & Annear P. L. (2013). "Strengthening district health service management and delivery through internal contracting: Lessons from pilot projects in Cambodia." Social Science & Medicine, Volume 96 (November 2013), pp. 241-249.

The Kingdom of Cambodia. (2010). The Constitution of the Kingdom of Cambodia. Unofficial Translation Version Supervised by the Constitutional Council.

Lee, R. (2007). Comparative Analysis on the Public Health Insurance Policy in South Korea and Taiwan: Industrialization, Democratization, and Social Policy in Late-comer Societies. Unpublished Doctoral Dissertation, Washeda University, Tokyo.

Ministry of Health (2018). Health Sector Progress in 2017.

Ministry of Health (2018). Prakas. To provide health insurance to Cyclo workers from Wednesday 03 Jan 2018 for free from Public Health facility according to the word of Hun Sen on 03 Jan 2018.

Ministry of Health (2016). Annual Health Financing Report 2016.

Ministry of Health (2014). Standard Benefit Package and Provider Payment Mechanism for Health Equity Funds, 2014

Ministry of Health (2008). Service Delivery Grant – Operational Manual.

Ministry of Health (2007). Guidelines on Minimum Package of Activities for Health Center Development 2008~2015 (2007)

Ministry of Health, Bureau of Health Economics and Financing of the Department of Planning and Health Information, with support from the World Health Organization. (2018). Estimating Health Expenditure in Cambodia: National Health Accounts Report (2012-2016 Data). Unpublished manuscript.

Ministry of Interior. (2016). The National Strategic Plan on Identification 2017-2026 (NSPI).

Ministry of Labour and Vocational Training and Ministry of Health (2017). Inter-Ministerial Prakas on Revision of Annex I of Inter-Ministerial Prakas No. 173 LV/PRK., DATED 05 May 2016, on Provider Payment Methods for Health Care.

Ministry of Labour and Vocational Training and Ministry of Health (2017). Prakas on Improving the Service for HEF for Informal Workers and Additional USD100 for Delivery According to Prime Minister Hun Sen.

Ministry of Labour and Vocational Training (2016). PRAKAS ON HEALTH CARE BENEFITS. NO. 109 LV/PrK.

National Centre for Global Health and Medicine (2015). Health Protection Systems: How can Japan utilize own experience for achieving UHC in developing countries? Symposium conducted in Tokyo.

National Institute of Statistics, Ministry of Planning (2013). Cambodia Inter-censal Population Survey 2013 Final Report.

National Institute of Statistics, Ministry of Planning. (2010-2017). Cambodia Socio-Economic Survey 2009-2016.

National Institute of Statistics, Ministry of Planning (2009). Cambodia General Population Census of Cambodia 2008.

National Institute of Statistics, Ministry of Planning. (2008). Cambodia Socio-Economic Survey 2006/7.

National Institute of Statistics, Ministry of Planning, Directorate General for Health, and ICF International, (2015). Cambodia Demographic and Health Survey 2014. Phnom Penh, Cambodia, and Rockville, Maryland, USA: National

Osawa, S., & Walker DG. Trust in the context of community-based health insurance schemes in Cambodia: villagers' trust in health insurers. Advances in Health Economics and Health Services Research. 21:107-32.

Peou E. & Depasse J. (2012). National Client Satisfaction Survey: Healthcare Services at Public Health Facilities Baseline Report for Ministry of Health.

The Phnom Penh Post. (30 October 2017). Draft budget for 2018 approved by the Council of Ministers.

P4H C+ Overview Health Care Financing Activities 2017 (updated October 2017)

The Royal Government of Cambodia. (2017). National Social Protection Policy Framework 2016-2025.

The Royal Government of Cambodia. (2011). Law on Social Security Schemes for Persos Defined by the Provisions of the Labour Law (Royal Kram NS/RKM/0902/018).

Schneider F. (2017) New Estimates for the Shadow Economies of 11 Asian Countries from 2000 to 2014. In: Rövekamp F., Bälz M., Hilpert H. (eds) Cash in East Asia. Financial and Monetary Policy Studies, vol 44. Springer, Cham

The World Bank. (2018). World Development Indicators. Retrieved September 3, 2018, from http://databank.worldbank.org/data/reports.aspx?source=world-development-indicators

The World Bank (2014). Encouraging Health Insurance for the Informal Sector: A Cluster Randomized Trial, Policy Research Working Paper 6910.

World Health Organization (2003). How Much Should Countries Spend on Health? DISCUSSION PAPER NUMBER 2.

World Health Organization & International Bank for Reconstruction and Development/The World Bank. (2017). Tracking Universal Health Coverage: 2017 Global Monitoring Report.

# ATTACHMENTS

# QUESTIONNAIRE FOR HOUSEHOLD SURVEY ON SOCIAL HEALTH PROTECTION SYSTEM IN CAMBODIA

**Informed Consent**

Greetings!

My name is _____. I work at the Center for Population Health Research, KHANA as a data collector. We regularly conduct health surveys in different parts of Cambodia. We are currently covering about 1,000 households (total) in Battambang and Kampong Speu under an important social health protection survey. We would ask you about health seeking behavior, utilization of health facilities, out of pocket expenditure on health and expectation for health insurance system. It will take approximately 30 minutes.

Your participation in this survey is voluntary. There is no direct benefit or payment to you for taking part in this survey. You do not have to participate, if you do not want to, and even if you agree to participate, you can stop the interview at any time. Everything reported during the interview will remain confidential to the extent allowed by law. Your name or other identification will not be reported to government bodies. Your honest answers will help in improving the public health system in Cambodia. We would also like to inform you that the survey is funded by Japan International Cooperation Agency (JICA). Any anonymous datasets developed using information from this survey will be given to JICA for use by authorized researchers. We would greatly appreciate your help in responding to this survey.

Do you have any questions for me?

Would you be willing to participate in the survey? 0. No 1. Yes

## A) Interview Identification

| | | | |
|---|---|---|---|
| 1. | Questionnaire No. | /…../…../…../…../ | |
| 2. | Province Code | /…../…../ | |
| 3. | OD code | /…../…../ | |
| 4. | AD Code | /…../…../ | |
| 5. | Commune Code | /…../…../ | |
| 6. | Village Code | /…../…../ | |
| 7. | Date of interview | Day_____, Month_____, 2017<br>Start time_____<br>End time_____ | |
| 8. | Interviewer's ID | /…../…../ | |
| 9. | Supervisor's ID | /…../…../ | |
| 10 | Checked by (full name) | | |
| 11 | Results | Completed | 1 |
| | | No household members at home | 2 |
| | | Refused | 3 |
| | | Dwelling not found | 4 |
| | | Finish at Q#..... | 5 |
| | | Other (Specify) _____ | 6 |

## B) Household Profile/ Respondent Identification/ Socio-Economic Status

| Please list up to three people that mainly earn income for the family (ID)<br>Relationship to household head | | Sex<br>**1: Male**<br>**2: Female** | Age in completed years<br>**Under one year code 0** | What is (ID)'s current marital status (if age 13 or above)?<br>**Use codes below** | Highest education level achieved | Does (name) currently work?<br>0=No<br>1=Yes | In what kind of industry/business (economic activity) did ..[ID].. work in his/her main occupation/activity | Under what type of employer did ..[NAME].. work in his/her main occupation/economic activity?<br>1=Government<br>2=Private Company/Industrial/Business Owner<br>3=NGO<br>4=Self employed<br>5=Other (Specify)…… |
|---|---|---|---|---|---|---|---|---|
| **ID** | **1.** | **2.** | **3.** | **4.** | **5.** | **6.** | **7.** | **8.** |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

**Q1 CODES:** 1= Head, 2 = Spouse, 3 = Son/Daughter, 4 = Stepchild, 5 = Adopted, child/ Foster child, 6 = Parent, 7 = Sibling ,8 = Grandchild, 9 = Nephew/Niece, 10 = Son/Daughter-in-law, 11 = Brother/Sister-in-law, 12 = Parent-in-law, 13 = Other relatives, 14 = Servant, 15 = Other non-relative including boarder

**Q4 CODES:** 1= Never married, 2 = married/live together, 3= married/living separated, 4= divorced/ living separated, 5= widowed.

**Q7 CODES:** 1= Seller, 2=Product Inventor, 3 = Hotel/Tour/Restaurant, 4= Hair dresser/barber/embellishment , 5 =Mechanic/electrician/technician, 6 = Battery Charger, 7=Factory Worker, 8 =Fish/animal raiser, 9 =Money Lender/money exchange/gold seller, 10 =Moto taxi, 11=Taxi, 12 =Agriculture (Laborer), 13 = Non-Agriculture (Laborer), 14= Civil Servant, 15= Handicraft, 16=Farmer, 17=Fishermen, 18=Company/NGO staff, 19=Bank/Microfinance staff, 20 = Other (Specify)……

## C) Household Characteristic

| No. | Question | Coding Categories | | Skip To |
|---|---|---|---|---|
| 9 | Does your household have electricity? | No | 0 | |
| | | Yes | 1 | |
| 10 | Does your household have a television? | No | 0 | |
| | | Yes | 1 | |
| 11 | Does your household have refrigerator? | No | 0 | |
| | | Yes | 1 | |
| 12 | Does your household have CD/DVD player? | No | 0 | |
| | | Yes | 1 | |
| 13 | Does your household have wardrobe? | No | 0 | |
| | | Yes | 1 | |
| 14 | Does your household have generator/battery/solar panel? | No | 0 | |
| | | Yes | 1 | |
| 15 | Does any member of your household own a motorcycle/scooter? | No | 0 | |
| | | Yes | 1 | |
| 16 | Does any member of your household own a watch? | No | 0 | |
| | | Yes | 1 | |
| 17 | Does any member of your household have bank account? | No | 0 | |
| | | Yes | 1 | |
| 18 | What is the main source of drinking water during the wet season for members of your household? | Pipe in to dwelling | 1 | |
| | | Other sources of water | 2 | |
| 19 | What is the main material of the floor? | Ceramic tile | 1 | |
| | | Wood planks | 2 | |
| | | Other material | 3 | |
| 20 | What is the main material of exterior walls? | Cement block | 1 | |
| | | Palm/bamboo/ thatch | 2 | |
| | | Other material | 3 | |
| 21 | What type of fuel does your household mainly use for cooking? | LPG | 1 | |
| | | Wood | 2 | |
| | | Other material | 3 | |
| 22 | What kind of toilet facility do member of your household usually use? | No facility/bush/field | 1 | |
| | | Flush to piped sewer system (not share with other household) | 2 | |
| | | Flush to septic tank (not share with other household) | 3 | |
| | | Other type of toilet | 4 | |

| | | | | |
|---|---|---|---|---|
| 23 | Approximately how much is the household's average income per month?<br>[Please circle KHR)<br>1USD=4,000 KHR | _____KHR | | |
| 24 | Assume that someone in your household gets into an accident; do you need to borrow money to pay for health care? | No | 0 | |
| | | Yes | 1 | |
| 25 | Has your household ever had a loan or sold your valuable goods like jewelries, TV, etc. in the last 12 months? | No | 0 | 0→Q30 |
| | | Yes (Loan) | 1 | |
| | | Yes(Sold) | 2 | **If 2 do not ask 28&29** |
| | | Don't know | 88 | 88→Q30 |
| 26 | What did you have the loan or sell your valuable goods in the last 12 months for?<br><br>PLEASE ASK FOR THE BIGGEST LOAN IF MULTIPLE LOANS WERE TAKEN | Food | 1 | |
| | | Rent, water, electricity | 2 | |
| | | Children's education | 3 | |
| | | Health expense | 4 | **4 ask Q27** |
| | | Marriage | 5 | |
| | | Funeral | 6 | |
| | | House/land | 7 | |
| | | Equipment/materials for work | 8 | |
| | | Other (Specify)_____ | 9 | |
| | | Don't know | 88 | |
| 27 | If above Q 26 #4, about how much did you spend? | …….. KHR | | |

| | | | | |
|---|---|---|---|---|
| 28 | Who did you borrow it from? | Money lenders | 1 | |
| | | Friends/Neighbour | 2 | |
| | | Microfinance institutions | 3 | |
| | | Banks | 4 | |
| | | Relatives | 5 | |
| | | Other (specify…….) | 6 | |
| 29 | Have you paid off this loan yet? | No | 0 | |
| | | Yes | 1 | |

| | | | | |
|---|---|---|---|---|
| 30 | Where does your household seek information necessary for everyday | Listen to radio | 1 | |
| | | Newspaper | 2 | |
| | | TV | 3 | |
| | | Internet | 4 | |
| | | Social Media (facebook, line, whatsapp..) | 5 | |
| 31 | How many dependents in your family? | Under age 18…… person | 1 | |
| | | Age 18 to 65……person | 2 | |
| | | Over the age of 65…… person | 3 | |
| | | Total number of dependents …… | 4 | |

## D). Utilization of Health Services

| No. | Question | Coding Categories | | Skip to |
|---|---|---|---|---|
| INSTRUCTION: Asking about **the most recent illness episode** in your family. | | | | |
| 32 | Did you/your family member seek care from a health facility/ personnel in the past 12 months? | No | 0 | 0→Q41 88→Q 42 |
| | | Yes | 1 | |
| | | Don't know | 88 | |
| 33 | Who was the family member who the most recent care from health facility/personnel? | Household Head | 1 | |
| | | Spouse | 2 | |
| | | Family member under the age of 18 | 3 | |
| | | Family member at the age of 18 to 65 | 4 | |
| | | Family member at the age over 65 | 5 | |
| 34 | When was the most recent illness episode about? [In days, weeks, months] | _____ago | | |
| 35 | Was it IPD or OPD? | Neither | 0 | |
| | | IPD | 1 | |
| | | OPD | 2 | |
| 36 | Was this due to chronic illness or disability? | No | 0 | |
| | | Chronic illness | 1 | |
| | | Disability | 2 | |
| 37 | Were you/your family member referred to another hospital? | No | 0 | 1→Q 40 |
| | | Yes | 1 | |
| | | Don't know | 88 | |
| 38 | If yes, did you/your family member go to the referred hospital? | No | 0 | |
| | | Yes | 1 | |

| | | | | |
|---|---|---|---|---|
| 39 | Why did you/your family member not seek care from the referred health facility?<br><br>[PROBE: Any other reason?]<br><br>[RECORD ALL MENTIONED] | Don't know where to go/ whom to ask | 1 | |
| | | Too far | 2 | |
| | | Too expensive | 3 | |
| | | No time | 4 | |
| | | Fear of being rejected | 5 | |
| | | Not allowed by family/ relatives | 6 | |
| | | Poor quality of care | 7 | |
| | | Not felt the need | 8 | |
| | | Have heard that people there are not well behaved | 9 | |
| | | Others (Specify)_____ | 10 | |
| 40 | How was the treatment financed? | Household income | 1 | |
| | | Savings | 2 | |
| | | Borrowing | 3 | All→Q 42 |
| | | Selling assets | 4 | |
| | | Selling household production in advance | 5 | |
| 41 | Why did you/your family member not seek care from a health facility/ personnel?<br><br>[PROBE: Any other reason?]<br><br>[RECORD ALL MENTIONED] | Don't know where to go/ whom to ask | 1 | |
| | | Too far | 2 | |
| | | Too expensive | 3 | |
| | | No time | 4 | |
| | | Fear of being rejected | 5 | |
| | | Not allowed by family/ relatives | 6 | |
| | | Poor quality of care | 7 | |
| | | Not felt the need | 8 | |
| | | Have heard that people there are not well behaved | 9 | |
| | | Others (Specify)_____ | 10 | |
| | | Other sources (specify) | 6 | |

| | | | | |
|---|---|---|---|---|
| 42 | Where did you/your family member go for the health services?<br><br>If you/your family member went to more than one health facility, please choose all, and place the number in order besides the name of the health facility.<br><br>IF UNABLE TO DETERMINE WHETHER THE FACILITY IS PUBLIC OR PRIVATE, WRITE THE NAME OF THE FACILITY/ PLACE BELOW.<br><br>_____<br>(Name of the facility)<br><br>_____<br>(Place) | **<u>Public</u> medical sector:** | | 7-16→Q 44 |
| | | Central hospital (in Phnom Penh) | 1 | |
| | | Provincial hospital | 2 | |
| | | District hospital | 3 | |
| | | Health center | 4 | |
| | | Health post | 5 | |
| | | Other public sector health facility | 6 | |
| | | **<u>Private</u> medical sector:** | | |
| | | Private hospital – tertiary to secondary | 7 | |
| | | Private clinic | 8 | |
| | | Village health practitioner | 9 | |
| | | Traditional healer | 10 | |
| | | Pharmacy/drugstore | 11 | |
| | | Traditional birth attendant (TBA) | 12 | |
| | | NGO or Trust hospital/clinic | 13 | |
| | | Other private sector facility | 14 | |
| | | Home treatment | 15 | |
| | | Other (Specify) _____ | 16 | |
| 43 | If you/your family member used the government facility, how satisfied were you with the health care received? | Very satisfied | 1 | All→Q 45 |
| | | satisfied | 2 | |
| | | Unsatisfied | 3 | |
| | | Very unsatisfied | 4 | |
| | | Don't know | 88 | |
| 44 | If you/your family member did not use the government facility, why did you/your family member <u>not</u> go to a government facility?<br><br>[PROBE: Any other reason?]<br><br>[RECORD ALL MENTIONED] | No nearby government facility | 1 | |
| | | Government facility's business hours/service time not convenient | 2 | |
| | | Health personnel often absent | 3 | |
| | | Fear of being rejected | 4 | |
| | | Health personnel's attitude rude/not kind | 5 | |
| | | Waiting time too long | 6 | |
| | | Not clean | 7 | |
| | | Poor quality of care | 8 | |
| | | No drugs/medication | 9 | |
| | | Non-availability of bed | 10 | |
| | | Other (Specify)_____ | 11 | |
| | | Don't know | 88 | |

| | | | | |
|---|---|---|---|---|
| INSTRUCTION: Q53-Q57 are general questions on health service utilization of your family. | | | | |
| 45 | What is your general perception on the health care at a government facility? | Very satisfied | 1 | |
| | | Satisfied | 2 | |
| | | Unsatisfied | 3 | |
| | | Very unsatisfied | 4 | |
| | | Other (Specify)_____ | 5 | |
| | | Don't know | 88 | |
| 46 | Which facility do you/family prefer to go? | Public | 1 | |
| | | Private | 2 | |
| | | Other (specify)_____ | 5 | |
| 47 | Why do you choose that facility? | Good quality | 1 | |
| | | Convenience | 2 | |
| | | Affordable | 3 | |
| | | No other choice | 4 | |
| | | Other (Specify)_____ | 5 | |
| 48 | How far is the nearest health facility from your house? [Time and means are also accepted] e.g. 20 minutes by motorcycle | Within 1 km | 1 | |
| | | 1-2 km | 2 | |
| | | 2-5 km | 3 | |
| | | More than 5 km | 4 | |
| | | Not sure | 88 | |
| 49 | What is the nearest public health facility? | Central Hospital (Phnom Penh) | 1 | |
| | | Provincial hospital | 2 | |
| | | District hospital | 3 | |
| | | Health center | 4 | |
| | | Health post | 5 | |
| | | Don't know | 88 | |
| 50 | What are the barriers for your family in accessing health care? [MULTIPLE RESPONSES POSSIBLE] | Costs | 1 | |
| | | No facilities nearby | 2 | |
| | | Do not know where to go | 3 | |
| | | Waiting time | 4 | |
| | | Poor quality of care | 5 | |
| | | Attitude of health workers not good | 6 | |
| | | Fear for health care | 7 | |
| | | Transportation | 8 | |
| | | No problems | | |

## E). Social Health Protection System

| No. | Question | Coding Categories | | Skip to |
|---|---|---|---|---|
| 51 | Is anyone in this household covered by a social health protection scheme? | No | 0 | 0→Q 61 |
| | | Yes | 1 | |
| | | Don't know | 88 | 88→Q 61 |
| 52 | What type of social health protection scheme?<br>Multiple answer possible<br><br>[PROBE: Any other type?]<br><br>[RECORD ALL MENTIONED]<br><br>[HAVE THEM SHOW THEIR INSURANCE CARD] | National Social Security Fund (NSSF) | 1 | 88→Q 61 |
| | | National Social Security Fund for Civil Servants (NSSF-C) | 2 | |
| | | Health Equity Fund (HEF) | 3 | |
| | | Community Based Health Insurance (CBHI) | 4 | |
| | | Private Insurance | 5 | |
| | | Others (Specify)_____ | 6 | |
| | | Don't know | 88 | |
| 53 | What is the social health protection about? | Health insurance | 1 | |
| | | Work injury | 2 | |
| | | Pension | 3 | |
| | | Other_____ | 4 | |
| | | Don't know | 88 | |
| 54 | Have you/your family member made use of the health insurance scheme to get any service so far? | No | 0 | 0→Q59 |
| | | Yes | 1 | 88→Q59 |
| | | Don't know | 88 | |
| 55 | What illness/condition did you or your family member use it for the most recent illness? | Acute illness (Fever, diarrhea, cough, intestine, stomachache) | 1 | |
| | | Chronic illness (Diabetes, hypertension, heard disease) | 2 | |
| | | Pregnancy/child-birth related | 3 | |
| | | Accident/emergency/ Surgery | 4 | |
| | | Hospitalization | 5 | |
| | | Others (Specify)_____ | 6 | |
| | | Don't know | 88 | |
| 56 | When was the most recent episode about? [In months] | _____ month | | |
| 57 | How did you feel when you/your family member used the social protection scheme? | Very Satisfied | 1 | |
| | | Satisfied | 2 | |
| | | Unsatisfied | 3 | |
| | | Very unsatisfied | 4 | |
| | | Don't know | 88 | |

| | | | | |
|---|---|---|---|---|
| 58 | Have you/your family member ever failed to use health insurance at a health facility? | No | 0 | 0→Q61 |
| | | Yes | 1 | |
| 59 | Do you know which hospitals you/your family member are eligible to use the insurance scheme?<br>[YES→PROVE: LET THEM TELL] | No | 0 | |
| | | Yes (Specify……) | 1 | |
| 60 | What were the reasons that you/your family member could not use the health insurance? | Not aware of the coverage at that time | 1 | |
| | | Did not bring the card | 2 | |
| | | Told ineligible | 3 | |
| | | Personnel refused for some reason | 4 | |
| | | Told that the specific service was not covered under this scheme | 5 | |
| | | Payment was anyway requested | 6 | |
| | | Others (Specify)_____ | 7 | |
| | | Don't know | 88 | |
| 61 | Do you have an ID Poor card?<br>[HAVE THEM SHOW THEIR ID POOR CARD] | No | 0 | |
| | | Yes | 1 | |
| | | Don't know | 88 | |
| 62 | Do you know what health insurance is?<br>[HAVE THEM EXPLAIN ABOUT INSURANCE.]<br>POINTS:<br>Words to be mentioned:<br>"premium," "benefit," and "co-payment." | Yes, I know what health insurance is | 1 | |
| | | I know something about health insurance | 2 | |
| | | I know nothing about health insurance. | 3 | |
| 63 | What kind of health insurance scheme would you like to join? | Government health insurance | 1 | 5 →Q 65<br>88→Q 66 |
| | | Community health insurance | 2 | |
| | | Private health insurance | 3 | |
| | | Other (Specify) _____ | 4 | |
| | | Don't want to join | 5 | |
| | | Don't know | 88 | |
| 64 | Why would you like to join the above health insurance scheme? | Good reputation | 1 | |
| | | No premium | 2 | |
| | | Can receive better health service | 3 | |
| | | Others (Specify)_____ | 4 | |
| | | Don't know | 88 | |

| | | | | |
|---|---|---|---|---|
| 65 | Why would you not like to join any health insurance scheme? | Don't understand | 1 | |
| | | Don't trust | 2 | |
| | | Don't use health service | 3 | |
| | | Others (Specify)_____ | 4 | |
| | | Don't know | 88 | |
| 66 | If the government insurance requires mandatory enrollment (with the need to pay premiums), would you agreed to join the scheme? | Agree | 1 | |
| | | Neutral | 2 | |
| | | Not agree | 3 | |
| | | Don't know | 88 | |
| 67 | If the government insurance requires mandatory registration (not necessarily with the need to pay premiums), would you register? | Yes | 1 | |
| | | No | 2 | |
| | | Not sure | 3 | |
| 68 | Who do you think is best suited to communicate about the health insurance and premium payments? | Village chief | 1 | |
| | | member of the health scheme | 2 | |
| | | health care provider | 3 | |
| | | /health facility admin staff/ | 4 | |
| | | Others (Specify)_____ | 5 | |
| INSTRUCTION: General questions on social health protection. | | | | |
| 69 | How many formal association/union in your community? | Fisherman | 1 | |
| | | Factory worker | 2 | |
| | | Famer | 3 | |
| | | Teacher | 4 | |
| | | Police/military | 5 | |
| | | Other (specify…….) | 6 | |
| | | Self-Support Group | 7 | |
| | | Rice Bank | 8 | |
| | | Cow Bank | 9 | |
| | | Microfinance | 10 | |
| | | Aging People | 11 | |
| | | None | 12 | |
| 70 | How much would you be willing to pay for the **Government** health insurance per person per month? | Not willing to pay | 1 | |
| | | Up to 10,000 KHR | 2 | |
| | | Up to 30,000 KHR | 3 | |
| | | Up to 50,000 KHR | 4 | |
| | | Up to 80,000 KHR | 5 | |
| | | Over 80,000 KHR | 6 | |

| | | | | |
|---|---|---|---|---|
| 71 | How much would you be willing to | Not willing to pay | 1 | |

| | | | | |
|---|---|---|---|---|
| | pay for the **Private** health insurance per person per month? | Up to 10,000 KHR | 2 | |
| | | Up to 30,000 KHR | 3 | |
| | | Up to 50,000 KHR | 4 | |
| | | Up to 80,000 KHR | 5 | |
| | | Over 80,000 KHR | 6 | |
| 72 | What do you value in health insurance? | benefit package | 1 | |
| | | premiums | 2 | |
| | | insured institutions | 3 | |
| | | claim process | 4 | |
| | | Others (Specify)_____ | 5 | |
| 73 | If available, would you like to join a health insurance for which you pay premiums consistently and receive payment support for health care when you fall sick or get injured? | No | 0 | |
| | | Yes | 1 | |
| | | Already insured by insurance | 3 | |
| 74 | If a health insurance is offered with a set premium of 14,000 riel per person per month (168,000 riel per person per year) which gives you free access to public facility and also assist in private sector payment , would you be able to pay the premiums? | No | 0 | |
| | | Yes | 1 | |
| | | Partly (may be not for all members of the household) | 2 | |
| | | Not sure | 3 | |
| 75 | Do you think that the premiums should be set equally to all households in community? | Yes | 1 | 1→Q 77<br>88→Q 77 |
| | | No | 2 | |
| | | Don't Know | 88 | |
| 76 | If no to the question above, how do you think that the premiums should be set? | Household income | 1 | |
| | | Property assets (land, housing, etc.) | 2 | |
| | | Job types | 3 | |
| | | Number of household members | 4 | |
| | | Number of dependents in the household | 5 | |
| | | Others (Specify)_____ | 6 | |
| 77 | What is the most convenient frequency to collect the premium? | Weekly | 1 | |
| | | Monthly | 2 | |
| | | Seasonally | 3 | |
| | | Annual | 4 | |
| | | Others (Specify)_____ | 5 | |
| 78 | If you are to pay premiums, which | Home visit and collection | 1 | |

| | | | | |
|---|---|---|---|---|
| | method(s) of payment do you prefer? | Money transfer such as Wing | 2 | |
| | | Through utility bills (e.g. for electricity) | 3 | |
| | | Bank account automatic debit | 4 | |
| | | Bank account payment | 5 | |
| | | Bank payment at a branch | 6 | |
| | | Mobile phone credit debit | 7 | |
| | | Others (Specify)_____ | 8 | |
| 79 | If you can automatically have the premiums debited from your bank account monthly, would you choose to do so? | No | 0 | 1→Q 81 |
| | | Yes | 1 | |
| 80 | If no to the above question, why? | Costly | 1 | |
| | | Do not trust bank | 2 | |
| | | Too much work to have this arrangement | 3 | |
| | | Others (Specify)_____ | 4 | |
| 81 | If the insurance allows the members to use private health facility, but the member needs to pay the difference between the medical fee covered by the insurance and the charge from the facility, will you still go to the private sector? | No | 0 | |
| | | Yes | 1 | |
| | | Don't Know | 88 | |
| 82 | If the insurance requires the members to first go to primary care level facility, does this affect your access to health care? | No | 0 | |
| | | Yes | 1 | |
| 83 | What is your source for financing health care? | Household income | 1 | |
| | | Saving | 2 | |
| | | Borrowing | 3 | |
| | | Selling assets | 4 | |
| | | Selling household production in advance | 5 | |
| | | Others (Specify…….) | 6 | |

**END OF THE QUESTIONNAIRE**

*Unofficial information*

**Kingdom of Cambodia**

**Nation Religious Kind**

No…….

**EMPLOYEE INFORMATION**

**Registered number of the Company with NSSF**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |

**A. Personal Information**

1. Name…… Name in Latin……..
2. Sex……..Nationality……Date of Birth……..Number of ID card……..
3. Place of birth house No……Street……Ville……Sangkat…….
   Khan…… Province/city…….
4. Current address house No……Street……Ville……Sangkat…….
   Khan…… Province/city…….

**B. Job Information**

5. Name of Enterprise……
   Registered number of the Company with the NSSF……..
6. Old ID with NSSF……Old ID with previous employer……..
7. Position…… Monthly salary……starting date……

**C. Family Information**

8. ☐ Single ☐ Married ☐ widowhood
9. Spouse name……Nationality……Date of birth……
   current position…….
10. Number of children…….
    a) Name…… Sex…… Date of birth……Position……
    b) Name…… Sex…… Date of birth……Position……
    c) Name…… Sex…… Date of birth……Position……

| | |
|---|---|
| | |
| Left thumb print | Right thumb print |

I undertake that all information provided is true.

Made at …… Date……..
signature or thumb print of employee

Made at …… Date……..
signature and name of NSSF's official

Attachment:
- Cambodian ID card
- Passport

Kingdom of Cambodia

Nation Religion King

NSSF

Letter for use in health service
(Health care)

ID number for employee .....
Name of sicker or victim .....Sex.....Age.....year.....
ID number for company.....Name.....
Send from .....
New person ..... old person.....come to take service at hospital/ health center/ Kosamak hospital ..... on date .....month.....year..... time.....minute.....in unit of:

| | | |
|---|---|---|
| General consultation | service port | emergency |
| Obstetric | urology | gynecology |
| Ophthalmology | stomatology | ORL |
| Cardiology | traumatology | pneumology |
| Cardiology vascular | traumatology | pneumology |
| Infectious diseases | dermatology | neurology |
| Gastrologic | endocrinology | psychiatric |
| Medicine | X-ray | endoscopy |
| Colposcopy | CT scan | echography |
| Laboratory | surgery | MRI |
| Other | | |

That will leave the hospital/ health center on .....month.....year.....time.....minute.....
that that deceases of .....

Signature and name of Agency

date .....month.....year 20.....
Signature and name of Doctor

For NSSF

A. Case for MPA: 1. Physical, 2 Emergency, 3 small surgery,4 preventive service, 5 give birth of child, 6 birth spacing
B. Case for CPA1: 1 . Physical, 2 Emergency, 3 small surgery, 4 adult care, 5 give birth of child, 6 lady problem, 7 abortion, 8 child problem, 9 TB
C. Case for CPA2: 1. . Physical, 2 Emergency, 3 small surgery, 4 medical care, 5 big surgery, 6 adult problem, 7 give birth of child, 8 lady problem, 9 abortion, 10 child problem, 11 TB
D. Case CPA3( higher level) : : 1. . Physical, 2 Emergency, 3 small surgery, 4 medical care, 5 big surgery, 6 adult problem, 7 give birth of child, 8 lady problem, 9 abortion, 10 child problem, 11 TB
E. Case NH : top level: : 1. . Physical, 2 Emergency, 3 small surgery, 4 medical care, 5 big surgery, 6 adult problem, 7 give birth of child, 8 lady problem, 9 abortion, 10 child problem, 11 TB, 12 middle surgery

# Concept Note of the SHIP Model[1]

**Prepared by**
**The Technical Working Group for Social Health Insurance for the Informal Sector Population[2] (TWG-SHIP[3]) in Cambodia**

## PART 1 Background

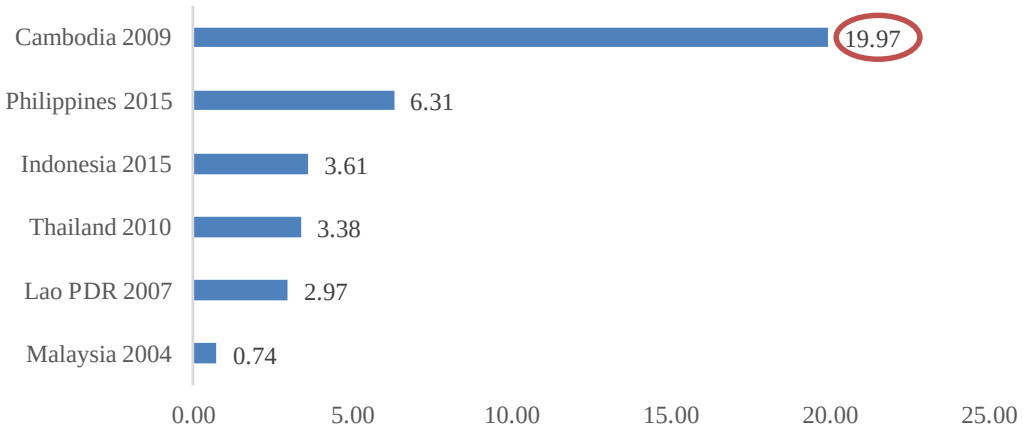
### 1-1 Current status of health protection in Cambodia

Achieving universal health coverage (UHC), including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all is one of the sustainable development goals which the United Nations has set for all countries, including Cambodia.

Moving towards UHC requires strengthening health systems which protect the people from catastrophic payment for health care. A study of global data on out of pocket (OOP) payment estimates that one-percent increase in OOP's share of THE is associated with more than 2-percent increase in households facing catastrophic expenditures.[4] In Cambodia, OOP payment for health care accounts for more than 60% of total health expenditures (THE), which is higher than the average OOP payment as a share of THE for lower-middle income countries, i.e. 40%. OOP health care payment per capita was USD 48 in 2016 in the country, which is also higher than the median OOP payment per capita of lower-middle income countries, i.e. USD 40 (2015).[5]

In 2009, about 20% of Cambodians spent more than 10% of total household consumption or income to cover their health expenses and this is substantially higher than other Southeast Asian countries (see Figure 1).

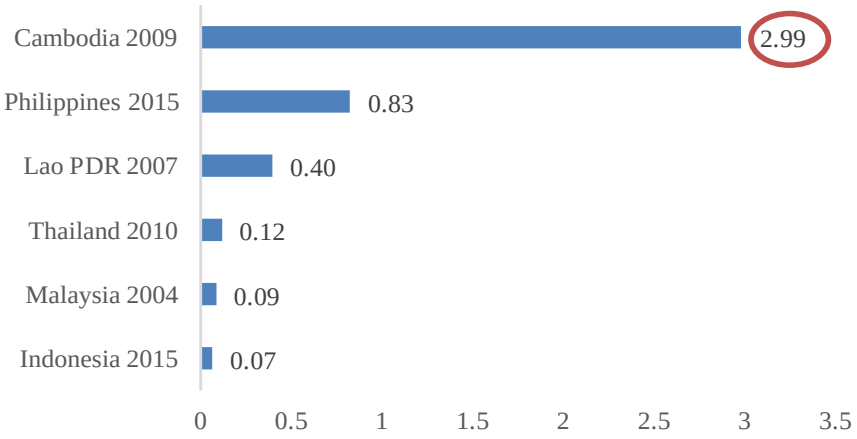
[1] The SHIP Model is a health insurance scheme model designed for the informal sector population in Cambodia.
[2] Informal Sector Population is defined as all people who are not covered by NSSF or HEF.
[3] SHIP stands for Social Health Insurance for the Informal Sector Population.
[4] Ministry of Health. (March 2016). Estimating Health Expenditure in Cambodia: National Health Accounts Report (2012-2014 Data).
[5] Ministry of Health. (March 2018). Estimating Health Expenditure in Cambodia: National Health Accounts Report (2012-2016 Data).




Source：WHO & International Bank for Reconstruction and Development/WB (2017)

**Figure 1 Incidence of catastrophic health expenditure**

In 2013, nearly one million people (6.3% of the population) in Cambodia struggled with catastrophic health care payment, with half falling into debt.[6] Figure 2 shows incidence rate of poverty due to the high level of OOP health care payment indicating that the impact of OOP payment on households is extremely serious in Cambodia. Thus, improving the social health protection system is an urgent priority in the country.




Source：WHO & International Bank for Reconstruction and Development/WB (2017)

**Figure 2 Incidence of impoverishing health expenditure**

Progress has been made to address this issue in the recent years: The National Social

[6] National Institute of Statistics, Ministry of Planning. (2014). Cambodia Socio-Economic Survey 2013.

Security Fund (NSSF) launched health insurance for the private sector employees in 2016 and started covering civil servants and veterans in January 2018. The Health Equity Fund (HEF) has been reinvigorated to ensure access to health care for the poor and the selected groups of people.[7] However, it was found that approximately 60% of the population is still left out primarily due to the government's limited fiscal space. Taking a holistic approach to fill a critical gap is a key for the government of Cambodia to achieve UHC.

## 1-2 Objective

The concept note was prepared to present the social health insurance model for the informal sector population in Cambodia (SHIP Model) to the National Social Protection Council (NSPC) and request NSPC to endorse the SHIP pilot project.

## 1-3 Development process of SHIP Model

The Technical Working Group for Social Health Insurance for the Informal Sector Population (TWG-SHIP) was established in January 2017 as a cross-sectorial task force engaging in overall formulation of the SHIP Model. The TWG-SHIP is comprised of multiple relevant government agencies (see Table 1) and the members are the former participants of the study tours to Japan and Thailand in the course of the JICA Data-collection Survey on Social Health Protection System in Cambodia conducted between 2015 and 2016.

[7] Since January 2018, workers who sign an employment contract of no more than 8 hours a week, a part-time work, a casual work or a seasonal work, commune council members, village chiefs, deputy village chiefs, village assistants, national athletes, land-mine cleaners and Cyclo drivers have been entitled to fully subsidized health care benefit equivalent to that of Heath Equity Fund.

**Table 1 List of the TWG-SHIP members**

| | Name | Ministry | Title in Profession | TWG Title |
|---|---|---|---|---|
| **1** | Dr. Lo Veasnakiry | MOH | Director of Department of Planning and Health Information (DPHI) | Chair |
| **2** | Dr. Sok Kanha | MOH | Deputy Director of DPHI | |
| **3** | Mr. Ros Chhun Eang | MOH | Deputy Director of Payment Certification Agency | |
| **4** | Dr. Loun Mondol | MOH | Chief of Bureau of Policy, Planning and Health Sector Reform, DPHI | |
| **5** | Dr. Ngin Seila Phiang | MOH | Vice Chief of Planning Bureau, DPHI | |
| **6** | Dr. Bun Samnang | MOH | Vice Chief of Bureau of Health Economics and Financing, DPHI | Secretary |
| **7** | Mr. Phou Sopheap | MOH | Officer of Health Economics and Financing, DPHI | |
| **8** | Mr. Chab Sat | MOH | Officer of Health Information, DPHI | |
| **9** | Mr. Pheakdey Sambo | MEF | Deputy Director General of Insurance and Pension Department | |
| **10** | Ms. Chhat Lengchanchhaya | MEF | Head of Pension Division, Insurance and Pension Department | |
| **11** | Mr. Heng Sophannarith | NSSF/ MOLVT | Deputy Director of Health Insurance Division | |
| **12** | Mr. Meas Vou | MOSVY | Deputy Director of National Social Security Fund for Civil Servants | |
| **13** | Mr. Kamphorn Sathya | MOI | Deputy Director of Management Information System Department | |
| **14** | Mr. Keo Ouly | MOP | Director of Identification of Poor Household Department | |
| **15** | Mr. Maun Chansarak | MOP | Director of Social Plan Department and Deputy Program Manager of ID Poor | |
| **16** | Dr. Say Ung | CARD | Director of Department, Health, Food Security and Nutrition | |

The TWG-SHIP meetings were held 10 times between January 2017 and March 2018 (see Table 2). The TWG-SHIP members discussed the specific issues set for each meeting based on the resource documents prepared by the JICA SHIP project team, and gradually built consensus for the concept and design of the SHIP Model.

**Table 2 The schedule and agenda of the TWG-SHIP meetings**

| | DATE | MEETING | AGENDA |
|---|---|---|---|
| **1** | 30 January 2017 | Kick-off Mtg | ・Team building<br>・TOR development |
| **2** | 8 February 2017 | 1st Business Mtg | ・Finalization of TOR<br>・Discussion on Roadmap of the TWG-SHIP |
| **3** | 21 March 2017 | 2nd Business Mtg | ・Discussion on Enrolment Options |
| **4** | 19 May 2017 | 3rd Business Mtg | ・Discussion on Legislation and Advocacy<br>・Dialogue with DPs |
| **5** | 27 June 2017 | 4th Business Mtg | ・Discussion on premium collection, management of the insured and M&E<br>・Presentation of preliminary results from the qualitative survey |
| **6** | 26 July 2017 | 5th Business Mtg | ・Discussion on premium-setting, benefit package and provider payment mechanism |
| **7** | 23-25 August 2017 | Mid-term Review Mtg | ・Review of overall design of SHIP model |
| **8** | 24 October 2017 | 6th Business Mtg | ・Introduction of the SHIP Model Concept Note (CN)<br>・Dialogue with DPs |
| **9** | 24 January 2018 | 7th Business Mtg | ・Discussion on CN and the SHIP Model pilot plan<br>・Presentation of preliminary results of the household survey<br>・Presentation of ICT utilization |
| **10** | 9 March 2018 | 8th Business Mtg | ・Finalization of CN and the pilot plan |
| **11** | 5 April 2018 | World Health Day UHC Forum | ・Dissemination of the SHIP Model |

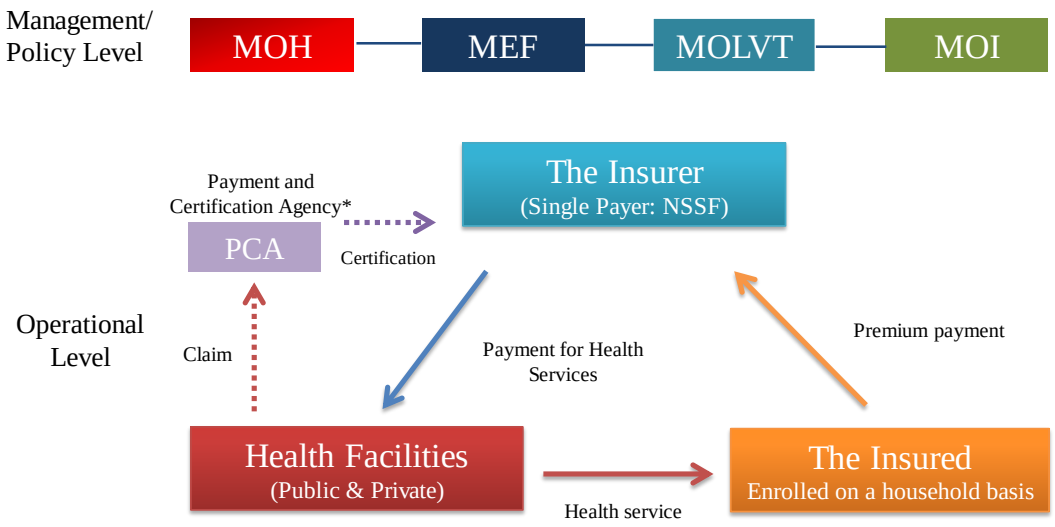
Meanwhile, a key informant interview, a focus group discussion and a household survey were conducted in Phnom Penh, Kampong Speu and Battambang provinces during the period of collecting information and opinions of the potential beneficiaries of the SHIP. A cost analysis was also done to estimate benefit costs, insurance premiums and affordability of the beneficiaries.

The drafted SHIP Model was shared and discussed with the development partners in May and October 2017. In August 2017, the TWG-SHIP conducted a mid-term review of the SHIP Model in Kep and reported the progress to the NSPC Executive Committee chairperson. Finally, the TWG-SHIP disseminated the SHIP Concept Note to the stakeholders at the World Health Day UHC Forum, co-sponsored by WHO, GIZ and JICA, in April 2018.

# PART 2 Outline of SHIP Model

## 2-1 Basic principles

The SHIP Model is a mechanism to enrol the informal sector population in health insurance scheme of the Single Payer, currently NSSF. This model is in line with the National Social Protection Policy Framework (NSPPF), ensuring that all citizens of Cambodia, regardless of one's employment status, access to essential, quality health services they need while protecting them against financial risk. The SHIP Model also attempts to achieve UHC with minimum cost by using the existing operational and administrative structures, considering the fact that the Cambodian government has limited fiscal space. The SHIP Model aims to have all citizens registered under a unified system. The conceptual framework of the SHIP Model is shown in Figure 3.




*PCA currently serves for HEF claim verification, but its role could be expanded to social health insurance in the future.

**Figure 3 Conceptual Framework of SHIP Model**

The Community-based Health Insurance (CBHI) served as a health protection scheme for the non-poor informal sector population in various areas in the country since early 2000s. However, in the recent years, the scheme has faced financial difficulties due to its limited risk-pooling mechanism. Reflecting on these lessons, the SHIP Model pools the fund at the national level in the Single Payer and pursues compulsory enrolment to avoid adverse selection.

The SHIP Model has conviction that social insurance managed by NSSF allows the government to maintain fiscal discipline as the contribution level is established in such a way as to balance revenues and expenditures. It would also allow the beneficiaries to claim their rights to health care strongly because the benefits are given in return for paying premiums, and this mechanism itself would improve the quality of health care.

## 2-2 Registration and enrolment

The SHIP Model pursues compulsory enrolment in response to the lessons learned from other countries as well as CBHI in Cambodia (see Table 3).[8] In reality, most of the countries that chose social insurance as the health protection system for the informal sector population made the enrolment policy compulsory either at the time of introduction or later to pursue financial sustainability.

**Table 3 Enrolment policies of social insurance for the informal sector population and current social protection enrolment rates in eight countries**

| Country | Enrolment policy of social insurance for the informal sector | Current enrolment rate* |
|---|---|---|
| **Japan** | Voluntary (1938)→Compulsory (1961) | 90-100% |
| **South Korea** | Compulsory (1989) | 90-100% |
| **Taiwan** | Compulsory (1995) | 90-100% |
| **The Philippines** | Compulsory (1995) | 80-90% |
| **Vietnam** | Voluntary (1995) | 60-70% |
| **Rwanda** | Voluntary (2000)→Compulsory (2008) | 90-100% |
| **Indonesia** | Tax-based→Social Insurance: Compulsory (2014) | 60-70% |
| **Cambodia** | *50+ CBHIs: Voluntary (2000～)* | *30-40%* |

*Enrolment rates of the total population

Source: JICA (2012),[9] International Labour Organization (2012),[10] National Centre for Global Health and Medicine (2015)[11] and Lee R. (2007)[12]

[8] A cluster randomized trial in Vietnam suggested limited opportunities to raise voluntary health insurance enrolment through information campaigns or subsidies, and that these interventions exacerbate adverse selection. (Encouraging Health Insurance for the Informal Sector: A Cluster Randomized Trial, Policy Research Working Paper 6910. World Bank, 2014).

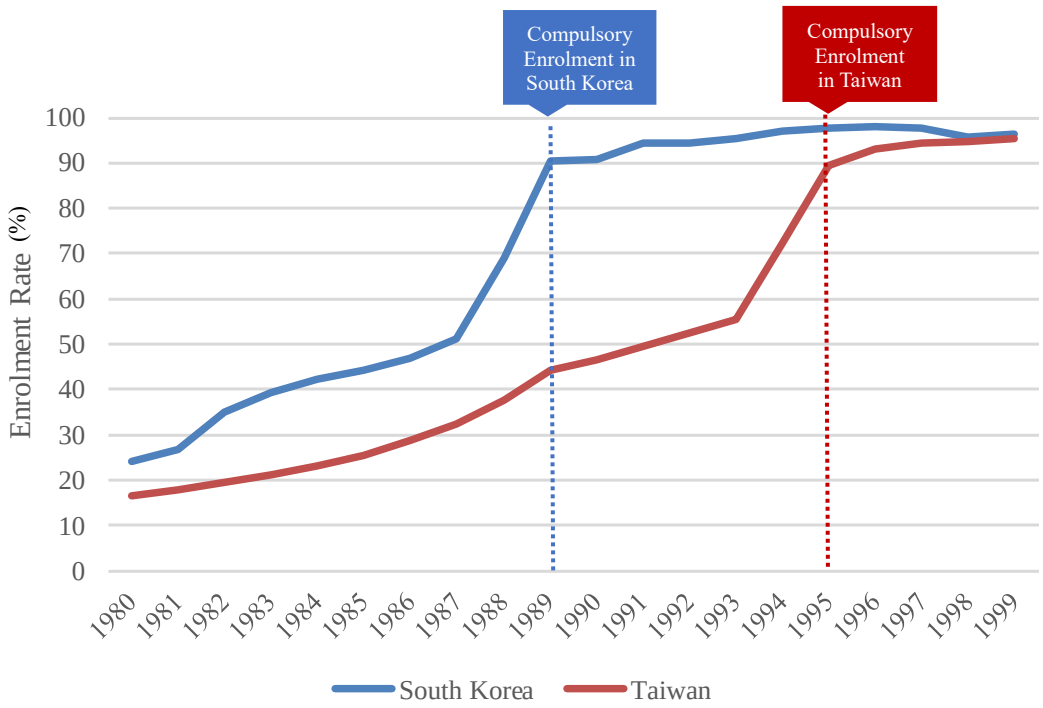
[9] Japan International Cooperation Agency & Mitsubishi UFJ Research and Consulting Co., Ltd. (2012). Data Collection Survey on social security sector in Asia final report: country report. Tokyo: Japan International Cooperation Agency.

[10] International Labour Organization (2016). Rwanda: Progress towards Universal Health Coverage. Social Protection in Action: Building Social Protection Floors.

[11] National Centre for Global Health and Medicine (2015). Health Protection Systems: How can Japan utilize own experience for achieving UHC in developing countries? Symposium conducted in Tokyo.

[12] Lee, R. (2007). Comparative Analysis on the Public Health Insurance Policy in South Korea and Taiwan: Industrialization, Democratization, and Social Policy in Late-comer Societies. Unpublished

Figure 4 shows how legislation of compulsory enrolment sharply increased enrolment rates in South Korea and Taiwan.




Source: Korea Health Insurance Association Annual Reports and Republic of China Social Indicators Statistics

**Figure 4 Enrolment policy of social health insurance for the informal sector and the insurance enrolment rates in South Korea and Taiwan (1980-1999)**

In Cambodia, legislation of the compulsory enrolment in health insurance is highly recommended. However, the target population will be gradually enrolled in the pilot, while developing the legal instruments and raising people's awareness of the health insurance.

On the other hand, the SHIP Model will register every citizen in the first place regardless of one's willingness to pay premiums or health protection scheme enrolment status. This would enable the insurer to track down the people moving from one scheme to another and to ensure that all is covered by a health protection scheme. There is also an intention to increase enrolment rates through this practice by informing the people of benefits of the health insurance.

Doctoral Dissertation, Washeda University, Tokyo.

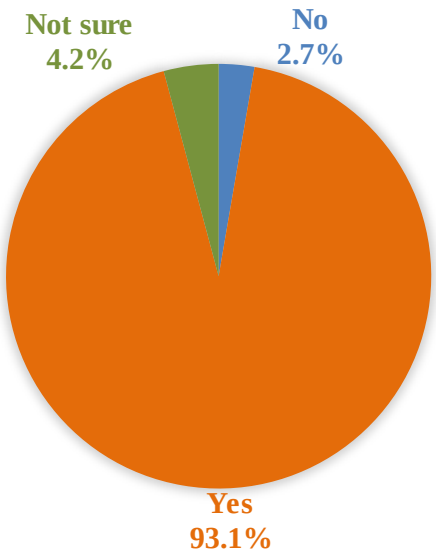



**Figure 5 Agree to compulsory registration? (N=1,033)**

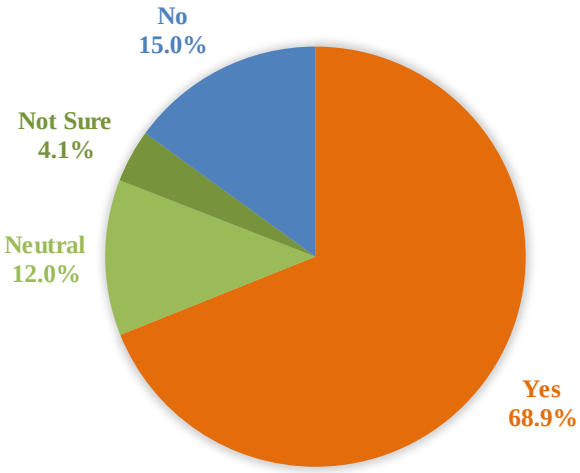



**Figure 6 Agree to compulsory enrolment? (N=1,033)**

The household survey conducted in Battambang and Kampong Speu provinces for 1,033 households in 2017 found that 93% of the respondents agreed to be registered for the health insurance (without the obligation to pay premiums) if it is compulsory (see Figure 5). Moreover, nearly 70% of them also agreed to compulsory enrolment (with the obligation to pay premiums) while 12% were neutral and 15% did not agree (see Figure 6). This indicates that resistance of the general public against compulsory enrolment is not strong.

In principle, registration unit is a household which is defined by the insured identifying their dependents. For the registration, personal ID, such as Khmer ID, Family Book or Residential Book is required. The insurance database containing personal data is centrally managed at the NSSF headquarters to allow the insurer to flexibly change the member's status, such as one's address, marital status and type of work, which determines the type of one's health protection scheme. Once registered, each individual receives a health insurance number, which is suggested to be replaced by the Khmer Identity Code (Kid-C)[13] when it becomes available.

The SHIP Model expects the NSSF branch offices to closely collaborate with local administration bodies, i.e. villages and communes/Sangkats under the Ministry of Interior (MOI), for the registration. The NSSF branch office staff registers the villagers at commune/Sangkat offices and update the data at the commune/Sangkat council monthly meetings (see Figure 7).

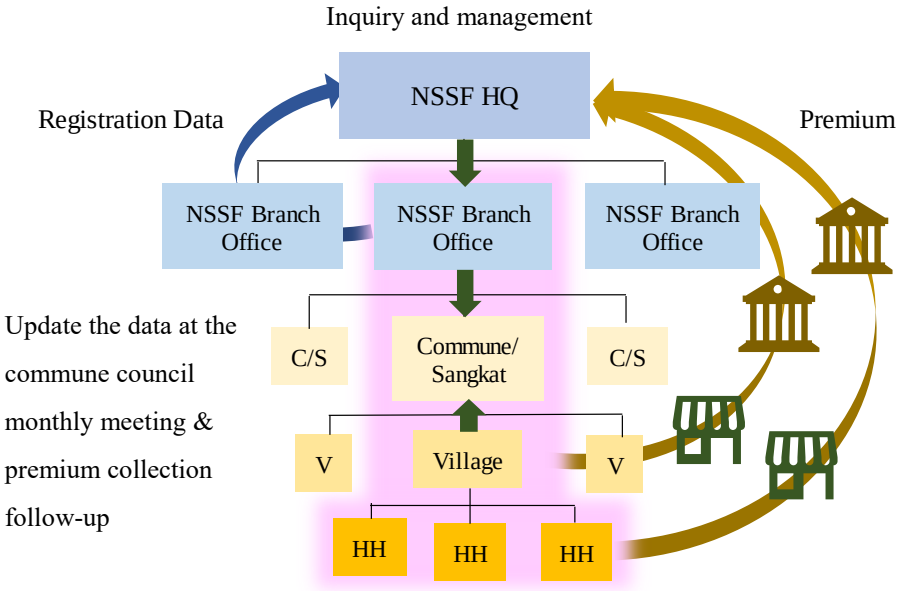



**Figure 7 Conceptual framework of registration and premium collection under the SHIP Model**

## 2-3 Premium collection methods and management of the insured

The SHIP Model allows each village to flexibly decide the premium collection method which best suits the local context. The urban population might desire monthly

[13] In 2015, MOI developed the National Strategic Plan on Identification 2015-2024 (NSPI). The NSPI states that a Khmer Identity Code (Kid-C) is to be distributed to every citizen, which could be utilized for a social health insurance system through the Integrated Population Identification System (IPIS).

collection through direct debit from bank accounts or money transfer system, while house-to-house collection by a village representative after harvesting could be a preferred option for the rural residents. Regardless of the premium collection methods, the money should be transferred to the NSSF headquarters electronically for security reasons (see Figure 7).

The SHIP Model expects the NSSF branch offices to monitor the premium payment records and notify commune/Sangkat and village representatives at a council monthly meeting if someone in their village is not paying premium. The commune/Sangkat mobilizes village representatives to go to the villager's house and collect premium from him/her.

## 2-4 Benefit package

The benefit package for the SHIP target population should follow that of the NSSF health insurance. However, it should be adjusted according to the contribution level. It is recommended to start with a minimal package and expand it as the number of the insured increases. There are two recommended benefit package options (see Figure 8). Option A provides case-based medical benefits, and referral and corpse transportation. Option B includes high-cost fee-for-service 9 items in addition to Option A. Rehabilitation, daily allowance and room with AC could be added when the contribution level increases.

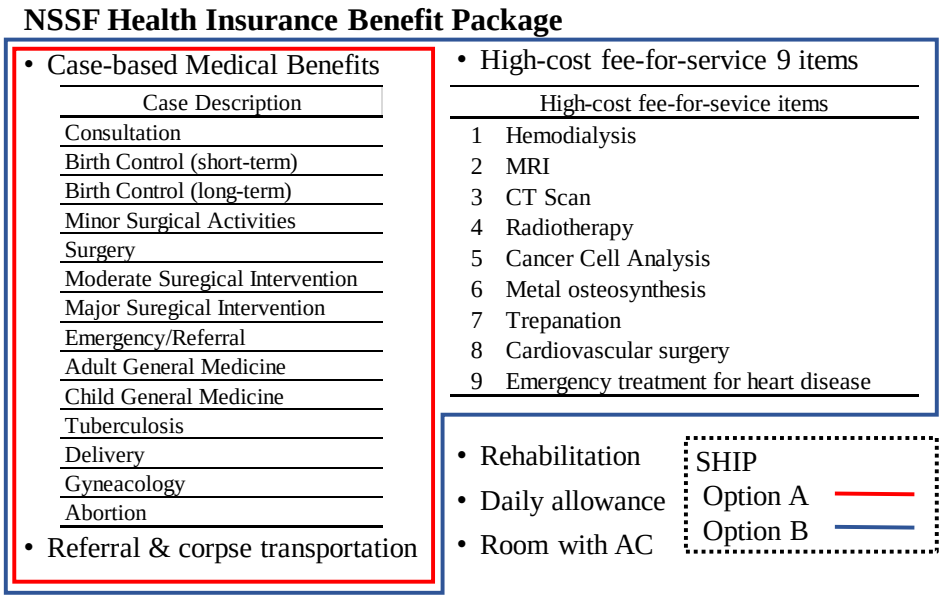



**Figure 8 SHIP suggested benefit packages: Options A and B**

## 2-5 Insurance premiums

Insurance premium should be collected uniformly while assessment of household's ability to pay is not available. The premium was estimated in the same manner as it was done for the private sector employees in 2014.[14] In estimating the per capita premium amount in the SHIP Model, first the medical benefit per capita was estimated and administration costs and capital buffer were added assuming that the premiums collection might be incomplete. The following seven kinds of data were utilized for the estimation.

① NSSF case-based fee schedule for the private-sector employees: the current NSSF case-based fee schedule for the health insurance stipulated in the Inter-ministerial Prakas between MOLVT and MOH (NO. 327 LV/PrK. NSSF) in August 2017.

② Assumed case-mix, relative share by type of provider and benefit category: the estimation made by the International Labour Organization (ILO) when the NSSF health insurance premium rate was calculated for the private-sector employees.

③ Care-seeking behaviour – assumed provider share by benefit category: the estimation made based on the data collected through the Health Insurance Project (HIP), the NSSF health insurance pilot project conducted since 2009 targeting at the garment factory workers.

④ Assumed utilization rates: the same as the above.

⑤ Assumed transportation costs (referral on health care and corpse transportation): the assumption that 10% of hospitalized patients would need to be transferred and 10% of the referred cases are transfers to other provinces. The distance was assumed to be 20 km at a time if it is within the province, and 400 km for transportation between provinces.

⑥ Per capita unit cost of nine high-cost items: the average medical cost per capita of the fee-for-service high-cost nine items. These fee-for-service items are payable only if it is decided as necessary by the designated health facility to be a follow-up case covered with the NSSF case-based payment method.

[14] International Labour Organization (2015). CAMBODIA Technical Note Estimation of Contribution Rates for the Health Insurance, Maternity, and Sickness benefits' branch of the National Social Security Fund (NSSF).

⑦ Average disposable income by quintile groups from 2009 to 2016: the data obtained from the Cambodia Socio-economic Survey 2009-2016.

① to ⑥ are the data used when calculating the health insurance premium rate for the NSSF health insurance for the private-sector employees.

The per capita premium for the SHIP Model was calculated as follows:

(1) Table 4 shows NSSF case-based fee schedule for the private-sector employees by the health care provider level. Based on this fee schedule and the assumed case-mix, relative share by type of provider and benefit category shown in Table 5, the assumed unit cost of insurance benefit per capita was calculated.

**Table 4 NSSF case-based fee schedule for the private employees**

| Case Description | MPA | CPA1 | CPA2 | CPA3 | NH |
|---|---|---|---|---|---|
| Consultation | 6,000 | 12,000 | 16,000 | 24,000 | 60,000 |
| Birth Control (short-term) | 10,000 | | | | |
| Birth Control (long-term) | 30,000 | | | 400,000 | 600,000 |
| Minor Surgical Activities | 12,000 | 20,000 | 240,000 | 40,000 | 100,000 |
| Surgery | | | 150,000 | 200,000 | 600,000 |
| Moderate Suregical Intervention | | | | 600,000 | 1,000,000 |
| Major Suregical Intervention | | | 400,000 | 1,000,000 | 1,500,000 |
| Emergency/Referral | 20,000 | 120,000 | 240,000 | 320,000 | 800,000 |
| Adult General Medicine | | 100,000 | 120,000 | 160,000 | 400,000 |
| Child General Medicine | | 92,000 | 108,000 | 128,000 | 350,000 |
| Tuberculosis | | 160,000 | 180,000 | 200,000 | 300,000 |
| Delivery | 80,000 | 100,000 | 120,000 | 160,000 | 400,000 |
| Gyneacology | | 100,000 | 150,000 | 200,000 | 400,000 |
| Abortion | | 100,000 | 120,000 | 150,000 | 400,000 |

Source：National Social Security Fund

**Table 5 Assumed case-mix, relative share by type of provider and benefit category**

| | MPA | CPA1 | CPA2 | CPA3 | NH |
|---|---|---|---|---|---|
| **Outpatient care (OPD)** | | | | | |
| Consultation | 95% | 96% | 92% | 88% | 90% |
| Minor Surgical Activities | 2% | 4% | 8% | 12% | 10% |
| Emergency/Referral | 3% | | | | |
| **Total** | **100%** | **100%** | **100%** | **100%** | **100%** |
| **Inpatient Care (IPD)** | | | | | |
| Emergency/Referral | | 2% | 2% | 2% | 2% |
| Surgery | | | 5% | 15% | 10% |
| Major Surgical Activities | | | 10% | 30% | 50% |
| Adult general Medicine | | 97% | 82% | 52% | 37% |
| Tuberculosis | | 1% | 1% | 1% | 1% |
| **Total** | | **100%** | **100%** | **100%** | **100%** |
| **Maternity-related care (admissions)** | | | | | |
| Delivery | 100% | 60% | 60% | 60% | 60% |
| Gynecology | | 20% | 20% | 20% | 20% |
| Abortion | | 20% | 20% | 20% | 20% |
| **Total** | **100%** | **100%** | **100%** | **100%** | **100%** |
| **Others** | | | | | |
| Birth Control (short-term) | 100% | | | | |
| **Total** | **100%** | | | | |
| Birth control (long-term) | 100% | | | 100% | 100% |
| **Total** | **100%** | | | 100% | 100% |
| Moderate Surgical Intervention | | | | 100% | 100% |
| **Total** | | | | **100%** | **100%** |
| Child General Medicine | | 100% | 100% | 100% | 100% |
| **Total** | | **100%** | **100%** | **100%** | **100%** |

Source：Technical Note: Estimation of Contribution Rates for the Health Insurance, Maternity, and Sickness benefits' branch of NSSF

(2) The sum of the insurance benefit unit cost by type of health provider and benefit category was obtained.

**Table 6 Care-seeking behaviour–assumed provider share by benefit category**

| Service category | MPA | CPA1 | CPA2 | CPA3 | NH | Total |
|---|---|---|---|---|---|---|
| Outpatient care (OPD) | 10% | 10% | 10% | 20% | 50% | 100% |
| Inpatient care (IPD) | | 5% | 10% | 15% | 70% | 100% |
| Maternity-related care | 25% | 5% | 5% | 5% | 60% | 100% |

Source：International Labour Organization

(3) Based on the care-seeking behaviour–assumed provider share by benefit category in Table 6, the weighted average of the insurance benefit unit cost by benefit category was calculated (see Table 7).

**Table 7 Unit cost of care by type of provider and weighted average**

(KHR)

| | MPA | CPA1 | CPA2 | CPA3 | NH | Weighted Average |
|---|---|---|---|---|---|---|
| Outpatient care (OPD) | 6,540 | 12,320 | 16,640 | 25,920 | 64,000 | 40,734 |
| Inpatient care (IPD) | | 101,000 | 152,500 | 421,600 | 977,000 | 767,440 |
| Maternity-related care | 80,000 | 100,000 | 126,000 | 166,000 | 400,000 | 279,600 |
| Child general medicine | | 92,000 | 108,000 | 128,000 | 350,000 | 279,600 |
| Birth Control (Short-term) | 10,000 | | | | | 10,000 |
| Birth Control (Long-term) | 30,000 | | | 400,000 | 600,000 | 387,500 |
| Moderate surgical intervation | | | | 600,000 | 1,000,000 | 790,000 |

Source : Technical Note: Estimation of Contribution Rates for the Health Insurance, Maternity, and Sickness benefits' branch of NSSF

**Table 8 Assumed utilization rates**

| Benefit category | Annual utilization rates (case) | |
|---|---|---|
| | Male | Female |
| Outpatient care (OPD) | 1.5 | 1.5 |
| Inpatient care (IPD) | 0.06 | 0.06 |
| Maternity-related care | | 0.03 |

Source：International Labour Organization

(4) The annual health insurance benefit per capita was calculated by benefit category and gender, based on the assumed utilization rates as shown in Table 8 and the weighted average was estimated considering the sex ratio (see Table 9).

**Table 9 Estimated annual cost of care by benefit category**

| | Unit cost (KHR) | Utilization rates (case) | | Annual cost per capita (KHR) | |
|---|---|---|---|---|---|
| | | Male | Female | Male | Female |
| Outpatient care (OPD) | 40,734 | 1.50 | 1.50 | 61,101 | 61,101 |
| Inpatient care (IPD) | 767,440 | 0.06 | 0.06 | 46,046 | 46,046 |
| Maternity-related care | 279,600 | | 0.03 | | 8,388 |
| Child general medicine | 279,600 | 0.06 | 0.06 | 7,381 | 7,381 |
| Birth Control (Short-term) | 10,000 | | 0.03 | | 300 |
| Birth Control (Long-term) | 11,625 | | | | 349 |
| Moderate surgical intervention | 47,400 | 0.06 | 0.06 | 2,844 | 2,844 |
| Total | | | | 117,372 | 126,409 |
| Weighted Average | | | | 122,018 | |

Source : Technical Note: Estimation of Contribution Rates for the Health Insurance, Maternity, and Sickness benefits' branch of NSSF

(5) Assumed per capita cost on health care referral and corpse transportation (see Table 10) was added to the assumed annual cost of care.

**Table 10 Assumed transportation cost**

(KHR)

| | Estimated cost per case | Annual unit cost | Annual cost per capita |
|---|---|---|---|
| Local transportation | 80,000 | 0.0054 | 432 |
| Tranfer/referral from province | 1,600,000 | 0.0006 | 960 |
| All items | | | 1,392 |

Source：International Labour Organization

(6) The average per capita unit cost of nine high-cost fee-for-service items was calculated (see Table 11).

**Table 11 Per capita unit cost of nine high-cost items**

| Case description | Estimated cost per case | Annual incidence rate (case) | Cost per capita (KHR) |
|---|---|---|---|
| Hemodialysis | 320,000 | 0.00028 | 90 |
| MRI | 600,000 | 0.00200 | 1,200 |
| CT scan | 480,000 | 0.00400 | 1,920 |
| Raiotherapy | 60,000 | 0.00341 | 205 |
| Cancer Cell Analysis | 100,000 | 0.00100 | 100 |
| Trepanation | 2,800,000 | 0.00018 | 492 |
| Cardiovascular surgery | 16,000,000 | 0.00020 | 3,200 |
| Emergency treatment for heart disease | 600,000 | 0.00050 | 300 |
| Total | | | 7,507 |
| Material Osteosynthese (+20%) | | | 9,008 |

Source : Technical Note: Estimation of Contribution Rates for the Health Insurance, Maternity, and Sickness benefits' branch of NSSF

(7) The benefit package of Option A was set by including case-based medical benefit and transportation costs, whereas that of Option B was set by adding the unit cost of nine high-cost fee-for-service items to the Option A benefit package. 10% of the total benefit cost was added as administration cost to each option.

(8) The premium amount was increased, assuming that premium collection rate is 95%.

(9) The premium amount was further increased by taking density factor into consideration, assuming that the actual collection period is 90% of that is obligated (see Table 12).

**Table 12 SHIP Model – health insurance premium per capita**

(KHR)

| Case description | Option A | Option B |
|---|---|---|
| Comprehensive payment medical benefit | 122,018 | 122,018 |
| Medical transfer cost | 1,392 | 1,392 |
| Fee-for-service | | 9,008 |
| Total insurance benefit | 123,410 | 132,418 |
| Administration cost (10%) | 12,341 | 13,242 |
| Collection rate of insurance premiums (95%) | 135,731 | 145,660 |
| Density factor (90%) | 142,896 | 153,326 |
| | 158,773 | 170,362 |

Source : Technical Note: Estimation of Contribution Rates for the Health Insurance, Maternity, and Sickness benefits' branch of NSSF

In the SHIP Model, it is assumed that enrolment is at the household level. The insured decides one's dependents and pays premiums for oneself and one's dependents. The amount of insurance premiums for children under the age of 18 was set at 80% of the insured/adult dependent premium to avoid emerging child labour as a result of financial constraints. Tables 13 and 14 show insurance premiums of individuals and average households for Options A and B.

**Table 13 Premiums of Option A**

| | Annual (KHR) | Annual (USD) | Monthly (KHR) | Monthly (USD) |
|---|---|---|---|---|
| **Insured & adult dependents** | 174,100 | 43.53 | 15,000 | 3.63 |
| **Child dependents** | 139,300 | 34.83 | 11,000 | 2.93 |
| **Premium of average household (a couple with 3 children)** | | | 63,000 | 15.75 |

**Table 14 Premiums of Option B**

| | Annual (KHR) | Annual (USD) | Monthly (KHR) | Monthly (USD) |
|---|---|---|---|---|
| **Insured & adult dependents** | 186,900 | 46.73 | 16,000 | 3.89 |
| **Child dependents** | 149,500 | 37.38 | 12,000 | 3.11 |
| **Premium of average household (a couple with 3 children)** | | | 68,000 | 17.00 |

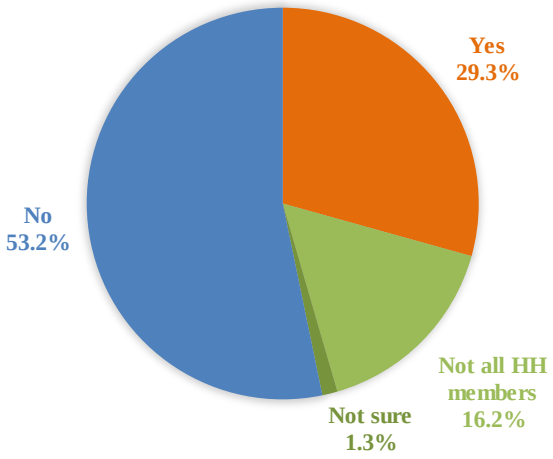



**Figure 9 Willing to pay 14,000 riels per person per month for a health insurance? (N=1,033)**

The household survey suggested that nearly one half of the population in Battambang and Kampong Speu provinces would be willing to pay the suggested premiums for some household members and one third would pay for all household members (see Figure 9).

The external actuarial analysis is going to be conducted once the pilot starts. The premiums will be periodically reviewed and adjusted based on financial conditions of the insurance fund.

Table 15 shows share of the Option A and B premiums in average disposable income by quintile groups. The average disposable income for each quintile group in 2019, the year the SHIP Model pilot project commences, was projected based on the Cambodia Socio-Economic Survey 2009-2016. It was assumed that the lowest quintile group does not pay premium as this quintile is supposed to be covered by Health Equity Fund. As compared with the premium rate of the private-sector employees: 2.6% of salary, the suggested premiums of both options are somewhat higher for the second lowest and the middle quintiles, but lower for the second highest and the highest quintiles.

**Table 15 Share of Option A and B premiums in average household disposable income by quintile groups**[15]

| | Average disposable monthly income in 2016 (Thousand Riels) | 2009-2016 average income growth rates | Projected disposable monthly income in 2019 (Thousand Riels) | Share of Option A premuim in average disposable income in 2019 | Share of Option B premuim in average disposable income in 2019 |
|---|---|---|---|---|---|
| I | 251.0 | 9.5% | 327.6 | — | — |
| II | 812.7 | 17.3% | 1,310.5 | 4.8% | 5.2% |
| III | 1,289.3 | 16.0% | 2,012.6 | 3.1% | 3.4% |
| IV | 1,910.5 | 14.6% | 2,876.4 | 2.2% | 2.4% |
| V | 4,569.9 | 9.9% | 6,067.6 | 1.0% | 1.1% |

Source: Cambodia Socio-economic Survey 2009-2016

## 2-6 Government Subsidy

The SHIP Model proposes the government to subsidize the health insurance scheme as there is a possibility that per capita benefit cost would go up while the enrolment rate is low and thus the near poor may not be able to pay the premium. The level of subsidy and the subsidization period are subject to negotiation between the Ministry of Economy and Finance (MEF) and the TWG-SHIP. Table 16 shows estimated annual subsidies required for the pilot (3 ODs) and the nation-wide implementation by the subsidy rates 15%, 30% and 50% and the enrolment rates of 20%, 50% and 100%.

[15] The average household size in Cambodia was assumed as 4.255 in accordance with Cambodia Socio-Economic Survey 2016.

## Table 16 Estimated annual subsidy

| Option | Subsidy rate (%) | Monthly premium of a couple with 3 children (USD) | Enrolment rate (%) | Annual subsidy for the pilot (million USD) | Annual subsidy for the nation-wide implementation (million USD) |
|---|---|---|---|---|---|
| Option A | 15 | 13.39 | 20 | 0.33 | 10.73 |
| | | | 50 | 0.82 | 26.80 |
| | | | 100 | 1.64 | 53.60 |
| | 30 | 11.03 | 20 | 0.65 | 21.44 |
| | | | 50 | 1.64 | 53.60 |
| | | | 100 | 3.27 | 107.20 |
| | 50 | 7.88 | 20 | 1.09 | 35.73 |
| | | | 50 | 2.73 | 89.33 |
| | | | 100 | 5.45 | 178.66 |
| Option B | 15 | 14.45 | 20 | 0.35 | 11.51 |
| | | | 50 | 0.88 | 28.77 |
| | | | 100 | 1.76 | 57.53 |
| | 30 | 11.90 | 20 | 0.70 | 23.01 |
| | | | 50 | 1.76 | 57.53 |
| | | | 100 | 3.51 | 115.06 |
| | 50 | 8.50 | 20 | 1.17 | 38.35 |
| | | | 50 | 2.93 | 95.89 |
| | | | 100 | 5.85 | 191.77 |

*The above estimation was done considering that 100% of the informal sector population is enrolled. When enrolment is lower, the required subsidy would be reduced.

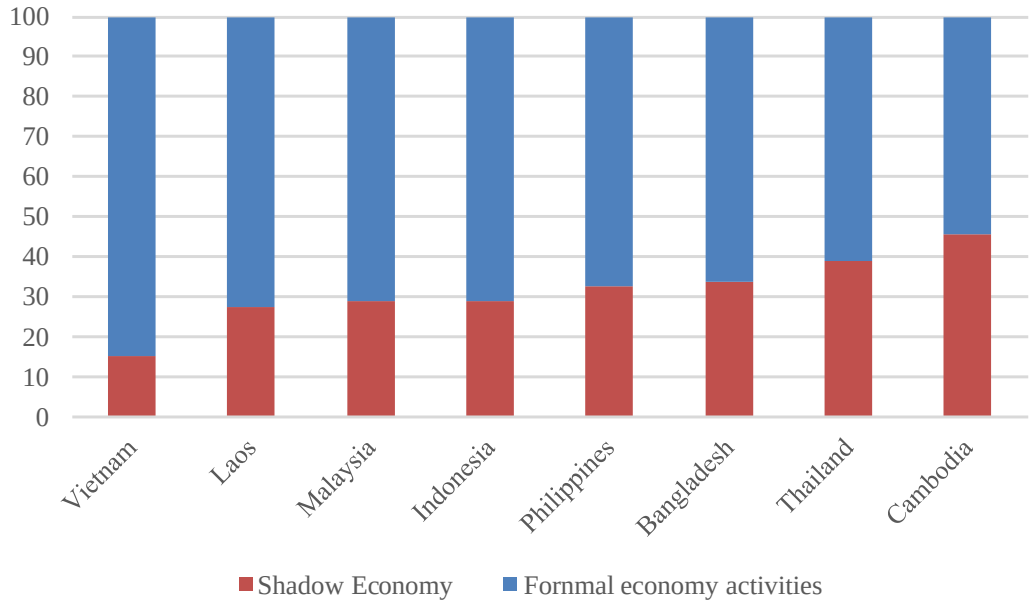
Source: The Royal Government of Cambodia and the World Bank

## Table 17 Proportion of subsidy in the national budgets and GDP of 2018

| | | | | | | |
|---|---|---|---|---|---|---|
| **Health sector budget (million USD) in 2018** | 485 | | | | | |
| **Total national budget (million USD) in 2018** | 6,018 | | | | | |
| **Projected GDP (million USD) in 2018** | 22,854 | | | | | |
| **Option A** | | | | | | |
| **Subsidy rate** | **50%** | **30%** | **15%** | **50%** | **30%** | **15%** |
| **Pilot / Nation-wide** | **Pilot** | | | **Nation-wide** | | |
| **Government subsidy (million USD)** | 5.45 | 3.27 | 1.64 | 178.66 | 107.20 | 53.60 |
| **Government subsidy in health sector budget (%)** | 1.12 | 0.67 | 0.34 | 36.84 | 22.10 | 11.05 |
| **Government subsidy in national budget (%)** | 0.09 | 0.05 | 0.03 | 2.97 | 1.78 | 0.89 |
| **Government subsidy in GDP (%)** | 0.02 | 0.01 | 0.01 | 0.78 | 0.47 | 0.23 |
| **Option B** | | | | | | |
| **Subsidy rate** | **50%** | **30%** | **15%** | **50%** | **30%** | **15%** |
| **Pilot / Nation-wide** | **Pilot** | | | **Nation-wide** | | |
| **Government subsidy (million USD)** | 5.85 | 3.51 | 1.76 | 191.77 | 115.06 | 57.53 |
| **Government subsidy in health sector budget (%)** | 1.21 | 0.72 | 0.36 | 39.54 | 23.72 | 11.86 |
| **Government subsidy in national budget (%)** | 0.10 | 0.06 | 0.03 | 3.19 | 1.91 | 0.96 |
| **Government subsidy in GDP (%)** | 0.03 | 0.02 | 0.01 | 0.84 | 0.50 | 0.25 |

Furthermore, Table 17 shows proportion of the estimated subsidies in the national budget, the health sector budget and the gross domestic product (GDP) of the year 2018. Currently the total health sector budget is approximately 2.12% of GDP, and it would be 2.15% if the insurance subsidy of Option B is added for the pilot. The GDP share of the health sector budget would go up to 2.96% if the insurance subsidy of Option B is added for the nation-wide implementation. However, it is still much lower than the WHO's recommendation that 5% of GDP should be spent on health.[16]

Cambodia maintained an average economic growth rate of 7.6% between 1994 and 2016, and this is ranked as the sixth in the world. Furthermore, economic growth of 6.8% is expected in 2017 and 6.9% in 2018 due to the recovery of the tourism industry and growth in export of clothing items and construction industry.




Source: Schneider F. (2017)

**Figure 10 Estimation of the average GDP share of shadow economy production for Southeast Asian countries from 2000 to 2014[17]**

Figure 10 shows the average GDP share of shadow economy[18] production for Southeast Asian countries from 2000 to 2014. According to the estimation, 45.5% of GDP consisted of shadow

[16] World Health Organization (2003). How Much Should Countries Spend on Health? DISCUSSION PAPER NUMBER 2.
[17] Schneider F. (2017) New Estimates for the Shadow Economies of 11 Asian Countries from 2000 to 2014. In: Rövekamp F., Bälz M., Hilpert H. (eds) Cash in East Asia. Financial and Monetary Policy Studies, vol 44. Springer, Cham
[18] All unregistered economic activities that contribute to the officially calculated Gross National Product

economy production over the 15 years in Cambodia, and this proportion is higher than other Southeast Asian countries. In other words, the Cambodian economy is largely dependent on the shadow economy engaged by the informal sector population. Therefore, allocating the national budget for health of the informal sector population leads to the country's healthy and high-quality labour and thus investment in further economic and social development in Cambodia.

## 2-7 Roles and responsibilities

The following is a brief overview of all actors involved in the SHIP Model implementation at each administrative level and a description of their roles and responsibilities.

### National Level: National Social Protection Council (NSPC)

The National Social Protection Council (NSPC), its executive committee, secretariat and other related sub-committees are responsible for the overall coordination and steering on the development of various social protection strategies and policies. Roles and responsibilities of NSPC in the SHIP Model are:

- Endorse the SHIP Model pilot plan
- Revise the policy on the social health insurance based on the pilot evaluation

### National Level: Technical Working Group for Social Health Insurance for the Informal Sector Population (TWG-SHIP)

The TWG-SHIP is comprised of Ministry of Health (MOH), Ministry of Economy and Finance (MEF), National Social Security Fund (NSSF)/ Ministry of Labour and Vocational Training (MOLVT), Ministry of Interior (MOI), Ministry of Planning (MOP), Ministry of Social Affairs, Veterans, and Youth Rehabilitation (MOSVY) and Council for Agriculture and Rural Development (CARD). Once the social health insurance system is established, the implementation will be carried out by designated actors. Roles and responsibilities of the TWG-SHIP are:

- Design the SHIP Model
- Organize quarterly reflection meetings on the progress and implementation challenges of the SHIP Model pilot and an evaluation workshop at the end of the pilot

- Disseminate results of the pilot evaluation to the NSPC

**National Level: Ministry of Health (MOH)**

MOH chairs the TWG-SHIP. Other responsibilities of MOH include:

- Monitor quality of the health care at the national and sub-national levels
- Build capacity of health care providers
- Keep and manage the data of medical costs at health facilities
- Determine fee schedule together with NSSF

**National Level: Ministry of Economy and Finance (MEF)**

MEF plays the key role in the National Social Protection Council (NSPC). Responsibilities of MEF include:

- Coordinate the SHIP in the context of overall social protection strategies in Cambodia
- Develop and update the policy of the government subsidy for the SHIP

**National Level: Ministry of Interior (MOI)**

The main role of MOI is to provide the policy on the involvement of the commune/Sangkat staff and local authorities in the SHIP operation. Responsibilities of MOI include:

- Provide directions to the commune/Sangkat staff and local authorities regarding the SHIP registration and social marketing
- Incentivize the commune/Sangkat staff and local authorities to work on the insurance promotion and registration
- Monitor the work of the commune/Sangkat staff and provide them with technical support in response to their requests

**National Level: Ministry of Labour and Vocational Training (MOLVT) / National Social Security Fund (NSSF)**

As the SHIP Model is going to be incorporated into the NSSF's health insurance system, NSSF will play a major role to implement the SHIP. Responsibilities of NSSF include:

- Contract with health facilities
- Determine benefit package and provider payment mechanism
- Calculate and update premiums
- Verify claims
- Reimburse contracted facilities for health service expenses
- Carry out trainings of trainers for the NSSF branch offices
- Perform advocacy and communication activities
- Monitor quality of the insurance registry data at the national and sub-national levels
- Manage the insurance fund

**Provincial and District Level: The NSSF Branch Office**

The NSSF branch offices are the closest health insurance agents to the people. Responsibility of the NSSF branch offices include:

- In collaboration with local administrators and authorities, promote and register the people in the health insurance
- Conduct social marketing activities in collaboration with the Commune/Sangkat Council (Office)
- Dispatch the staff to the designated Commune/Sangkat council monthly meetings and update the information of the insured
- Request the NSSF headquarters to issue the insurance cards and deliver them to the insured
- Collect premiums from the insured
- Place the Hospital/NSSF Agents in health facilities to receive claims from the facilities and send them to the NSSF headquarters

**Commune/Sangkat Level: The Commune/Sangkat Council (Office)**

The Commune/Sangkat Council (Office) plays a significant role in facilitating insurance enrolment and management of the insured. Responsibilities of the Commune/Sangkat Council (Office) include:

- Facilitate insurance registration by inviting the NSSF branch office staff and villagers
- Instruct the village staff to collect insurance premiums from those who did not pay in response to notification from the NSSF, and send the collected premiums to the NSSF headquarters
- Consolidate the residential data submitted from each village and send them to the NSSF branch office

**Local Level: Village Chief, Deputy Chief and Assistant**

Village Chiefs, Deputy Chiefs and Assistants play important roles to support the Commune/Sangkat Councils (Offices). Responsibilities of Village Chiefs, Deputy-Chiefs and Members include:

- Update the list of the villagers monthly and report it to the designated Commune/Sangkat Office
- Visit each household and explain the people purpose, significance and the function of the health insurance, and tell them to pay premiums as responsibility of the Cambodian citizens
- Collect premiums from the villagers when instructed by the designated Commune/Sangkat Council

**All Levels: Health Care Providers**

National Hospitals in the capital city, Provincial Hospitals at the provincial level, Referral Hospitals at the district level, Health Centers at the commune/Sangkat level and private health care provides at all levels provide health care to the people. In the context of the health insurance system, responsibilities of Health Care Providers include:

- Obtain a license from MOH to meet the government's requirements, including quality of care
- Provide minimum to complementary package of health care
- Refer patients to higher-level health facilities if necessary
- Claim the medical fees to the NSSF headquarters

**Other Actors:**

Other actors playing important roles in the SHIP Model include Provincial Health Department (PHD), Operational Department (OD), Banks, Money Transfer and Payment Systems, ICT developers, the media and development partners.

## 2-8 Policy options

There are several policy options remaining in the SHIP Model. Table 18 shows these options and advantages and disadvantages of each option. The highlighted options are recommended by the TWG-SHIP.

**Table 18 Policy options and advantages and disadvantages of each option**

| Issue | Options | Advantages | Disadvantages |
|---|---|---|---|
| **Benefit Package** | Option A* | Least costly | Uncovers high-cost treatment |
| | Option B** | Covers basic high-cost treatments | Requires higher premiums than Option A |
| | Same benefit package as the private-sector employees | Simple in payment | Most costly |
| **Subsidy vs. cross-subsidy** | Subsidy | Secures most stable and reliable financial source | Requires budget allocation |
| | Cross-subsidy | Reduces subsidy | Expects reaction from employers |
| **Voluntary vs. compulsory enrolment** | Voluntary by law | Easiest in implementation | Leads to adverse selection and financial unsustainability |
| | Compulsory by law but gradually implemented in practice | Provide time for people to understand the insurance and for available health care to be increased and improved | Difficult to convince some people to be enrolled in the scheme |
| | Compulsory in practice | Easy to convince people and able to avoid adverse selection | May face inadequate quality health care necessary for the insured |

* Option A provides case-based medical benefits, and referral and corpse transportation.
**Option B includes high-cost fee-for-service 9 items in addition to Option A.

# PART 3 Pilot Implementation Plan

## 3-1 Objective

The objective of the pilot implementation is to test SHIP Model in the selected sites and make the modifications necessary to the model for the eventual roll out at the national level.

## 3-2 Pilot implementation sites and target population

### 1） Pilot-implementation sites

The SHIP Model is going to be piloted at most in three health Operational Districts (ODs) from each of the following three provinces: Battambang, Kampong Speu, and Prey Veng. These provinces were selected according to the following criteria:

**Population size and density**

To measure effectiveness as accurately as possible, it is desirable to select provinces with population size from medium to large. Therefore, based on the Inter-censal Population Survey 2013, provinces with populations over 750,000 were selected.

**Table 19 Population in provinces of Cambodia (2013)**

| | Province | Population | | Province | Population |
|---|---|---|---|---|---|
| 1 | Banteay Meanchey | 729,569 | 14 | Prey Veng | 1,156,739 |
| 2 | Battambang | 1,121,019 | 15 | Pursat | 435,596 |
| 3 | Kampong Cham | 1,757,223 | 16 | Ratanak Kiri | 183,699 |
| 4 | Kampong Chhnang | 523,202 | 17 | Siem Reap | 922,982 |
| 5 | Kampong Speu | 755,465 | 18 | Preah Sihanouk | 250,180 |
| 6 | Kampong Thom | 690,414 | 19 | Stung Treng | 122,791 |
| 7 | Kampot | 611,557 | 20 | Svay Rieng | 578,380 |
| 8 | Kandal | 1,115,965 | 21 | Takeo | 923,373 |
| 9 | Koh Kong | 122,263 | 22 | Otdar Meanchey | 231,390 |
| 10 | Kratie | 344,195 | 23 | Kep | 38,701 |
| 11 | Mondul Kiri | 72,680 | 24 | Pailin | 65,795 |
| 12 | Phnom Penh | 1,688,044 | 25 | Tboung Khmum | 754,000 |
| 13 | Preah Vihear | 235,370 | | | |

Source：Inter-censal Population Survey 2013

The capital city, which has an extremely high population density, and Tboung Khmum, a newly established province with currently limited data, were excluded as

potential candidates. Based on this criterion, Battambang province, Kampong Cham province, Kampong Speu province, Kandal province, Prey Veng province, Siem Reap province and Takeo province, highlighted in Table 19, were identified as candidates.

**Variation in income level**

In the pilot, it is ideal to introduce health insurance holding aside household income level. Table 20 shows the distribution of households by income quintiles in the selected seven provinces. A province with a low standard deviation (SD) indicates little difference in the number of households in each quintile, that is, an area where households of relatively diverse economic levels reside. Based on this criterion, the possible provinces were narrowed down to Battambang province, Kampong Cham province, Kampong Speu province, and Prey Veng province, highlighted in the Table 20.

**Table 20 Number of households in each wealth quintile in the selected seven provinces (2014)**

| | Wealth Quintiles | | | | | | |
|---|---|---|---|---|---|---|---|
| | I | II | III | IV | V | mean | SD |
| **Battambang** | 194 | 187 | 299 | 359 | 365 | 281 | 77 |
| **Kampong Cham** | 254 | 208 | 200 | 117 | 186 | 193 | 44 |
| **Kampong Speu** | 417 | 362 | 453 | 458 | 272 | 392 | 69 |
| **Kandal** | 84 | 156 | 366 | 438 | 395 | 288 | 141 |
| **Prey Veng** | 339 | 434 | 381 | 272 | 253 | 336 | 67 |
| **Siem Reap** | 532 | 404 | 233 | 207 | 448 | 365 | 125 |
| **Takeo** | 108 | 340 | 383 | 518 | 189 | 308 | 145 |

Source：Cambodia Socio-Economic Survey 2014

**Variation in job types**

The pilot should be implemented in provinces with a variety of jobs, such as agriculture, manufacturing and service industries, so that the pilot can test applicability of the scheme for a variety of occupations. Table 21 shows main income sources for urban and rural households in the four provinces with relatively diverse income levels. Jobs in Battambang province are the most diverse followed by Prey Veng province and Kampong Speu province. Therefore, it is proposed to select these provinces as the pilot target sites.

**Table 21 Job types of the household main income earners in urban/rural areas of the four provinces (2014)**

(the number of households)

| | | Salaried | Agriculture | Fishing | Manufacture | |
|---|---|---|---|---|---|---|
| **Battambang** | Urban | 69 | 53 | 5 | 1 | |
| | Rural | 122 | 307 | 27 | 0 | |
| **Kampong Cham** | Urban | 73 | 76 | 6 | 1 | |
| | Rural | 342 | 573 | 34 | 8 | |
| **Kampong Speu** | Urban | 90 | 31 | 0 | 4 | |
| | Rural | 258 | 480 | 15 | 6 | |
| **Prey Veng** | Urban | 13 | 16 | 0 | 0 | |
| | Rural | 147 | 437 | 35 | 4 | |
| | | **Service** | **Others** | **Total** | **Mean** | **SD** |
| **Battambang** | Urban | 71 | 41 | 240 | 40 | 67 |
| | Rural | 31 | 27 | 514 | 86 | |
| **Kampong Cham** | Urban | 60 | 23 | 239 | 40 | 285 |
| | Rural | 69 | 59 | 1085 | 181 | |
| **Kampong Speu** | Urban | 39 | 15 | 179 | 30 | 246 |
| | Rural | 42 | 35 | 836 | 139 | |
| **Prey Veng** | Urban | 16 | 3 | 48 | 8 | 189 |
| | Rural | 37 | 57 | 717 | 120 | |

Source: Cambodia Socio-Economic Survey 2014

### Geographical variation

Battambang province is located in the northwest of Cambodia, close to the Thai border, Kampong Speu is to the west of Phnom Penh, and Prey Veng province is in the southeast of the country, bordering Vietnam. There are urban and rural settings in all three provinces (see Figure 11).


**Figure 11 Target area candidates of the pilot**

### The Utilization rate of the public health facilities

The utilization rate of the public health facilities in Cambodia in 2016 is as shown in Figure 12. Utilization rate of referral hospital outpatient clinics is close to the average of all three provinces. The outpatient clinic at the health centre has a slightly different trend, but all three provinces do not differ much from the average of the country.

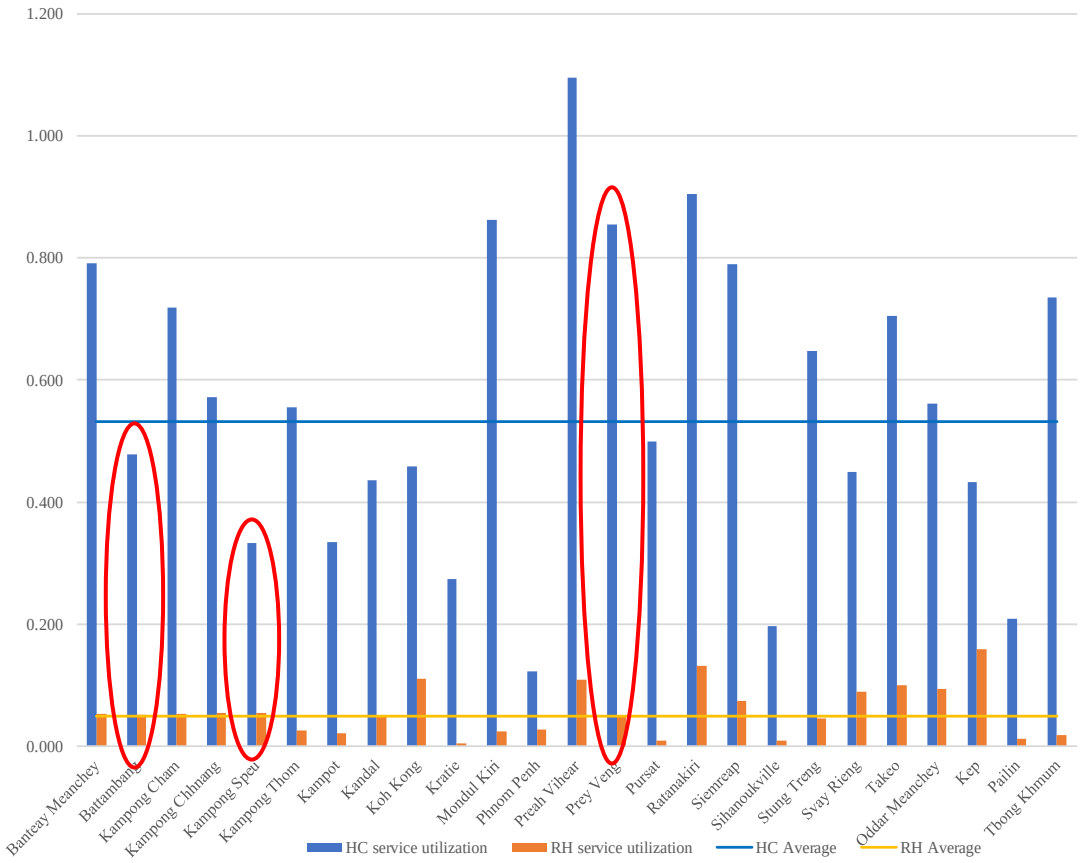



**Figure 12 Public medical facility utilization rate[19] in Cambodia (2016)**

Source: DPHI, MOH

### Variation in quality in public health facilities

Results of the client satisfaction survey[20] indicate that Battambang province is a

[19] OPD Service Utilization is defined as number of outpatient department visits to the public health facility, health centre (HC) or referral hospital (RH)) per person per year. The numerator is the total number of OPD visits per year in either all HCs or in all RHs, and the denominator is the total population of the respective province.

[20] MSD. Peou E. and Depasse J-P. (2012). National Client Satisfaction Survey: Healthcare Services at

model for large provinces.[21] Kampong Speu province, on the other hand, scored slightly lower than the national average and was one of the eight provinces recommended for priority improvements. Prey Veng province is in line with the national average. This makes this package of three provinces ideal for the pilot project.

**Market for private medical facilities**

Since NSSF contracts not only with the public health providers, but also the private health provides, it is desirable that the pilot be implemented in areas where there is an active private health provider market. Figure 13 presents the number of large private health facilities in each province registered at MOH in 2017. In Battambang province, Kampong Speu province and Prey Veng province, it seems that the private health sector market is relatively active.

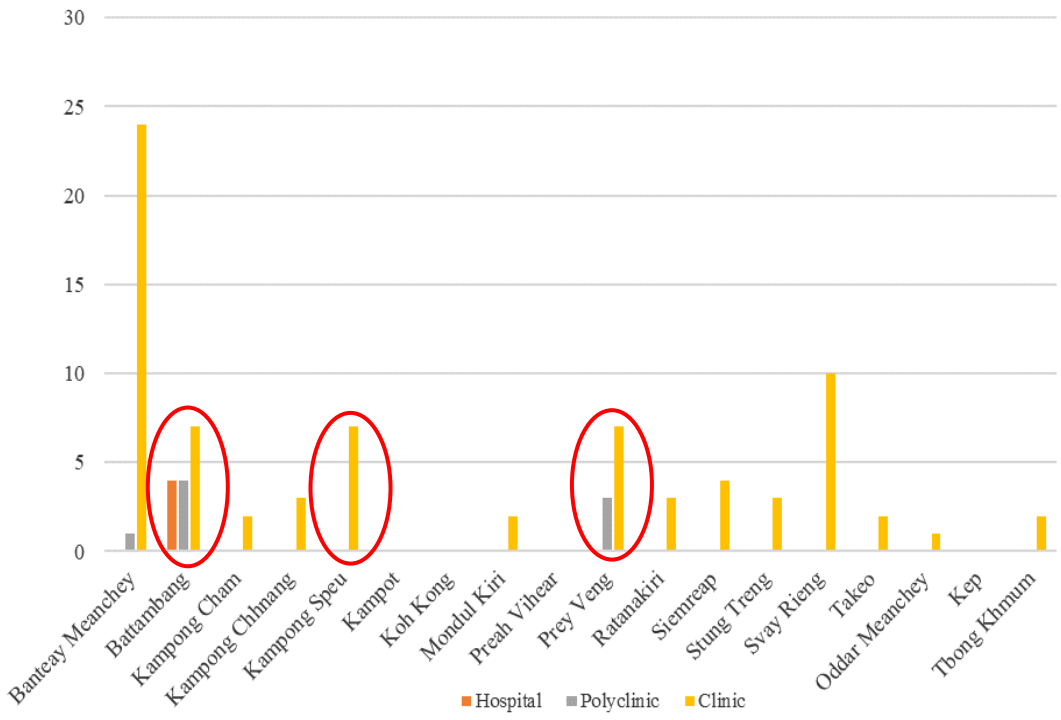



**Figure 13 Number of large private health facilities registered by province (2017)**

Source: MOH

Public Health Facilities in Cambodia Baseline Report for Ministry of Health.

[21] A large province is a province whose population is larger than one million.

### Capacity of NSSF Branch Office

Since the operational base of the SHIP Model is NSSF, it is essential to confirm that the NSSF branch office in the target provinces are functioning properly and the staff has sufficient capacity and commitment to work with the informal sector population.

As mentioned above, since health care in Cambodia is administered in ODs, it is proposed to conduct the pilot on the ground in ODs. The criteria for selecting ODs in each province are the same as selecting provinces. Maung Russei OD in Battambang province, Ou Dongk OD in Kampong Speu province and Pearaing OD in Prey Veng province are recommended by the TWG-SHIP (see Table 22). However, it will be necessary to make a final decision based on consultations with stakeholders at the central, provincial and district levels during the project preparation period.

**Table 22 Three ODs recommended as the pilot sites**

| Province | OD | Population | Province | OD | Population |
|---|---|---|---|---|---|
| Battambang | Thmar Koul | 235,376 | Prey Veng | Kamchay Mear | 96,467 |
| | Maung Russei | 206,480 | | Kampong Trabek | 139,274 |
| | Sampov Luon | 170,735 | | Mesang | 123,585 |
| | Battambang | 379,787 | | Peam Ror | 68,785 |
| | Sangkae | 208,267 | | Pearaing | 118,063 |
| Kampong Speu | Kampong Speu | 347,916 | | Preah Sdach | 131,442 |
| | Kong Pissey | 281,617 | | Svay Antor | 118,880 |
| | Ou Dongk | 133,071 | | Sithor Kandal | 75,701 |
| | Phnom Srouch | 113,753 | | Krog Prey Veng | 82,700 |
| | | | | Baphnom | 97,471 |
| | | | | Peam Chor | 75,367 |
| | | | | Kanhchriech | 72,804 |

Source: Ministry of Health in Cambodia

Since it is assumed that all residents in the target areas are to be registered, considerable time and personnel input are required. Therefore, if it is difficult to implement the pilot in all three ODs in three provinces within the timeframe and budget, it is suggested to implement through the Administrative Districts (ADs) which are used by other sectors and usually smaller than ODs. However, it is important to ensure that the target ADs include at least one referral hospital to provide the beneficiaries with necessary health services.

**Motivation of commune/Sangkat staff and village representatives**

As enrolling the informal sector is a challenge and the local authorities play the significant roles in this effort, it is desirable to choose commune/Sangkats whose officials and village representatives have strong commitment to provide equitable health services to the people in their communities.

**2） Target population**

Every one of all ages residing in the selected OD/AD will be registered for the SHIP and will be encouraged to be enrolled in the health insurance scheme. Those who are covered by other public health protection schemes, such as the NSSF health insurance or the Health Equity Fund (HEF), will also be registered as they are all potential SHIP members at some point in life.

### 3-3 Preconditions for the pilot implementation

There are technical and administrative issues that need to be resolved as preconditions for the start of the pilot implementation.

1. The SHIP Model concept note should be approved by the NSPC Secretariat and endorsed by the NSPC Executive Committee.
2. Upon obtaining the endorsement of NSPC, inter-ministerial prakas will be developed as guided by NSPC and sent to target provinces.

### 3-4 Activities and timeline

A tentative pilot-implementation workplan listing the activities and timeline is provided in Figure 14. The pilot project assisted by JICA will be implemented over the three years, from 2019 Q2 to 2022 Q1. The workplan will be adjusted according to the speed of the implementation, external factors and resource availability.

There are mainly three stages to the pilot implementation: preparation for the phase-in, the NSSF capacity building for the SHIP, and the SHIP implementation in the selected sites.

The first stage of the preparation is expected to take half a year to a year, involving development of the implementation guideline and the SHIP management system for the

insured. The guideline will be based on the actuarial analysis externally conducted for the SHIP, and it contains the information of premium rates, benefit packages, premium collection methods options, monitoring and evaluation framework for the SHIP, and advocacy and communication strategy for registration and enrolment. The formal letters concerning the SHIP Model and the pilot implementation plan will be submitted to the concerned Provincial Governors before the activities begin in the selected ODs.

| | | | 2018 | | | | 2019 | | | | 2020 | | | | 2021 | | | | 2022 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 |
| **1** | **Preconditions for the phase-in implementation** | | | | | | | | | | | | | | | | | | | | | |
| 1.1 | Endorsement of the SHIP model concept note and implementation plan | NSPC | | | | | | | | | | | | | | | | | | | | |
| 1.2 | Development of the legal instrument (if necessary) | MOH | | | | | | | | | | | | | | | | | | | | |
| **2** | **Preparations for the phase-in implementation** | | | | | | | | | | | | | | | | | | | | | |
| 2.1 | Development of the implementation guideline | MOH and MOLVT/NSSF | | | | | | | | | | | | | | | | | | | | |
| 2.1.1 | Actuarial analysis | Outsourced | | | | | | | | | | | | | | | | | | | | |
| 2.1.2 | Premium rate adjustment | MOH | | | | | | | | | | | | | | | | | | | | |
| 2.1.3 | Benefit package adjustment | MOH | | | | | | | | | | | | | | | | | | | | |
| 2.1.4 | Premium collection method options | NSSF, banks, etc. | | | | | | | | | | | | | | | | | | | | |
| 2.1.5 | Monitoring and evaluation framework | | | | | | | | | | | | | | | | | | | | | |
| 2.1.6 | Advocacy and communication strategy for registration and enrolment | NSSF, MOH | | | | | | | | | | | | | | | | | | | | |
| 2.2 | Development of the SHIP management system for the insured by NSSF and communes | NSSF, local authority | | | | | | | | | | | | | | | | | | | | |
| 2.3 | Submission of the formal letter to the Provincial Governer of the selected ODs | MOH | | | | | | | | | | | | | | | | | | | | |
| **3** | **NSSF capacity building for the SHIP** | | | | | | | | | | | | | | | | | | | | | |
| 3.1 | NSSF IT system development for registration | NSSF HQ and branch | | | | | | | | | | | | | | | | | | | | |
| 3.2 | NSSF training manual development | NSSF HQ and branch | | | | | | | | | | | | | | | | | | | | |
| 3.3 | NSSF and commune system establishment for the SHIP management | NSSF branch, commune | | | | | | | | | | | | | | | | | | | | |
| 3.4 | NSSF branch office staff hiring and training in the first OD | NSSF branch | | | | | | | | | | | | | | | | | | | | |
| 3.5 | NSSF branch office staff hiring and training in the second OD | NSSF branch | | | | | | | | | | | | | | | | | | | | |
| 3.6 | NSSF branch office staff hiring and training in the third OD | NSSF branch | | | | | | | | | | | | | | | | | | | | |
| **4** | **The SHIP implementation** | | | | | | | | | | | | | | | | | | | | | |
| 4.1 | Registration of residents in the first OD | NSSF, communes | | | | | | | | | | | | | | | | | | | | |
| 4.2 | Registration of residents in the second OD | NSSF, communes | | | | | | | | | | | | | | | | | | | | |
| 4.3 | Registration of residents in the third OD | NSSF, communes | | | | | | | | | | | | | | | | | | | | |
| 4.4 | The SHIP takes into effect in the first OD | | | | | | | | | | | | | | | | | | | | | |
| 4.5 | The SHIP takes into effect in the second OD | | | | | | | | | | | | | | | | | | | | | |
| 4.6 | The SHIP takes into effect in the third OD | | | | | | | | | | | | | | | | | | | | | |
| 4.7 | Advocacy, communication, and information provision | | | | | | | | | | | | | | | | | | | | | |
| **5** | **Management and reporting** | | | | | | | | | | | | | | | | | | | | | |
| 5.1 | The TWG-SHIP meetings | TWG-SHIP | | | | | | X | X | X | X | X | X | X | X | X | X | X | X | | | |
| 5.2 | Province/OD level SHIP meetings | | | | | | | X | | X | | X | | X | | X | | X | | | | |
| 5.3 | External evaluations | Outsourced | | | | | | | | | | | | X | | | | | | X | | |
| 5.4 | Annual reports to NSPC | | | | | | | | | | X | | | | X | | | | | X | | |
| 5.5 | Adjustment of the SHIP Model for the nation-wide implementation | | | | | | | | | | | | | | | | | | | X | | |

**Figure 14 Pilot-Implementation Workplan**

The second stage of the NSSF capacity building for the SHIP includes IT system development for registration and management, training manual development, NSSF

and commune/Sangkat system establishment for the SHIP management, and the NSSF Branch Office staff hiring and training.

The third stage of the SHIP pilot implementation can be further divided into two phases: 1) registration of all applicable residents by NSSF and the local authority (the Commune/Sangkat Council members and village representatives), and 2) the SHIP taking into effect. Advocacy, communication, and information provision activities will be carried out throughout this stage.

The TWG-SHIP meetings will be held quarterly to review the progress and implementation challenges of SHIP model and to provide inputs to improve the implementation. Province and OD level meetings will also be held at least bi-annually and as required to make decisions, review progress, and resolve any issues. Annual reports on the pilot will be submitted to NSPC. External evaluations of the SHIP pilot will be conducted twice throughout the pilot period. At the end of the 3-year pilot implementation, adjustments will be made to the SHIP Model for the pilot expansion and national-wide implementation.

### 3-5 Budget

JICA will cover part of the pilot implementation once the intergovernmental agreement between Cambodia and Japan is reached for the new project after the general election in July 2018. JICA will provide technical assistance and financial assistance for trainings, equipment, materials, and operational costs. Cambodian government will cover the cost necessary for the personnel (hiring and salaries) for operating the project, office space, and part of the operational cost. Collected premium will most likely not be sufficient to make the scheme financially sustainable, particularly when enrolment rate is low. Therefore, the government subsidy should be secured.

TWG-SHIP/JICA

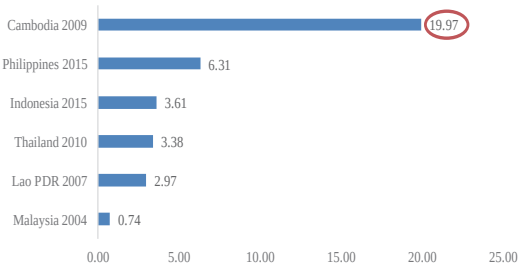
# Designed Model for Social health Insurance for Informal Sector Population in Cambodia (SHIP)

## PART 1 Background

2

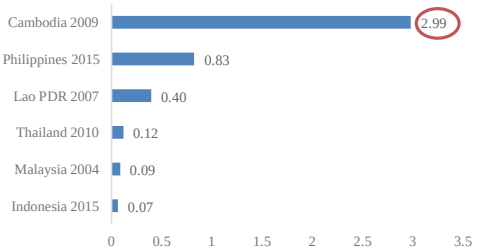
# Current Status of Health Protection in Cambodia

Out-of-pocket (OOP) health care payment is higher than other lower-middle income countries and highest in Southeast Asia. Impoverishment due to the high level of OOP health care payment is also highest among Southeast Asian countries.




Incidence of catastrophic health expenditure

*10% of household total consumption or income spent for health care




Incidence of impoverishing health expenditure

Source：WHO & International Bank for Reconstruction and Development/WB (2017)

3

# Development Process of SHIP Model

- The Technical Working Group for Social Health Insurance for the Informal Sector Population (TWG-SHIP), comprised of multiple relevant government, discussed and gradually developed concept and design of the SHIP Model between January 2017 and March 2018.
- A key informant interview, a focus group discussion and a household survey were conducted to collect information and opinions of the potential beneficiaries of the SHIP.
- Benefit costs, insurance premiums and affordability of the beneficiaries were estimated by a cost analysis.
- Consultations with development partners and a mid-term review with the prospective NSPC Executive Committee chairperson were held.

4

# PART 2
# Outline of SHIP Model

5

## Basic principles

- **A mechanism to enroll the informal sector population in health insurance scheme of the Single Payer**

- **Utilization of existing systems:**

(1) Operational structure of NSSF and (2) communes and villages as the administrative foundation

→ in line with NSPPF

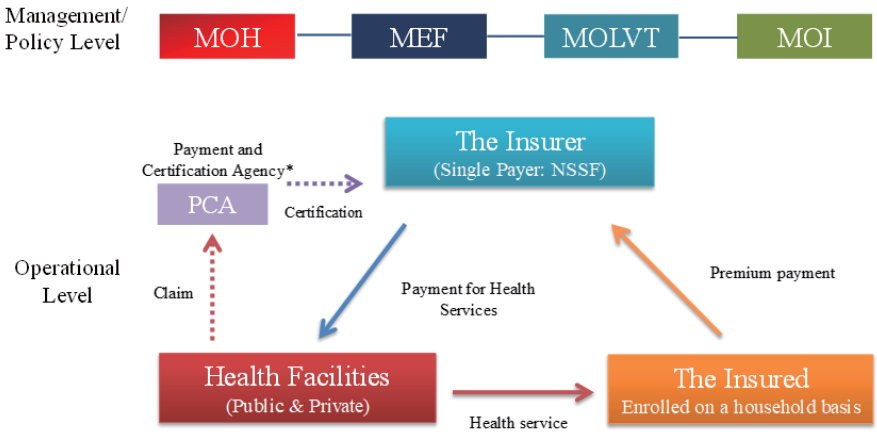
→ reduces operational costs

- **Utilization of lessons learned from CBHI:**

(1) Pool the fund at the national level in the Single Payer and (2) pursue mandatory enrollment on a household basis to avoid adverse selection

6

# Conceptual Framework of SHIP Model




*PCA currently serves for HEF claim verification, but its role could be expanded to social health insurance in the future.

7

# Target population

Those who are not covered by other public health protection schemes: 6.9 million (43%) to 11.1 million (69%)

| | Target population | Number | % of total population | Coverage & Gap | Scheme |
|---|---|---|---|---|---|
| Formal sector population | Workers* | 1,470,842 | 9.20% | ✓ | NSSF |
| | Workers' dependents** | 3,677,105 | 23.01% | not covered yet | |
| | **Total** | **5,147,947** | **32.21%** | | |
| | Civil servants | 175,000 | 1.09% | ✓ | |
| | Civil servants' dependents | 438,000 | 2.74% | not covered yet | |
| | Civil service pensioners | 36,000 | 0.23% | ✓ | |
| | Pensioners' dependents | 90,000 | 0.56% | not covered yet | |
| | **Total** | **739,000** | **4.62%** | | |
| Informal sector population | Wealth-off | 799,090 | 5.00% | COVERAGE GAP | SHIP |
| | Middle-class | 3,090,000 | 19.33% | | |
| | Near-poor | 3,000,000 | 18.77% | | |
| | Poor households | 3,000,000 | 18.77% | ✓ | HEF |
| | Informal workers* **** | 205,721 | 1.29% | ✓ | |
| | **Total** | **10,094,811** | **63.16%** | | |
| **GRAND TOTAL*** ** | | **15,981,798** | **100.00%** | | |

* NSSF (2018). Achievement over the period of 10 years (2008-2017) and Direction for 2018

**The number of dependents was calculated based on the assumption that the worker-dependent ratio is 1:2.5

***Grand total population is the projected population in 2018 based on the data of the National Institute of Statistics (NIS)

****Informal workers are those who became the health care beneficiaries in January 2018 as the Prime Minister announced, including commune/Sangkat council members, village chiefs, deputy chiefs and assistants, the government-sponsored athletes, land-mine cleaners and cyclo drivers

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# Registration and enrolment

| Country | Enrolment Policy of Social Insurance | Enrolment rate |
|---|---|---|
| **Japan** | Voluntary (1938)→Compulsory (1961) | 90-100% |
| **South Korea** | Pilot (1981～)→Compulsory (1989) | 90-100% |
| **Taiwan** | Compulsory (1995) | 90-100% |
| **The Philippines** | Compulsory (1995)→Scale up | 80-90% |
| **Vietnam** | Voluntary (1995) | 60-70% |
| **Rwanda** | Voluntary (2000)→Compulsory (2008) | 90-100% |
| **Indonesia** | Tax-based→Social Insurance: Compulsory (2014) | 60-70% |
| **Cambodia** | *50+ CBHIs: Voluntary (2000～)* | *30-40%* |

**Table: Enrolment policies of social insurance for the informal sector population**

- The SHIP Model pursues compulsory enrolment.
- In practice, the target population will be gradually enrolled in the voluntary basis, while developing the legal instruments and raise people's awareness of the health insurance.
- Every citizen will be registered in the first place.

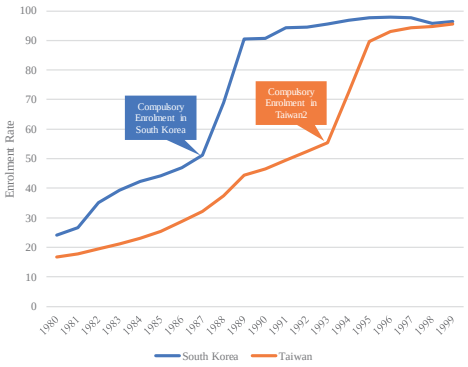
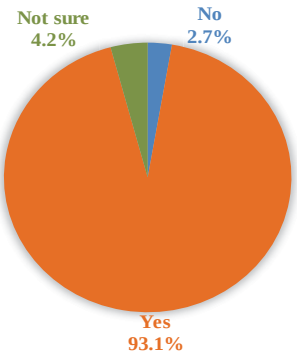


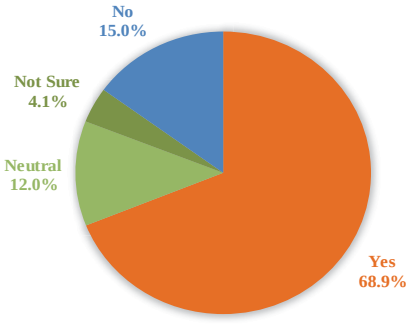

**Figure: Enrolment policy and enrolment rates in South Korea and Taiwan (1980-1999)**

9

# Registration and enrolment




**Q) Agree to compulsory registration? (N=1,033)**




**Q) Agree to compulsory enrolment? (N=1,033)**

- The household survey conducted in Battambang an Kampong Speu provinces for 1,033 households in 2017 found that 93% of the respondents agreed to be registered for the health insurance (without the obligation to pay premiums) if it is compulsory.
- Nearly 70% of them also agreed to compulsory enrolment (with the obligation to pay premiums).

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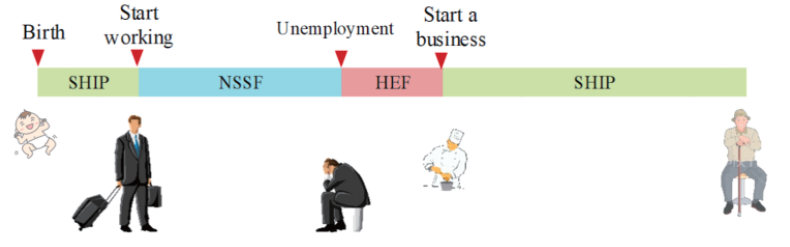
# Registration and enrolment

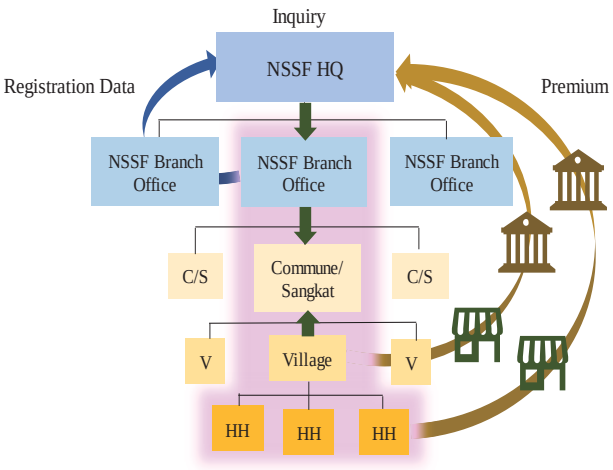
**Single registry**

- People change jobs from the informal sector to the formal sector and vice versa
- The ID Poor households are not poor forever
- Register ALL residents at commune/Sangkat offices by NSSF branch offices




Flexible health protection system based on the lifestyle of each citizen

11




# Registration and enrolment

- Registration unit is an individual.
- Each individual receives a health insurance number.
- The insurance database is centrally managed at NSSF
- NSSF branch offices closely collaborate with communes/Sangkats and villages for the registration.
- The NSSF branch office staff updates the information of the villagers at commune/Sangkat at the commune/Sangkat council monthly meetings.

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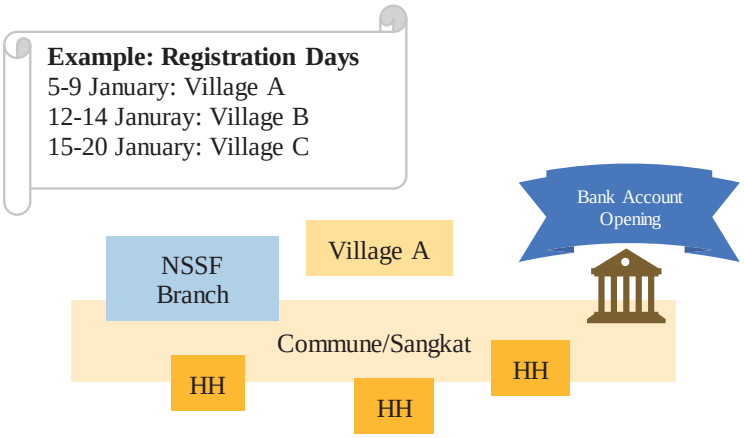
# Registration and enrolment




## Registration Day

- Registration days are decided for each village
- NSSF Brach Office staff come to the commune/Sangkat office to register the residents
- Residents are registered based on the residential registration records
- Bank staff are also present to provide an opportunity for the residents to open a bank account

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# Registration and enrolment

| | Name | Personal # | The insured # | Address | Occupation | Social Protection Scheme |
|---|---|---|---|---|---|---|
| 1 | XXXX | 10000000 | 10000000 | PP | Business owener | SHIP |
| 2 | XXXX | 10000001 | 10000000 | PP | Housewife | SHIP |
| 3 | XXXX | 10000002 | 10000000 | PP | Student | SHIP |
| 4 | XXXX | 10000003 | — | KC | Unemployed | HEF |
| 5 | XXXX | 10000004 | — | KC | Unemployed | HEF |
| 6 | XXXX | 10000005 | 10000005 | KS | Factory worker | NSSF |
| 7 | XXXX | 10000006 | 10000005 | KS | Student | SHIP |

## Registration Data

- The registration data are centrally managed at NSSF
- The database is integrated with the MOI residential registration system
- It is updated monthly along with the residential registration data
- NSSF branch office staff attend the commune/Sangkat council monthly meetings to be informed

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# Premium collection methods

**Flexible choice of a best suited method**

| Mode | Frequency | | | |
|---|---|---|---|---|
| | Annually | Biannually | Quarterly | Monthly |
| 1) Automatic withdrawal from bank account | | | | |
| 2) Remittance by a bank or a money transfer system | | | ✓ | |
| 3) Automatic withdrawal from mobile phone credit | | | | |
| 4) Automatic withdrawal from public utility bills (water/electricity) | | | | |
| 5) Collection and collective remittance by village representative | | | | |

- The insured generally not willing to and easily forget to pay premiums
- Money transferred electronically for security reasons
- Use of authority of to make the delinquent pay premium
- Incentives, such as discount in premiums and provision of telephone credit in case of not being delinquent as a way of promoting the premium payment

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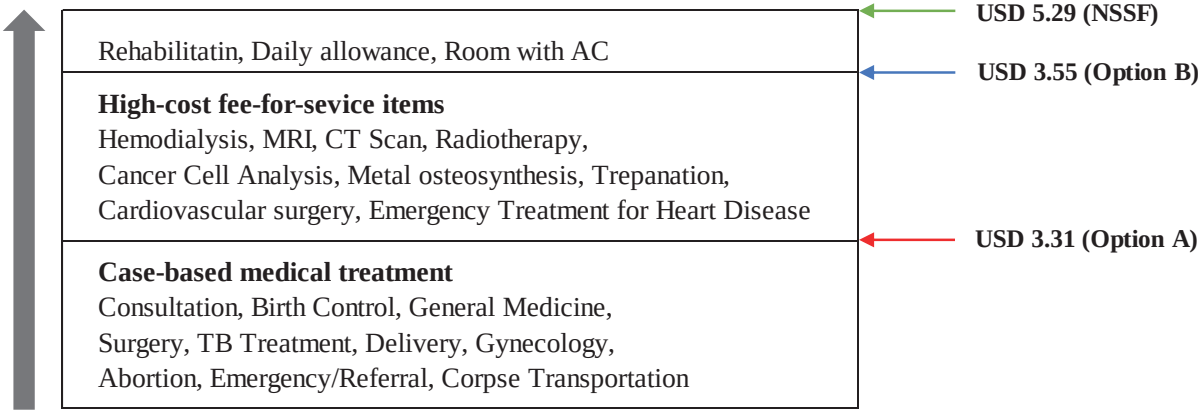
# Benefit Package and Average Monthly Premium per Person

## SHIP suggested benefit packages: Options A and B

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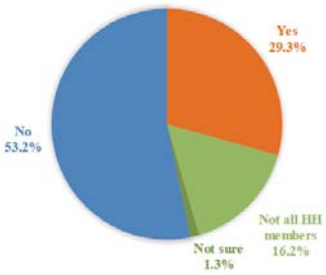
# Insurance Premiums

## Premiums of Option A

| | Annual (KHR) | Annual (USD) | Monthly (KHR) | Monthly (USD) |
|---|---|---|---|---|
| **Insured & adult dependents** | 174,100 | 43.53 | 15,000 | 3.63 |
| **Child dependents** | 139,300 | 34.83 | 11,000 | 2.93 |
| **Premium of average household (a couple with 3 children)** | | | 63,000 | 15.75 |

## Premiums of Option B

| | Annual (KHR) | Annual (USD) | Monthly (KHR) | Monthly (USD) |
|---|---|---|---|---|
| **Insured & adult dependents** | 186,900 | 46.73 | 16,000 | 3.89 |
| **Child dependents** | 149,500 | 37.38 | 12,000 | 3.11 |
| **Premium of average household (a couple with 3 children)** | | | 68,000 | 17.00 |




**Q) Willing to pay 14,000 riels per person per month for a health insurance? (N=1,033)**

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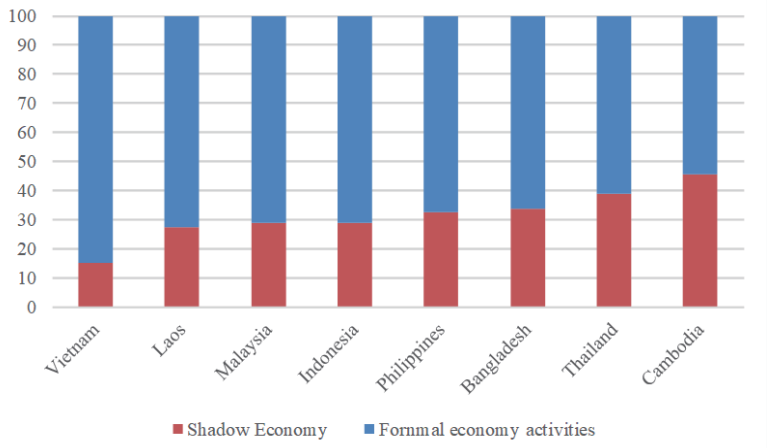
## Government Subsidy

# Estimation of the average shadow economy production from 2000 to 2014 for Southeast Asian countries' share of GDP




Source: Schneider F. (2017)

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## Government Subsidy

# Estimated annual subsidy

| Option | Subsidy rate (%) | Monthly premium of a couple with 3 children (USD) | Enrollment rate (%) | Annual subsidy for the pilot (million USD) | Annual subsidy for the nation-wide implementation (million USD) |
|---|---|---|---|---|---|
| Option A | 0 | 15.75 | 20 | 0 | 0 |
| | | | 50 | | |
| | | | 100 | | |
| | 15 | 13.90 | 20 | 0.33 | 10.73 |
| | | | 50 | 0.82 | 26.80 |
| | | | 100 | 1.64 | 53.60 |
| | 30 | 11.03 | 20 | 0.65 | 21.44 |
| | | | 50 | 1.64 | 53.60 |
| | | | 100 | 3.27 | 107.20 |
| | 50 | 7.88 | 20 | 1.09 | 35.73 |
| | | | 50 | 2.73 | 89.33 |
| | | | 100 | 5.45 | 178.66 |
| Option B | 0 | 17.00 | 20 | 0 | 0 |
| | | | 50 | | |
| | | | 100 | | |
| | 15 | 14.45 | 20 | 0.35 | 11.51 |
| | | | 50 | 0.88 | 28.77 |
| | | | 100 | 1.76 | 57.53 |
| | 30 | 11.90 | 20 | 0.70 | 23.01 |
| | | | 50 | 1.76 | 57.53 |
| | | | 100 | 3.51 | 115.06 |
| | 50 | 8.50 | 20 | 1.17 | 38.35 |
| | | | 50 | 2.93 | 95.89 |
| | | | 100 | 5.85 | 191.77 |

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## Government Subsidy

# Proportion of subsidy in the national budgets and GDP (2018)

| | | | | | | |
|---|---|---|---|---|---|---|
| **Health sector budget (million USD)** | 485 | | | | | |
| **Total national budget (million USD)** | 6,018 | | | | | |
| **Projected GDP (million USD)** | 22,854 | | | | | |
| **Option A** | | | | | | |
| **Subsidy rate** | **50%** | **30%** | **15%** | **50%** | **30%** | **15%** |
| **Pilot / Nation-wide** | **Pilot** | | | **Nation-wide** | | |
| **Government subsidy (million USD)** | 5.45 | 3.27 | 1.64 | 178.66 | 107.20 | 53.60 |
| **Government subsidy in health sector budget (%)** | 1.12 | 0.67 | 0.34 | 36.84 | 22.10 | 11.05 |
| **Government subsidy in national budget (%)** | 0.09 | 0.05 | 0.03 | 2.97 | 1.78 | 0.89 |
| **Government subsidy in GDP (%)** | 0.02 | 0.01 | 0.01 | 0.78 | 0.47 | 0.23 |
| **Option B** | | | | | | |
| **Subsidy rate** | **50%** | **30%** | **15%** | **50%** | **30%** | **15%** |
| **Pilot / Nation-wide** | **Pilot** | | | **Nation-wide** | | |
| **Government subsidy (million USD)** | 5.85 | 3.51 | 1.76 | 191.77 | 115.06 | 57.53 |
| **Government subsidy in health sector budget (%)** | 1.21 | 0.72 | 0.36 | 39.54 | 23.72 | 11.86 |
| **Government subsidy in national budget (%)** | 0.10 | 0.06 | 0.03 | 3.19 | 1.91 | 0.96 |
| **Government subsidy in GDP (%)** | 0.03 | 0.02 | 0.01 | 0.84 | 0.50 | 0.25 |

*The above estimation was done considering that 100% of the informal sector population is enrolled.

Source: The Royal Government of Cambodia and the World Bank

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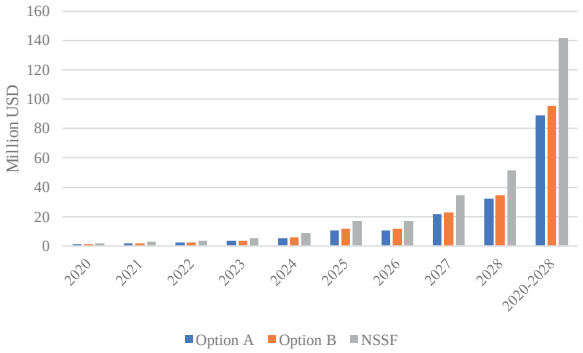
# Schedule of Government Subsidy

| | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Pilot | Pilot | Pilot | Pilot | Pilot | Nation-wide | Nation-wide | Nation-wide | Nation-wide | Nation-wide | Nation-wide | |
| Enrolment rate (%) | 20 | 30 | 40 | 50 | 60 | 10 | 20 | 40 | 60 | 80 | 100 | |
| Subsidy rate (%) | 50 | 50 | 50 | 30 | 30 | 30 | 15 | 15 | 15 | 0 | 0 | |
| OptionA (Million USD) | 1.1 | 1.7 | 2.2 | 3.2 | 5.4 | 10.7 | 10.7 | 21.4 | 32.2 | 0.0 | 0.0 | 88.6 |
| OptionB (Million USD) | 1.2 | 1.8 | 2.4 | 3.5 | 5.8 | 11.5 | 11.5 | 23.0 | 34.5 | 0.0 | 0.0 | 95.2 |
| NSSF (Million USD) | 1.8 | 2.7 | 3.6 | 5.1 | 8.6 | 17.1 | 17.1 | 34.3 | 51.4 | 0.0 | 0.0 | 141.7 |

*Pilot areas are 3 ODs in 3 provinces with total population of 438,296

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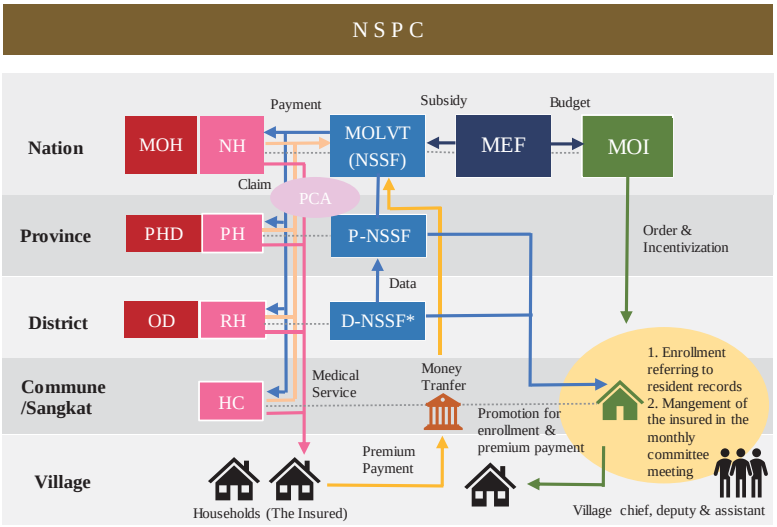
# Roles and Responsibilities




*There are only three district offices of NSSF in Kampong Cham, Prey Veng and Kampong Speu as of October 2017. However, it is under preparation in other areas.
*PCA currently serves for HEF, but its role could be expanded to social health insurance.
····· Communication between the SHIP actors

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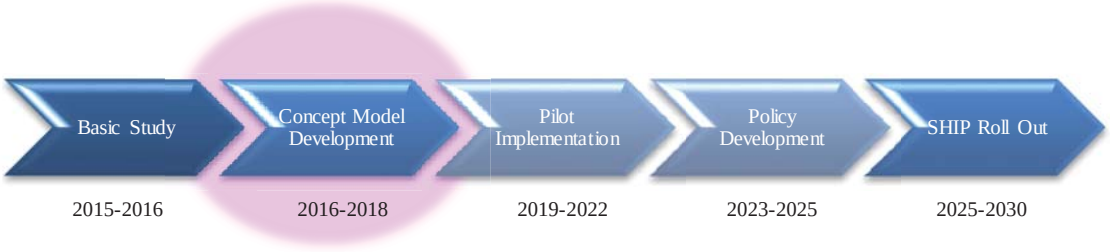
# Timeline




2019 Preparation
2020-2022 Implementation
2022 Evaluation

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# Policy Options

| Issue | Options | Advantages | Disadvantages |
|---|---|---|---|
| **Benefit Package** | Option A* | Least costly | Uncovers high-cost treatment |
| | Option B** | Covers basic high-cost treatments | Requires higher premiums than Option A |
| | Same benefit package as the private-sector employees | Simple in payment | Most costly |
| **Subsidy** | Equal subsidy for all | Secures most stable and reliable financial source | Requires budget allocation |
| | Expand HEF for the near poor | Simple in administration | No subsidy for the non-poor |
| | Cross-subsidy | Reduces burden on the government | Expects reaction from employers |
| **Voluntary vs. compulsory enrolment** | Voluntary by law | Easiest in implementation | Leads to adverse selection and financial unsustainability |
| | Compulsory by law but gradually implemented in practice | Provide time for people to understand the insurance and for available health care to be increased and improved | Difficult to convince some people to be enrolled in the scheme |
| | Compulsory in practice | Easy to convince people and able to avoid adverse selection | May face inadequate quality health care necessary for the insured |

* Option A provides case-based medical benefits, and referral and corpse transportation.
**Option B includes high-cost fee-for-service 9 items in addition to Option A.

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Thank you

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