

Department of Information, Culture and Tourism of Luang Prabang Province
Department of Luang Prabang World Heritage

Project for Capacity Enhancement for Sustainable World Heritage Management and Preservation in Luang Prabang in Lao PDR

Final Report

March 2020

Japan International Cooperation Agency

Nippon Koei Co., Ltd.

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Abbreviations are as follows.

Abbreviation	Official Name
ADB	Asia Development Bank
AFD	Agence Française de Développement (French)
ASEAN	Association of Southeast Asian Nations
DoICT	Department of Information, Culture, and Tourism of Luang Prabang Province
DOF	Department of Finance of Luang Prabang Province
DOIC	Department of Industry and Commerce of Luang Prabang Province
DPI	Department of Planning and Investment of Luang Prabang Province
DPL	Département du patrimoine mondial de Luang Prabang (French) Department of Luang Prabang World Heritage (English)
DPWT	Department of Public Works and Transport of Luang Prabang Province
GDP	Gross Domestic Product
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit (German)
ICOMOS	International Council on Monuments and Sites
JCC	Joint Coordination Committee
JICA	Japan International Cooperation Agency
JOCV	Japan Overseas Cooperation Volunteers
JPY	Japanese Yen
LAK	Laos Kip
LANITH	Lao National Institute of Tourism and Hospitality
LWHPPEL	Luang Prabang World Heritage Preservation Fund
MICT	Ministry of Information, Culture and Tourism
MPWT	Ministry of Public Works and Transport
PSMV	Plan de Sauvegarde et de Mise en Valeur (French)
R/D	Record of Discussion
RLUP	Regulation on Luang Prabang Urban Planning
UDAA	Urban Development and Administration Authority
UNESCO	United Nations Educational, Scientific, and Cultural Organization
USD	United States Dollar
ZPP	Les zones comprises dans le périmètre de Protection du Patrimoine Architectural et Urbain (French) Zoning Plan of the Heritage Protected Areas (English)
World Heritage Area	Town of Luang Prabang, which has been registered as a UNESCO World Heritage Area
Rural District	Areas in Luang Prabang Province excluding the Town of Luang Prabang

Abbreviation	Official Name
the Project	Project for Capacity Enhancement for Sustainable World Heritage Management and Preservation in Luang Prabang in the Lao People's Democratic Republic

Currency Exchange Rate

1 LAK = 0.1250 JPY	1 JPY = 8.000 LAK
1 USD = 109.122 JPY	1 JPY = 0.00916 USD

Source: JICA Web Page

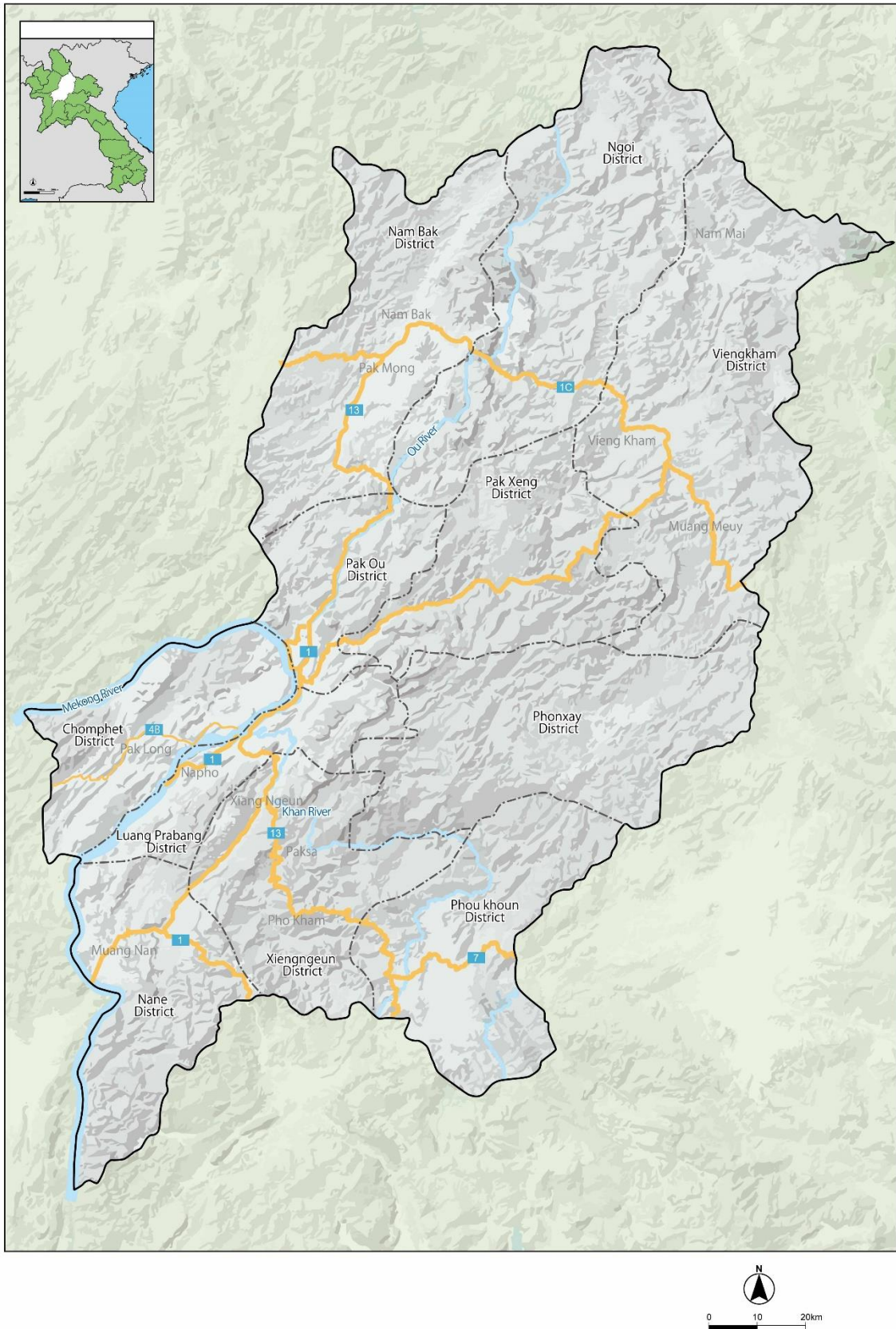
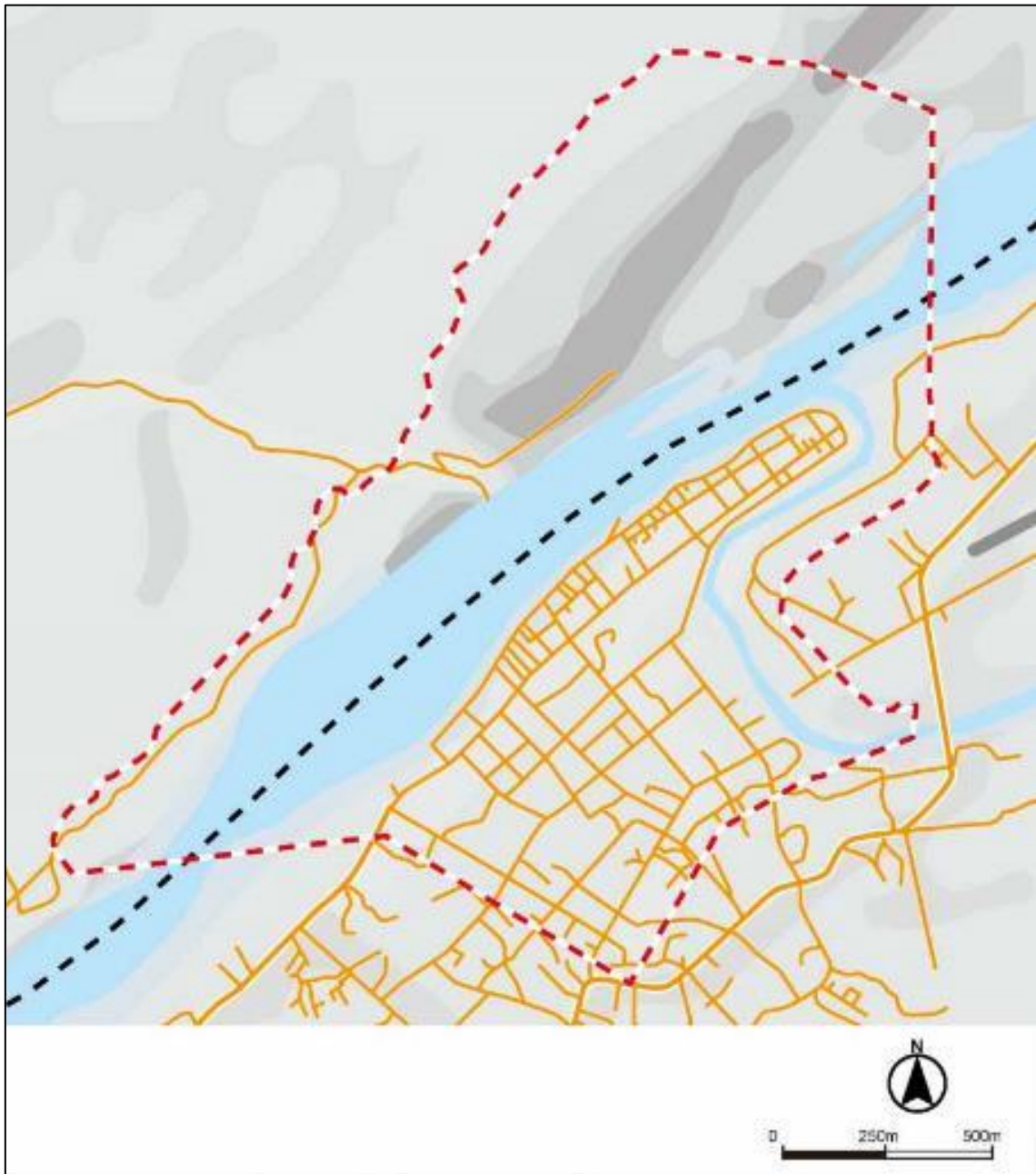


Figure: Luang Prabang Province (Project Area)



- - -: World Heritage Area

Figure: World Heritage Area (Project Area)

Chapter 1 Project Outline

1.1 Background

In 1995, the old town center of Luang Prabang in the northern main part of Laos was registered as a World Heritage Area (Cultural Heritage) by the United Nations Educational, Scientific, and Cultural Organization (hereinafter referred to as “UNESCO”). In doing so, this area of Luang Prabang was recognized as a beautiful town that combines traditional architecture with European-style colonial buildings.

More recently in the “Town of Luang Prabang”, which has been registered as a World Heritage Area (hereinafter referred to as “the World Heritage Area”), negative impacts have been noted such as environmental degradation due to the rapid increase in tourist arrivals and decrease in the number of local residents due to changes in the use of buildings. In addition, such development pressures are expected to increase further when the Laos-China Railway opens in the near future. There is a concern about the risk of loss of charms such as the traditional scenery and traditional culture of the World Heritage Area, especially as the preservation and management body of the World Heritage Area has weaknesses including financing.

On the other hand, the Luang Prabang Provincial Government aims to spread more widely tourism’s economic benefits, currently centered on the World Heritage Area, to the under-developed areas of Luang Prabang Province. The economic benefits of the industry have been concentrated in the World Heritage Area and to present that the spillover of the remainder of Luang Prabang Province is limited.

Therefore, the Project for Capacity Enhancement for Sustainable World Heritage Management and Preservation in Luang Prabang (hereinafter referred to as “the Project”), has been implemented to contribute: to the promotion of the regional development and capacity building of the related agency staff in Luang Prabang Province; to strengthen the preservation and management body of the World Heritage Area of Luang Prabang; and to conduct the Pilot Project of the regional development in the surrounding areas.

The Luang Prabang Provincial Government and the Japan International Cooperation Agency (hereinafter referred to as “JICA”) signed the record of discussion (hereinafter referred to as “R/D”) in October 2017. Both parties agreed on the Cooperation Framework and Contents of the Project.

1.2 Purpose

Overall Goal of the Project: “Luang Prabang continues to preserve and manage the World Heritage Area and implement rural development in the province”.

The Purpose of the Project: “To enhance the capacity development of related organizations of Luang Prabang in preserving and managing the World Heritage Area and implementing rural development in the province”.

Based on the goals and the aforementioned R/D, this mission targets the following three outputs:

- Output 1
Organizational Structure To organize preservation and management body of the World Heritage Area
- Output 2
Fund Mechanism To propose fund mechanism for sustainable maintenance of historical buildings in the World Heritage Area
- Output 3
Pilot Project To set up and conduct a pilot project for rural area development

Specifically, by conducting the works given to this mission, the project purpose is to achieve the expected outputs and contribute to the achievement of the Project goal as seen in Table 1.1 in the next section.

1.3 Scope of Implementation

Table 1.1 shows the outputs of the Project and the activities of this mission.

Table 1.1: Project Outputs, this Mission, and Project Area

Classification	Item	Description
Output 1	Project Output	To organize preservation and management body of the World Heritage area
	Activity	1-1: Review the roles of the existing organizations related to the preservation and management of the World Heritage area 1-2: Identify the role of the local community as the responsible organization for preservation and management of the World Heritage under the super vision of Luang Prabang Province and District 1-3: Propose necessary measures and action plan for heritage management and preservation* ¹ 1-5: Review and analyze the Luang Prabang maintenance manuals and regulation in reference to heritage management and preservation and propose an amendment if necessary* ²
	Project Area	World Heritage Area (7 km ²)
	Output 2	Project Output
Output 2	Activity	2-1: Calculate the necessary cost for the preservation and management of the World Heritage Area 2-2: Review and analyze the existing tax system (organization, laws, and regulation) and propose the sustainable fund-raising mechanism and its distribution system
	Project Area	World Heritage Area (7 km ²)
Output 3	Project Output	To set up and conduct a pilot project for rural area development
	Activity	3-1: Choose the pilot project about new tourist resource, handicrafts, and agricultural products in the rural district of Luang Prabang Province from the existing project list 3-2: Setting up a pilot project about development of the new tourism resources and quality improvement and marketing of handicrafts and agricultural products in the rural district with the local partners* ³
	Project Area	The Rural District (16,875 km ²)

*1 Proceeded outside this mission. 1-4: Conduct maintenance management activities based on proposals of 1-3 with participation of local residents, private companies, and local administrations and use the results to formulate and revise action plans and manuals for sustainable preservation.

*2 Proceeded outside this mission. 1-6: Conduct awareness-raising activities to local residents and tourists on the importance of heritage preservation.

*3 Proceeded outside this mission. 3-3: Conduct a pilot project, formulated in 3-2, with local partners and utilize the results for alternative tourism resources (new tourism resources) development, handicraft (handicrafts), agricultural product production improvement and marketing

Source: JICA Consultant Team

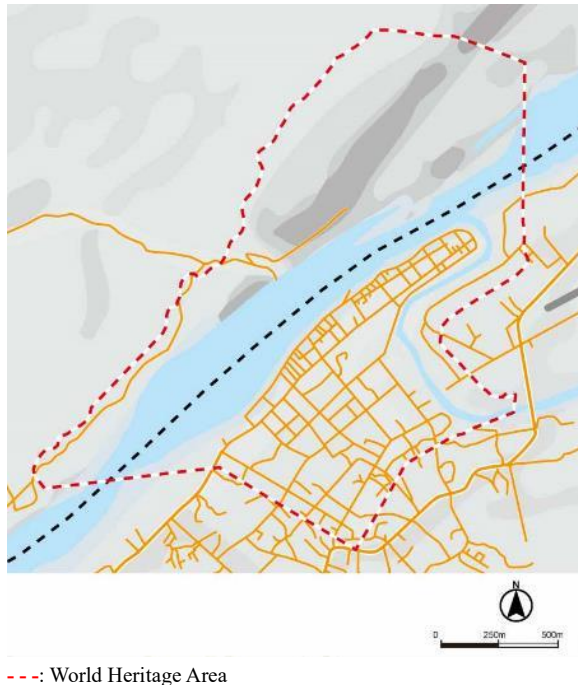
1.4 Project Area

The project requires different outputs in each of the two project areas, World Heritage Area and Rural District. The project areas for the four outputs of the Project are shown in Table 1.2 and Figure 1.1. Target outputs in this mission are Output 1, Output 2, and Output 3.

Table 1.2: Project Area (Definition of Project Areas and Relationship with Outputs)

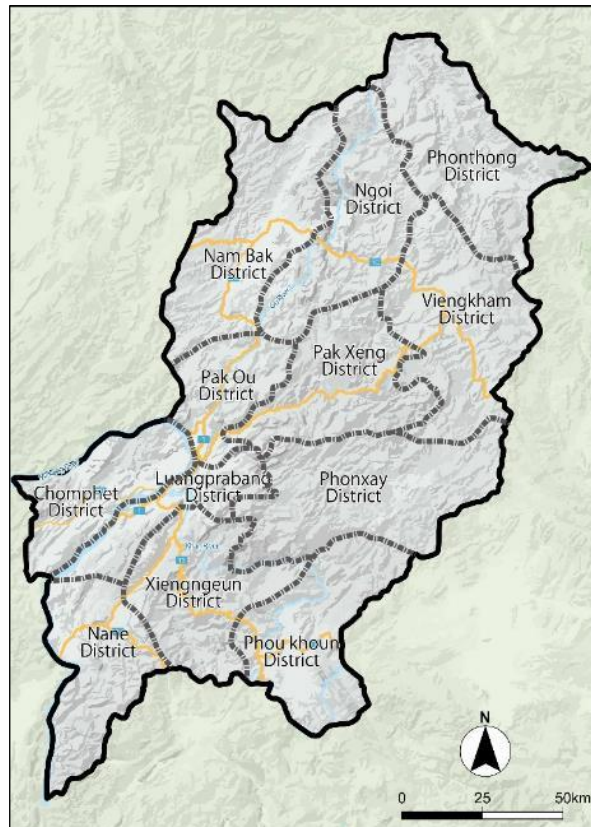
Project Area	World Heritage Area (7 km ²)	The Rural District (16,875 km ²)
Characteristics	Area that is registered as a UNESCO World Heritage Area (cultural heritage). Requires appropriate maintenance and management to preserve and enhance heritage value of the historical townscape and culture.	Areas of Luang Prabang Province outside of the World Heritage Area. Economic benefits (employment and revenue) from tourism are limited as tourism resource development has been delayed despite the natural, cultural, and historical resources that are dispersed throughout.
Output	Output 1 and Output 2	Output 3 and Output 4

Source: JICA Consultant Team



World Heritage Area of Luang Prabang (7 km²)

Source: JICA Consultant Team



Entire Area of Luang Prabang Province (16,875 km²)

Figure 1.1: Project Areas

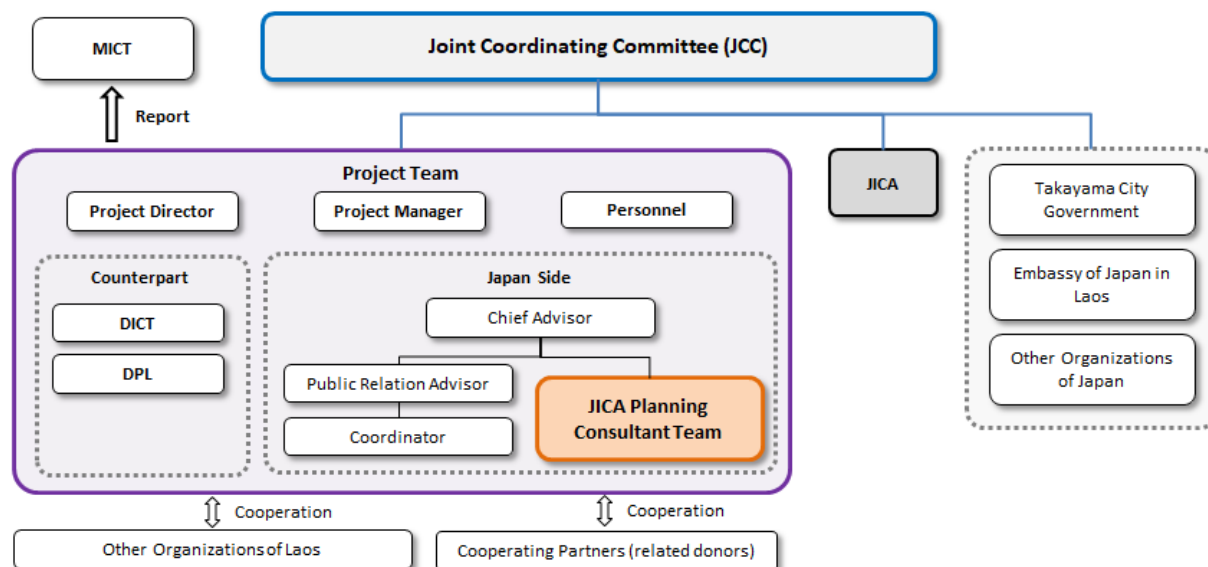
1.5 Mission Period

The period of this mission is from November 28, 2018 to March 27, 2020.

1.6 Implementation Structure

The Project is implemented under the chief advisor with consultants, public relations advisers, Takayama City and Laotian counterparts including the two agencies, namely: the Department of Information, Culture and Tourism of Luang Prabang Province (hereinafter referred to as “DoICT”) and Department of Luang Prabang World Heritage (hereinafter referred to as “DPL”) (Figure 1.2).

The consultants which are in charge of this mission is seen in the figure below, corresponding to the first half of the Project.



Source: JICA Consultant Team

Figure 1.2: Implementation Structure

1.7 Activities of this Mission

Table 1.3 shows the contents of the activities conducted in the Project. The Project started with the first Joint Coordinating Committee (hereinafter referred to as “JCC”) on December 12, 2019. In the second JCC, the activity plans for technological transfer to be conducted in the latter half of the Project was approved. In the third JCC, the improvement proposals to regulations in the World Heritage Area and the project plans of the pilot projects were approved.

Table 1.3: Main Activities in the Project

Date	Meeting Name	Discussion Topics
2019/11/30	Meeting with related departments of Takayama City	• Explanation regarding the activity plan of this mission
2019/12/10	Meeting with DoICT	• Explanation regarding the activity plan of this mission
2019/12/11	Meeting with DPL	• Explanation regarding the activity plan of this mission
2019/12/12	First JCC	• Launch of this mission
2019/2/23-3/9	Training in Japan	• Resident Participatory Management of Cultural Property (Takayama, Tokyo)
2019/4/2	Meeting with DoICT/DPL	• Discussion on the first draft of proposals
2019/5/27	Meeting with related departments of Takayama City	• Discussion on the second draft of proposals
2019/5/28	Meeting with DoICT/DPL	• Discussion on the third draft of proposals
2019/7/2	Second JCC	• Output 1: Approval of preservation and management plans • Output 1: Decision on site for pond water purification experiment • Output 2: Approval of proposals on World Heritage preservation fund • Output 3: Selection of pilot projects
2019/8/12-22	Dispatchment of short-term experts from Takayama City	• Preliminary experiment for water purification • Site survey in pilot project sites and stakeholder meetings
2019/10/13-28	Training in Japan	• Pottery and brewery skills • Heritage management and utilization for tourism
2020/2/5	Third JCC	• Output 1: Improvement proposals for preservation regulations in Luang Prabang World Heritage Area • Output 1: Reports on community-based activities • Output 3: Approval of project plans for pilot projects

Source: JICA Consultant Team

1.8 Deliverables of this Mission

The deliverables of this mission are shown in Table 1.4. As for documents of technical cooperation, activity plan and manual proposals for heritage preservation and management is shown in “3.6 Plan Proposals for Preservation and Management Activities”, outline proposals for World Heritage fund is shown in the appendix, and the catalogue of tourism-related regional development activities is shown in “5.1 Data Collection and Survey Result of Alternative Tourism Resources” and “5.2 Data Collection and Survey Result of Handicrafts and Agricultural Products”.

Table 1.4: Deliverables of this Mission

Name of Report	Submission Period	Language	Status
Inception report	Within 10 days after conclusion of contract	Japanese and Laotian	Submitted
Interim report	End of March 2019	Japanese and Laotian	Submitted
Monitoring sheet	June 2019	English	Submitted
Interim report 2*	October 2019	Japanese	Submitted
Draft final report*	January 2020	Japanese and English	Submitted
Final report	Before expiration of contract	Japanese and English	This report

*: not included in the consultancy contract

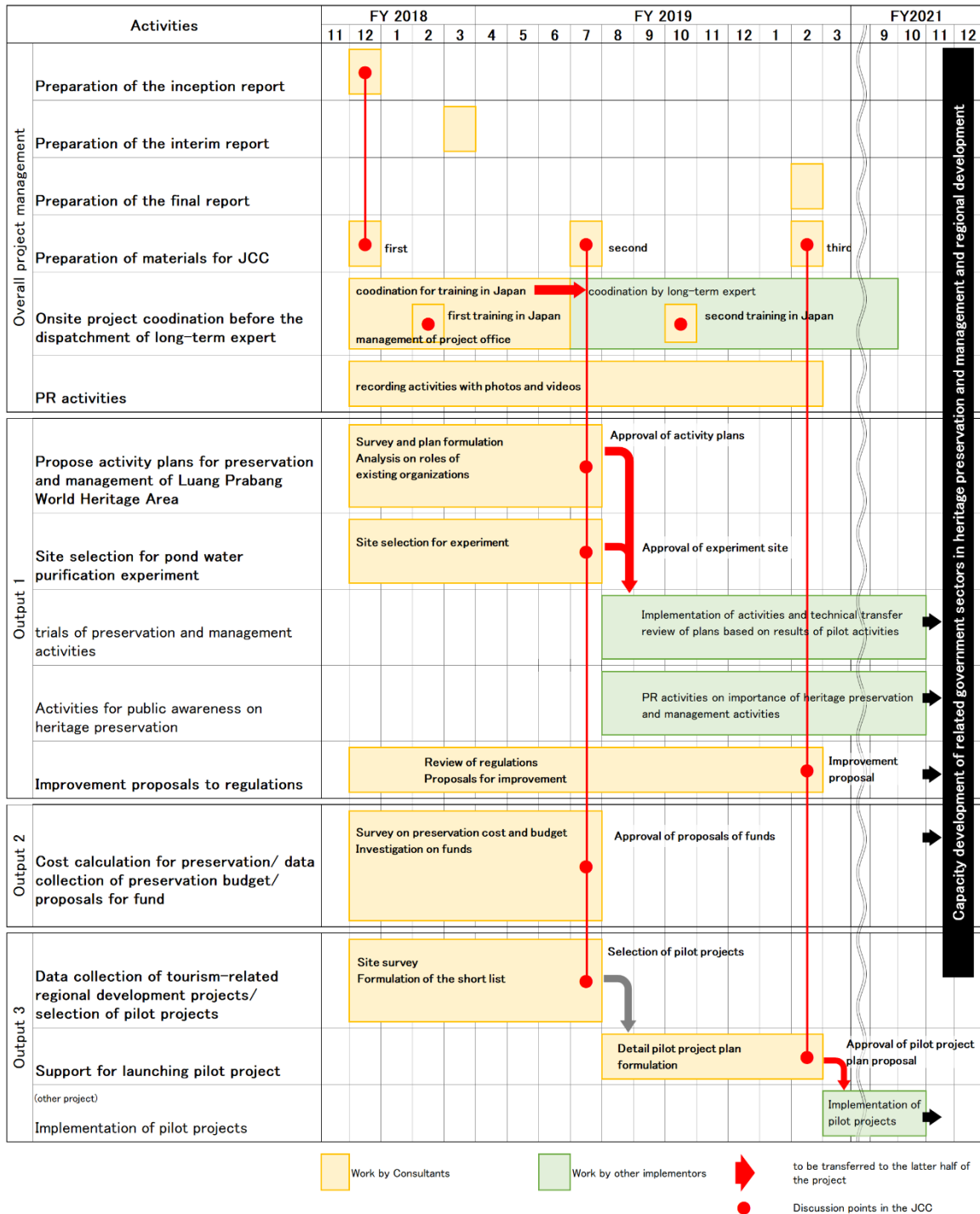
Source: JICA Consultant Team

Chapter 2 Project Activities and Basic Information of the Project Area

2.1 Project Outline

2.1.1 Activity Flow

Table 2.1 shows the activity flow of the Project. In the Project, the JICA Consultant Team supports the establishment of the activity plans and pilot projects in the first half of the Project, while the Japanese staff members, including Takayama City, focuses their skills in the second half of the Project.



Source: JICA Consultant Team

Figure 2.1: Project Flow

2.1.2 List of Activities

Table 2.1: External Activities of this Mission

Date	Concerned Party	Location	Discussion Topics
30-Nov-18	Takayama City	Takayama City	Kick-off meeting for this project
30-Nov-18	Commerce and Industry Department of Takayama City	Takayama City	Resources of agriculture, handicraft and tourism in Takayama City
30-Nov-18	Cultural Asset Department and Urban Planning Department of Takayama City	Takayama City	Practices for heritage preservation and management of Takayama City
7-Dec-18	JICA Laos Office	Vientiane	Kick-off meeting for the Project
10-Dec-18	DPL	DPL Office	Kick-off meeting for the Project
11-Dec-18	DoICT	DoICT Office	Kick-off meeting for the Project
12-Dec-18	DoICT, DPL, Urban Development and Administration Authority (UDAA), and Luang Prabang Provincial Government	Pulman Hotel	1st JCC
14-Dec-18	Japanese Embassy	Vientiane	Kick-off meeting for the Project
14-Dec-18	JICA expert in the Ministry of Finance	Vientiane	Financial scheme of Laos
18-Dec-18	DoICT	DoICT Office	Next action of the Project
19-Dec-18	DPL	DPL Office	Next action of the Project
14-Jan-19	DPL	DPL Office	Courtesy call, Pond Water Improvement
15-Jan-19	DPL	DPL Office	Pond Water Improvement
18-Jan-19	Mano Village	Mano Village	Pond Water Improvement
28-Jan-19	Mano Village and Pongkham Village	Mano Village	Pond Water Improvement
28-Jan-19	JICA Sustainable Forest Management and REDD + Support Project	Luang Prabang	Utilization of insects
30-Jan-19	UDAA	UDAA	Pond Water Improvement
1-Feb-19	DPL	DPL Office	Pond Water Improvement
7-Feb-19	DoICT	Luang Prabang	Handicraft and Agricultural Products and Development Study Progress
18-Feb-19	Xiengmoun Village	Xiengmoun Village	Daily maintenance activities by villagers
21-Feb-19	UDAA	UDAA Office	Cleaning and maintenance
21-Feb-19	Security Division of Police Department	Police office	Security management
22-Feb-19	Firefighting Division of Police Department	Firefighting Department Office	Firefighting
25-Feb-19	JICA Laos Office	Vientiane	Progress of the Project
25-Feb-19	DPL	DPL Office	Progress of the Project
25-Feb-19	UDAA	UDAA Office	Financial scheme of UDAA
27-Feb-19	Techno Eco Co., Ltd. (Takayama)	Takayama City	Pond Water Improvement
28-Feb-19	DoICT	DoICT Office	Prioritized issues of tourism development
28-Feb-19	DoICT, Japan ASEAN Center	Pulman Hotel	Eco-tourism and interpretation method
5-Mar-19	JICA Laos Office	Vientiane	Progress of the Project
7-Mar-19	DPL	Planning Division	Submission of request letter
7-Mar-19	Bounlath Construction Material Shop	Luang Prabang	Construction Material Market Price Survey
7-Mar-19	Thongsavath Wooden Shop	Luang Prabang	Construction Material Market Price Survey
7-Mar-19	Somphamit Construction Co., Ltd	Tile Factory	Material Cost Survey
7-Mar-19	DPL	DPL office	Submission of request letter
7-Mar-19	Bounlath Construction Material Shop	Luang Prabang	Construction Material Market Price Survey
27-Mar-19	JICA Laos Office	Vientiane	Project Progress
27-Mar-19	Planning and Centering Division, Department of Budget, and Ministry of Finance	Vientiane	World Heritage Preservation Fund

Date	Concerned Party	Location	Discussion Topics
27-Mar-19	Department of Heritage and MICT	Vientiane	World Heritage Preservation Fund
28-Mar-19	Mano Village and Pongkham Village	Pongkham Village	Pond Water Improvement
28-Mar-19	UDAA	UDAA	Pond Water Improvement
28-Mar-19	DPL	DPL Office	Pond Water Improvement
1-Apr-19	UDAA	UDAA	Pond Water Improvement
2-Apr-19	DoICT	DoICT	Project Proposal Presentation (first draft)
2-Apr-19	DPL	DPL Office	Project Proposal Presentation (first draft)
3-Apr-19	Blue Lagoon Restaurant	Luang Prabang	Utilization of insects
6-Apr-19	Hotel and Restaurant Owners Monthly Meeting	Luang Prabang	Project Proposal Presentation
8-Apr-19	JICA Laos Office	Vientiane	Project Proposal Presentation
10-Apr-19	DoICT and DPL	Luang Prabang	Handicraft and Agricultural Products and Development Study Progress
10-Apr-19	Luang Prabang Province Chamber of Commerce and Industry	Luang Prabang	Project Proposal Presentation
18-Apr-19	Techno Eco Co., Ltd.	Tokyo Metropolitan	Pond Water Improvement
14-May-19	DPL	DPL Office	Public garden and toilet
16-May-19	DoICT	DoICT Office	Progress of the Project
24-May-19	DPL	DPL Office	Second draft of the project proposal
24-May-19	DoICT	DoICT Office	Second draft of the project proposal
27-May-19	Takayama City	Takayama City	Project Proposal Presentation
27-May-19	DoICT	DoICT Office	Project Proposal Presentation (second draft)
27-May-19	DPL	DPL Office	Project Proposal Presentation (second draft)
28-May-19	DoICT and DPL	DoICT Office	Project Proposal Presentation (second draft)
28-May-19	DPL	DPL Office	Project Proposal Presentation (second draft)
30-May-19	JICA Laos Office	Vientiane	Progress of the Project
30-May-19	Hotel and Restaurant Owners Monthly Meeting	Sanakeo Boutique Hotel	Information sharing of clean agriculture project by JICA
3-Jun-19	DPL	DPL Office	Project Proposal Presentation (second draft)
18-Jun-19	JICA Laos Office	Vientiane	Report of Project Progress and Project Proposal
20-Jun-19	Field Survey (JICA Laos Office and Counterparts)	Luang Prabang	Field survey with counterparts
21-Jun-19	ADB	Vientiane	Demarcation between projects by ADB and JICA
22-Jun-19	JICA Laos Office	Vientiane	Good practices of agricultural product development in Vientiane
26-Jun-19	DPL	DPL office	Project proposal in second JCC
26-Jun-19	DoICT	DoICT office	Proposed project in Chan village
26-Jun-19	Hotel and Restaurant Owners	Luang Prabang	Survey summary sharing of agricultural products and handicrafts by the Project
27-Jun-19	Hotel and Restaurant Owners	Luang Prabang	Hotel-Restaurant GM monthly meeting
28-Jun-19	Lao National Institute of Tourism and Hospitality	Luang Prabang	Preservation and utilization for tourism of tradition
28-Jun-19	Luang Prabang Technical and Vocational College	Luang Prabang	Agricultural product development survey summary sharing and consideration of cooperation possibility
1-Jul-19	Division of Finance and DoICT	DoICT Office, LPB	Income/Payment/Budget of DoICT
2-Jul-19	DoICT, DPL, UDAA, and Luang Prabang Provincial government	Luang Prabang	Second JCC
3-Jul-19	DPL	DPL office	Financial management
4-Jul-19	Souphanouvong University	Luang Prabang	Agricultural product development survey summary sharing and consideration of cooperation possibility
17-Jul-19	Lapon Co., Ltd, Innogreen Co., Ltd, and JICA Lao Office	Vientiane Capital	Import/Export of Chemical Products Testing of Wastewater World Heritage and Other Funds
1-Aug-19	JICA Laos Office	Vientiane Capital	Preparation for project implementation
5-Aug-19	DoICT and JICA expert	Luang Prabang	Project implementation and short-term expert preparation

Date	Concerned Party	Location	Discussion Topics
7-Aug-19	UDAA	Luang Prabang	Community-based management and short-term expert preparation
8-Aug-19	Villagers in Chan Village	Luang Prabang	Improvement possibility of pottery products
9-Aug-19	Villagers in Xang Hai Village	Luang Prabang	Improvement possibility of liquor products
12-Aug-19	DoICT	Luang Prabang	Interview survey
12-Aug-19	UDAA	Luang Prabang	Preliminary pilot project for water quality improvement with Super-Sol
13-Aug-19	Villagers in Chan Village	Luang Prabang	Technical support on pottery products by expert from Japan
14-Aug-19	Villagers in Xang Hai Village	Luang Prabang	Technical support on liquor products by expert from Japan
15-Aug-19	Water Supply State Enterprise	Luang Prabang	Water quality analysis parameters
19-Aug-19	Villagers in Xang Hai Village	Luang Prabang	Ingredients of liquor product
19-Aug-19	UDAA	Luang Prabang	Entrustment of equipment for water quality improvement
19-Aug-19	DPL, DoICT, UDAA, and other stakeholders in wetland management	Luang Prabang	Wetland environment working group meeting and preliminary pilot project for water quality improvement with Super-Sol
20-Aug-19	Lao-Korea Science and Technology Center	Luang Prabang	Lao liquor production
22-Aug-19	DPL, DoICT, and UDAA	Luang Prabang	Report by short-term expert to discuss pond water quality improvement
23-Aug-19	Phanthamit Analytical Lab. Co. Let	Vientiane Capital	Consulting service for information collection on pond water quality improvement
19-Nov-19	Ngoi DoICT	Ngoi DoICT office	Preparation for pilot project in the Ou River area development
19-Nov-19	Somchem Village	Somchem Village	Preparation for pilot project in the Ou River area development
20-Nov-19	Muang Ngoi Village	Muang Ngoi Village	Preparation for pilot project in the Ou River area development
20-Nov-19	Union of Guest house	Muang Ngoi Village	Preparation for pilot project in the Ou River area development
20-Nov-19	Union of boat	Nong Khiaw	Preparation for pilot project in the Ou River area development
21-Nov-19	Union of Guest house	Nong Khiaw	Preparation for pilot project in the Ou River area development
22-Nov-19	LANITH	Luang Prabang	Preparation for pilot project in the Ou River area development
25-Nov-19	DPL	Luang Prabang	Report on the result of preliminary pilot project for water quality improvement with Super-Sol, and introduction of Thai resource person to raise awareness
26-Nov-19	UDAA	Luang Prabang	Report on result of preliminary pilot project for water quality improvement with Super-Sol and introduction of Thai resource person to raise awareness
27-Nov-19	Mano and Pongkham Village	Luang Prabang	Small Workshop on community awareness on pond environment
29-Nov-19	DPL, DoICT, UDAA, and other stakeholders in wetland management	Luang Prabang	Wetland environment working group meeting, report on the result of preliminary pilot project with Super-Sol, and discussion on the activity plan including awareness raising, monitoring, removal of mud, and countermeasure to house wastewater influx
5-Dec-19	DoICT	Luang Prabang	Heritage preservation and management
5-Dec-19	DPL	Luang Prabang	Heritage preservation and management
5-Dec-19	UDAA	Luang Prabang	Heritage preservation and management
16-Dec-19	DOES (Department of Education and Sports)	Luang Prabang	Quick action plan of heritage preservation and management
16-Dec-19	Luang Prabang City (Administration Office, UDAA, OICT, Fire Station, and OOES)	Luang Prabang	Quick action plan of heritage preservation and management

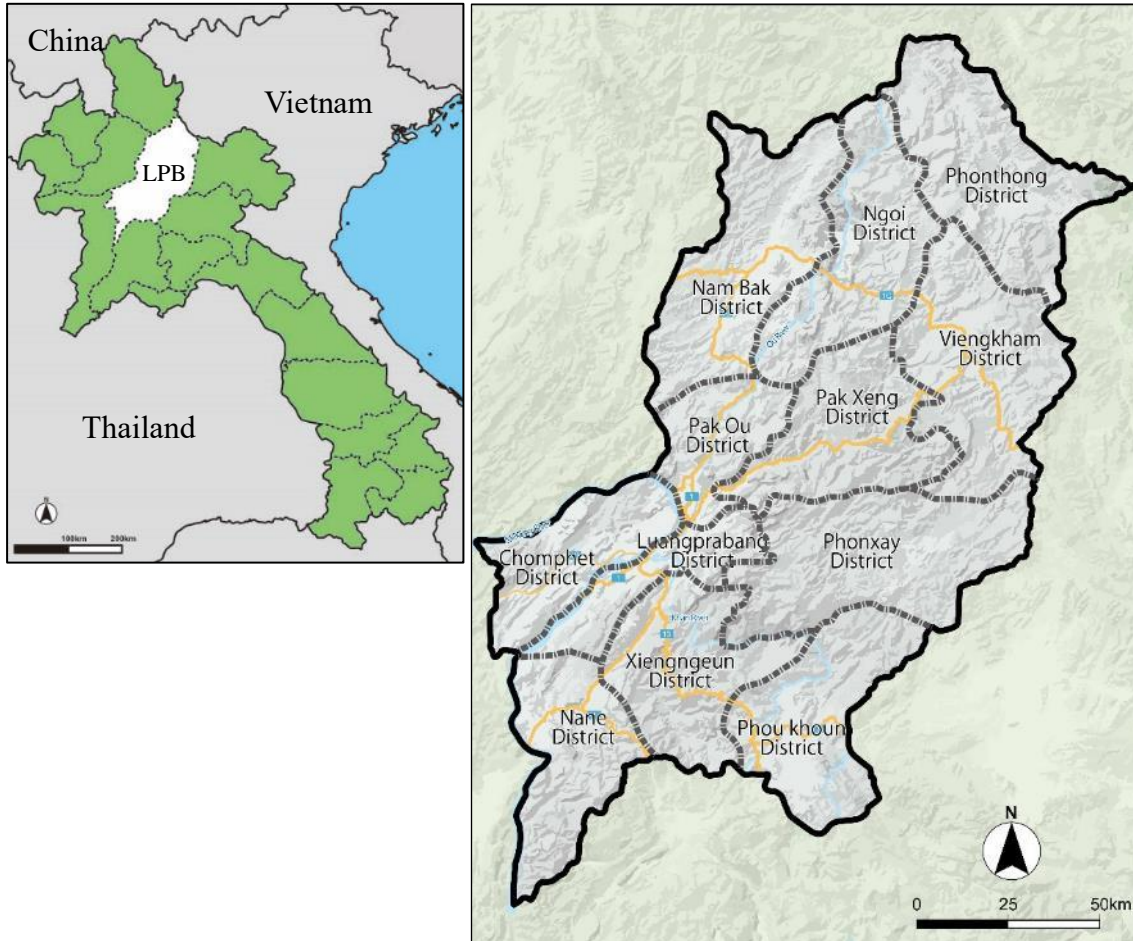
Date	Concerned Party	Location	Discussion Topics
17-Dec-19	Key village heads (10 villages)	Luang Prabang	Quick action plan of heritage preservation and management
18-Dec-19	DoICT, DPL, and Luang Prabang City	Luang Prabang	Quick action plan of heritage preservation and management
18-Dec-19	DPL	Luang Prabang	Heritage regulations
27-Jan-20	JICA Laos Office	Vientiane	Progress of CEML project
28-Jan-20	DoICT	Luang Prabang	Preparation for 1st step activities
29-Jan-20	UDAA	Luang Prabang	Preparation for Cleaning Day as a 1st step activity
29-Jan-20	Head and villager of Vatsene Village	Luang Prabang	Preparation for Guidance of Alms Giving as a 1st step activity
29-Jan-20	DoICT	Luang Prabang	Preparation for 1st step activities
30-Jan-20	UDAA	Luang Prabang	Preparation for Information Exchange Meeting as a 1st step activity
30-Jan-20	DoICT	Luang Prabang	Preparation for 1st step activities
31-Jan-20	DoICT, DPL, UDAA, Luang Prabang City (education & sports dept.) and 4 villages	Luang Prabang	Ceremony for equipment provision for Cleaning Day of 1st step action
31-Jan-20	DoICT	Luang Prabang	Preparation for 1st step activities
31-Jan-20	UDAA	Luang Prabang	Preparation for Cleaning Day & Information Exchange Meeting as a 1st step activity
31-Jan-20	Head of Hua Xieng Village	Luang Prabang	Explanation and request for presentation on Exchange Information Meeting
31-Jan-20	Head of Xieng Thong Village	Luang Prabang	Explanation and request for presentation on Exchange Information Meeting
31-Jan-20	Head of Pa Kham Village	Luang Prabang	Explanation and request for presentation on Exchange Information Meeting
1-Feb-20	DoICT, DPL, UDAA, Luang Prabang City (education & sports dept.) and 4 villages	Luang Prabang	Cleaning Day of 1st step action
2-Feb-20	DoICT, Vatsene Village	Luang Prabang	Alms Giving Guidance of 1st step action
3-Feb-20	17 villages and DoICT, DPL, Luang Prabang City	Luang Prabang	Village Information Exchange Meeting of 1st step action
4-Feb-20	DoICT, DPL, Takayama City, JICA Laos Office, JICA	Luang Prabang	Preliminary meeting for 3rd JCC
5-Feb-20	DoICT, DPL, Luang Prabang City, Luang Prabang Province	Luang Prabang	3rd JCC
6-Feb-20	DoICT	Luang Prabang	Submission of Draft Final Report
6-Feb-20	DPL	Luang Prabang	Submission of Draft Final Report
7-Feb-20	Luang Prabang City	Luang Prabang	Submission of Draft Final Report

Source: JICA Consultant Team

2.2 Basic Information of Project Area

2.2.1 Location and Natural Environment

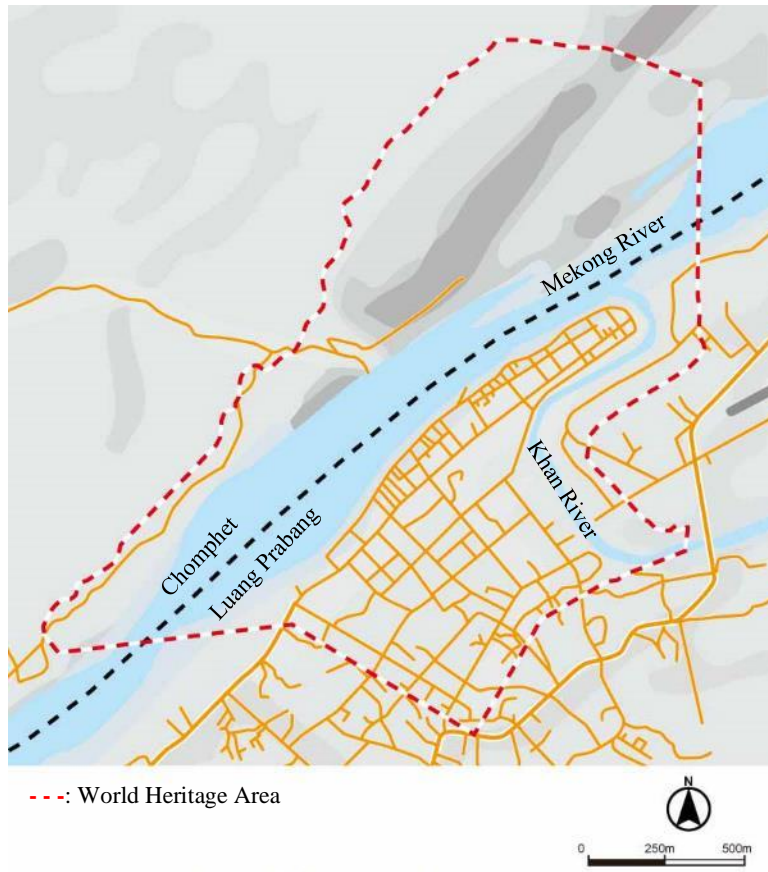
Luang Prabang Province is located almost at the center of the northern part of Laos with the north part sharing borders with Vietnam. The province with total area of 16,875 km² is mostly mountainous while the cities and villages are formed in small parts of flatland along the rivers and mountain roads (Figure 2.2). The Mekong River flows in the southwestern part of the province while the Ou River from the north and the Khan River from the southeast joined with the Mekong River.



Source: JICA Consultant Team

Figure 2.2: Location of Luang Prabang Province

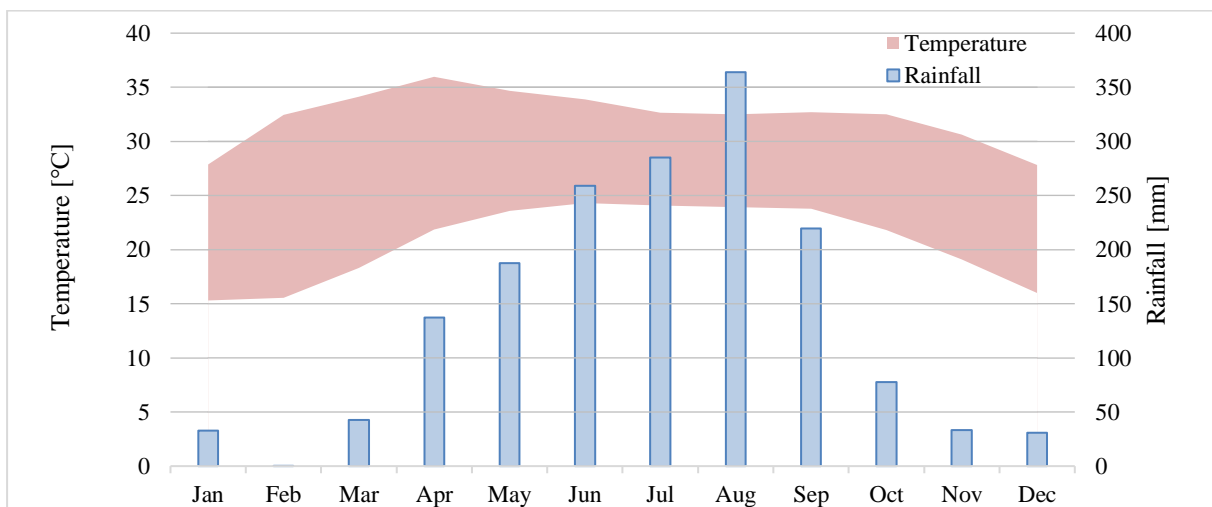
The World Heritage Area is located in the old town area of Luang Prabang District, where the Mekong River and Khan River meet and also in Chomphet District across the Mekong River (Figure 2.3).



Source: JICA Consultant Team

Figure 2.3: Location of World Heritage Area in Luang Prabang

Luang Prabang Province has a tropical monsoon climate. The temperature range is between 15 and 35 degrees Celsius and due to the inland location, the daily temperature ranges are larger than that of major cities in the Association of Southeast Asian Nations (ASEAN). The average annual rainfall is 1,672 mm in the rainy season from April to October and the dry season from November to March (Figure 2.4).



Source: Lao Statistics Bureau (average of 6 years from 2010 to 2017)

Figure 2.4: Temperature and Rainfall of Luang Prabang Province

2.2.2 Social Environment

(1) Population

As of 2017, the population of Luang Prabang Province was 455,000 people, which is the 4th largest among 18 provinces in Laos. While as of 2010, the population was 448,000 people, which is similar to the overall trend in Laos, it can be noticed that the population has been almost constant in recent years.

Comparing all 12 districts in Luang Prabang, it can be seen that population is concentrated in Luang Prabang District where urbanization has progressed. Still, the size is small, given that the population is about 100,000 people with approximately 100 people/km² (Table 2.2).

Table 2.2: Population and Population Density of 12 Districts

District Name	Number of Villages	Surface Area (km ²)	Population (thousand people)	Population Density (persons /km ²)
Luang Prabang	114	857	90.4	105.5
Xiengngeun	49	1,629	33.4	20.5
Nan	51	1,363	28.2	20.7
Pak Ou	51	862	25.8	29.9
Nam Bak	81	1,757	69.2	39.4
Ngoi	77	2,057	29.7	14.4
Pak Seng	54	1,482	22.2	15.0
Phone Xai	60	2,353	32.6	13.9
Chomphet	69	1,432	30.1	21.0
Viengkham	69	2,553	28.5	11.2
Phoukhoun	38	1,141	23.2	20.3
Phonethong	40	1,751	19.0	10.9

Source: JICA Data Collection Survey on Regional Development in Luang Prabang (2016)

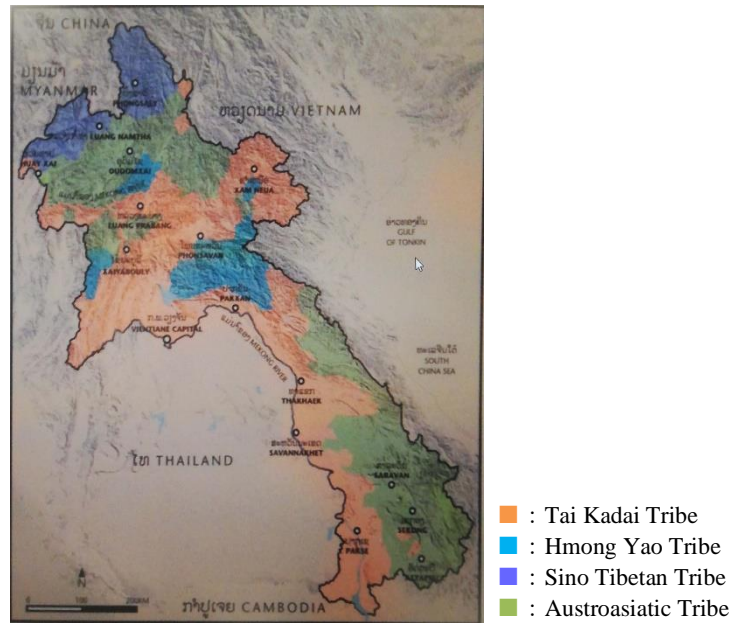
(2) Ethnic Groups

Laos is a multi-ethnic country. The ethnic groups are classified mainly into four groups. They are Tai Kadai Tribe including Tai Lao Tribe (generally called Lao Tribe), which accounts for 53% of the total population, Hmong Yao Tribe including the Hmong Tribe, Sino Tibetan Tribe, and Austroasiatic Tribe (Table 2.3). Common tribes in Luang Prabang Province include Tai Kadai, Hmong Yao, and Austroasiatic tribes (Figure 2.5).

Table 2.3: Laotian Tribes

Classification	Tai Kadai	Hmong Yao	Sino Tibetan	Austroasiatic	
Sub-classification	Tai Lao	Hmong	Akha	Kmhmu	Lamet
	Tai Dam	Yao Mien	Phounoi	Bit	Samtao
	Tai Daeng	Yao Mun	Lahu	Tin	Phong
	Tai Khao		Kui	Sing Moun	Mlabri
	Phutai		Sila	Toum	Mone
	Tai Lue		Lolo	Ngouan	Kri
	Tai		Ho	Makong	Suel
	Nyuan		Kheu	Tri	Ta Oy
	Yang		Hanyi	Katu	Katang
	Sek			Pacoh	Nge
				Alak	Talieng
				Lavi	Jeh
				Oi	Laven
				Nha Hoen	Lawe
				Cheng	Sadang

Source : Traditional Arts and Ethnology Centre



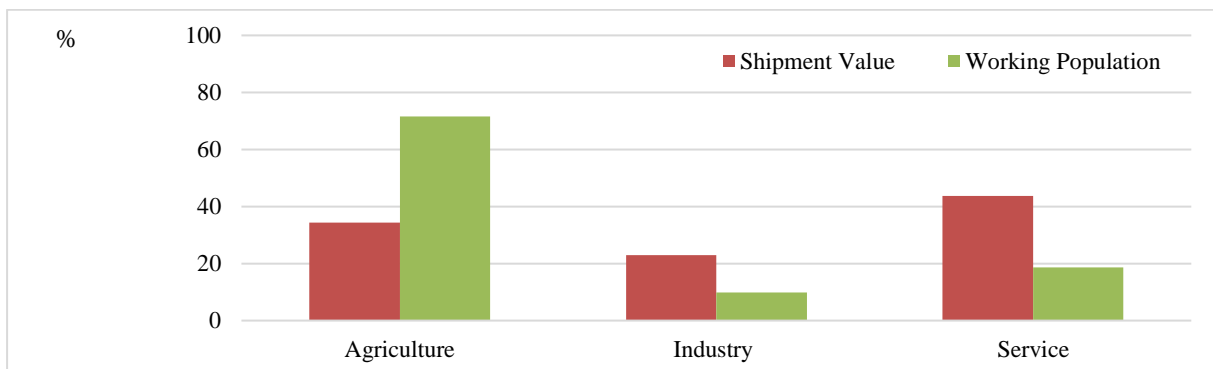
Source: Traditional Arts and Ethnology Centre

Figure 2.5: Laotian Ethnic Distribution

2.2.3 Economy and Industry

Due to the high economic growth that began around 2000, the gross domestic product per capita (GDP) of Laos has reached USD 2,457¹, growing to be ranked at 7th among ten ASEAN countries. In Luang Prabang Province, its GDP is about United States Dollars (USD) 1,530², far below the average of Laos. The industrial structure is not much different from the average of Laos although the tourism industry, mainly the World Heritage Area, supports Luang Prabang’s economy. The service industry has the highest shares (43.6%), followed by industry (23.0%), and then agriculture (34.3%).

Luang Prabang Province has workforces of 260,000 people in 2015. The agricultural sector has 186,000 workers, approximately 70% of the total working population while, in the industrial sector, there are many small-seized family-run companies. The number of people working in the service sector including tourism is approximately 48,500 (18% of the working population)³, showing its high productivity compared with the value of production and population ratio (Figure 2.6).



Source: JICA Data Collection Survey on Regional Development in Luang Prabang (2016)

Figure 2.6: Industry Structure of Luang Prabang Province

¹ World Bank (2017)

² JICA Data Collection Survey on Regional Development in Luang Prabang (2016)

³ JICA Data Collection Survey on Regional Development in Luang Prabang (2016)

2.2.4 Transportation

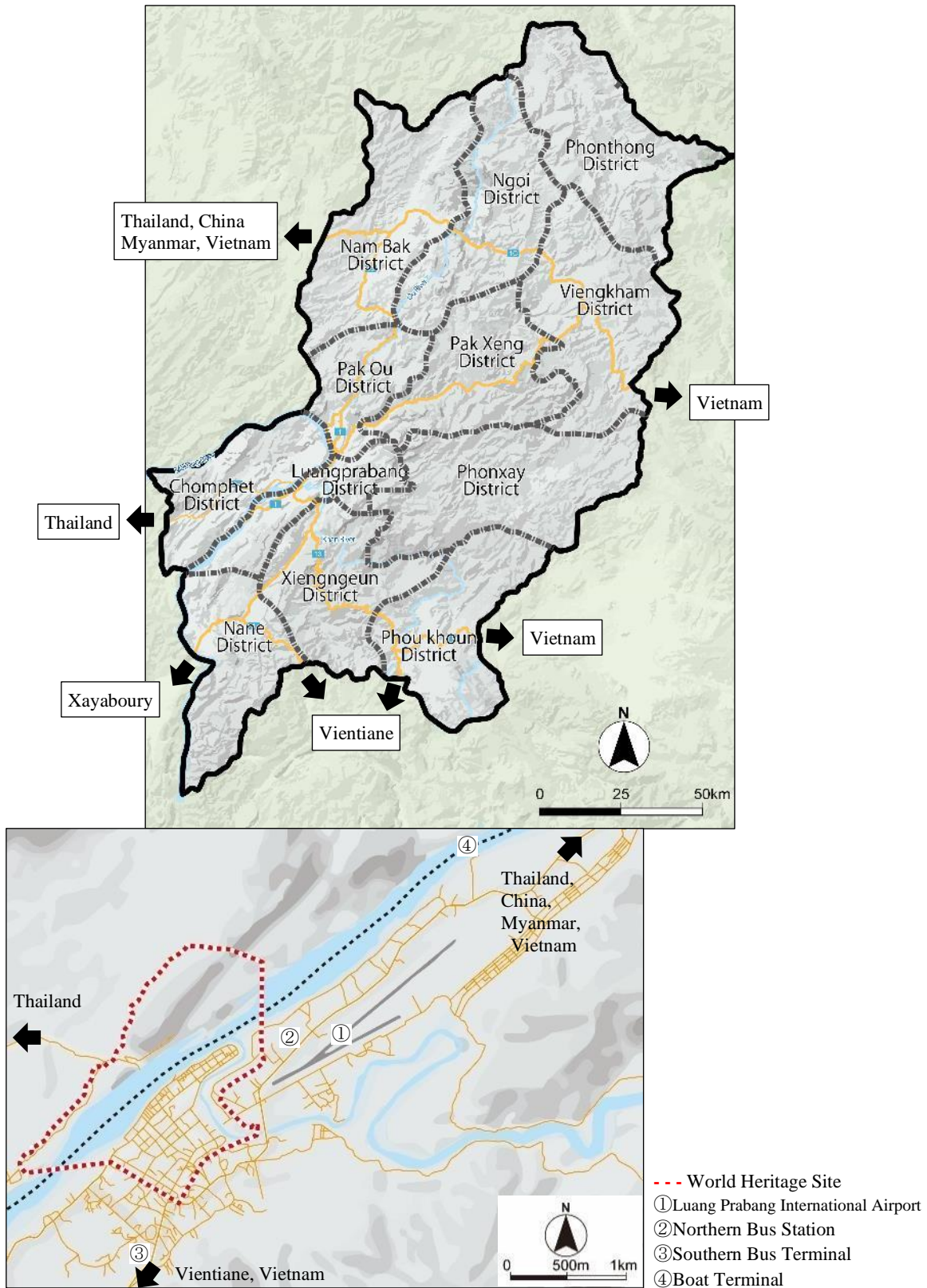
Major transportation facilities in the northern part of Laos are shown in Figure 2.7. Luang Prabang Province is bordered by Vietnam, but there is no border checkpoint. The province does not have an on-the-ground border point but has the only international airport in northern Laos. The current state of each mode is described in and after Figure 2.8.



Source: JICA Consultant Team

Figure 2.7: Major Transportation Facilities and Borders in Northern Part of Laos

The main transportation facilities in Luang Prabang Province are shown in Figure 2.8.



Source: JICA Consultant Team

**Figure 2.8: Major Transportation Facilities in Luang Prabang Province
(Top: Entire Province, Bottom: Around World Heritage Area)**

(1) Airport and Flight Route

Luang Prabang International Airport is located about 4 km from the World Heritage Area (① of the bottom figure of Figure 2.8). The new terminal opened in 2013 and is the second largest international airport in Laos after the Wattay International Airport in Vientiane.

At present, there are five countries that have regular international flights in service, namely: Thailand, Vietnam, Cambodia, China, and Singapore (Table 2.4). Lao Airlines has a project to inaugurate services between the Luang Prabang International Airport and the Kumamoto Airport, but the project is postponed as of January 2020.

Table 2.4: Scheduled International Flights of Luang Prabang International Airport

Country	City	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Daily Average
Thailand	Bangkok	4 LBBT	2 BB	4 LBBT	2 BB	4 LBBT	3 LBB	4 LBBT	3.3
	Don Mueang	1 A	1 A	1 A	1 A	1 A	1 A	1 A	1.0
	Chiang Mai	1 L	1 B	1 L	1 B	1 L	1 B	1 L	1.0
Vietnam	Hanoi	2 LL	2 LL	2 LL	1 L	2 LL	2 LL	1 L	1.7
Cambodia	Siem Reap	2 LL		2 LL	1 L	2 LL	1 L		1.1
China	Jinghong				1 L			1 L	0.3
	Kunming	1 C	1 C	1 C	1 C	1 C	1 C	1 C	1.0
	Ganzhou		1 L		1 L		1 L		0.4
	Chengdu		1 L		1 L		1 L		0.4
Singapore	Singapore			1 L		1 L		1 L	0.4

L: Lao Airlines, B: Bangkok Airways, C: China Eastern Airlines, T: Thai Smile, A: Air Asia

As of August 2019

Source: JICA Consultant Team

There are only two domestic flight routes (Vientiane and Pakse).

(2) Railway

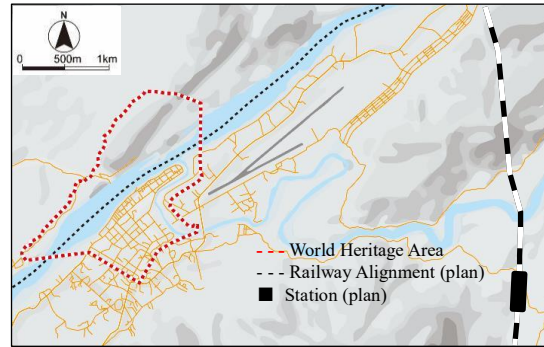
As of March 2019, there is no passenger railway in Luang Prabang Province.

However, it is expected that a new station for the Laos-China High-speed Railway (Figure 2.9), where operations will begin to be under construction at the end of 2021, the structure will be built approximately 10 km from the center of the World Heritage Area (Figure 2.10). Currently, there is only one narrow unpaved road beside the Khan River that connects the expected station area and the World Heritage Area. It is assumed that the opening of the railway would increase the number of tourists from China and Vientiane and the development demand around the new station.



Source: JICA Consultant Team

Figure 2.9: Laos-China High-Speed Railway under Construction



Source: Prepared by the JICA Consultant Team based on information from DPWT

Figure 2.10: Laos-China High-Speed Railway Alignment Design



Source: JICA Consultant Team

Figure 2.11: Expected Station Area of Luang Prabang Station of Laos-China High-Speed Railway (1)



Source: JICA Consultant Team

Figure 2.12: Expected Station Area of Luang Prabang Station of Laos-China High-Speed Railway (2)

(3) River (Ships)

The route of Mekong River between the World Heritage Area and the northern part of Thailand is popular to tourists. The boat terminal is located about 9 km from the center of the World Heritage Area (④) of the bottom figure of Figure 2.8) and is connected to the northern cities of Thailand: Chiang Mai, Chiang Rai, and Chiang Khong. Other rivers are also used to access the riverside villages, but the service in small rivers with shallow beds is limited to small boats.

The use of boats remains an attractive tourism product. The usage of boat travel has decreased as some sightseeing boat service was stopped due to flood control dam construction (Figure 2.13) and the main traffic line has changed with new roads via land routes.



Source: JICA Consultant Team

Figure 2.13: Ou River Dam under Construction

(4) Road

There are ten border checkpoints in Thailand, Vietnam, China, Myanmar, and in other neighboring provinces of the northern part of Laos, where traffic due to sightseeing tours and private car access from neighboring countries and other places are high. Although Luang Prabang Province is in contact with Vietnam in the north, it is necessary to travel across the other provinces since no border checkpoint has been set up (Top figure of Figure 2.8). The two bus terminals near the World Heritage Area serve as the bases for long-distance traveling (② and ③ of the bottom figure of Figure 2.8).



Source: JICA Consultant Team

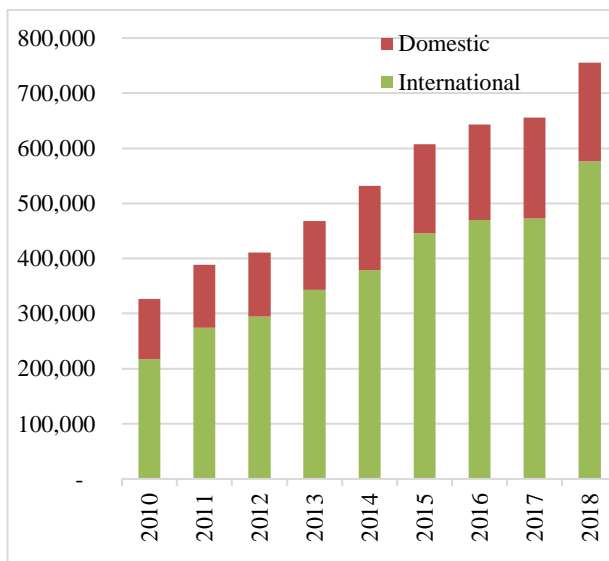
Figure 2.14: Road Congestion Due to Disaster Recovery Work

Mostly the main roads are made of asphalt pavement. However, speedy travel is difficult and it requires a considerable time due to factors such as road surface damage, mountainous and meandering roads, and road closure caused by landslides (Figure 2.14).

2.2.5 Tourism

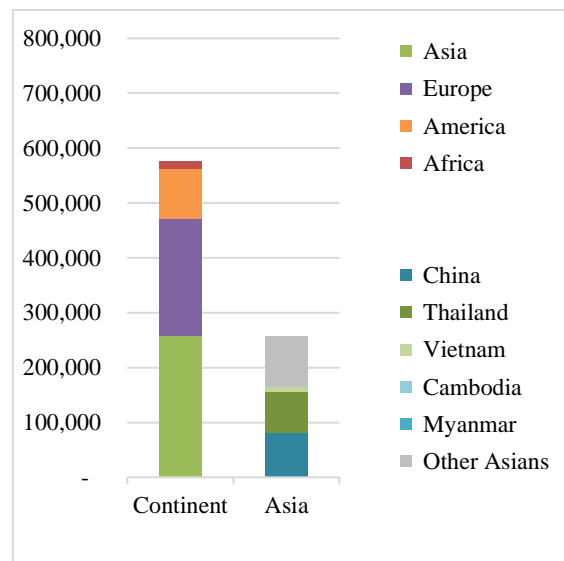
(1) Outline

The number of tourists visiting Luang Prabang Province reached 755,000 people (domestic: 178,000 people / foreign: 577,000 people) in 2018, which is more than doubled over the eight years since 2010 (Figure 2.15). About 80% of all tourists are from other countries. Roughly speaking, about half of the foreign tourists visiting Luang Prabang Province are from western countries and about a quarter are from China and Thailand while another quarter comes from other areas (Figure 2.16). At present, unlike China and Thailand, although they are neighboring countries too, there are fewer tourists from Vietnam, Cambodia, and Myanmar.



Source: DoICT

Figure 2.15: Number of Tourists in Luang Prabang Province



Source: DoICT

Figure 2.16: Number of Foreign Tourists by Origin (2018)

The number of tourists by district is shown in Table 2.5 and Figure 2.17. Given that the total number of tourists in Luang Prabang Province exceeds 750,000 people, it is noticeably seen that the tourists are

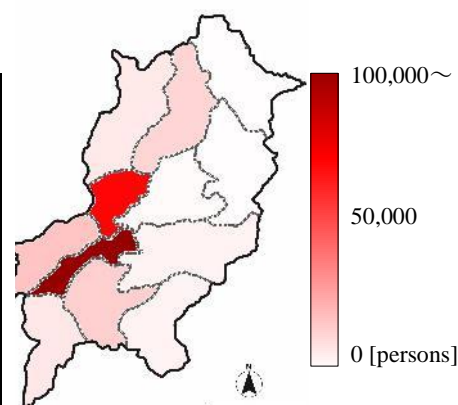
concentrated in Luang Prabang District, where the World Heritage Area is located, although attention needs to be paid to data accuracy.

Having popular attractions such as Ting Cave and whisky villages, Pak Ou District generates 77,000 visitors, the highest number among the districts. With the numbers decreasing largely, over 12,000 people visited Chomphet District and Xiengngeun District, which have good access from Luang Prabang District and Ngoi District, where tourism resources and accommodation facilities are relatively organized, respectively. The three districts in the northeastern part of the province have almost no tourists.

Table 2.5: Number of Tourists by District in 2018

District Name	Domestic Tourist	Foreign Tourist	Total
Pak Ou	9,118	68,483	77,601
Chomphet	8,002	10,525	18,527
Xiengngeun	8,572	5,590	14,162
Ngoi	1,938	10,786	12,724
Nan	5,204	1,512	6,716
Nam Bak	2,354	3,756	6,110
Phone Xai	2,490	682	3,172
Phoukhoun	2,218	535	2,753
Pak Seng	564	248	812
Phonethong	350	95	445
Viengkham	184	91	275
Subtotal of 11 Districts	40,994	102,303	143,297
Luang Prabang	N/A	N/A	N/A

Source: Interview from each district office by JICA Consultant Team



Source: Prepared Based on Interview from Each District Office

Figure 2.17: Number of Tourists by District in 2018

(2) High Season

In Luang Prabang Province, the high season of tourism is from October to February, which is almost in parallel with the dry season when the temperature drops, and sunny weather is often seen. Although monthly data of the tourist number has not been confirmed, the Regional Development Data Collection and Confirmation Survey conducted by JICA in 2016 estimates the concentration rate in the high season as shown in Table 2.6.

Table 2.6: Estimation of Concentration Rate in High Season

	High Season Oct - Feb	Low Season Mar - Sep
Tourist Number	70%	30%
Accommodation Occupancy Rate	81.3%	15.6%

Source: JICA Data Collection Survey on Regional Development in Luang Prabang (2016)

In addition, during the long holiday seasons of neighboring countries (Lunar New Year in China and Vietnamese New Year, Tet - usually around early February), the number of tourists from these countries increase rapidly. Problems emerge such as a temporary rise in accommodation charge and a large number of cars entering the World Heritage Area have been confirmed. (Figure 2.18).



Source: JICA Consultant Team

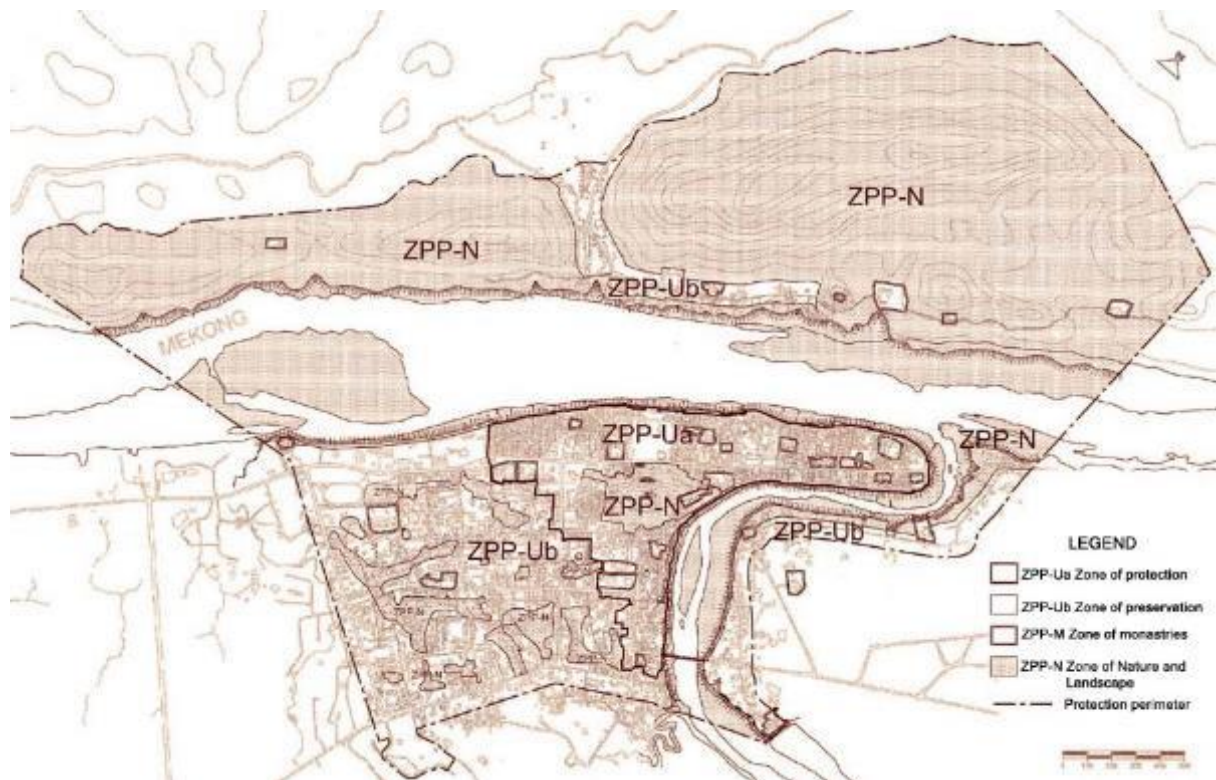
Figure 2.18: Cars with Chinese License Plate on the Street (Chinese New Year)

2.2.6 Overall Plan

(1) Preservation Management of the World Heritage Area

For architectural preservation in the World Heritage Area, *Plan de Sauvegarde et de la Mise en Valeur* (2001) (hereinafter referred to as “PSMV”), that was made with the support of the *Agence Française de Développement* (hereinafter referred to as “AFD”), is currently under operation.

PSMV is operated in around 820 ha inside the World Heritage Area (Figure 2.19) and regulates the form, height, color, and materials of architecture. DPL conducts building certification according to this plan.



Source: PSMV

Figure 2.19: Zoning inside the World Heritage Area

Table 2.7 shows the 18 prioritized projects that DPL is planning to operate from 2015 to 2020. It includes tourism restoration projects in Phousi Hill, in response to the safety problems caused by the increase in

number of tourists and architectural restorations, as well as infrastructure upgrading such as drainage upgrading and parking lot maintenance.

Table 2.7: DPL Prioritized Projects for the World Heritage Preservation (2015-2020)

No	Project name	Location of Project	Amount (LAK)	Amount (USD)
I	Tourism Promotion Projects		3,055,108,000	348,359
1	Viewpoints Project	Phousi Hill	906,575,000	103,372
2	Tree Protection Project	Phousi Hill	569,710,000	64,961
3	Public garden at behind the Governor Office Project	That luang Village	1,578,823,000	180,025
II	Restoration of Religion Buildings Projects		812,970,000	92,699
1	Restoration of Pahuaok Temple No: 511	Phousi Hill	430,650,000	49,105
2	Restoration of Inventory Building No: 537	Vat that Village	382,320,000	43,594
III	Restoration of Ancient Buildings Projects		5,224,548,000	595,730
1	Restoration of Inventory Building No: 325	Pakham Village	957,857,000	109,220
2	Restoration of Inventory Building No: 58	Meunna Village	732,105,000	83,478
3	Restoration of Inventory Building No: 440	Vixoun Village	602,910,000	68,747
4	Restoration of Inventory Building No: 129	Pakham Village	1,033,560,000	117,852
5	Restoration of Inventory Building No: 231	Pakham Village	861,300,000	98,210
6	Conference Hall of the World Heritage Office Project	Xiengthong-Khili Village	1,036,816,000	118,223
IV	Infrastructure Improvement Projects		16,871,091,100	1,923,728
1	Khan Riverbank Protection Project	Heritage protection Area	10,413,764,000	1,187,430
2	Boundary of Phousi Project	Phousi Hill	1,617,350,000	184,418
3	Public Toilets Project (5 Points)	Heritage protection Area	947,755,000	108,068
4	Boundary of PSMV and Buffer Zone Projects	PSMV and Buffer zone	1,232,040,000	140,483
5	Parking Project	Heritage protection Area	751,443,100	85,683
6	Drainage System Project	Heritage protection Area	979,585,000	111,697
7	Footpath on Khan and Mekong Riverbank Project	Heritage protection Area	929,154,000	105,947
	Total Cost of All Projects		25,963,717,100	2,960,515

Source: DPL (internal document)

(2) Tourism Development

Luang Prabang Province has its master plan for tourism development, “Luang Prabang Tourism Development and Marketing Strategy 2011-2020”, created by DoICT with support of AFD and the Asia Development Bank (hereinafter referred to as “ADB”). The purposes and goals of the plan are shown in Table 2.7. To this end, 23 strategies, 50 programs, and 155 projects have been identified.

Table 2.8: Purposes and Goals of Luang Prabang Tourism Development and Marketing Strategy 2011-2020

Description	Contents
Purpose	<ul style="list-style-type: none"> • Sustainable preservation of the World Heritage Area • Tourism promotion for activities to increase revenue and preserve resources • Maintaining biodiversity • Development and arrangement to be a representative tourist destination in Laos with focus in the northern parts • Appropriate tourism management • Development of tourist attractions and international standard sightseeing destinations • Development of community-based eco-tourism and tourism products • Provision of investment information, survey, and development regarding tourism • Support for and promotion of marketing activities • Capacity building of related staffs
Goal (As of 2020)	<ul style="list-style-type: none"> • Reach 80% of progress in service level classification regarding accommodation facilities • Promote private investment into luxury and large-scale hotels for wealthy individuals • Increase the number of foreign tourists to 700,000 people

Description	Contents
	<ul style="list-style-type: none"> • Increase sightseeing revenue to USD 350 million • Achieve 27,000 employees in both urban and remote areas and poverty eradication • Develop Luang Prabang into a representative tourism base in Laos • Raise the level of tourist destinations and facilities to attract wealthy foreign tourists • Expand and organize tourist information centers (for tourists in Luang Prabang, Chompet, Nan, Park Ou, and Phou Khoune districts) • Find budget for public relations to promote tourism and develop souvenirs • Acquire management and service skills for continuous tourism development • Increase community-based crafts to 15 • Coordinate with related departments to increase tourist destinations in ten new areas • Survey the areas to register all tourist destinations and launch service at five new tourist destinations • Promulgate related laws and regulations • Build partnerships with other provinces to promote tourism, transportation facilitation, and information sharing • Improve transportation system • Conduct realistic tourism development with accurate goals • Build a management mechanism for tourism development

Source: DoICT

There are 23 priority items of the tourism development plan set by DoICT in 2019 which are shown in Table 2.9.

- Of the 155 projects listed in Luang Prabang Tourism Development and Marketing Strategy 2011-2020, 23 priority projects are selected to have been implemented in 2019.
- Given the requested budget and contents, tourism promotion is planned not only for the World Heritage Area but also the entire province while it can be translated that, for the Rural District, higher priority is placed on Ngoi District.
- DoICT said that the implementation has not yet started due to the lack of budget distribution from the government. The fundamental problems of financial mechanism are highlighted.

Table 2.9: Budget Request to Government (2019) and DoICT's Tourism Development Candidates

No	Project	Location	Cost (LAK)
1	Continue and improve the facilities at Kuang Si Waterfall	Kuang Si Waterfall	450 million
2	Causes awareness of the impact of natural and cultural tourism for target groups at Meungngoi District	Meungngoi District	50 million
3	Allocated for souvenir shops and restaurants in major tourist destinations	Luang Prabang Province	250 million
4	Pushing awareness into environmental protection in Luang Prabang Province	Luang Prabang Province	50 million
5	Developing tourism in Ngoi District town by holding tourist center as the second district of province	Meungngoi District	400 million
6	Explore and collect tourism information to conservation and the people can participate in Ngoi District, Chompet District, and Nam Bak District	Chompet District	50 million
7	Evaluate participatory tourism for conservation activities all in the province	Luang Prabang Province	150 million
8	Tourism development of Pakseng District and Phuonsai District so that people can participate	Pakseng District	550 million
9	Allocate and expand tourism villages to conserve people in the localities	Luang Prabang Province	350 million
10	Tree planting projects on natural tourist sites in Luang Prabang City	Luang Prabang City	150 million
11	Explore and rank the newly established tourist destinations and divide the management (National, Province, and District)	Luang Prabang Province	500 million
12	Improve the product at Nam Bak District	NamBak District	150 million
13	Improve and develop the quality of products and tourism in Banchan, Chompet District	Chompet District	150 million
14	Study tours exchange lessons on tourism and production in Thailand (Xiengmai, Leir, Oudonthany Province)	Thailand	250 million

No	Project	Location	Cost (LAK)
15	Organize foreign training to the staff in the tourism sector, in particular English and Chinese	Luang Prabang Province	25 million
16	Organizing a meeting about the lesson of provincial tourism work every six and 12 months.	Luang Prabang Province	200 million
17	Improve tourism statistics collection system	Luang Prabang City	20 million
18	Improve the province's developmental and tourism development plans on 2011 - 2020	Luang Prabang City	75 million
19	Create a Master Plan for Tourism Promotion in the Luang Prabang Heritage Area for 2015 - 2020	Luang Prabang City	30 million
20	Improve the strategy and tourism development plans for 2020 - 2030	Luang Prabang City	50 million
21	Publishing development strategies and tourism promotion for the district and province	Luang Prabang Province	20 million
22	Explore and mark on the natural tourism side of Kuang Si Waterfall	Luang Prabang City	150 million
23	Eliminate and reduce garbage in key tourist attractions such as Kuang Si Waterfall, Sae Waterfall, and Ting Cave	Luang Prabang Province	50 million

Source: JICA Consultant Team (translated information from DoICT)

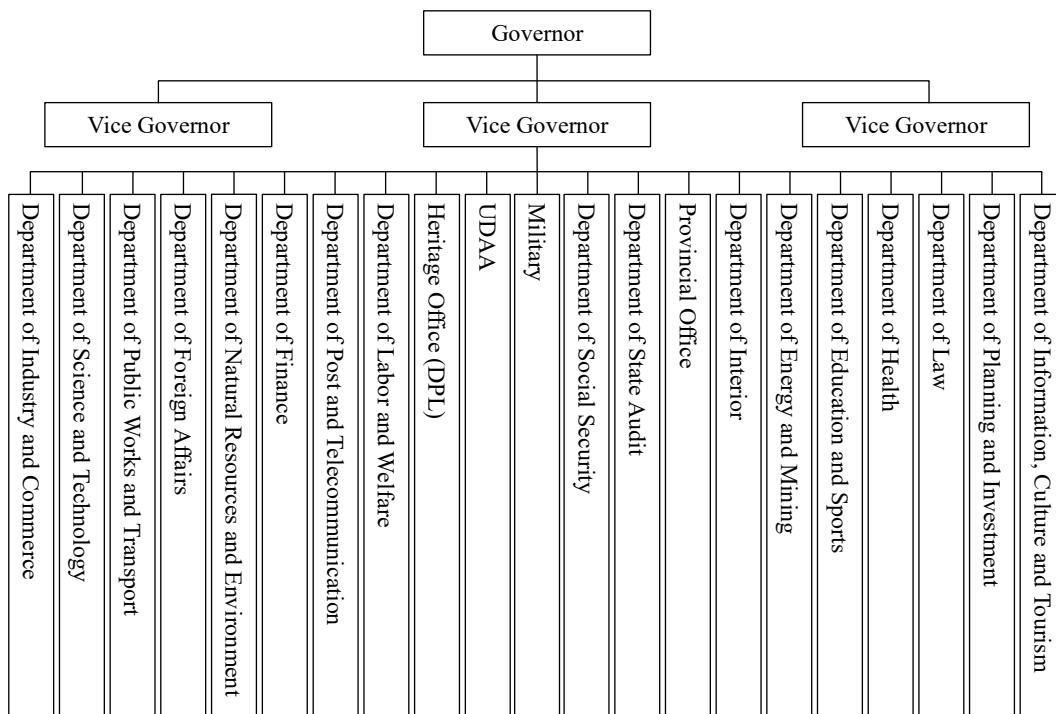
Chapter 3 Output 1 Organizational Structure for Preservation and Maintenance Management of World Heritage Area

3.1 Organizational Structure

Structures and roles of organizations inside Luang Prabang Province that are relevant to the Project are as follows:

3.1.1 Provincial Organization

In Luang Prabang Province, there are 22 departments, three deputy governors, and one governor (Figure 3.1). The secretariat of the governor and deputy governors are the so-called Luang Prabang Province. Each department is a provincial department of Luang Prabang as well as a branch office of the central government. For example, the Department of Public Works and Transport (hereinafter referred to as “DPWT”) is responsible for the administration of civil engineering and transportation is a provincial department of Luang Prabang while serving as a branch office of the Ministry of Public Works and Transport (hereinafter referred to as “MPWT”), at the central governmental level⁴.



Source: DPI (JICA Data Collection Survey on Regional Development in Luang Prabang (2016)

Figure 3.1: Organization of Luang Prabang Province

(1) DoICT (Department of Information, Culture and Tourism)

1) Organization

DoICT’s staffing in charge of tourism is shown in Table 3.1. The position in charge of “training program” has been abolished⁵ compared with the time of the detailed planning survey for the Project.

⁴ JICA Data Collection Survey on Regional Development in Luang Prabang (2016)

⁵ JICA Detail Design Survey 2018

Table 3.1: Staffing of DoICT

Division	Title / Position	Person
Deputy Director General		1
Secretary of Deputy Director General		1
Tourism Marketing Division	Head	1
	Deputy Head	1
	International Cooperation	2
	Tourism Research and Promotion	1
	General Affairs / Information / Graphics	3
	Subtotal	8
Tourism Management Division	Head	1
	Deputy Head	1
	Service / Tour Guide, Sightseeing Site Management, and Investment Management	1
	Management of Hotel, Restaurant and Entertainment	5
	Subtotal	8
Tourism Development Division	Head	1
	Deputy Head	1
	Research	2
	Community Tourism	2
	Tourism Development / Planning / Survey	1
	Subtotal	7
Total		25

Source: JICA Consultant Team

2) Organizational Roles

Roles of DoICT, as shown in Table 3.1, are to achieve an ultimate goal set for sustainable tourism promotion by planning the tourism development for promoting and marketing, formulating standards, managing guides, hotels, and restaurants, conducting trainings, developing new tourist destinations, and others.

In addition, DoICT has divisions responsible for culture. The division's scope of work includes intangible cultural heritage preservation (dance and music) and repair of temples as well as collaborative activities with DPL.

Applying to register 12 traditional cultures to UNESCO (six types of music, Mekong River weed, O-Lam (dish name) and spicy fermented bean paste) and making booklets on social etiquette are among the most recent major activities. For the purpose of inheriting traditional skills, DoICT implements trainings for monks to become skillful in the art field such as paintings, murals, woodwork, pottery, gold leaf work, glass work, and copper work.

(2) DPL (Luang Prabang World Heritage Office)

1) Organization

Staffing of DPL is as shown in Table 3.2. There are two posts for the deputy director generals while one of the two is currently vacant. The "International Cooperation" in the General Affairs Division was newly established this year. Although detailed planning survey for the Project says that consideration to create a position for intangible cultural property preservation is underway⁶, it is not the case at this moment.

Table 3.2: Staffing of DPL

Division	Position	Person
Director General		1
Deputy Director General		1
	Head	1

⁶ JICA Report of the Detailed Planning Survey for the Project (JICA 詳細計画策定調査報告書(2018))

Division	Position	Person
Water Resources / Environment	Engineering/ Planning / Environment	1
	Subtotal	2
Building Permit	Head	1
	Deputy Head	1
	Instruction and Guidance	1
	Research and Building Permission	1
	Building Standard and Review	1
	Information	1
	Subtotal	6
General Affairs	Head	1
	Deputy Head	1
	Information	1
	Inspection	2
	Finance	2
	Personnel Affairs	1
	International Cooperation	2
	Subtotal	10
Planning	Head	1
	Deputy Head	1
	Planning	1
	Management	1
	Subtotal	4
Total		24

Source: JICA Consultant Team

2) Organizational Roles

DPL's main roles in the World Heritage Area are as follows:

- Preservation/restoration of buildings
- Authorization for construction and rebuilding
- Authorization for development activities
- Instruction and public awareness raising regarding preservation activities
- Management of building database (detailed information in 3.2.1(3))

Regarding the preservation and restoration of buildings, DPL often cooperates with villages. For example, an application of permission is sent through village heads while activities for awareness raising are conducted with support of the village heads. In addition, since scope of DPL's work is limited to inside the World Heritage Area, it works with DoICT, DPWT, and UDAA depending on the issues.

3) Other

The Regional Heritage Preservation Committee has been established for the purpose of preservation management of the World Heritage Area. The committee, chaired by a deputy governor, consists of the district heads (vice chairmen), and director generals of DoICT and DPL. The committee discusses activities of development and preservation in the site regarding buildings, ponds, and all others as well as large hotel construction outside the World Heritage Area. In other words, the Regional Heritage Preservation Committee is regarded as the party to coordinate and authorize various matters in the World Heritage Area⁷.

⁷ JICA Report of the Detailed Planning Survey for the Project (2018)

(3) DPWT (Department of Public Works and Transport)

1) Organization

DPWT staffing is as shown in Table 3.3. According to the detailed planning survey for the Project, the staffs are assigned to all 12 districts of the province as well as in the provincial department⁸.

Table 3.3: Staffing of DPWT

Title and Division	Person
Director General	1
Deputy Director General	4
General Affairs	8
Audit	2
Road Management	18
Statistics / Plan	3
Urban Management	11
River Management	3
Traffic / Transport	9
Vehicle Management	13
Total	72

Source: JICA Consultant Team

2) Organizational Roles

DPWT is responsible for infrastructure construction management. Since higher priority is given to road construction (including rehabilitation) for the entire province of Luang Prabang, more staffs are allocated. The Urban Management Division has the responsibility for urban planning and management of water supply and sewage however, the water purification plant operation is managed by the Water Supply State Enterprise⁹.

(4) DOIC (Department of Industry and Commerce)

1) Organization

Staffing of the Department of Industry and Commerce of Luang Prabang Province (hereinafter referred to as "DOIC") is as shown in Table 3.4.

Table 3.4: Staffing of DOIC

Title and Division	Person
Director General	1
Deputy Director General	2
General Affairs	8
Audit	3
Planning / Cooperation	5
Industry / Handicrafts	7
Domestic Commerce	7
Company Registration	4
Export / Import	4
Promotion of Small and Medium Enterprises	5
Total	46

Source: JICA Consultant Team

⁸ JICA Report of the Detailed Planning Survey for the Project (2018)

⁹ JICA Report of the Detailed Planning Survey for the Project (2018)

2) Organizational Roles

For product development, budget has been allocated with emphasis placed on handicraft and bamboo work. Every year, DOIC implements about a two-week training for several representatives from each district. Although support is needed for the food sector, guidance has only been given separately and sporadically. While this problem has resulted from DOIC's organizational structure, it is partly due to the fact that food companies do not have any associations unlike the handicraft sector¹⁰.

(5) UDAA (Urban Development and Administration Authority)

1) Organization

Staffing of the Urban Development and Administration Authority (hereinafter referred to as "UDAA") is as shown in Table 3.5. There are also nine cleaning workers and 15 waste collection workers who are hired by UDAA.

Table 3.5: Staffing of UDAA

Title and Division	Person
Director General	1
Deputy Director General	2
Engineering/ Environment	7
Waste Management	7
Finance	8
Trees / planting	6
Inspection	5
Total	36

Source: JICA Consultant Team

2) Organizational Roles

Cleaning of the World Heritage Area is directly implemented by UDAA while that of the buffer zones is jointly operated by UDAA and private companies. The cleaning is implemented by using waste collection trucks and water trucks (13 vehicles in total) provided by JICA, two vehicles provided by China, and one vehicle provided by AFD. Regarding the sewage management, UDAA implement small-sized construction jointly with villages while DPWT is responsible for larger projects¹¹.

3.1.2 Village Administrative Organization

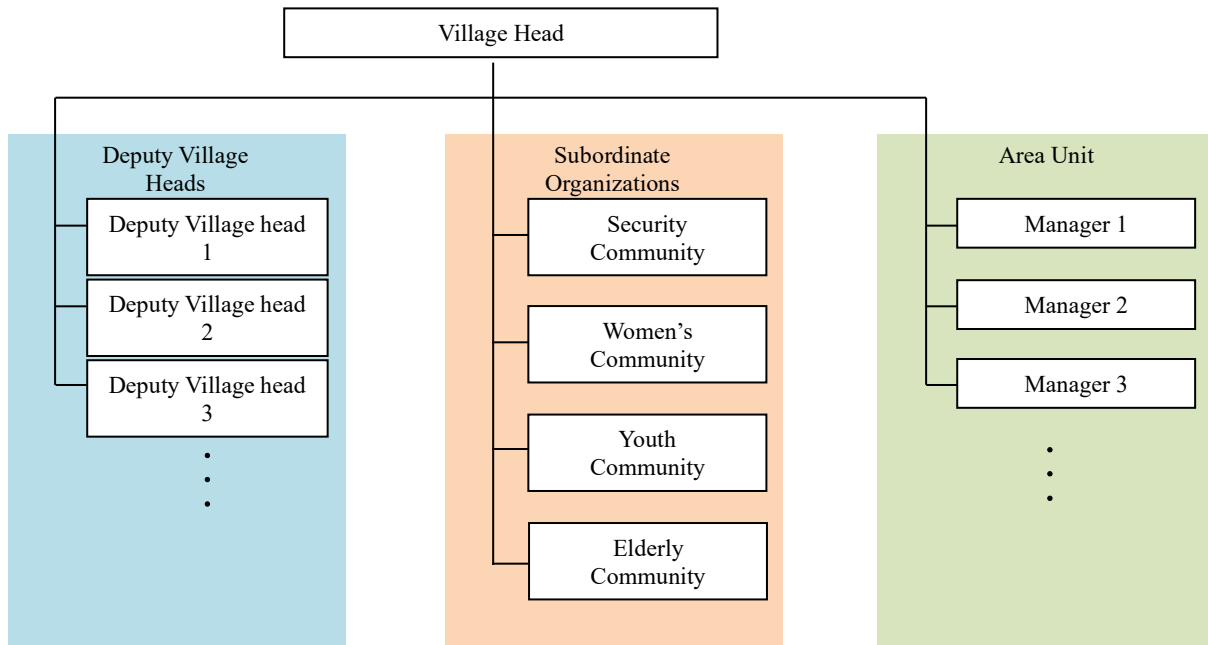
Interview surveys were conducted to 28 village heads and deputy village heads in the World Heritage Area between February and March 2019. In the interview surveys, the interviewees were asked about organizational structure, activities, and finance of villages.

(1) Organization

According to the interview surveys to village heads, the executives of the village administrative organization consist of the village head and two to four deputy village heads (depending on the village). Deputy village heads are responsible for finance and education in the village. The village head and deputy village heads are given the title as management officer of Luang Prabang District Government. In each village, Security Community, Women's Community, Youth Community, and Elderly Community, which will be described later, are classified as subordinate organizations of the village administration. Furthermore, depending on the size of the village, a manager for the area unit that has a certain number of households is set up to assist the village head (Figure 3.2).

¹⁰ JICA Report of the Detailed Planning Survey for the Project (2018)

¹¹ JICA Report of the Detailed Planning Survey for the Project (2018)

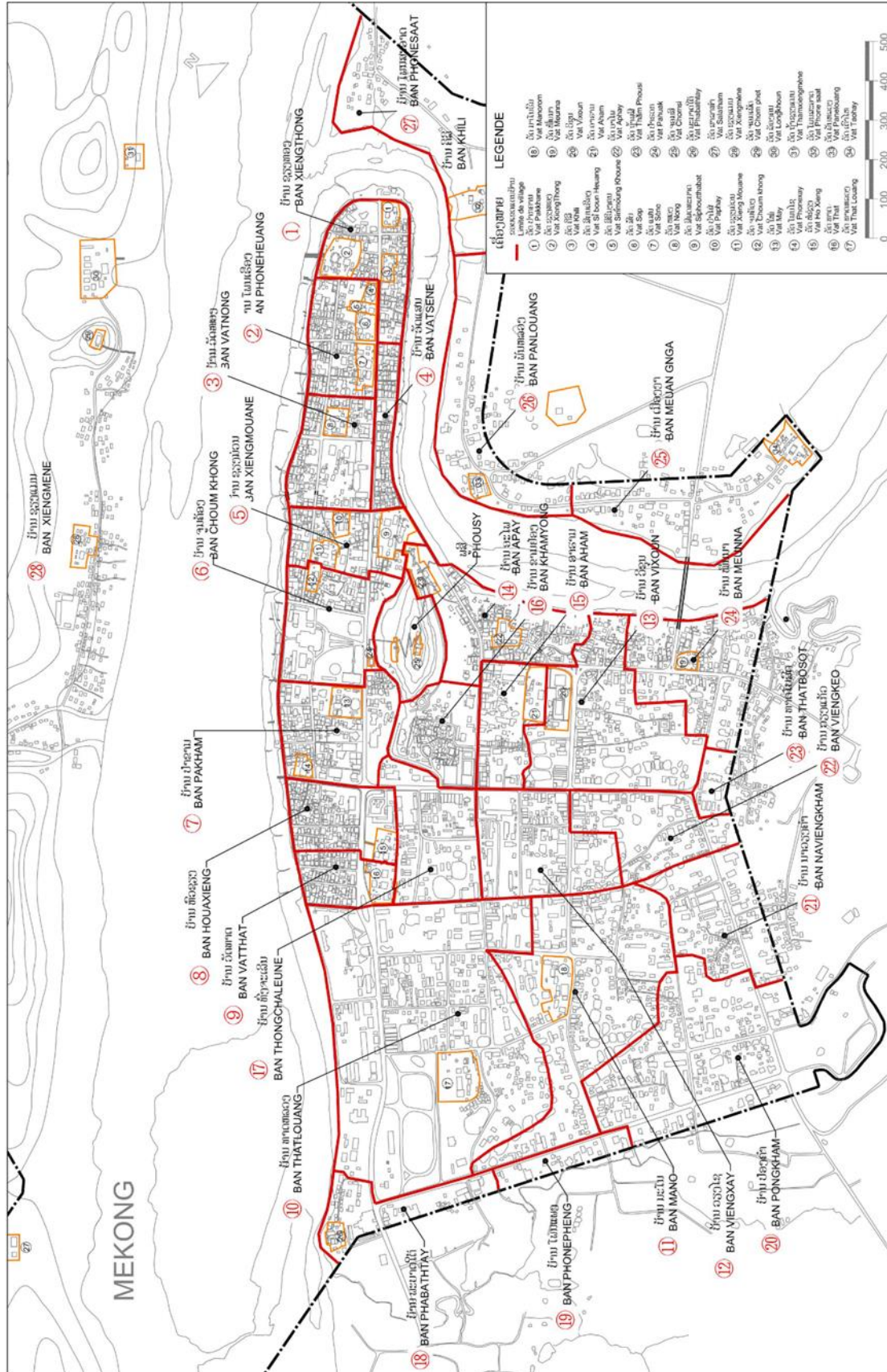


Source: JICA Consultant Team

Figure 3.2: Chart of Village Administrative Organization

(2) Division of Village Administration

The 28 villages in the World Heritage Area are as shown in Figure 3.3 and basic data are shown in Table 3.6.



Source: Prepared by JICA Consultant Team Based on PSMV

Figure 3.3: Village Division Map in the World Heritage Area

Table 3.6: Basic Information of Villages inside World Heritage Area

No.	Item	Village																	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14				
1	Classification under PSMV ZPP-Ua ZPP-Ub Outside World Heritage Area	○	○	○	○	○	○	○	○	○	○	○	○	○	○				
2	Population	Total	304	358	328	210	210	256	653	388	273	912	907	359	597	272			
3	No. of households	Total	60	63	65	42	41	53	122	61	55	161	155	79	104	41			
		of which are Khams of which are Hmong								2			2	5	1				
4	No. of houses	Total	125	104	102	64	75	60	165	85	60	114	218	79	104	81			
		of which are Khams of which are Hmong											2	5	1				
5	No. of temples	Total	3	3	1	1	3	1	2	1	1	9	1		1	1			
6	No. of commercial facilities	Total	13	23	25	20	32	26	25	33	20	15	14	10	20	16			
		Hotel	2	4	5	2			4	2		7	3	2	4				
		Guesthouse	7	15	15	8	19	17	15	25	17	6	5	2	10	11			
		Restaurant	4	4	5	10	13	9	6	6	3	2	6	6	6	5			
7	No. of foreign business operators	Total	10	5	6	5	12	10	10	3	4	7	1						
		Chinese		Guesthouse 1	Guesthouse 1	Guesthouse 1	Apartment 8 Guesthouse 1 Restaurant 3	Guesthouse 4 Restaurant 1	Hotel 1	Guesthouse 2	Guesthouse 1				Guesthouse 2 Restaurant 1	Apartment 1			
		Vietnamese	Guesthouse 5		Guesthouse 1		Apartment 2 Guesthouse 1 Restaurant 1	Guesthouse 3	Guesthouse 7		Guesthouse 3	Guesthouse 3	Restaurant 1		Hotel 3 Guesthouse 3 Restaurant 1	Apartment 1			
		French			Guesthouse 1	Hotel 1	Apartment 4 Guesthouse 1 Restaurant 2		Hotel 1							Guesthouse 3 Restaurant 2	Apartment 1		
		Thailand	Hotel 2	Guesthouse 1		Hotel 1	Restaurant 2												
		Indian					Restaurant 1												
		American				Restaurant 1							Hotel 1						
		English		Guesthouse 1		Restaurant 1													
		Italian			Restaurant 1														
		Korean			Restaurant 1					Hotel 1							Apartment 1		
		Japanese			Restaurant 1			Restaurant 1											
		Singaporean									Hotel 1								
		German		Guesthouse 1															
Switzerland							Restaurant 1												
Others		3	Guesthouse 1																
8	Other public facilities				Elementary school		monastery	National Museum	night market	morning market	night market	library	radio station	Medical school	embassy of Vietnam	provincial office	Provincial department of Provincial department of Provincial department of	Lao Development	Provincial department of

No.	Item	Village															
		15	16	17	18	19	20	21	22	23	24	25	26	27	28		
1	Classification under PSMV ZPP-Ua ZPP-Ub Outside World Heritage Area	○	○	○	○	○	○	○	○	○	○	○	○	○	○		
2	Population	Total	299	394	333	1169	956	1239	1032	459	700	560	1772	1987	1053	1700	
3	No. of households	Total	58	58	54	215	170	200	239	81	109	86	291	355	210	339	
		of which are Khams of which are Hmong			2	2	14	31	10	2	13	5	2	24	12	2	
4	No. of houses	Total	67	64	78	241	205	205	239	155	112	86	302	483	252	339	
		of which are Khams of which are Hmong					2	14	31	10	2	13	5	2		2	
5	No. of temples	Total	1	1		1		4				1	1	3	1	9	
6	No. of commercial facilities	Total	9	3	12	5	20	9	19	14		10	12	12	1		
		Hotel	1	1	1	1	5	3	3			1	3	1			
		Guesthouse	4	1	9	1	7	4	15	6		4	8	7	1		
		Restaurant	4	1	2	3	8	2	1	8		5	1	4			
7	No. of foreign business operators	Total	1	2	10	1	4				4		3	3			
		Chinese		Hotel 1		Hotel 1	Restaurant 2							Restaurant 1			
		Vietnamese			Guesthouse 5		Restaurant 2			Guesthouse 3				Guesthouse 1			
		French	Hotel 1	Apartment 1										Hotel 2	Restaurant 1		
		Thailand			Restaurant 1					Restaurant 1							
		Indian															
		American															
		English													Hotel 1		
		Italian															
		Korean			Guesthouse 3												
		Japanese															
		Singaporean					Hotel 1										
		German															
Switzerland																	
Others																	
8	Other public facilities		Office of youth Department of human	Museum	High school	Provincial department of Provincial department of Provincial department of		High school	Nursery	Lao Telecom	Provincial department of	Police office	Office of Women's Police office	High school	Junior high school	Provincial department of Provincial department of Provincial department of	

Source: JICA Consultant Team

(3) Roles

1) Outline

Roles of village administration are as follows:

- Support for events such as New Year and Boat Racing
- Support for villagers' ceremonial occasions
- Collection of funds from villagers
- Responsible for cleaning activities
- Provision of meals to temples

Members are provided with snacks during activities, but they are basically unpaid volunteers. Roles of the subordinate organizations of the village administration are as follows:

i) Security Community

It is a vigilante organization that are composed of 10 to 15 people for village patrol. Villagers who have already retired are often engaged. Main activities are as follows:

- Daily patrol
- Check IDs of Lao people working at hotels and guest houses
- Responsible for security during the visit of governmental VIPs or foreign VIPs
- Fire drills conducted in cooperation with the police (held once a year)

ii) Women's Community

The women's community is responsible for setting up of village administration meetings and preparing meals.

iii) Youth Community

The youth community help to do heavy physical work.

For example, in Apay Village, if a landslide occurs around Phousi Hill, members help in doing repair work.

iv) Elderly Community

The elderly community is responsible for promoting inter-generational exchanges, organizing villagers' ceremonial occasions, and settling disputes.

2) Election

Village heads and deputy village heads are elected for a five-year term by the villagers. Normally, four to five candidates run for election and according to the result of the score voting, where scores are added to candidates according to their former experience etc., and the person with the highest score is elected as village heads while the others are elected as deputy village heads. Experience of each candidate is considered in the scoring. Most recently, the vote was held in January 2019.

(4) Revenue of Village Administration

The province provides Laos Kip (LAK) 100,000 per month for village administration.

In addition, LAK 10,000-20,000 are collected from village households during events such as New Year and Boat Racing (depending on the household revenue) and this comes to a part of the operating fund for the events. Furthermore, when the villagers are to set out booths during events, 30% of the sales is collected by villages.

Pakham Village, which holds a morning market and night market, and Choum Khong Village, which holds a night market, collect booth fees from vendors and use the fees for market operation (see also below).

In addition, all villages can collect 10% for property tax as revenue. While entrance fees are collected from foreign visitors at some temples, the revenue is managed by the temples for their restoration (detailed information in 4.2.2).

3.1.3 Tourism Association

1) Organization

This association was established by the travel agencies that have offices in Luang Prabang Province. Staffing of the secretariat is composed of an executive and five officers, wherein all are volunteers.

Although 97 travel agencies are in operation in Luang Prabang Province, since some companies are skeptical about benefits from the association so are not the members¹², at present, there are only 32 member companies. Annual member fee is LAK 1 million if the headquarters function is in Luang Prabang while the agencies, which have only branch function, pay LAK 600,000. Furthermore, LAK 700,000 is collected yearly in sponsorship for the Pii Mai Lao Festival and Boat Racing respectively¹³.

2) Organizational Roles

The main activities of the association are as follows:

- Exchange information between travel agencies (especially trends in foreign markets)
- Participate and set out booths in tourism exhibition abroad
- Participate both as training lecturers and learners
- Contribute fund to festivals

For the trainings as mentioned on the 3rd item, it is often the case to participate as the lecturers in the trainings for tour guides organized by DoICT. Examples of the participation of project executive committee as shown on the 5th item include participating in discussion on awareness-raising about etiquette of alms giving ceremony. On the other hand, there is no case that the association provides infrastructure and equipment.

3.2 Historic Architecture Preservation

3.2.1 Regulations Regarding World Heritage Area

(1) Urban Planning inside and around World Heritage Area

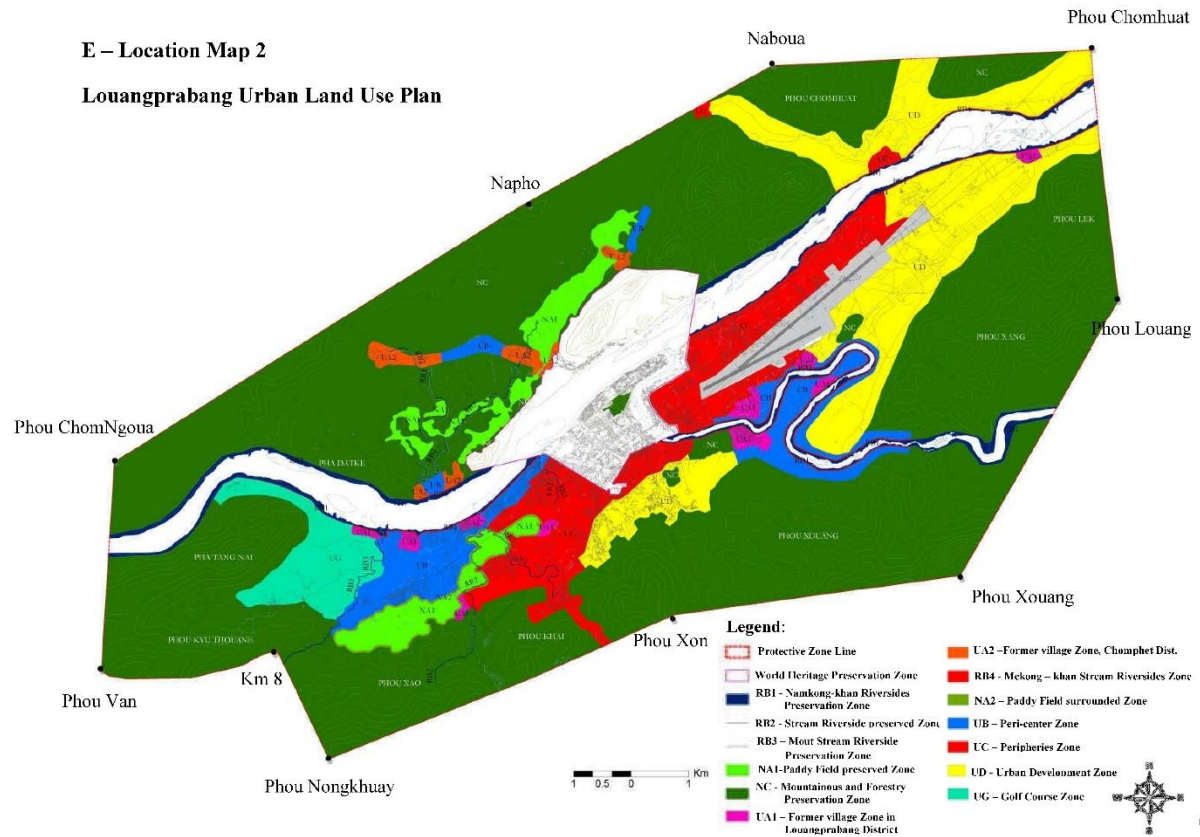
MPWT formulates an urban planning system that gives guidance for land use and infrastructure development of urban areas and urban planning has been formulated for areas including the town of Luang Prabang District. Figure 3.4 is the land use plan shown in the Regulation on Luang Prabang Urban Planning (2012) (hereinafter referred to as "RLUP"), which has the following characteristics:

- The central part (whited out) of the urban planning area defined as the World Heritage Area is completely same as in PSMV (2001).
- Areas along the Mekong River and Khan River are designated as natural preservation area.
- The area surrounding the World Heritage Area (around the whited-out area) is defined as land that is allowed to be used for low density development; higher priority is given for environmental protection.

¹² JICA Report of the Detailed Planning Survey for the Project (2018)

¹³ JICA Report of the Detailed Planning Survey for the Project (2018)

- Future urban development (shown in yellow) is designed to be directed to the south side of the World Heritage Area and the north side of the airport.



Source: RLUP

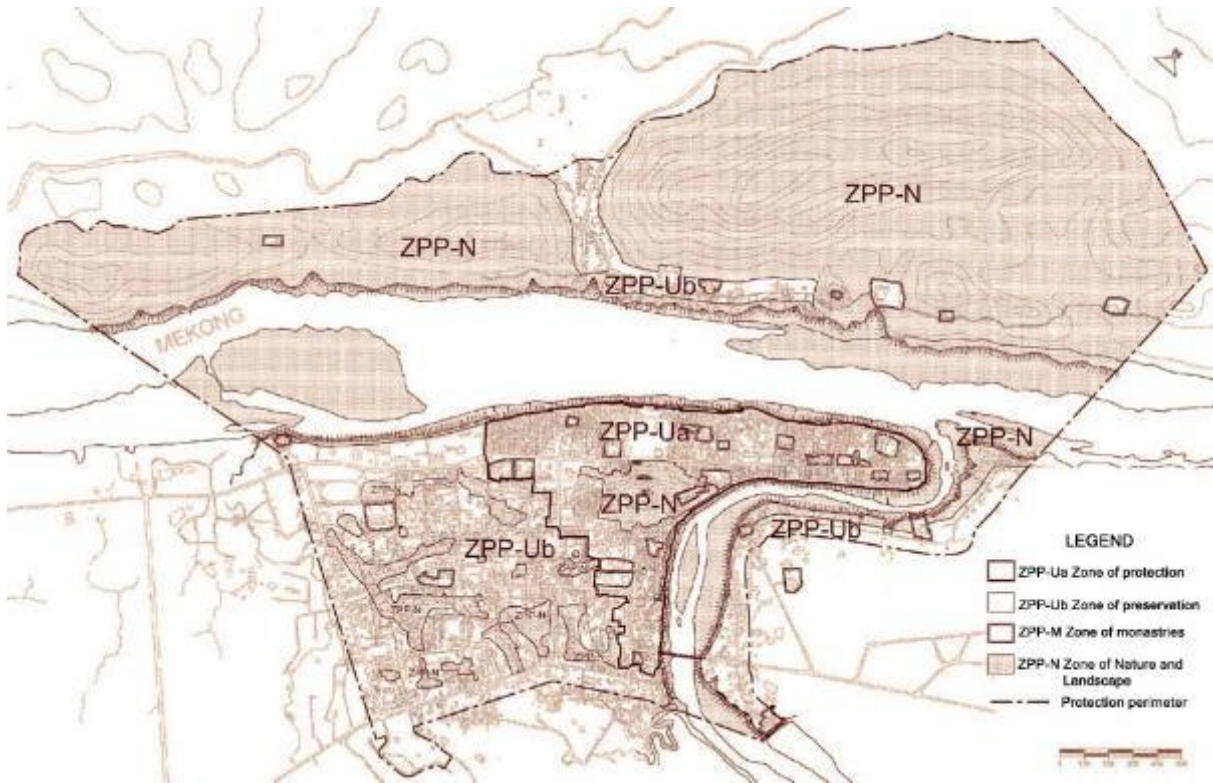
Figure 3.4: Land Use Plan of Luang Prabang District

(2) Plans and Development Regulations of the World Heritage Area

As was shown in 2.2.6(1), after being registered as a UNESCO World Heritage Area in 1995, Luang Prabang Province formulated PSMV in 2001 with support from AFD. The World Heritage Area, defined in PSMV, is an area of about 820 ha consisting of the peninsular area between the Mekong River and the Khan River and a part of the opposite side of the Mekong River.

PSMV describes to designate buildings in the World Heritage Area that are to be preserved and to regulate rebuilding (shape, height, color, and building materials). Luang Prabang District, which includes the World Heritage Area, has its own urban planning. The contents however have been formulated after confirming that there is no variance with PSMV.

Outline and regulations of each zone specified in the current PSMV are as shown in Figure 3.5 and Table 3.7.



Source: PSMV

Figure 3.5: Land Use Plan of World Heritage Area

Table 3.7: Outline and Regulations of Each Zone Specified in PSMV

Outline	ZPP-Ua (Preservation Area)	ZPP-Ub (Protection Area)	ZPP-N (Natural Scenery Protection Area)
1. Situation	<ul style="list-style-type: none"> The peninsula formed by the Khan and Mekong rivers Not including the Phou Si Hill 	<ul style="list-style-type: none"> South of the preservation area Right side of the Khan River and the Mekong River, respectively 	<ul style="list-style-type: none"> Divided into four areas: natural / forest area, wetland area, riverbank area, and Phou Si Hill area
2. Character	<ul style="list-style-type: none"> Mainly residential area, but there are facilities, shops, and service stores along the main and auxiliary roads There are concerns that the heritage value of buildings may be impaired by activities directly related to tourism. 	<ul style="list-style-type: none"> Mainly residential area, but there are facilities, shops, and service stores along the main and auxiliary roads 	<ul style="list-style-type: none"> This zone is a major component of the UNESCO World Heritage Registration
3. Particularities	<ul style="list-style-type: none"> Validity of architectural style and decoration detail Validity of materials and colors for restoration and newly built buildings Management of plant arrangement, fences made with plants, and garden furniture 	<ul style="list-style-type: none"> Validity of architectural style and decoration detail Validity of materials and colors for restoration and newly built buildings Management of plant arrangement, fences made with plants, and garden furniture 	<ul style="list-style-type: none"> Preserve the characteristics and state of the current natural conditions (with green space preservation, and drainage management).
4. Rehabilitation	<ul style="list-style-type: none"> Rebuilding is to be conducted in accordance with the regulations for town-making to protect urban scenery 	<ul style="list-style-type: none"> Desirable to respond as necessary Relocation of buildings are permitted. Prohibit a mark of building demolition from remaining 	<ul style="list-style-type: none"> Prohibit rebuilding and restoration that adversely affect urban scenery Prohibit demolition of buildings

Outline	ZPP-Ua (Preservation Area)	ZPP-Ub (Protection Area)	ZPP-N (Natural Scenery Protection Area)
5. Road System	<ul style="list-style-type: none"> Prohibit widening of roads and sidewalks 	<ul style="list-style-type: none"> Prohibit widening of roads that exceeds 50% Prohibit widening of sidewalks 	<ul style="list-style-type: none"> Prohibit widening of roads or sidewalks Prohibit vehicles from entering sidewalks
6. Nature	<ul style="list-style-type: none"> In principle, logging of trees is prohibited 	<ul style="list-style-type: none"> In principle, logging of trees is prohibited 	<ul style="list-style-type: none"> In principle, logging of trees is prohibited
7. Drainage	<ul style="list-style-type: none"> Not applicable 	<ul style="list-style-type: none"> Pay special attention to drainage to improve wetland pollution 	<ul style="list-style-type: none"> Pay attention to drainage to not to adversely affect the function of natural area
8. Construction (Maximum height)	<ul style="list-style-type: none"> Floor height of all buildings shall be up to the second floor. 	<ul style="list-style-type: none"> Floor height of all buildings shall be up to the second floor. 	<ul style="list-style-type: none"> Floor height shall be up to the first floor of the high-floored buildings

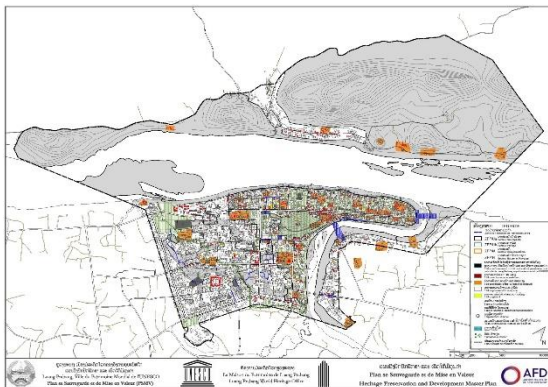
Source: JICA Data Collection Survey on Regional Development in Luang Prabang (2016)

(3) Revision of PSMV

DPL is currently conducting revision of PSMV. As is discussed later, support from AFD has finished in 2019. Due to the limited budget for the revision, the finalization period of the revision has not been determined. According to interviews with the DPL, the detail works for revision are as follows:

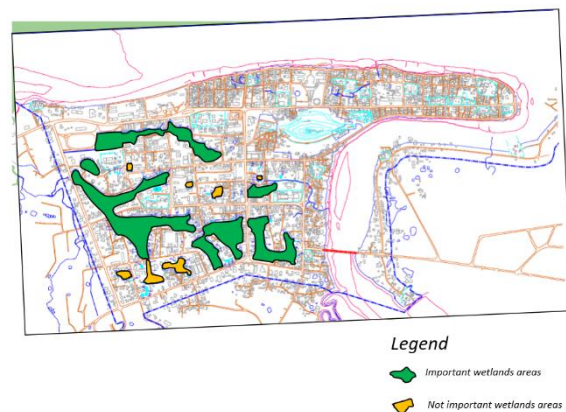
- Update of the base map
- Measurement of terrain, architecture, and ponds
- Development of the database of restoration activities
- Refinement of architectural classification
- Review of pond preservation standards (especially related to small ponds outside the water system)

Regarding the surveys on buildings of above, the database of all the buildings in the World Heritage Area collected with the cooperation of the Global Scientific Information and Computing Center, Tokyo Institute of Technology, has been utilized¹⁴.



Source: DPL

Figure 3.6: Map Currently Updating



Source: DPL

Figure 3.7: Draft Standards for Pond Preservation

¹⁴ JICA Report of the Detailed Planning Survey for the Project (2018)

3.2.2 Restoration

(1) Laws and Regulations

1) PSMV and Regulation on Luang Prabang Urban Planning

As development demand of areas outside the World Heritage Area has increased after the World Heritage Registration and enforcement of the plan described in the PSMV mentioned above needs to be ensured, Luang Prabang Province formulated RLUP in 2012 under the direction of UNESCO. In this plan, the outside of the preservation zone is designated as the Buffer Zone (about 12,500 ha) for development regulation. The RLUP's basic policy regarding the World Heritage Area preservation is as follows:

- Based on the idea that the value is placed on the fact that Luang Prabang's heritage is integrated with the surrounding mountains and rivers, all the areas inside the ridge lines that can be seen from Phou Si Hill are in the scope of the target.
- Regarding the Buffer Zone, the plan indicates that measures to reduce traffic toward the town, like a bypass, are under consideration.

To share roles, DPL is mainly responsible for the development management of the Preservation Zone (ZPP) while DPWT manages the development of the Buffer Zone (Table 3.8). The Construction Committee discusses and reviews the application for the development projects (building construction, commercial facilities such as guest houses) that may have a significant impact on scenery in the preservation area. The Deputy Governor, chairman of the Construction Committee is authorized to give an approval. To be reviewed, about four to five cases are raised to Construction Committee a year¹⁵.

Table 3.8: Development Regulation Standard and Responsible Organizations Regarding Preservation Zone (ZPP) and Surrounding Zone (Buffer Zone)

	Preservation Area (ZPP)	Surrounding Area (Buffer Zone)
Development Regulation Standard	PSMV	RLUP
Responsible Organization	<ul style="list-style-type: none"> • DPL (Small Size) • Committee (Large Size and Priority Project) 	<ul style="list-style-type: none"> • DPWT • Committee (Large Size and Priority Project)

Source: Prepared by the JICA Consultant Team based on RLUP








Some local residents experience inconvenience because small-sized extension or renovation of houses is not allowed due to the regulations. Concerning about the cost of restoration for preserved buildings, as the government and others do not have a good system for financial support, the cost is spent by relying on either of the burden of the residents or support from international organizations.

2) Classification of Registered Buildings

In PSMV, a serial number (Inventory No.) from 1 to 610 is given to 610 buildings (443 houses and 167 temples) that are designated to be preserved. Of the registered buildings, the houses except the temples are classified into seven types (Typology) according to the style as shown in the table below.

¹⁵ JICA Data Collection Survey on Tourism Development in Luang Prabang (2016)

Table 3.9: Building Classification by Architectural Style According to PSMV



1 single pignon	2 Simple pignon avec aile perpendiculaire	3 Maison compartiment	4 Colonial
			
5 Simple pignon véranda	6 Double pignon	7 Compartiment en rangée	
			



Source: PSMV

3) Examples of Buildings

i) Restored Buildings

Of the 610 buildings, Figure 3.8 shows some examples of buildings that have already been restored with private funds.

1. Restaurant	
Inventory No.: 105	
Typology: <i>Simple pignon véranda</i>	
	
Before Restoration	After Restoration
Remarks: As the roofing material is quite new compared with the neighbours, it is assumed that the restoration has been completed recently.	
2. Hotel	
Inventory No.: 111	
Typology: <i>Simple pignon avec aile perpendiculaire</i>	

	
<p>Before Restoration</p>	<p>After Restoration</p>
<p>Remarks: Works such as painting stairs and exterior walls have been conducted.</p>	

3. Hotel (Villa)

Inventory No.: 112

Typology: *Single pignon*

	
<p>Before Restoration</p>	<p>After Restoration</p>
<p>Remarks: Another building has been constructed in front.</p>	

4. Store (Exclusive Compartment)

Inventory No.: 219

Typology: *Compartment en rangée*

	
<p>Before Restoration</p>	<p>After Restoration</p>
<p>Remarks:</p>	

Source: DPL (Picture Before Restoration), JICA Consultant Team (Picture After Restoration)

Figure 3.8: Comparison between Before Restoration and After Restoration

ii) Buildings for Restoration with High Priority

According to interviews with DPL, of the 610 buildings, 34 houses and temples need to be restored, and building surveys and restoring preparation are underway. Of the 34 houses and temples, the buildings that DPL placed an immediate priority for restoration are listed in Figure 3.9.

1. Luang Prabang Library	
Inventory No.: 325	
Typology: Colonial	
	
Outside (front)	Inside (open shelf reading room)
Remarks: The only public library in Luang Prabang which is a free entrance.	
2. Wat Mahathat (Temple)	
Inventory No.: 537	
Typology:	
	
Outside	Surrounding
Remarks: Restoration is underway with roof bricks loaded.	
3. Residence	
Inventory No.: 440	
Typology: <i>Simple pignon véranda</i>	

	
<p>Outside</p>	
<p>Remarks: According to interviews with the neighbours, no one currently lives in it as the owner lives in Vientiane.</p>	

<p>4. Residence and Store</p>	
<p>Inventory No.: 58</p>	
<p>Typology: <i>Simple pignon véranda</i></p>	
	
<p>Outside (front)</p>	<p>Outside (side)</p>
<p>Remarks: According to interviews with the owner, they used to live on the 2nd floor with a high-floored building, but because the floor was said to be dangerous, they built a room by making concrete block walls on the 1st floor. The building faces the road. A store has been added.</p>	

Source: JICA Consultant Team

Figure 3.9: Pictures of the Current State Regarding Buildings with High Priority for Restoration

4) Subsidy

AFD has been supported DPL for building preservation and restoration in the World Heritage Area for the past two phases.

- Phase 1 2002-2008
- Phase 2 2009-2019 (first half 2009-2012, second half 2012-2019)

In the 1st phase, experts were dispatched from AFD to DPL to provide support and technology transfer related to building preservation and restoration. In the 2nd phase, DPL proceeded work by itself by following the manual which was formulated based on the accumulated technology and knowledge in the 1st phase. The AFD subsidy project is scheduled to end in June 2019. Although the subsidy project will end before the completion of the aforementioned PSMV revision, DPL plans to continue its work on its own.

(2) Result of Interview to Village Administration

1) Financial Burden to Residents

Some residents are burdened financially with the cost of rebuilding or building repair due to regulations by PSMV and RLUP. Normally, due to the regulations of PSMV, the cost tends to be higher than the rebuilding and restoration at usual rate. For this reason, many cases are seen that old houses and stores are used as they are. Around 2010, some residents moved to the suburbs because they were unable to pay the cost for restoring their old buildings. Some of them offered to have their property for rent while remaining the house owner.

2) Insufficient Understanding on Rules of Rebuilding and Restoration

Some residents do not understand the rules of rebuilding and restoration. In confirming and applying for the necessary designs, DPL has given instruction to those residents and ordered them to change their design if it is non-compliant.

3.3 Town Design

3.3.1 Road / Parking Development

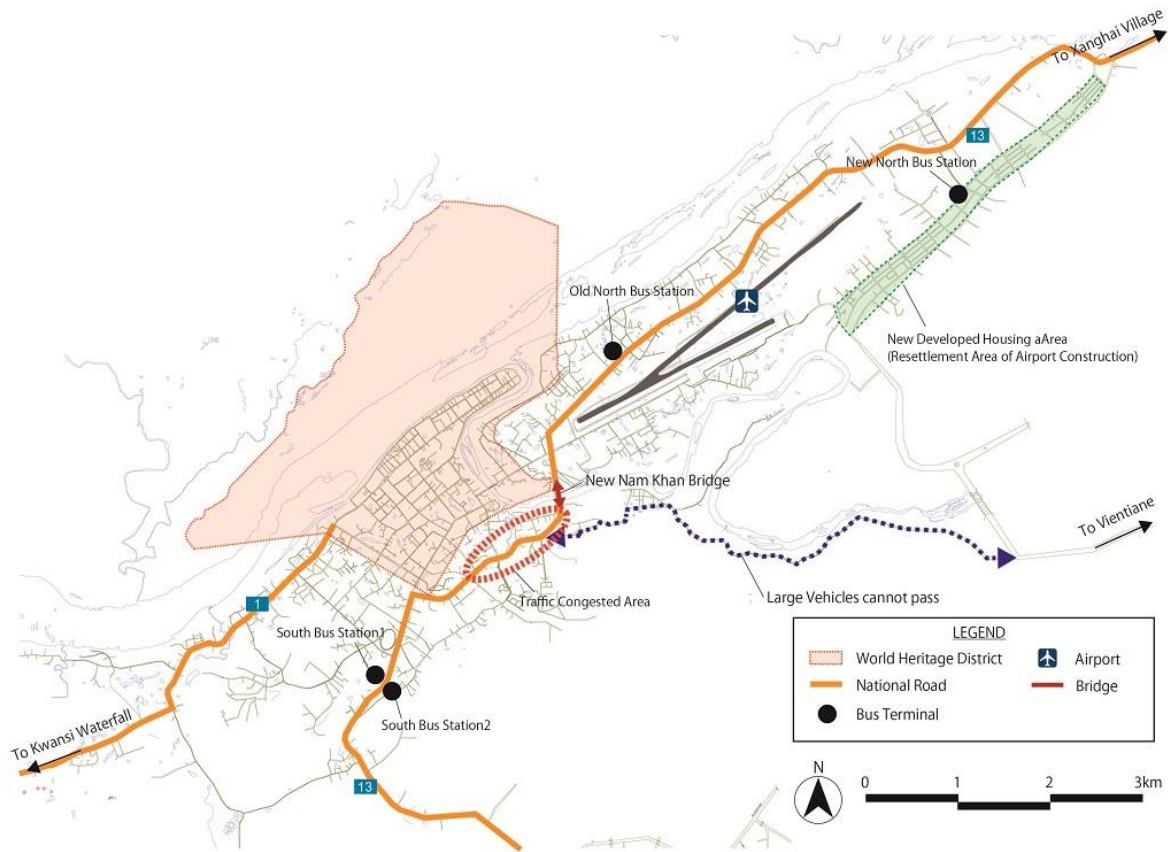
(1) Road / Transportation

1) Airport Access

The World Heritage Area is located about 4 km from Luang Prabang International Airport through Petsarat Street and National Highway 13. National Route 13 North is a two-lane asphalt road that is the only actual entrance to the World Heritage Area from the airport. The road network around the World Heritage Area and the location map of the main transportation facilities are shown in Figure 3.10.

At present, traffic congestion is not noticeable on Petsarat Street and National Highway 13. However, since the bridge over the Khan River is the only bridge that connects the World Heritage Area and the airport, and there are junctions on the southwest side of the bridge, traffic jam is then observed during rush hours in the mornings and evenings.

There is no public transportation between the airport and the World Heritage Area. Tourists arriving at the airport use a van, taxi, and tuk-tuk to access the World Heritage Area. Also, as described later, there is no airport bus available because large buses are prohibited from entering the World Heritage Area.



Source: JICA Data Collection Survey on Regional Development in Luang Prabang (2016)

Figure 3.10: Current Road Network and Location Map of Main Transportation Facilities

2) Within the World Heritage Area

There is no public transportation within the World Heritage Area. In addition, as mentioned above, because tourist buses and trucks are prohibited from entering the World Heritage Area for scenery preservation and preventing traffic jam, tourist's main transportation is a van, taxi, or tuk-tuk. Individual cars and motorcycles used by the residents can also enter the World Heritage Area.

However, in the main street of the World Heritage Area, the section from the middle of Pakham Village through Choi Khong Village to the middle of Xiengmouane Village is the area where vehicles are prohibited from entering between 8:00 a.m. and 4:00 p.m. on Saturdays and Sundays, which is vehicle-free pedestrian only. As it is effective both for attracting tourists to the center part for a walk and ensuring safety of residents and tourists, in response to request from other villages, a recommendation was proposed to the provincial government on expanding the vehicle-free pedestrian-only area throughout the entire area. However, the request was declined because stopping vehicles from passing may cause traffic jam outside the area.

(2) Parking Area in the World Heritage Area

1) Current State

Currently, there is no large-sized parking areas in the World Heritage Area. In addition, in the World Heritage Area, there are many vehicles that are parking on the street due to lack of parking areas. This causes problems such as the road gets narrow, where the scenery in the World Heritage Area is adversely affected and others. Particularly, it is notable that a large number of vehicles are parking on the narrow streets along the rivers, where tourists enjoy the scenery of the Khan River and Mekong River. The solution to this problem is that there are currently two types of parking areas along the Mekong River.

- Parking area arranged by drawing white lines beside the road (by DPWT)

- Parking area for cars and bikes arranged by pulling into the sidewalk (by DPL pilot project)

The latter parking areas for cars and bikes are currently in trial operation. Fees are set at LAK 5,000 for a car and LAK 2,000 for a bike. Staff cost for collection: LAK 100,000 / month.

The former parking areas is not an effective solution, it causes vehicles to park along the roadside. At the same time, the pedestrian areas are not well organized and neat due to lack of cleaning management in combination with the large number of vehicles parking on the streets, as a result, the potential of tourism resources which is supposedly for that area gets limited.



Source: JICA Consultant Team

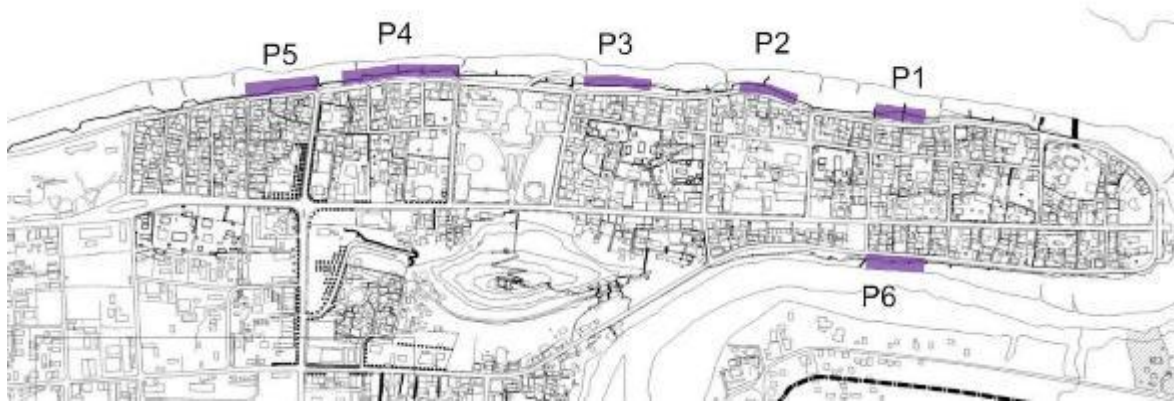
Figure 3.11: Current State of the Parking Area for Cars and Bikes in the World Heritage Area

According to interviews with the village administration, temporary parking areas are set up in vacant area to deal with the lack of parking areas during events such as New Year and Boat Racing. Fees are set at 5,000-10,000 LAK / time for a car and 2,000-3,000 LAK / time for a bike.

Furthermore, partial area of some large temples has been used for parking areas. At Wat That in Vat That Village, the parking area is free and open to anyone including foreigners throughout the year. Meanwhile, at Wat Choum Khong in Choum Khong Village, the village administration and the temple have decided to prohibit cars and bikes from parking for a better atmosphere of the temple. As observed above, the response to the parking issue depends on each temple's policy.

2) Plan

According to the Detailed Planning Survey for the Project, to deal with the issue as mentioned above, DPL and DPWT formulated a plan in 2015. The plan aims to set new parking areas (a total of 70-80 vehicles) at six locations along the Khan River and Mekong River in combination with a plan to develop walking area along the river (Figure 3.12 and Figure 3.13). The work has finished as of 2020.



Source: DPL (Data Collection Survey on Regional Development)

Figure 3.12: Location Map of New Parking Area Plan



Source: DPL (Data Collection Survey on Regional Development)

Figure 3.13: Drawing of Parking Area and Pedestrian Area





Source: JICA Consultant Team

Figure 3.14: New Parking Areas

3.3.2 Development of Public Space (Streets and Riverbanks) and Facilities

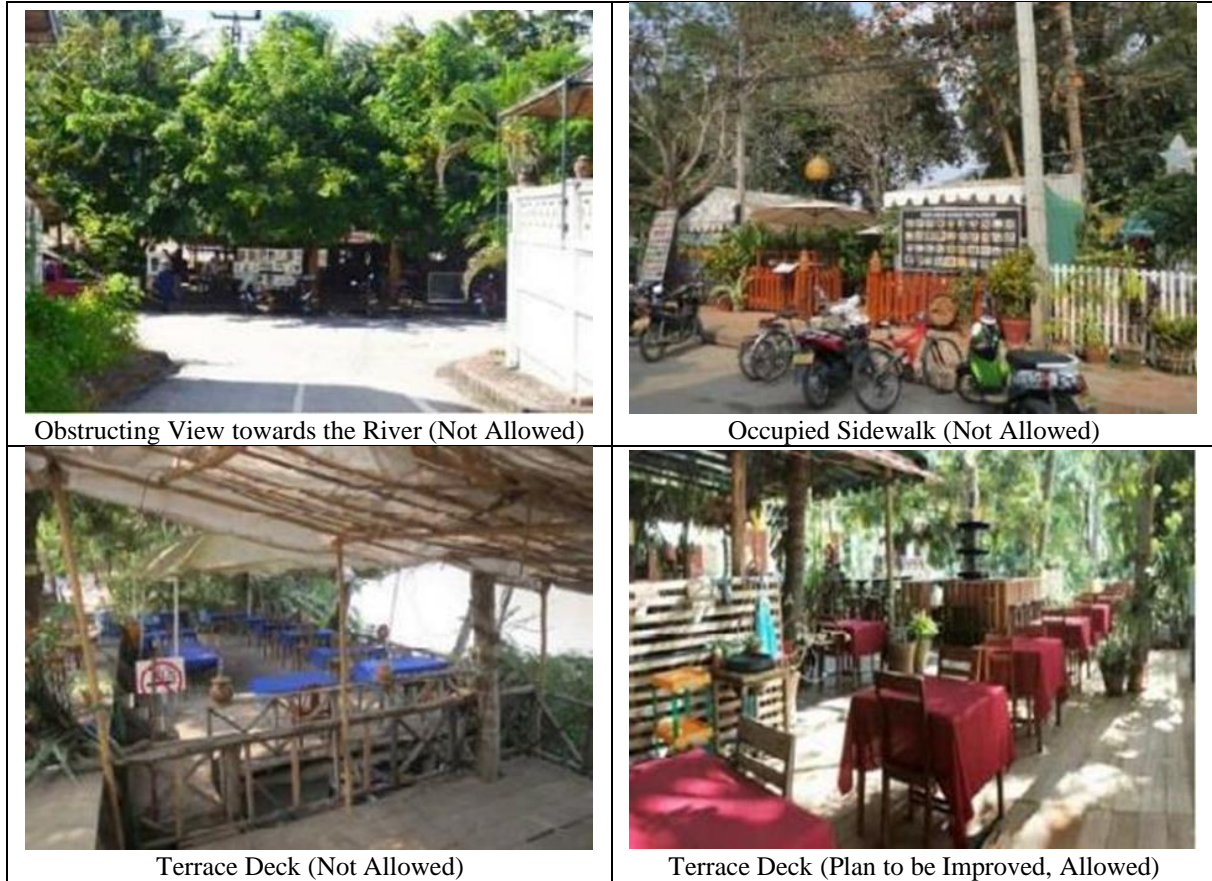
(1) Usage of Streets and Riverbanks (Restaurant)

In the World Heritage Area, there are many restaurants on the sidewalks and riverbank slopes along the Mekong River and Khan River. At the time of the survey, 116 such restaurants were confirmed, most of which were occupying the sidewalks and riverside slopes without permission¹⁶. DPL plans to advance the following scenery preservation measures agreed on between DPL and the related agencies on March 7, 2013 with an aim to strengthen regulations against such restaurants. However, according to DPL, the plan has not been implemented yet.

- In the section between the old bridge and the confluence of Khan River (both banks) and Mekong River, business such as restaurants on the sidewalks along the riverbanks is not allowed.
- In the section between DPWT's building and the confluence of Mekong River (left bank) and Khan River, business such as restaurants on the sidewalks along the rivers is not allowed. On the other hand, on the riverbank slopes, business such as restaurants that are careful about the scenery preservation measures is allowed.
- At T-shaped intersections, businesses that obstruct the view from the roadside toward the river are not allowed (15 locations).
- Businesses that occupy the sidewalks are not allowed (38 locations).
- Businesses with terrace decks on the riverbank slopes that do not meet installation requirements are not allowed (42 locations).

¹⁶ JICA Data Collection Survey on Tourism Development in Luang Prabang (2016)

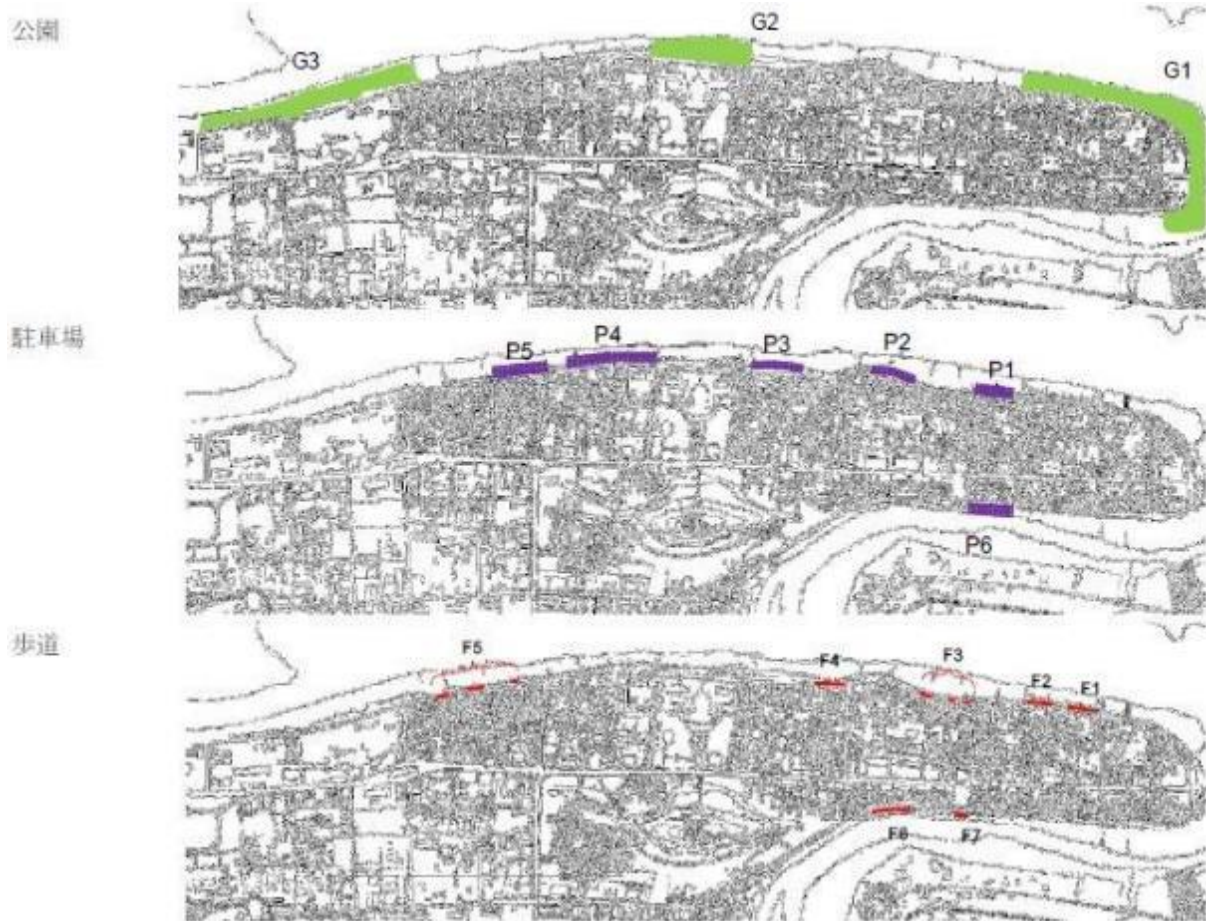
- Businesses with terrace decks on the riverbank slopes that plan to improve for installation requirements are allowed (21 locations).



Source: JICA Data Collection Survey on Tourism Development in Luang Prabang

Figure 3.15: Examples of Existing Restaurants

- Organize parks in three sections (Figure 3.16, Upper).
- Organize parking areas in six sections (as mentioned above) (Figure 3.16, Middle).
- Organize sidewalks in seven sections (Figure 3.16, Bottom).



Source DPL (JICA Data Collection Survey on Tourism Development in Luang Prabang (2016))

Figure 3.16: Development Plan of Parks, Parking Areas, and Sidewalks

i) Conditions in using Riverbank

- Areas within 7.5 m each on both sides along the river from a T-shaped intersection are not available so as not to obstruct the view from the roadside towards the river.
- Areas within 3 m each on both sides of the stairway and rainwater outlet installed on riverbank slope are not available. Areas within 3 m around the trees are not available.

ii) Installation Pre-requisites for Restaurants

- Terrace decks on riverside slopes are to be installed 1.5 m lower than the sidewalk so as not to obstruct the view from the sidewalk towards the river. The maximum area of a terrace deck is 50 m² (width 5 m and length 10 m). The terrace decks are to be made of 100% wood (excluding the concrete foundation that is the underground part). No roof can be installed on the terrace deck. Only white umbrellas are available.
- Decorations of restaurants and others are to be in line with the scenery preservation.

iii) Signboards

- Signboards of restaurants and others are to be made of wood with the maximum size of 0.7 m in width and 1.0 m in height.

iv) Restaurant's Compliance

- Follow laws and policies
- Buildings are to be installed on the opposite side (land side) across the riverbank
- Toilets and kitchens are to be installed in the building

- Pay land use fee
- Proceed paperwork for land use permission
- Keep the site clean

v) **Prohibitions Regarding Riverbank Use**

- Raise livestock
- Hang laundry
- Stockpile firewood and gravel
- Install buildings
- Transfer restaurants and the like to another person
- Install toilets and kitchens (excluding public toilets)

(2) **Toilets**

Although five public toilets are installed along the Mekong and Khan Rivers by DPL, there is no public toilet around the main street except the toilets attached to tourist facilities that are expected to be used by the facility users (Figure 3.17). According to interviews with the village administration, the need is recognized since tourists and local residents often come to ask to use the resident's toilets.

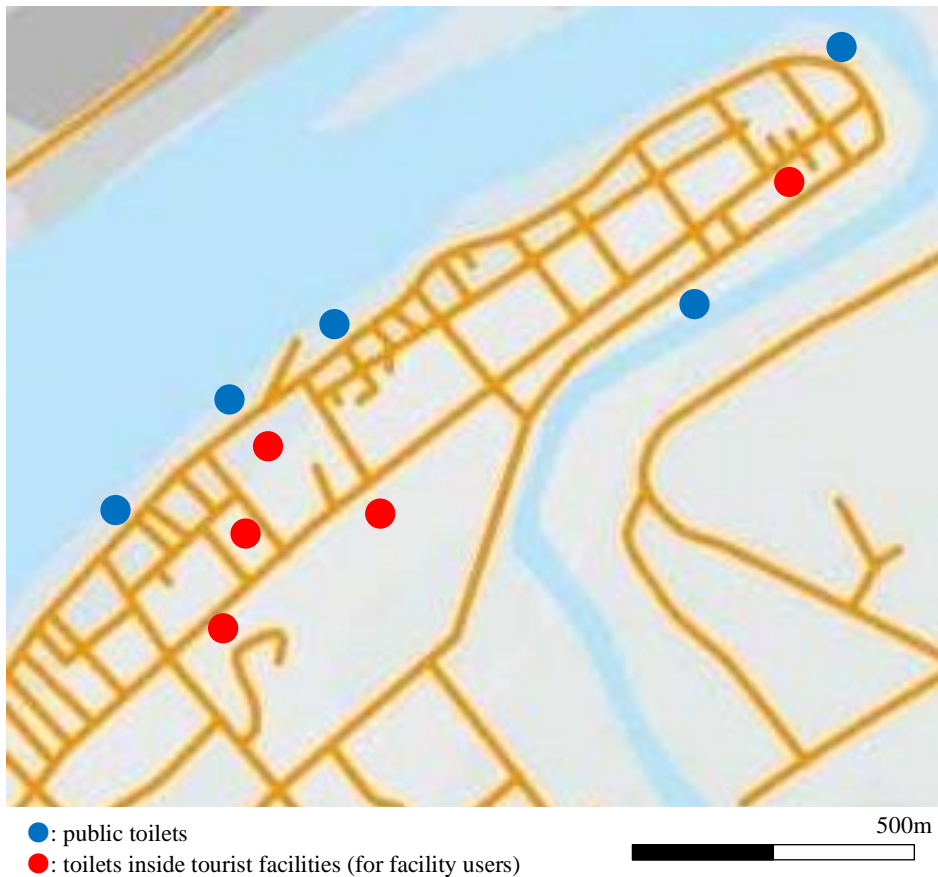


Figure 3.17: Location of Toilets in the World Heritage Area

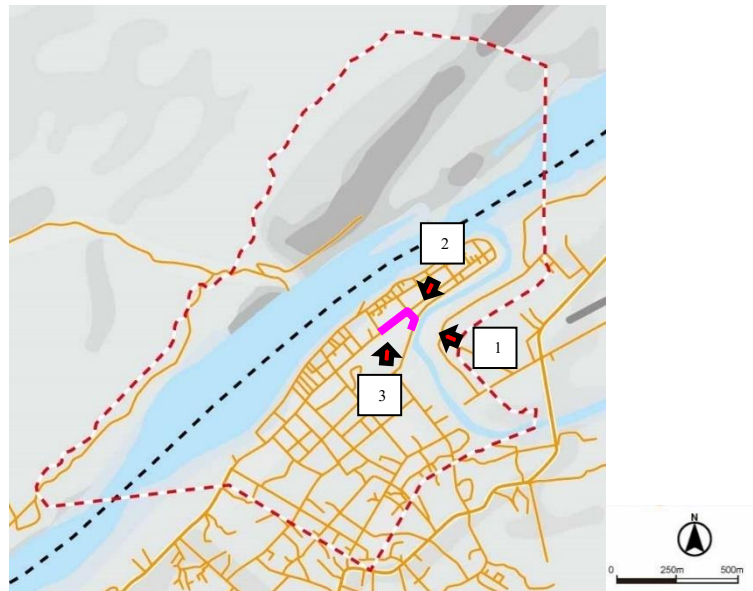
(3) **Telephone Pole, Electrical Wire and Telecommunication Wire**

According to the interviews with DPL, the starting point and sections of underground electrical wire are as shown in Figure 3.18. This section of the underground wire was conducted with the support of AFD. Only the electrical wire is underground while the telephone line and LAN cable are not underground.



Source: JICA Consultant Team

Figure 3.18: Points of Underground Electrical Wire



Source: JICA Consultant Team

Figure 3.19: Location of Underground Electrical Wire

In addition, as PSMV says that it is desirable to make electrical wire less visible, even in areas of non-underground wire, the electrical wire is arranged to be stopped at narrow riverside streets so that the wire is not visible on the main street at the center of the World Heritage Area (Figure 3.20).



Source: JICA Consultant Team

Figure 3.20: View of Points with Underground Electrical Wire

Telephone wire and the like are routed under eaves of houses (Figure 3.21).



Source: JICA Consultant Team

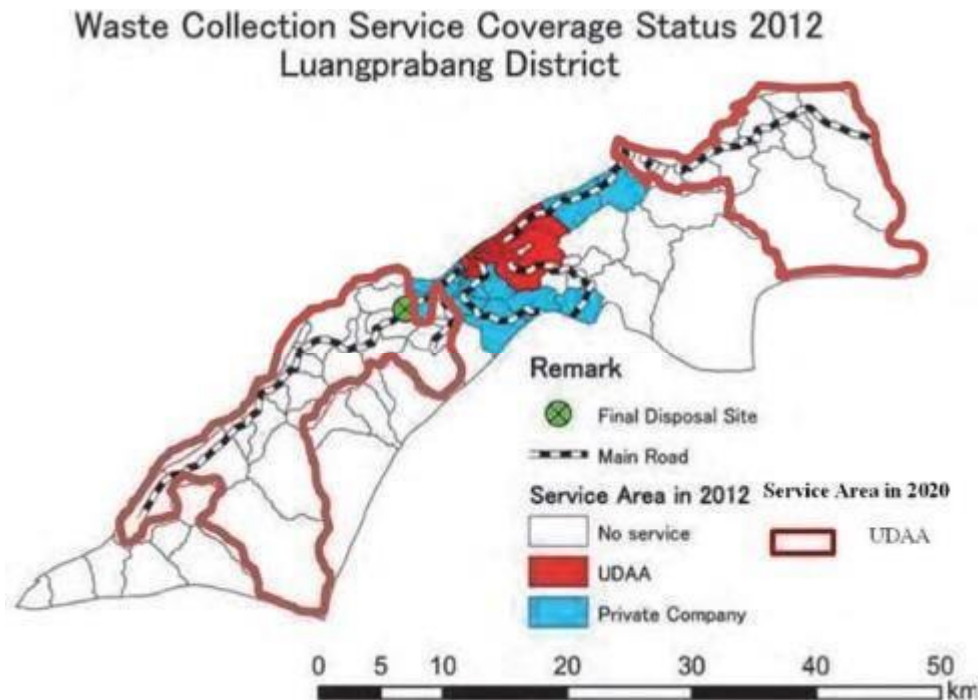
Figure 3.21: Telephone Wire Routed Under Eaves

3.3.3 Waste and Drainage Management

(1) Current State of Waste Management

1) Waste Collection

Garbage collection in Luang Prabang District is under the jurisdiction of UDAA. Of 115 villages in the district, UDAA collects garbage directly in about half of the villages in the World Heritage Area, while the remaining collection works are cosigned to the private companies. The contract period with the private companies is usually for five years. The collection area of UDAA and private companies is shown in Figure 3.22.



Source: UDAA (Data Collection Survey on Tourism Development)

Figure 3.22: UDAA Waste Collection Area

UDAA collects two days a week with five of its own waste collection trucks. Although there are waste collection sites such as 11 collection tanks in the district (which were provided with assistance from

JICA) trash boxes, and the like installed in various locations in the town, the trucks basically stop to collect waste directly in front of each house.

The amount of waste collected in July 2015 is as follows¹⁷:

- UDAA: 623,350 kg (261 vehicles)
- Private Companies: 1,021,890 kg (250 vehicles)
- Market Operators: 117,230 kg (78 vehicles)
- Other individuals: 15,550 kg (39 vehicles)
- Total: 1,778,020 kg (628 vehicles)



Source: JICA Consultant Team (left), UDAA (right)

Figure 3.23: Picture of Waste Management

Collection and transportation of sewage are conducted by private companies (361,770 m² by 118 vehicles).

Also, apart from waste collection, UDAA manages operation of the following in 115 of the villages Luang Prabang District;

- Road clean-up (details mentioned afterwards)
- Planting care
- Support to the village administration for the drain maintenance
- Care for streetlamps

2) Dispersal

Waste collected in Luang Prabang District is transported to a waste treatment site located in Lakpaed Village, about 8 km south of the city center. This waste treatment site, built in 1996, has an area of 15 ha and has been operated under the control of UDAA for over 20 years. Waste treatment site equipment such as excavators, bulldozers, administrative building workshops, and truck scales are provided and supported by JICA. UDAA, by itself, has been expanding the treatment site to cope with the increase in the amount of waste. Table 3.10 shows the result number and forecast of beneficiaries and the amount of waste¹⁸.

¹⁷ JICA Data Collection Survey on Tourism Development in Luang Prabang (2016)

¹⁸ Source: JICA Data Collection Survey on Regional Development in Luang Prabang (2016)

Table 3.10: Waste Output Forecast

Description	2013		2020	
	UDAA	Private Company	UDAA	Private Company
Waste Collection Amount (tons/day)	20.6	16.0	54.4	21.2
Total	36.6		75.6	
Waste Collection Service User (person)	33,362	11,940	48,319	15,900
Total	45,302		64,219	
Population Ratio of Waste Collection Service User	56%		68%	

Source: Laos Pilot Program for narrowing the Development Gap towards ASEAN Integration, 2010-2015 (Data Collection Survey on Regional Development)

In addition, a construction plan of new waste treatment site has been formulated in 2015, to cope with the increase in the amount of waste. As shown in Figure 3.24, the new waste treatment site is located in Xanghai Village and Pak Ou District, around 19 km far from the World Heritage Area. According to UDAA, the plan has not been implemented yet, and an additional survey is planned by with support from ADB.



Source: UDAA (Data Collection Survey on Regional Development)

Figure 3.24: Location of UDAA Existing and New Waste Treatment Site

3) Food Composting Project

Until January 2019, members of the Japan Overseas Cooperation Volunteers (hereinafter referred to as “JOCV”) of JICA dispatched to Department of Natural Resources and Environment (hereinafter referred to as “DONRE”) worked on a project for food waste composting in collaboration with UDAA.

The activities include installing buckets to store food waste for composts gathered at restaurants and hotels, from which later UDAA collects periodically and conducts composting at the space provided at the waste treatment site.

The number of restaurants and hotels that help with waste separation and collection has increased. However, it remains a challenge to find markets for the compost.

In addition, use of compost for cultivation of clean agricultural product was considered in JICA’s “Clean Agriculture Development Project”, which is currently underway. Because of difficulty in identifying the

ingredients due to various ingredients that are mixed in the household food waste, applying to the clean agriculture was not recognized as feasible.

(2) Current State of Drainage and Sewage Management

A combined system that conveys both sewage and rainwater is adopted.

1) Rainwater Drainage

Since there are no rainwater drainage facilities along the road near Luang Prabang District or regional area, rainwater flows down through natural terrain, rivers, drain canals, and stormwater management ponds and lakes. As a result, the insufficient flow capacity of rainwater drainage may cause flood damage not only to the area without drainage facilities but also to the World Heritage Area.

2) Sewage

Luang Prabang District has no sewage treatment system. Some houses have septic tanks that collect sewage while household wastewater is conveyed directly into drain canals and rivers without being treated. In addition, in many cases, the existing drain canals are old and damaged. Some drain canals are blocked by dumped waste.

According to interview surveys with the village administration, cleaning drains along the road is the responsibility of the village administration and residents. It is the duty of each household to remove and clean the trash in the drains which are facing their house on a daily basis. However, the sewage water flow may be obstructed and overflowed because of insufficient drain capacity which causes the flow to be slow and clogged even with a small amount of trash. In particular, malodor occurs in hot seasons. Such problems are especially seen in drains along narrow streets. Particularly, malodor at the morning market and sewage drainage are serious problems.



Source: JICA Consultant Team

Figure 3.25: Picture of the Drain

Although some hotels and restaurants in the center of Luang Prabang have installed septic tanks with grease traps and contact aeration tanks, the function is not fully utilized due to lack of management¹⁹.

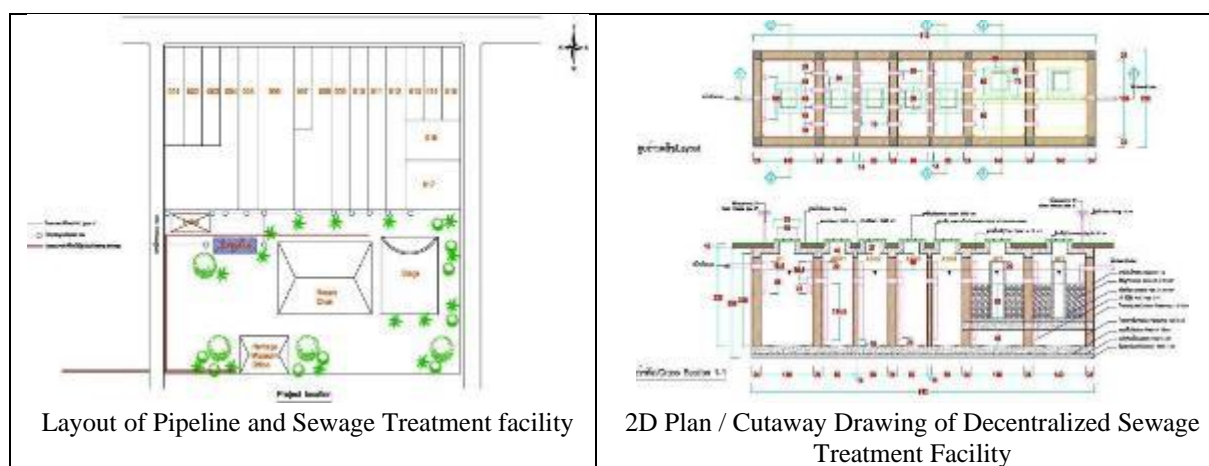
(3) Plan for Drainage and Sewage Management

1) Sewage Treatment Equipment

There is one small decentralized sewage treatment facility for 20 to 30 related buildings in the medical school in the World Heritage Area. A similar type of decentralized sewage treatment facility (for 30 to

¹⁹ JICA Data Collection Survey on Tourism Development in Luang Prabang (2016)

40 buildings) was planned to be installed near the National Museum of Luang Prabang and was installed from 2014 to 2018. The current state of sewerage facilities and outline of decentralized sewage treatment facilities are shown in Figure 3.26²⁰.



Source: ASEAN ESC Model Cities Programme, provided by UDAA (Data Collection Survey on Tourism Development)

Figure 3.26: Outline Drawing of Decentralized Sewage Treatment Facility

The "Drainage and Sewage Master Plan" has been formulated for Luang Prabang District's sewage treatment plan with support of AFD in March 2013. The Master Plan advocates introduction of sewage lagoon treatment system by improving ponds and lakes scattering in drain canals and preservation areas of the World Heritage Area²¹.

2) Flood Countermeasure

In 2008, increase in water level of the Mekong and Khan rivers generated backflow into small rivers which caused flood damage in lowland area. DPWT has proposed a plan to install six backflow prevention gates along the Mekong and Khan rivers²².

3.4 Community-based Activities

3.4.1 Cleaning

(1) Current State of Cleaning

1) Community-based Cleaning

With support of agencies such as *Deutsche Gesellschaft für Internationale Zusammenarbeit* (hereinafter referred to as "GIZ"), Trash boxes have been installed inside the World Heritage Area. According to interviews with the village administration, daily cleaning of the road surface is the responsibility of each household facing the road / street. The village management executives visit their villages daily to check the progress of the cleaning. In addition, community-based cleaning is conducted in the villages weekly or every two weeks (Figure 3.27 and Figure 3.28).

²⁰ JICA Data Collection Survey on Tourism Development in Luang Prabang (2016)

²¹ JICA Data Collection Survey on Regional Development in Luang Prabang (2016)

²² JICA Data Collection Survey on Regional Development in Luang Prabang (2016)

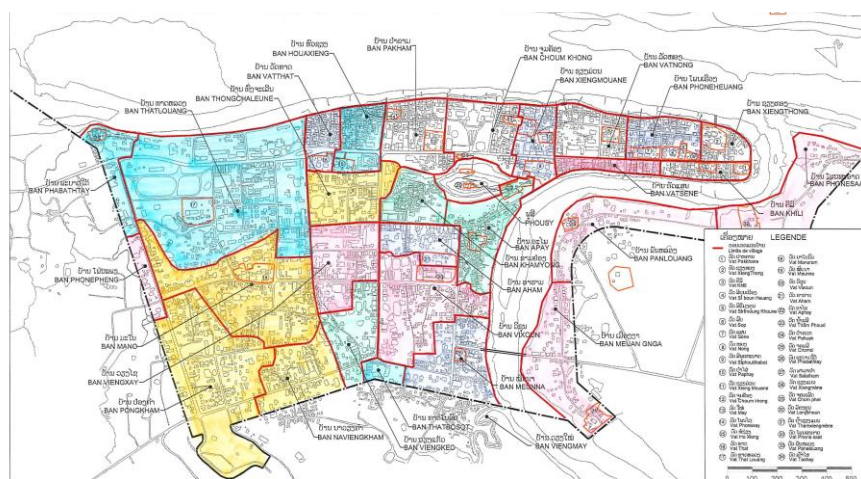


Sidewalk Cleaning

Temple Cleaning

Source: Houaxieng Village

Figure 3.27: Community-based Clean-up of Houaxieng Village (May 2019)



■: Every Saturday Morning ■: Every Saturday ■: Every Week ■: Every 2 Weeks ■: Every Month □: None

Source: JICA Consultant Team

Figure 3.28: Current Schedule of Cleaning by Villages in the World Heritage Area

On the other hand, some temples use their revenue from entrance fees to consign for daily cleaning. Cleaning in the night market and the morning market after closing is also consigned to private companies. Revenue of booth fees from vendors is used in this case.



Trash Box Installed with GIZ Support
(Next to Park along the Mekong River)

Waste Generated at the Night Market

Source: JICA Consultant Team

Figure 3.29: Pictures of Waste and Trash Boxes

2) Cleaning Operation by UDAA

Two people are assigned to clean up the following sections every day from 8:00 a.m. to 4:00 p.m. Their own watering trucks are used when necessary.

- Phouvao Road to Pabath Village
- Phouvao Road to Meuna Village
- Police station to Pakham Village

(2) Plan for Cleaning Management

“Regulation on Cleaning Management of Luang Prabang District” came into effect in June 2017 by UDAA. This defines the penalty provision covering various fields such as transportation, architecture, clothing, ship route, transport, and cleaning. Although there had been various written rules, enforcement was in question because there was no penalty provision. This regulation has been formulated to solve this issue three years after an executive committee led by UDAA made effort²³.

3.4.2 Fire Protection

(1) Number of Fires

The number of fires in Luang Prabang District was 13 in 2018 (zero fatality and one injured). The main cause of fire is a short circuit of electrical appliances.

(2) Firefighting and Fire Prevention

1) Fire Station

Roles of Luang Prabang Province Fire Station are as follows:

- Fire extinguishing
- Training (for villagers, companies, and guest house and hotel visitors)
- Investigation of the cause of fire

i) Equipment

The Fire Department of Luang Prabang Province owns 14 fire trucks, including ten water cannon trucks. Many of these were provided by the support from China, Japan, and Korea.

It is difficult to extinguish fire with large fire trucks since temples and other buildings designated as World Heritage are located in narrow streets²⁴. Therefore, it is necessary to utilize small fire trucks and install fire prevention equipment such as fire monitors on the site. Examples of firefighting equipment are shown in Figure 3.30.

²³ JICA Report of the Detailed Planning Survey for the Project (2018)

²⁴ JICA Data Collection Survey on Tourism Development in Luang Prabang (2016)



Source: JICA Data Collection Survey on Tourism Development in Luang Prabang (2016)

Figure 3.30: Fire Truck of Fire Department

ii) Instruction and Training

All households must have at least one fire extinguisher. In addition, the number of fire extinguishers in hotels / restaurants is determined according to the floor area; five to ten is installed on average. Luang Prabang Fire Department checks the fire extinguishing equipment once every three months²⁵.

Basic fire drills are conducted once a year in collaboration with villages and police by using fire extinguishers.

2) Fire Prevention Activities by Villages

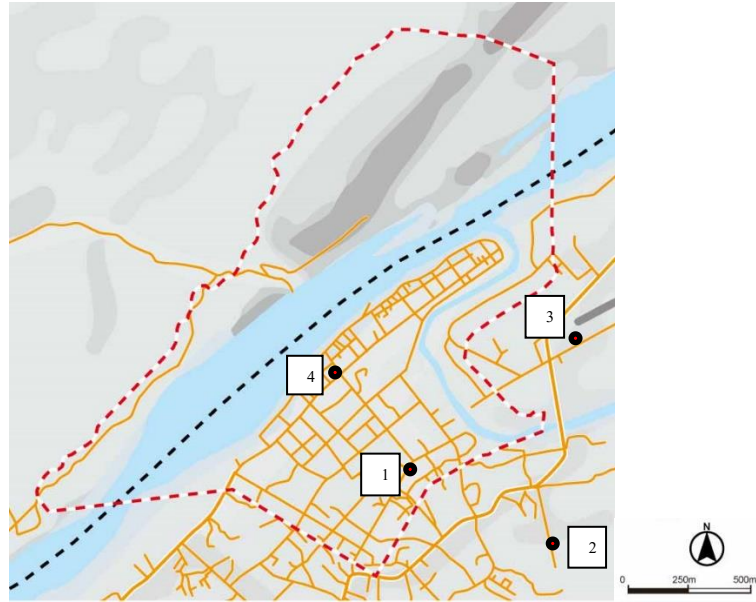
During the abovementioned fire drills, the security community, a subordinate organization of the village administration, collaborates with the fire department to teach residents to use the fire extinguishers.

(3) Firefighting Equipment

1) Current State

According to interviews with the Police's Firefighting Division, there are only four fire hydrants currently installed in Luang Prabang District (Figure 3.31).

²⁵ JICA Data Collection Survey on Regional Development in Luang Prabang (2016)



Source: JICA Consultant Team

Figure 3.31: Location of Fire Hydrant in Luang Prabang District



Source: JICA Consultant Team



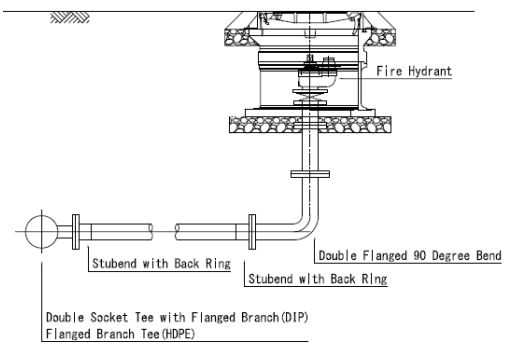
Figure 3.32: Status of Fire Hydrant Installation

2) Plan to Increase Equipment

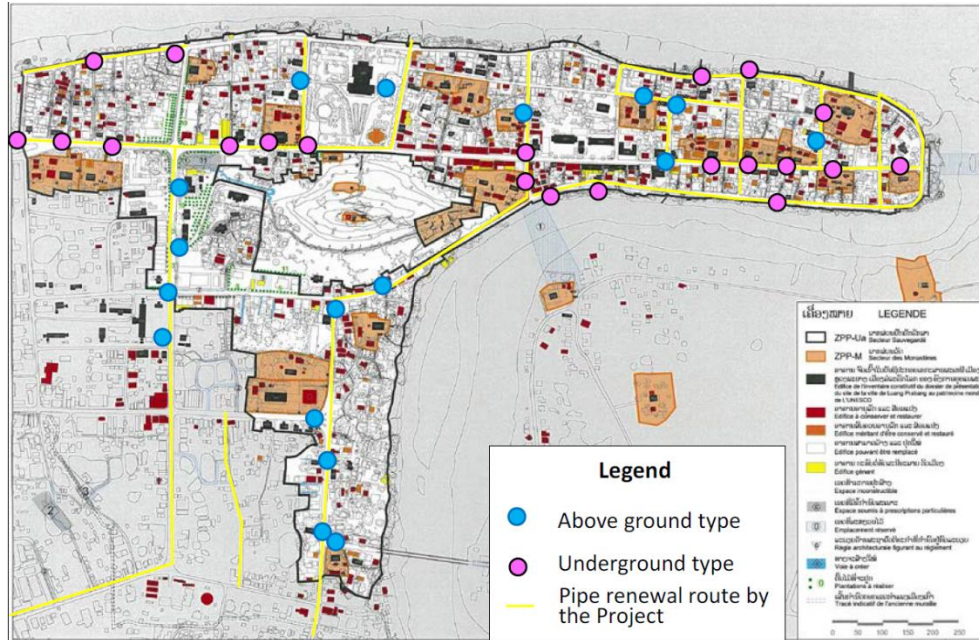
In the “Project for Expansion of Water Supply System in Luang Prabang”, a JICA grant aid project, equipment of fire hydrants is planned to be provided in the future (Table 3.11). According to the Preparatory Survey for the Project (Water Supply System), fire hydrants will be installed along with the renewal of water pipes based on the following policy.

- To install within 50 m of the World Heritage registered buildings (in black) for protection measure.
- To install 45 fire hydrants (of which 38 are to be placed in the World Heritage Area) in the district.
- To install 21 underground type at the location whose scenery is adversely affected by equipment, such as the main street at the central area and 17 aboveground type in other locations which equipment naturally fits to the scenery, such as narrow streets and out of the central area.
- Use joints that meet the specifications of the fire department (currently, not matching the hose joints used by the fire department).

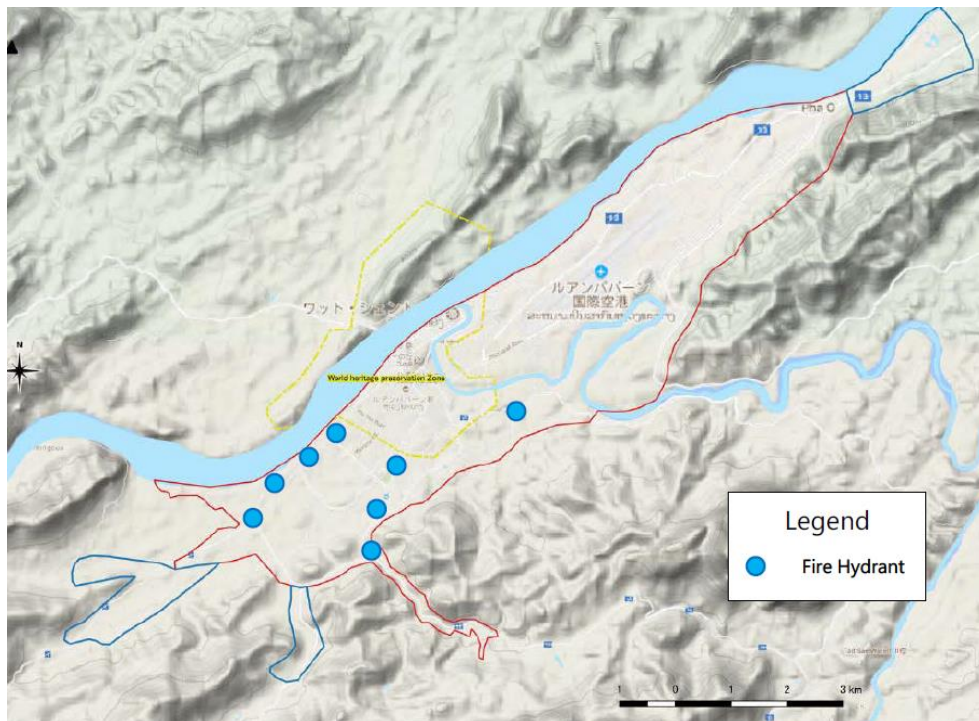
Table 3.11: Types of Hydrant and Installment Image

Type	Underground Type	Aboveground Type
Installment Image		
Cutaway Drawing		

Source: Preparatory Survey for Project for Expansion of Water Supply System in Luang Prabang District



Source: Preparatory Survey for Project for Expansion of Water Supply System in Luang Prabang District
Figure 3.33: Location of Hydrant Installation (38 in the World Heritage Area)



Source: Preparatory Survey for Project for Expansion of Water Supply System in Luang Prabang District
Figure 3.34: Location of Hydrant Installation (Eight Outside the World Heritage Area)

Component of technical assistance in this project that the Department of Water Supply, the counterpart, asked for at the stage of the written request was to conduct activities for awareness-raising about fire causes, prevention, and usage of fire extinguishing equipment. However, the confirmed component of the technical assistance has not included the request; only assistance for water quality management and usage monitoring is to be conducted.

According to DPL, the expansion of water supply system in this project is expected to be completed in 2022.

3.4.3 Crime Prevention and Road Traffic Safety

(1) Number of Crime Incidents

According to interview surveys with the police, the most common crime in the World Heritage Area is motorcycle theft. Some other cases include theft of Buddha statues at the temples and robbery which targets tourists on Sisavangvong Street, the main street of the World Heritage Area. There were 13 cases of such crime reported in 2018.

(2) Crime Prevention

1) Prevention by the Police

The police hold opinion exchange meetings once a week with the security community of each village. It also checks criminal records of guesthouse and hotel guests and patrols venues during events such as New Year and Boat Racing.

2) Prevention by DoICT

DoICT's divisions for culture make effort to conduct cultural property management called Resister Cultural Assets for Buddha Statues in temples and others. As theft cases at temples have become more serious recently, DoICT have discussions with the police and UNESCO aims to eradicate the theft damage.

Some temples are provided with crime prevention cameras from the support of the US Embassy and the Indian government.

3) Prevention by the Village Administration

The aforementioned Security Community patrols to check suspicious people on a daily basis. The persons in charge regularly exchange information with the police.

One of the concerns of the village administration is that facilities to prevent crime such as streetlights and crime prevention cameras are not enough. In the past, with support from China, crime prevention cameras were installed in several locations of the World Heritage Area, but they have not functioned since they were broken down about seven years ago. One of the concerns of the residents is that there are no crime prevention measures being taken for elementary schools.

(3) Road Traffic Safety

There were 100 cases of vehicle accident in Luang Prabang District, resulting in 18 deaths. Some foreigners are involved in accidents due to insufficient understanding of traffic conditions.

The police call on the Vietnamese and Chinese embassies to ensure their tourists are taken extra care of, especially during the Lunar New Year season in China and Vietnam, when more arrivals occur.

3.4.4 Festivals and Events

Typical events in the World Heritage Area include New Year (*Pii Mai Lao*) in April, Boat Racing in September, and Lantern Festival in October. The provincial government takes lead role to organize such events.

(1) Outline

1) Lao New Year (*Pi Mai Lao*)

It is a water festival that celebrates Lao New Year, the largest festival in Laos (Figure 3.35). It takes place in mid-April, the hottest time of the year.

In the water festival, famous for cooling down the heat in Vientiane, there are various traditional events held in the ancient city of Luang Prabang. On the main street, events such as a parade of elephants living in Luang Prabang, Miss Laos Competition, and a large-sized parade with monks and local people wearing traditional garments are held for two days. In addition, a traditional dance Phralak Phralam is performed at the National Museum while, at the end of the festival, the Prabang Buddha is shown only for three days of the New Year²⁶. Furthermore, on the other side of the Mekong River, sand pagodas are built to pray for good luck.



Pii Mai Lao Float

Market Open During Pii Mai Lao

Source: JICA Consultant Team

Figure 3.35: During Pii Mai Lao

2) Boat Racing

It is a festival that celebrates the end of the rainy season, held over three days in September. Villages and companies that have their own boats form teams and compete by boat racing in the 800 m section of the Khan River. The competition is held in a knockout system separately for men and women. There are 34 teams that participated in for men's competition in 2018. Some villages, which do not own boats, team up with other villages. Boats are owned by villages and are often stored in temples in the villages (Figure 3.36).

During the boat racing, DoICT holds a traditional garment event on the theme of preserving folk culture. It is conducted as part of cultural preservation activities of DoICT's cultural divisions and educational institutions for them to get involved with the event.



Boat Racing in September

Boats Stored in Temples

Source: DoICT Website (left), JICA Consultant Team (right)

Figure 3.36: Boat Racing and Boats Stored in Temples

²⁶ DoICT Website

In villages that do not participate in boat racing, it is often the case that a ceremony called Boun Khao Chi is held instead, where baked confectionery made of rice is offered to villagers.

3) Lantern Festival (Boun Lai Heua Fai)

This festival is held to pray for good luck to “Naga”, an imaginary holy creature of a dragon and snake, which is believed to live in the Mekong River. For the first three days in early October, temples, hotels, and restaurants around the town are decorated with countless lanterns. A parade is held on the main street on the last night. Boats with lanterns prepared by villages and temples are carried into the Mekong River ²⁷ (Figure 3.37).



Source: DoICT Website

Figure 3.37: Lantern Festival

(2) Finance

The province collects funds for events from residents through the village administration. The village administration collects LAK 10,000 to 20,000 per household (depending on household revenue) and sends it to the province. In addition, funds from private companies is another source. For example, Lao Brewery Co., Ltd. offered LAK 4,000,000 during the 2018 boat racing in sponsorship. Participating teams in boat racing can receive a support money of LAK 8,000,000 from the province to be used for the team management.

3.4.5 Tourism

One of the tourist attractions in the World Heritage Area are the Morning Market and Night Market. These markets are operated in collaboration between hosting villages and the province.

(1) Outline of Markets

1) Morning Market

Location: In Pakham Village
Time: 5:00 a.m. to 12:00 p.m.
Number of Stalls: 250

2) Night Market

Location: Between Pakham Village and Choum Khong Village along the Sisavangvong Street
Time: 4:30 p.m. to 11:00 p.m.
Number of Stalls: 684 (310 in Pakham Village / 374 in Chum Khong Village)

²⁷ DoICT Website



Source: JICA Consultant Team

Figure 3.38: Morning Market and Night Market

(2) Background of Market Establishment

According to interviews with the village administration of Pakham Village, the Night Market was introduced to the World Heritage Area thanks to the Luang Prabang Province staffs who were inspired during their visit to *Marché* in France. The project of the Morning Market and Night Market were started to offer business opportunities with the Khmu Tribe people and Hmong Tribe people who have used a slash-and-burn farming method which causes forest destruction around the town. In fact, 70% of vendors are Hmong Tribe people living around Luang Prabang (5% Khmu and 25% Lao) while vendors living in the World Heritage Area are only 5%.

Night Market started in Pakham Village in 2002. It expanded to Choum Khong Village several months later.

(3) Market Operation

Market operation for the areas of Pakham Village and Choum Khong Village is conducted separately. The police and village security community block the road when the market opens.

1) Revenue

Around LAK 6,000 per day of booth fees are collected from each vendor.

2) Expenditure

Operating costs of the two villages, Pakham Village and Choum Khong Village include cleaning, electricity bills, and fee collection staffs while tax is to be paid to the provincial government from a portion of the revenue. According to the JICA Detailed Planning Survey for the Project, examples of expenditures and revenues in Choum Khong Village are as shown in Table 3.12. The table shows the figures for the six months from November to April. The revenue slightly goes down from May to October.

**Table 3.12: Revenue and Expenditure of Night Market
(Choum Khong Village) (6 Months from November to April)**

Revenue (LAK)		Expenditure (LAK)	
Booth Fee	Over 25 million (Of which over 10 million for electricity bill)	Tax (To Provincial Tax Department)	12 million (Fixed)
		Electricity Bill	Approximately 10 million
		Cleaning (To UDAA)	2.5 million (Fixed)
		Cleaning materials	Approximately 300,000
Total	Over 25 million	Total	Approximately 25 million

Source: Detailed Planning Survey for the Project

(4) Other

According to interviews with the village administration, Houaxieng Village once asked the provincial government to authorize the village for night market operation, but it was rejected because of issues such as road traffic congestion.

3.4.6 Cultural Inheritance (Public Awareness and Education)

(1) Inflow of Foreign Investors and Outflow of Local Residents

In many cases, the local residents choose to sell their property if costs for renovation and repair are high while restrictions are tight without any financial support.

Outflow of local residents has been occurring as the number of selling and renting buildings for hotel and restaurant use has increased²⁸. There is a concern that this will eventually lead to devastation of local culture. In addition, the number of unauthorized building has increased as foreign investors (especially Chinese and Vietnamese) often conduct construction without being familiar with local rules. It is pointed out that restrictions on renovation and repair of buildings in the World Heritage Area and lack of financial support for the reconstruction and repair are behind in the increase in selling.

(2) Youth Culture and Tourist Etiquette

Due to influence of urbanization and media, traditional lifestyles have been disappearing especially among young generations²⁹. On the other hand, tourists who do not sufficiently understand "religion", "culture", and "traditional lifestyle", are often frowned on by local residents. Although activities to raise awareness such as cautious awareness signs and tourist's "Dos and Don'ts" pamphlets for tourists have been conducted, the local residents are still concerned.

3.5 Site Selection for Pond Water Purification Experiment

Target area of Pond Water Improvement and Monitoring Project include Mano Village and Pongkham Village.

Outline of activities up until mid-January 2020 is as shown in Table 3.13.

Table 3.13: Outline of Activities up until mid-January 2020

Date	Location	Activities and Concerned Parties	Discussion Topics
2018/11/30	Takayama City	Discussion with Techno Eco Co., Ltd., Takayama City and JICA	Preliminary meeting on water purification experiment using Super-sol
2019/1/14 ~2/1	Luang Prabang, Laos	(1 st field activity) Discussion and field visit with DPL, UDAA, Mano Village, Pongkham Village, and pond owners on the pond water purification experiment	<ul style="list-style-type: none"> • Discussion with stakeholders on the pond water purification experiment • Field survey of ponds, with interviews to the pond owners • Discussion on the survey results and site selection for the experiment, with DPL, UDAA, Mano village, and Pongkham Village
2019/2/27	Takayama City	Discussion with Techno Eco Co., Ltd.	<ul style="list-style-type: none"> • Report on the field survey • Discussion on experiment site selection and future activities • Visit to Super-Sol Manufacturing Factory
2019/3/27 ~4/4	Luang Prabang, Laos	(2 nd field activity) Discussion with DPL, UDAA, Mano Village, Pongkham Village, and pond owners on details of the pond water purification experiment	<ul style="list-style-type: none"> • Discussion with stakeholders on the pond water purification experiment, particularly site selection and methodology for the experiment • Discussion on water quality monitoring • Discussion on workshops through which lessons from the experiment are shared

²⁸ JICA Report of the Detailed Planning Survey for the Project (2018)

²⁹ JICA Report of the Detailed Planning Survey for the Project (2018)

Date	Location	Activities and Concerned Parties	Discussion Topics
2019/4/18	Setagaya, Tokyo	Discussion with Techno Eco Co., Ltd. and JICA	<ul style="list-style-type: none"> • Report on the field survey and discussion • Opinion exchange on the methodology
2019/May ~July	Japan	Draft development of action plan and budget plan for the Pond Water Improvement and Monitoring Project	<ul style="list-style-type: none"> • Detailed development of procedure and cost estimate of the pond water purification experiment • Budget planning of activities other than the pond water purification experiment
2019/8/9 ~24	Luang Prabang, Laos	(3 rd field activity) Implementation of the preliminary pond water purification experiment with DPL, UDAA, Mano Village, Pongkham Village, and pond owners	<ul style="list-style-type: none"> • Arrangement of equipment and services for the preliminary experiment • Entrustment of equipment to UDAA • Implementation of the preliminary experiment and technical transfer to UDAA • Discussion with DPL and UDAA on the preliminary experiment and other activities • Presentation at Wetland Environment Working Group Meeting
2019/Sep. ~Oct.	Japan	Periodical implementation of the preliminary pond water purification experiment with DPL and UDAA and preparation for awareness raising activity	<ul style="list-style-type: none"> • Remote support for regular data collection in the preliminary experiment and summarizing of the data • Arrangement with a resource person on awareness raising among local communities
2019/11/24 ~12/4	Luang Prabang, Laos	(4 th field activity) Sharing results of the preliminary pond water purification experiment and discussion on the way forward with DPL, UDAA, Mano Village, Pongkham Village, and pond owners	<ul style="list-style-type: none"> • Explanation of results of the preliminary pond water purification experiment • Discussion at a workshop with local communities on their recognition of the ponds in Mano and Pongkham villages • Discussion with DPL and UDAA on pond water monitoring at the ponds and the drainage • Presentation at the Wetland Environment Working Group Meeting
2019/12 ~2020/1	Japan	Periodical implementation of pond water monitoring with DPL and UDAA and development of action plans	<ul style="list-style-type: none"> • Remote support for regular data collection in pond water monitoring • Development of reports and other documents • Suggestion of actions in the future

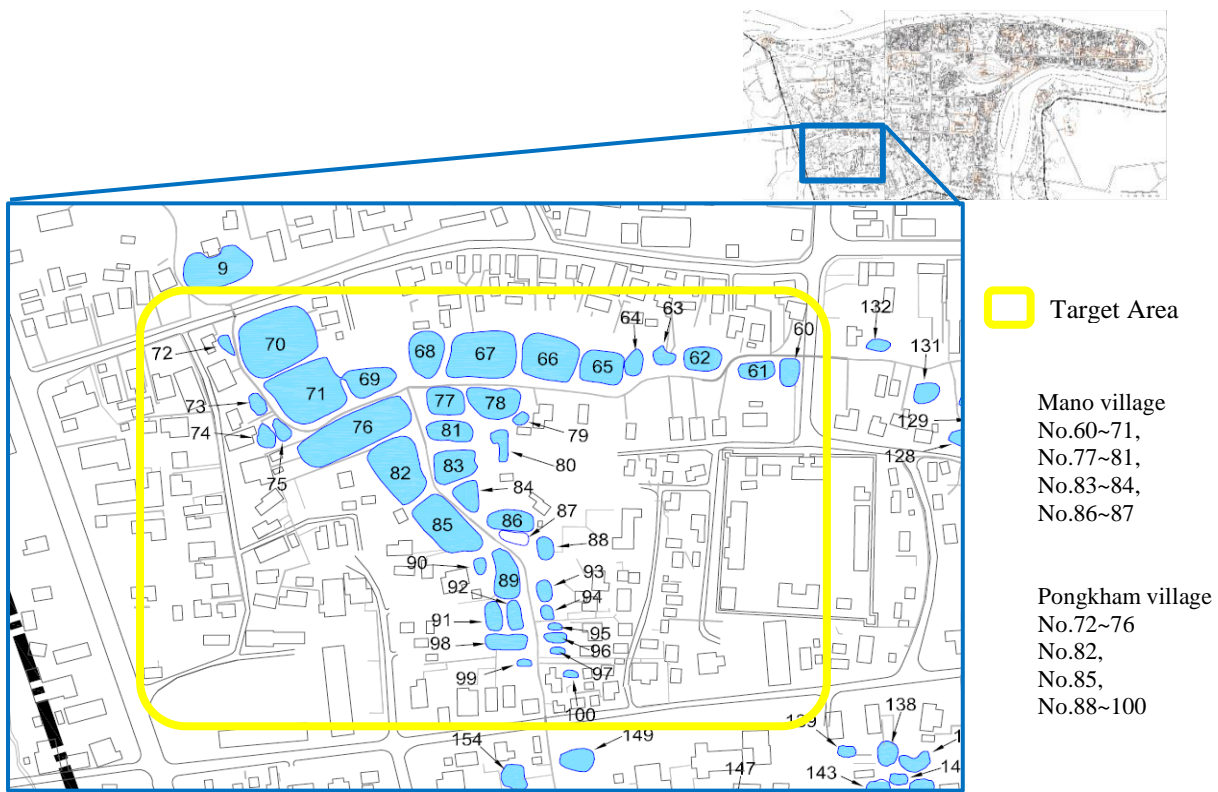
Source: JICA Consultant Team

Through these activities, current status of ponds in Mano and Pongkham Village has been surveyed and preliminary pond water purification experiment with Super-Sol was implemented. Besides, progress has been achieved through discussion, preparation, and implementation of water quality monitoring at ponds and drainage in the target area and awareness raising among local communities, in cooperation with DPL, UDAA, village leaders, and local communities.

This report illustrates the 3.5.1 Current Status of Ponds in the Target Area, 3.5.2 Preliminary Pond Water Purification Experiment with Super-Sol, 3.5.3 Pond Water Quality Monitoring, and 3.5.4 Awareness Raising among Local Communities.

3.5.1 Current Status of Ponds in the Target Area

During the 1st field activity between January 14 and February 1, 2019, a series of discussions with DPL and field visits with Mr. Anda, Division Head of Heritage Planning and Management, were undertaken to set a target area for the Pond Water Improvement and Monitoring Project. It was finally determined to cover the ponds from No. 60 to 100, where AFD drainage development project took place and DPL recommended as the target area (Figure 3.39). The area overlaps two villages, Mano and Pongkham villages.



Source: Prepared by JICA Consultant Team Based on Plans de Reperage (La Maison du Patrimoine, 2001)

Figure 3.39: Target Area for the Pond Project

A total of 21 ponds were surveyed from January 16 to 22, 2019, excluding ponds that no longer existed or inaccessible due to fences. Prior to the survey, a discussion was provided to the village leaders and permissions were obtained. The survey referred to Pond Inventory by AFD (2001) and the following parameters were measured:

- Size of ponds (simple measurement of length and width to calculate the area size)
- Water depth (measured at pond edge)
- Mud depth (measured at pond edge)
- Water temperature
- pH / COD (simple measurement by Pack Test)
- Odor (subjective and sensory judgment by researcher)
- Location of water inlet and outlet
- Water surface coverage of water hyacinth (visual measurement)

In addition, an interview survey was conducted regarding current pond owners, their usage of ponds, and objectives of their usage. When ponds were found to be unused for any specific purposes, the pond water purification experiment was explained, and the pond owners were asked if they would accept the experiment undertaken in their ponds.

Result summary of the pond survey is shown in Table 3.14.

Table 3.14: Results of Measurement Survey in 21 Ponds

No.	Surface area x depth (m ³)	Mud Thickness (cm)	pH	COD	Odor	Water Inlets	Water Outlets	Remarks
60	32.2	28	8.0	10	No	Rainwater	No.61	May dry up in dry season
61	30.0	12	7.5	10	No	No.60	Drainage	May dry up in dry season
62	82.5	30	9.0	13	Minor	Rainwater	Drainage	The owner is not around

No.	Surface area x depth (m ³)	Mud Thickness (cm)	pH	COD	Odor	Water Inlets	Water Outlets	Remarks
63	105.2	17	7.5	13	No	Rainwater	Drainage	The owner is not around
64	156.9	51	7.5	20	No	Households	Drainage	The owner is not around
65	122.8	40	7.5	20	Minor	Households	Drainage	The owner is not around
66	274.3	18	7.0	20	No	Households	Drainage	Clean, growing fish
67	—	22	7.5	50	Minor	Households	Drainage	The owner is not around, fence hindered the measurement
68	187.6	52	7.5	20	Minor	Households	Drainage	The owner is not around
70	—	—	7.5	30	Bad	Households	Drainage	No.70 and 71 are connected, too large and deep for measurement
71	—	—	7.5	30	Bad	Drainage	Drainage	
77	62.8	31	7.5	20	Minor	Rainwater	Drainage	The owner is not around
82	—	—	—	—	No	Households	Drainage	Divided half by net, growing fish and flowers, unable to measure
89	120.0	30	8.0	40	No	No.90 Households	Drainage	Big volume, unknown reason for high value in COD
90	60.6	16	7.0	5	No	Households	No.89	Growing fish hidden under water hyacinth
91	80.7	20	7.5	100	Bad	Households No.98	No.92	The owner is not around
92	65.0	19	7.5	20	No	No.91	Drainage	The owner is not around
93	37.6	37	7.5	30	No	Piped water	Drainage	Piped water inflows after washing vegetables
94	11.1	18	7.5	16	No	Rainwater	Drainage	The owner is not around
97	17.6	24	8.0	20	Minor	Households	Drainage	An aged woman lives alone
98	62.8	20	7.5	20	No	Households	No.91	The owner is not around
99	30.9	29	7.5	20	No	Rainwater	No outlet	Growing lotus flowers

Source: JICA Consultant Team

Remarks: Length of No.66 and 68 were unable to measure, and the length of the neighboring pond was used to calculate approximate area size.

Among 21 ponds which survey was possible, 11 ponds had no owners around, nine ponds were with their owners nearby, and one (No.70 and 71) was owned by Luang Prabang City. Thickness of mud ranged between 12 and 52 cm, largely variable among ponds. The pH was between 7.0 and 9.0 and pH of two ponds which have been keeping fish were 7.0 (neutral). This shows that these two ponds were well maintained. COD ranged between 5 and 100, largely variable among ponds. The odor was “No” in 13 ponds, while 2 ponds smelled “bad”. Water inlets were “rainwater” in six ponds, “households” in 12 ponds, and neighboring ponds in four ponds, that means 57% of ponds have water that were from “households”. Water outlets were “drainage” in 16 ponds and “neighboring ponds” in four ponds. Ponds with fish and plants were only three and two, respectively.

The results show that 52% of ponds were without their owners nearby and unable to maintain and among those with owners nearby merely five ponds (23.8%) were used to keep fish and grow plants. Such five ponds were well maintained, and their water quality were relatively good. It is suggested that encouraging pond owners to actively utilize ponds that would lead to the improvement of water quality. Interview survey discovered that some people used to keep fish in the past, but they gave up doing it after the fish were stolen. Active pond utilization would require good security by fencing out their ponds and other means.

3.5.2 Preliminary Pond Water Purification Experiment with Super-Sol

“Super-Sol” is a porous material made by recycled glass and the pond water purification experiment is planned to use Super-Sol. Preliminary discussions were conducted with the Japan side (Techno Eco Co., Ltd., Takayama City and JICA) and the Laos side (DPL) independently and opinions on requirement for the purification experiment with Super-Sol were expressed as shown in Table 3.15.

Table 3.15: Requirement for Purification Experiment with Super-Sol

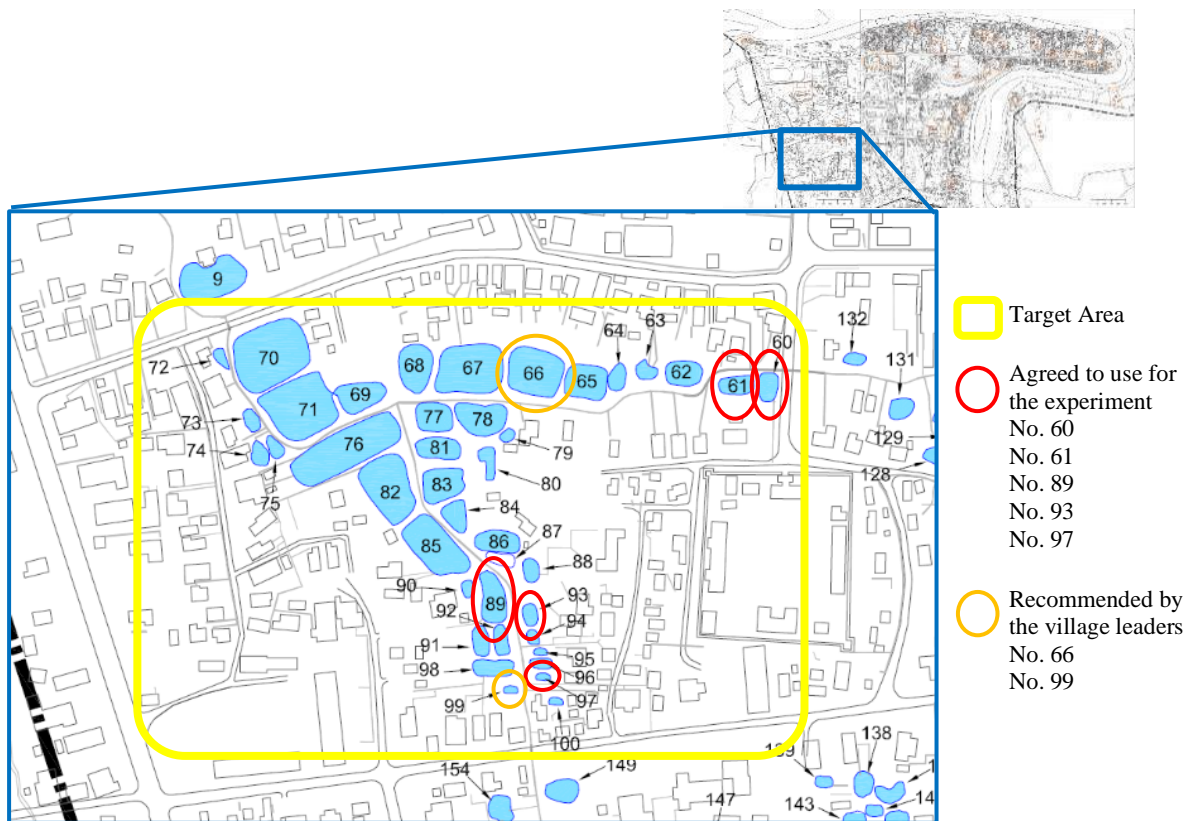
From the Japanese side	From Laos Side
· Compacted pond volume	· Need to be cleaned up before experiment

From the Japanese side	From Laos Side
<ul style="list-style-type: none"> • A certain water depth is secured in the dry season • Easy access to ponds • Not used for any specific purposes • Permission from the pond owner is granted • Not too dirty in water quality • Little inflow and outflow of water 	<ul style="list-style-type: none"> • Recommendation is given to the area where AFD project for drainage development was undertaken in 2018 and ponds were cleaned up alongside • Need to secure agreements of pond owners and village heads

Source: JICA Consultant Team

As discussed, through the survey of 21 ponds in Mano and Pongkham villages, interview survey was conducted to nine pond owners and five of them agreed to use their ponds for the experiment. The other four ponds were being used for certain purposes such as fish farming and flower growing.

After the survey, the results were shared with the two villages to discuss the site selection for the experiment. The villages recommended to add two more ponds (one each per village), which were being used for certain purposes, to the candidate sites. A total of the seven candidate ponds is shown in Figure 3.40.



Source: Revised by the JICA Consultant Team Based on Plans de Reperage (La Maison du Patrimoine, 2001)

Figure 3.40: Location of Candidate Ponds for the Experiment

The appearance of these seven candidate sites is as shown in the pictures below (Figure 3.41).



No. 60 (Same owner of pond No.61. High water transparency. It may dry up at the end of the dry season from April to June.)



No. 61 (Same owner of pond No.60. High water transparency. It may dry up at the end of the dry season from April to June.)



No. 89 (Same owner of pond No.90. Fish is kept in No. 90 while no farming in No.89. Large capacity)



No. 93 (Tap water for washing vegetables flows in. No inflow of household wastewater. It smells during the hot season from March to June.)



No. 97 (The owner, an elderly lady, was considering spraying pesticides, as she suffered from a large number of mosquitoes. The owner cleans up the surroundings of the pond but does not pay attention to pond maintenance.)



(Reference)

Drainage by
AFD

Road nearest to
No.97
(Wide enough to
park on the
street)



Source: JICA Consultant Team

Figure 3.41: Candidate Ponds for the Experiment

Progress was reported to UDAA, the implementing agency for pond management, and DPL at the end of the 1st field activity, where seven ponds were nominated as candidate sites. UDAA and DPL were informed that the seven candidate sites would be discussed with the Japanese side as well.

On February 27, 2019, the way forward was discussed with Techno Eco Co., Ltd. in Takayama City. Basic explanation was provided on both preliminary and main purification experiments with Super-Sol conducted in Takayama City from 2017 to 2018. Summary of discussion results are as follows:

- No. 97 is appropriate as a candidate site. Another site should be selected by the JICA Consultant Team.
- Following the case study in Takayama City, it is appropriate to conduct experiments in two steps in Laos, which are the preliminary experiment and main experiment.
- For both the preliminary and main experiments, careful consideration is required for implementation, such as local procurement of equipment and materials, designing monitoring frequency, and designation of monitoring officers.
- The dry season is expected to have little movement of water, which is suitable for the start of the main experiment. Some refinement and adjustment may be required and applied, based on a one-year long observation on changes in water level.

During the 2nd field activity from March 27 to April 4, 2019, a series of discussion took place with the two villages, UDAA and DPL to agree on the issues below:

- No.93 and No.97 are designated as experiment sites.
- The experiment is conducted in three steps, i.e. preliminary experiment with aquariums, main experiment in the actual ponds and the 2nd main experiment after adopting countermeasures to household wastewater.
- Continuous water quality monitoring should be implemented in all the ponds and the drainage in the target area.
- Countermeasures to the household wastewater, which is a source of the dirty water in the ponds, should be adopted along the other activities.
- Workshops should be implemented to share with and extend to the other local communities regarding lessons learned from the experiment.

On April 18, 2019, discussions took place at Techno Eco Co., Ltd in Setagaya, Tokyo. Results of the discussion with Lao side during the 2nd field activity were explained, based on which detailed methodology of the experiment and the way forward were further developed.

As abovementioned, information and opinions have been carefully shared and exchanged with both Japanese and Lao sides continuously since the 1st field activity, to prepare for the preliminary experiment in August 2019.

During the 3rd field activity from August 9 to 24, 2019, varieties of the activities have been implemented, including arrangement and procurement of equipment and detailed water quality analysis service for the preliminary experiment, implementation of the preliminary experiment and technology transfer to UDAA and DPL, and explanations and discussions at the Wetland Environment Working Group meeting.

The Wetland Environment Working Group is a mechanism for stakeholder organizations on wetland environment in Luang Prabang City to meet and discuss issues at appropriate timings, to share progress of activities in the Pond Water Improvement and Monitoring Project, and to coordinate for effective and efficient cooperation among them. Such stakeholders include; DPL, DoICT, DPWT, Dept. of Natural Resources and Environment, UDAA, Dept. of Health, Mano Village and Pongkham Village.

The 1st Working Groups were organized on August 19, 2019, and the short-term expert from Techno Eco Co., Ltd. explained both the preliminary and main experiments. Members of the Working Group expressed their great expectation for the improvement of water quality in ponds. The 2nd Working Group will be held to share the result of the preliminary experiment and to discuss the way forward.

Equipment for the preliminary experiment was procured as shown in Table 3.16, which have been entrusted to UDAA for their use.

Table 3.16: Equipment Entrusted to UDAA for the Preliminary Experiment

No.	Item	Manufacturer/Model	Quantity	Procurer
1	pH Meter with Thermometer	Hanna Instruments / pHep H198107	1	The Project
2	Transparency Meter	Tokyo Garasu Kikai (TGK)	1	Techno Eco Co., Ltd
3	Aquarium	Order-made	8	The Project
4	Water Container	25 Liter	8	The Project
5	Thermometer	-30°C ~ 50°C	8	The Project
6	Electronic Scale	Puliheng / SF-400	1	The Project
7	Waterproof Digital Camera	FujiFilm / Finepix XP130	1	The Project

Source: JICA Consultant Team

On August 20, 2019, the preliminary experiment commenced by sampling water from ponds No. 93 and No. 97.

In the preliminary experiment, four aquariums per pond were filled with sampled pond water, and 0%, 0.5%, 1.0%, and 2.0% of Super-Sol to the water volume were added, respectively. Changes in water quality have been monitored by measuring pH, transparency, and water temperature every week. The objectives of the preliminary experiment were; to examine the effect of Super-Sol in improving water quality, to provide technical transfer to the officers of UDAA and DPL on measurement of pH, transparency, and water temperature, and to exercise for water quality monitoring at all ponds for smooth operation. Manuals such as “Plan for Preliminary Water Purification Pilot Project with Super-Sol” and “How to Record Data in the Preliminary Water Purification Pilot Project with Super-Sol” were developed, wherein UDAA and DPL officers-in-charge were trained.

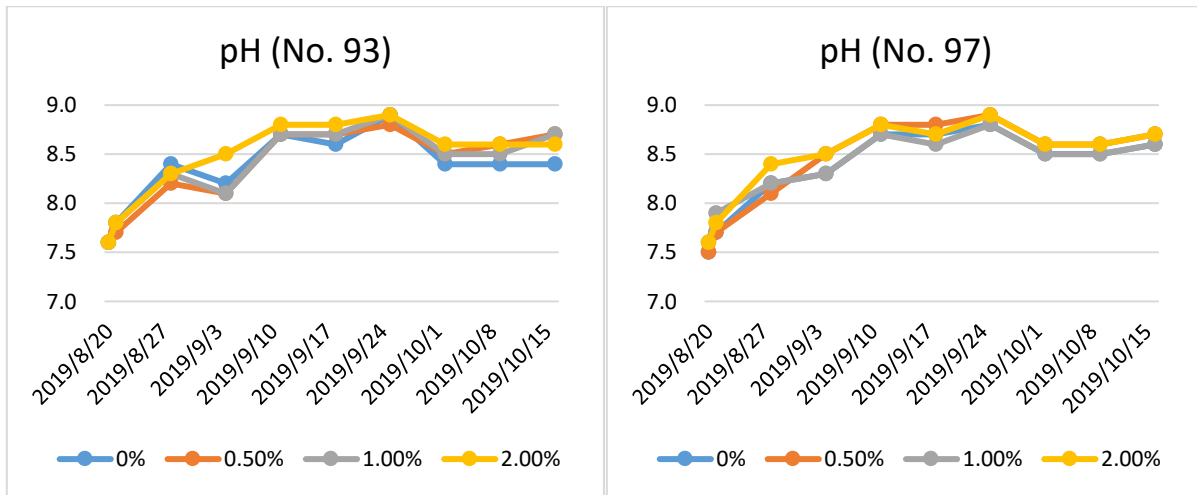
On August 21, 2019, water from pond No. 93 and No. 97 were sampled and sent for detailed analysis by a specialized agency for water quality analysis. Analysis parameters include; pH, BOD³⁰, COD³¹,

³⁰ BOD (Biochemical Oxygen Demand) is often used as a surrogate of the degree of organic pollution of water.

³¹ COD (Chemical Oxygen Demand) is used to quantify the amount of oxidizable pollutants found in surface water.

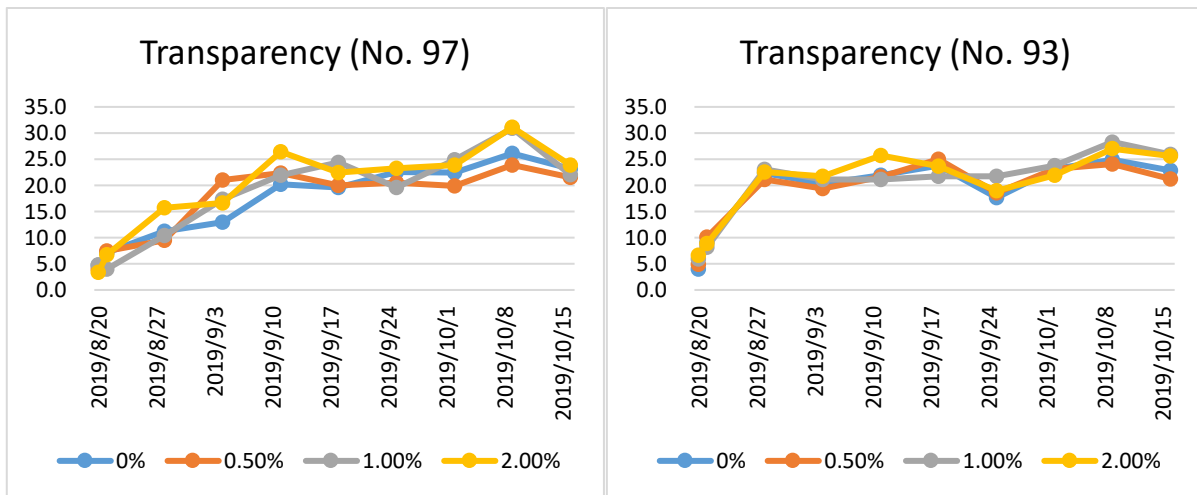
DO³², SS³³, E. coli., total bacteria, and total nitrogen³⁴. Water samples in each aquarium will be sent to the same specialized agency to measure the same parameters at the end of the preliminary experiment, which will enable to compare the water quality at the beginning and end of the preliminary experiment and to examine the effect of Super-Sol.

On October 16, 2019, the preliminary experiment ended and monitoring results by UDAA and DPL are seen in Figure 3.42, Figure 3.43, and Figure 3.44.



Source: JICA Consultant Team

Figure 3.42: Monitoring Results of the Preliminary Experiment with Super-Sol (pH)



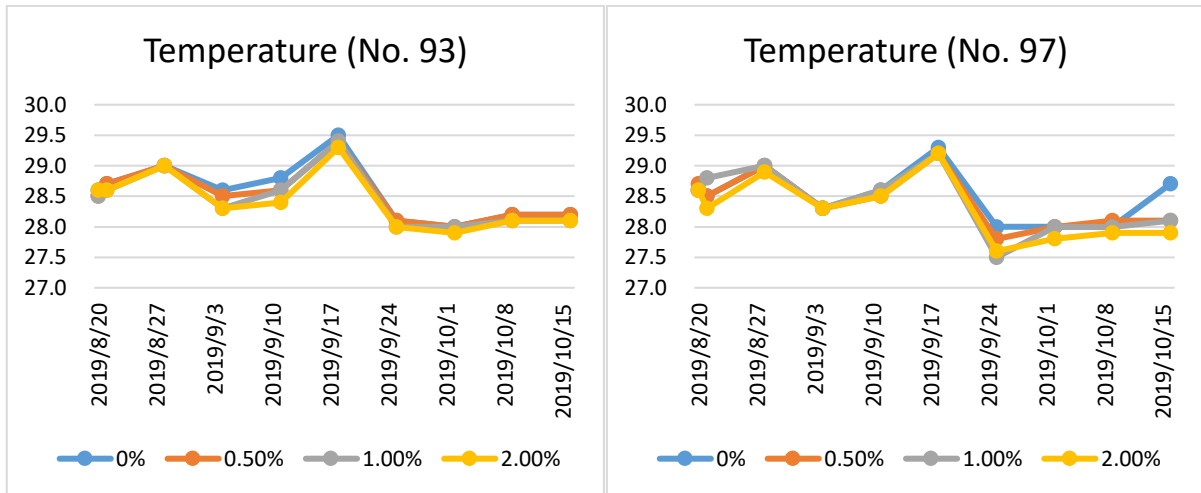
Source: JICA Consultant Team

Figure 3.43: Monitoring Results of the Preliminary Experiment with Super-Sol (Transparency)

³² DO (Dissolved Oxygen) is a relative measure of the amount of oxygen (O₂) dissolved in water available to sustain life, including living bacteria. DO will decrease when there is an increase in nutrients and organic materials from industrial wastewater, sewage discharges, and runoff from the land. If more oxygen is consumed than is produced, DO levels decline and some sensitive animals may move away, weaken, or die.

³³ SS (Settleable Solids) are the particulates that settle out of a still fluid. SS can be used to predict whether aggregation and settling will occur over time.

³⁴ Total Nitrogen (TN) is an essential nutrient for plants and animals. However, an excess amount of nitrogen in a waterway may lead to low levels of dissolved oxygen and negatively alter various plant life and organisms.

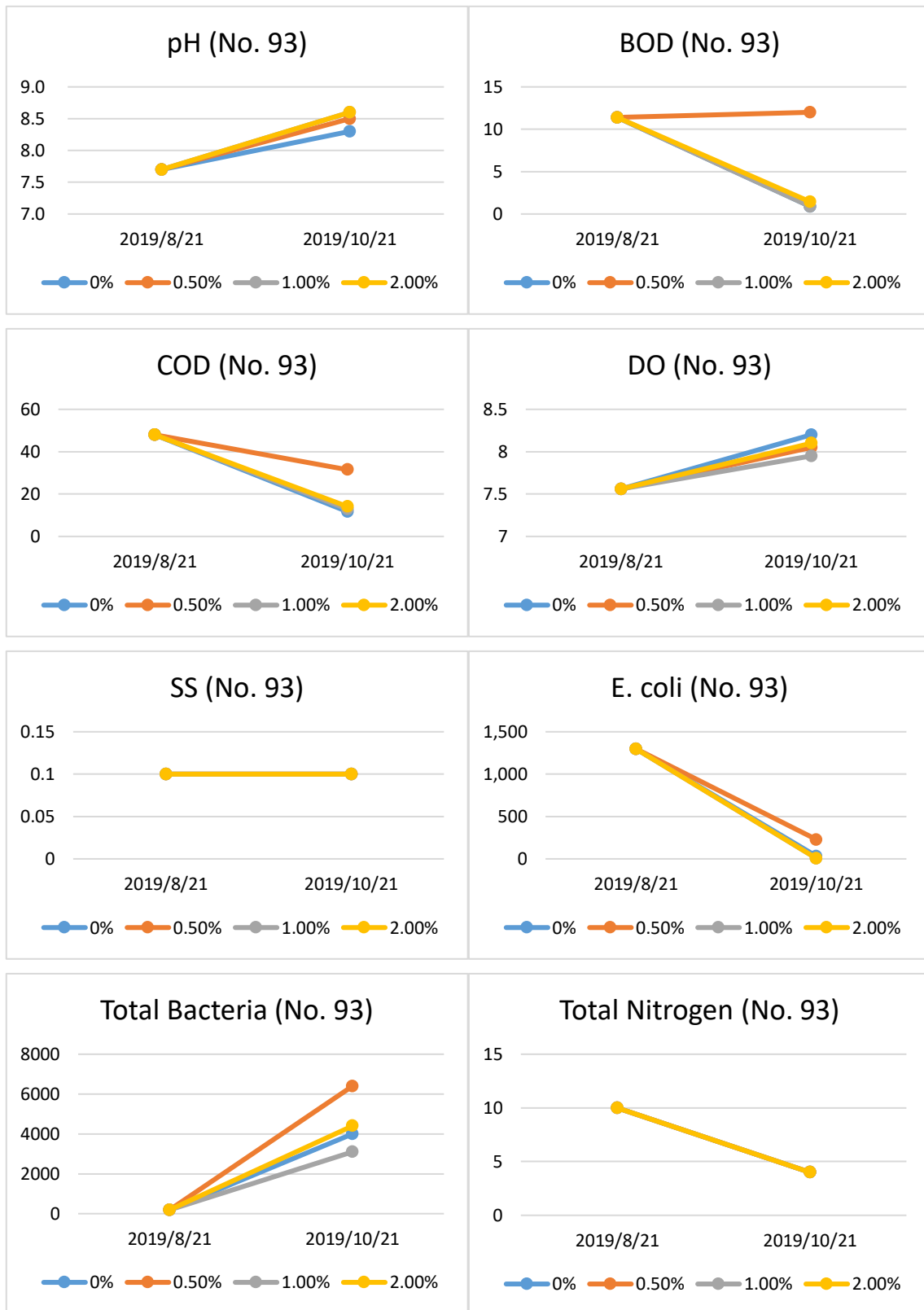


Source: JICA Consultant Team

Figure 3.44: Monitoring Results of the Preliminary Experiment with Super-Sol (Temperature)

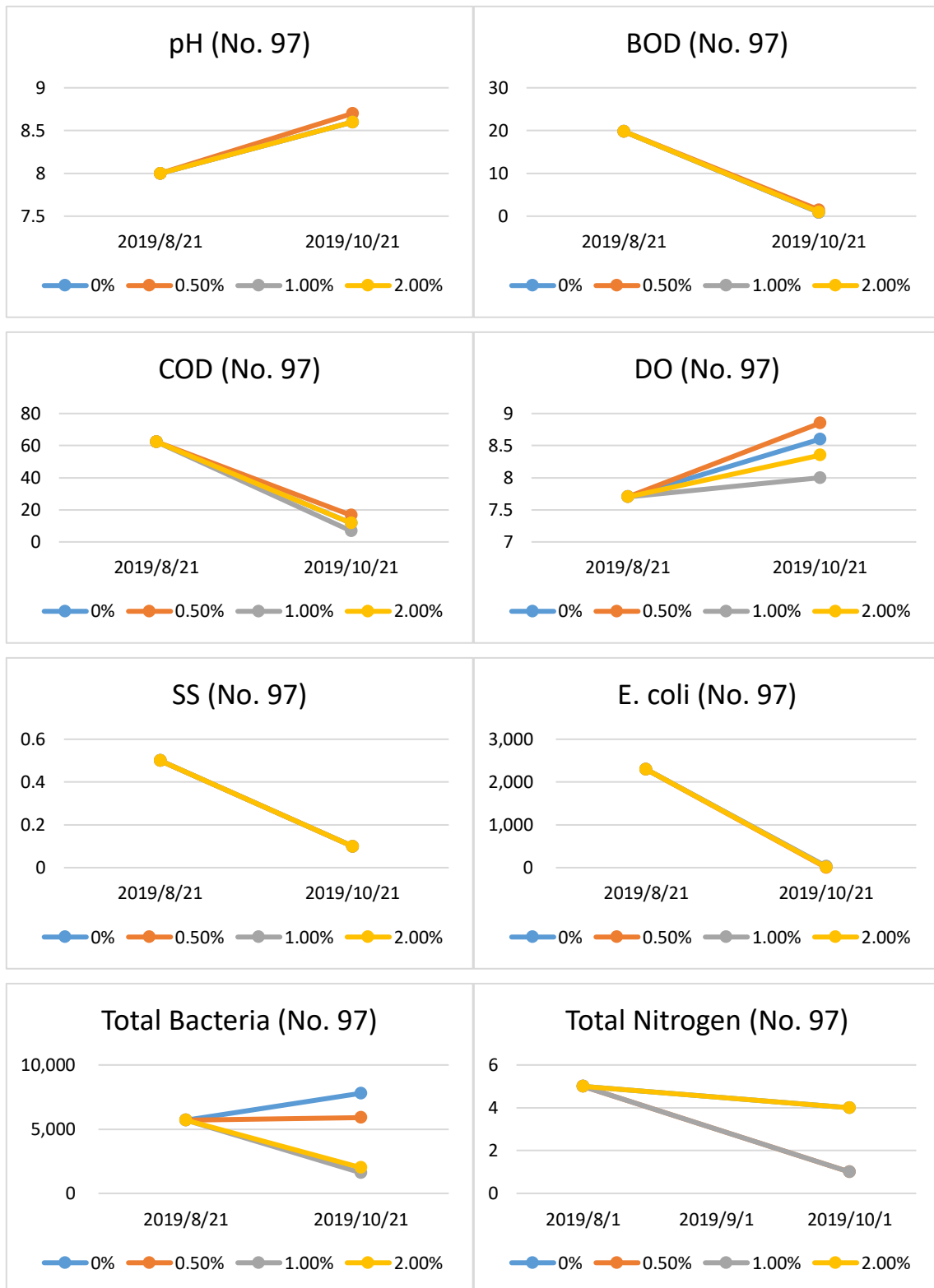
These results indicate that changing patterns and differences in all parameters look not significant among the samples, regardless with or without Super-Sol, or less or more of Super-Sol. The number of samples is merely two and statistical test is not applicable, however it shows that there is no clear difference among the samples. Therefore, the monitoring results of three parameters in the preliminary experiment suggest that the effect of Super-Sol is not confirmed to improve water quality.

Results of the detailed analysis of water quality before and after the preliminary experiment are shown in Figure 3.45 and Figure 3.46.



Source: JICA Consultant Team

Figure 3.45: Detailed Water Analysis Results Before and After the Preliminary Experiment with Super-Sol (No. 93)



Source: JICA Consultant Team

Figure 3.46: Detailed Water Analysis Results Before and After the Preliminary Experiment with Super-Sol (No. 97)

These results indicate that changing patterns in some parameters look insignificantly different among the samples, regardless with or without Super-Sol, or less or more of Super-Sol, and in other parameters

show irrelevantly different results. Therefore, the detailed analysis results of eight parameters before and after the preliminary experiment also suggest that the effect of Super-Sol is not confirmed to improve water quality.

These two results show that the effect of Super-Sol is not confirmed with the pond water in the target area. The short-term expert from Techno Eco Co., Ltd., who observed the target area in August 2019, pointed out that the pond water quality was much worse than expected and may be beyond the water quality improvement capacity of Super-Sol. This could be a reason of failure for Super-Sol to work.

The short-term expert also commented that water quality improvement by Super-Sol cannot come into effect under the condition of continuous wastewater influx into ponds and mud accumulation at the bottom of ponds. Countermeasures towards household wastewater influx and removal of mud are necessary before implementation of the main experiment which is putting Super-Sol into the ponds. In addition, the preliminary experiment results failed to confirm the water quality improvement effect of Super-Sol. It suggests that it is difficult to implement the main experiment during the Project period.

At the 2nd Working Group Meeting, results of the preliminary experiment and the detailed water quality analysis were shared with the relevant organizations. Based on that, the participants discussed the way forward, including the need of countermeasures towards household wastewater influx and removal of mud, importance of baseline data collection to understand the current status of water quality through monitoring at all ponds in the target area, and implementation of awareness raising among local communities.

3.5.3 Pond Water Quality Monitoring

Discussions with UDAA and at the Working Group Meetings clarified the importance of understanding the current status of the ponds. The preliminary experiment provided officers of UDAA and DPL with opportunities to learn simple skills of water quality monitoring. With these, it was concluded that the need of pond water quality monitoring was understood, and human resource development has achieved progress to some extent. Appropriate methodology was explored with UDAA and DPL through fieldwork and fixed points for detailed water quality analysis every three months were temporarily identified. Details of the methodology and the fixed points are explained in Section 3.6.2(4)6)iii) Water Quality Monitoring” (p. 123).

UDAA and DPL, with the Project national staff, implemented pond water quality monitoring at all ponds and drainage in the target area in December 2019. This monitoring will take place every month. Detailed water quality analysis for every three months requires cost and arrangement with a water quality analysis organization in Vientiane to obtain sample bottles. Therefore, the Project needs to support UDAA and DPL for such arrangements.

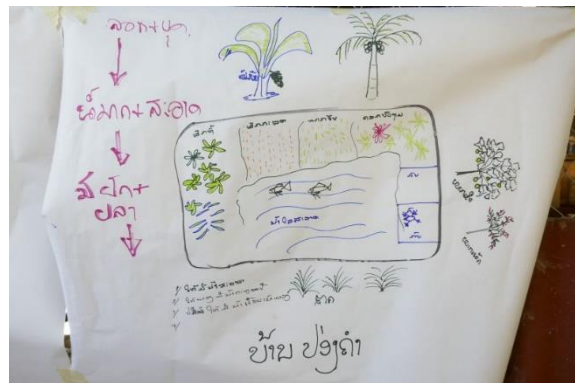
3.5.4 Awareness Raising among Local Communities

Ponds and drainage are closely linked to the local livelihood and water quality improvement requires cooperation with local communities. Some ponds are well managed, in which pond owners take care of fish and vegetables; while other ponds are poorly managed and left unattended by the pond owners of which are either unknown or a non-resident in the vicinity. To explore possibilities of community-based pond water improvement, a workshop was organized to discuss the future of the ponds with local communities of Mano and Pongkham villages, wherein village leaders are included. A Thai consultant for participatory nature conservation, was invited to Luang Prabang from November 25 to 29, 2019, to organize a workshop as an initial step for awareness raising among local communities. The workshop was conducted on November 27, 2019 at a residence in Mano Village. The number of participants was six each from Mano and Pongkham villages (including respective village leaders), one from DPL, and two from UDAA. Summary of the discussion is shown in Table 3.17.

Table 3.17: Summary of Discussion in the Awareness Raising Workshop with Local Communities

Session		Discussion
History and current status of ponds in Mano and Pongkham villages		<ul style="list-style-type: none"> Water was clean and clear 50 years ago Using ponds to grow water vegetable (e.g., morning glory, water spinach), fish, and snails for food Drainage was renovated in 2017 Local people recognized that drainage renovation caused mud accumulation and less and dirty water New pond owners are less interested in pond management Local people see current status of the ponds as shallow and muddy ponds, little and dirty water, and less or no fish
Objective setting in next 2 years		<ul style="list-style-type: none"> Clean and clear water, increased volume, healthy ponds, more fishes and other foods (snails and frogs), gardening around ponds, and livelihood sufficient in food and income
Stakeholders mapping and analysis		<ul style="list-style-type: none"> Key stakeholders: pond owners, DPL, UDAA, community leaders Others: donors/supporters, Agriculture Dept., Natural Resource Dept., Health Dept.
Direction of problem solving, challenges, and potentials	Direction of problem solving	<ul style="list-style-type: none"> Cleaning up (machine/manpower) Mud removal Detailed discussion on cost sharing Involvement of more pond owners Support for the poor
	Challenges	<ul style="list-style-type: none"> Lack of or outdated information on laws and regulations Shortage of communication among pond owners, and between pond owners and pond managers (government) Shortage of experience in discussion and brainstorming Lack of facilitation for participatory discussion Lack of detailed action plan
	Potentials	<ul style="list-style-type: none"> Local wisdom to improve ponds Willingness to participate in pond improvement

Source: JICA Consultant Team



Source: JICA Consultant Team

Figure 3.47: Workshop with Local Communities (left) and Objective Setting in next Two Years (right)

Based on this, the Thai consultant for participatory nature conservation suggested recommendations as stated below.

- In need to support with each other between government and donors
- In need to have clear planning and role sharing of government and donors
- In need to have a practical action plan, including objectives, outputs, process, methods, schedule, roles, and actors
- In need to establish effective collaboration among participating organizations in the Working Group
- In need to develop effective communication among the working group, villagers, and others
- In need to have good facilitators
- In need a participatory approach in the process of pond water improvement
- In need of capacity building in the working group and local communities

This summary of discussion and an image of awareness raising activity were shared among the members in the 2nd Working Group Meeting and importance of community participation was discussed.

3.6 Plan Proposals for Preservation and Management Activities

3.6.1 Japanese and International References for Preservation and Management

As for the Japanese and international references for heritage areas, the succeeding sections describe the summary of Charter for the Conservation of Historic Towns and Urban Areas, Historic Villages of Shirakawa-go and Gokayama, and Takayama City, that is conducting the Project. Historic villages of Shirakawa-go and Gokayama, and Takayama City are both places that the counterpart organizations have already visited as part of training in Japan, and also the ideal references in view of the implementation of the preservation and management. Other references for individual preservation and management activities are mentioned afterwards in the report.

(1) Charter for the Conservation of Historic Towns and Urban Areas (Washington Charter)

The Charter for the Conservation of Historic Towns and Urban Areas was adopted in 1987 by the International Council on Monuments and Sites (hereinafter referred to as “ICOMOS”), and it defines principles, objectives and instruments for the conservation of historic towns and urban areas. In article 3, it mentions that the participation and the involvement of the residents are essential for the success of the conservation program and should be encouraged. Also, in Article 15, it mentions that in order to encourage their participation and involvement, a general information program should be set up for all residents, beginning with children of school age. Thus, it can be said that in this charter, participation and involvement of residents is regarded as important in the World Heritage conservation, and especially in the preservation of historic towns.

(2) Historic Villages of Shirakawa-go and Gokayama

Historic villages of Shirakawa-go and Gokayama consists of three villages (Hagimachi Village in Gifu Prefecture, Aikura Village in Toyama Prefecture, and Suganuma Village in Toyama Prefecture). The three villages, with the houses of Gassho style, a rational architecture style adopting to the heavy snow, remaining through the rapid growth of the Japanese economy in the 20th century was regarded to be demonstrating the culture of the people living in the mountainous areas and was registered as the World Cultural Heritage in 1995.

In the era of rapid economic growth in Japan, which is before the registration, this area was targeted by land speculators, and many Gassho style houses were demolished. During this situation, villagers of Hagimachi Village started campaigns of Gassho style housing conservation, and established “Party for the Conservation of the Natural Environment of Shirakawa-go Hagimachi Village”, with the three principles of “don’t sell”, “don’t lend” and “don’t demolish” the Gassho style houses in 1971. It is said that this party started to appeal to the public sector for support of the preservation of the village which lead to the designation of Important Preservation Districts for Groups of Historic Buildings and the registration of the World Cultural Heritage.

This area, with faith in Jodo-Shinshu since the 13th century still maintains, where this faith is said to be the foundation of the strong spiritual bondage of the local society. Each village has a mutual assistance unit that remains since the Edo era, called “kumi”, and there is a tradition that this “kumi” functions as the unit for ceremonies and the renewal of the thatch roof of the Gassho style houses. Nowadays, this “kumi” still functions as the unit for mowing and snow shoveling on roads and fire prevention activities³⁵.

³⁵ Pamphlet of Historic Villages of Shirakawa-go and Gokayama



Source: Shirakawa Village

Figure 3.48: Location of Shirakawa Village



Source: JICA Consultant Team

Figure 3.49: Hagimachi Village

(3) Takayama City

The central area of Takayama City prospered as merchant street in the Edo era, and Sannomachi area and Shimoninomachi Oshinmachi area, with many traditional townhouses preserved, is designated as Preservation Districts for Groups of Historic Buildings.

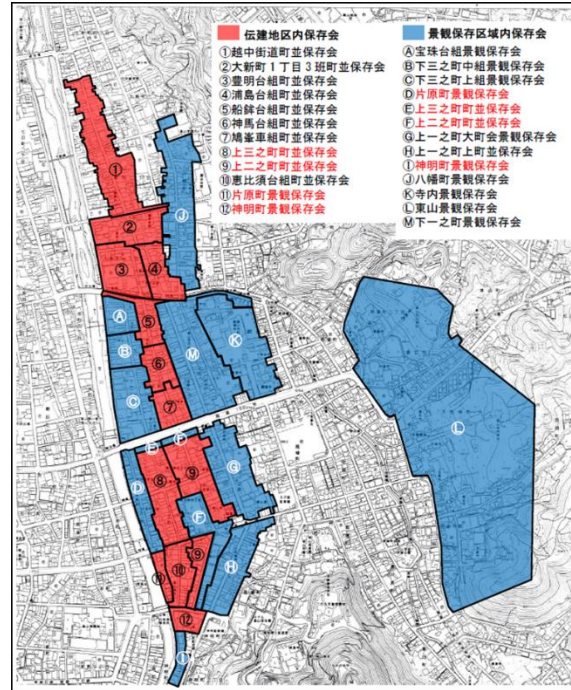
In Takayama City, campaigns started in the 1960s to oppose the environmental damage in the Miyagawa River, that flows in the city. The campaign developed into townscape preservation campaigns, wherein, there are currently 21 townscape preservation parties, including the Kamisannomachi Townscape Preservation Party, that was established in 1966. The townscape preservation parties conduct preservation and management activities in the historic towns, such as festivals to pray for the prevention of fire and snow shoveling in the winter. Also, Takayama City Townscape Preservation Party's Association is an umbrella organization of the 21 townscape preservation parties, which collaborates with the Takayama City Office to conduct PR activities and hand down the tradition to local children.

Also, in Takayama City, a festival called "Sanno-sai" is held in spring and a festival called "Yahata-sai" is held in autumn, and both festivals are generically called "Takayama-sai (Takayama Festival)". This Takayama Festival is counted as one of the three most beautiful festivals of Japan and was registered as the Intangible Cultural Heritage by UNESCO. A total of 23 floats are used in the Takayama-sai and these floats are maintained by the local community, called "Yatai-gumi". Takayama-sai does not only invite many tourists, but also the Yatai-gumi is the foundation of the townscape preservation parties and functions as the fundamental community unit for the preservation and management of the townscape of Takayama City.



Source: Takayama City

Figure 3.50: Location of Takayama City



Source: Takayama City

Figure 3.51: Location of the 21 Townscape Preservation Party

3.6.2 Proposal of the Activity Plans

(1) General Idea

1) Problem Recognition

The activity plans were considered with the problem recognition of the following;

- Activity objectives and fields (“why”): Many organizations relate to preservation and management activities. For the organizations to sustainably cooperate with each other, clarification of the activity objectives and fields are necessary.
- Implementation system with local organizations (“who”): In preservation and management activities, not only the participation of the public sector, but also of the local community is important, and hence the structure of the implementation body needs to be considered with care.
- Roles of relevant organizations (“what” and “where”): Preservation and management of the World Heritage Area are relevant to many organizations including DPL and DoICT. Therefore, specification of relevant organizations and jurisdiction in each activity field is necessary.

2) Basic Approach in Planning Activities

For the organization of the body to sustain the preservation and management in the World Heritage Area, the proposals were made with five approaches; i) Information Networking, ii) Townscape Preservation and Management, iii) Cultural Inheritance, iv) Public Facility Management, and v) Historic Architecture Preservation.

i) Information Networking

Responsible organizations of the preservation and management activities widely vary according to the type of activity. On the other hand, for the preservation and management activities to be effective and comprehensive, the various organizations are required to cooperate with each other. For this, the

establishment of a platform for various organizations to exchange information about preservation and management activities is effective.

ii) Townscape Preservation and Management

Whilst activities to preserve and restore buildings and infrastructure are necessary, for the town to be vitalized, beautification of the town and enhancement of the value of the World Heritage Area are important. For the cleaning activities to be sustainable, the activity needs to involve all relevant people, including the private sector, local residents, and tourism-related workers. Also, to inherit the cultural townscape of wooden architecture to future generations, and to secure the everyday lives of the people living in the area. In addition, fire prevention is also an important aspect.

iii) Cultural Inheritance

The traditional culture of the World Heritage Area has been inherited until today with the religious relationship between the monks (temples) and the Buddhists (local residents), represented by the fact that monks live for their religious belief in the temples, which is the historic and cultural asset for the area, and the residents participate in the morning alms' giving. However, in one aspect, the building restrictions of the PSMV are heavy burden for the Buddhist residents and hence, some residents that religiously contributed to the area are reported to release their asset inside the World Heritage Area and moving outside the area. This outflow of Buddhist residents is leading to the collapse of the existing local community and the World Heritage Area hollowing out and the sustainability of the temples is under threat. On the other hand, traditional festivals that historically root in the area still exists and regional revitalization with these festivals shall be effective. Considering the above reality, plans that cover not only townscape preservation as a hard component, but also soft components to sustain the religious activities inside the World Heritage Area and inherit them to future generations are necessary.

iv) Public Facility Management

The townscape of the World Heritage Area is not only consisted by the historic architectures, but also other components such as buildings, streets, open spaces, rivers, trees, and various infrastructure. These components of the townscape of the World Heritage Area are under restrictions on PSMV and especially the management of public facilities that is accessible to the public need to be prioritized. The management of public facilities needs to be revised under the concept of sustainability and the activities to form and preserve the ideal townscape are necessary.

v) Historic Architecture Preservation

The main target of this aspect will be the "buildings to be preserved and restored" in the inventory made with support of AFD. Some of the historic buildings are used as administrative offices, but many of the buildings are privately owned. The maintenance cost of the buildings is basically covered by the individual owners and because of this financial burden, the damage of the historic buildings is becoming apparent. Currently, financial support to the restoration of historic architecture is only applicable to those listed by AFD or those that will be converted to tourism related facilities that can expect income. Thus, along with financial support by the public sector, there is a need of a financial scheme for crowdfunding or other sources.

(2) Proposals of Organization Structure

For the organization structure of the preservation and management of the World Heritage Area, roles and participation conditions of the administrative body (provincial and district offices), the village community, and the private sector need to be clarified according to the five approaches of information networking, townscape preservation and management, cultural inheritance, public facility management, and historic architecture preservation. According to the surveys, the current condition of the roles of each organization is shown in Table 3.18.

Table 3.18: Current Roles and Responsibilities of the Organizations in Preservation and Management

Sector	Main Organizations	Roles and Responsibilities
Province City District	DoICT	• Policy making, facility management, and human resource development of tourism
	DPL	• Issuing development permission and building permission and infrastructure development inside the World Heritage Area • Pond environment improvement
	DPWT	• Issuing development permission and building permission and infrastructure development outside the World Heritage Area
Village Community	Villages, residents, temples, and tourism-related business operators	• Cleaning • Landscape management of public spaces (partially)

Source: JICA Consultant Team

Currently, villages are individually conducting activities and cooperation of multiple villages are rarely seen.

Under such circumstances, activities and organization structure of preservation and management of the World Heritage Area are proposed as in Table 3.19. Plan proposals and manual proposals for each approach are described later in the report.

Table 3.19: Proposal of Organization Structure of Preservation and Management Activities

Approach	Activity	Implementation Players
Information networking	Information exchange network formulation of province, city, and village	• (Main) DPL • (Sub) DoICT, UDAA, city, village
Townscape preservation and management	World Heritage Area Clean Day	• (Main) village • (Sub) UDAA, DoICT, DPL, Luang Prabang City, hotel/restaurant association, schools
	Compost Waste Utilization	• (Main) hotels, guesthouses, restaurants • (Sub) UDAA, village, schools
	Garbage Separation and Convert-to-money System (Plastic Bottle)	• (Main) UDAA • (Sub) village, schools
	Community-based Fire Drill	• (Main) fire station • (Sub) village, police, business operators
Cultural inheritance	Boat Race Festival Promotion	• (Main) village • (Sub) DoICT, DPL, schools
	Guidance for Morning Alms Giving	• (Main) DPL • (Sub) DoICT, Luang Prabang City, temple, village
	Cultural Exchange Activity between Luang Prabang and Takayama	• (Main) DoICT, Takayama City • (Sub) Schools (Luang Prabang, Takayama City), DPL, village
Public facility management	Public Toilet Management Improvement	• (Main) DPL • (Sub) UDAA
	Public Garden Improvement	• (Main) DPL, UDAA
	Phousi Viewpoint Improvement and Technical Funding	• (Main) DPL
Historic architecture preservation	Heritage Building Rehabilitation	• (Main) DPL
	Crowdfunding	• (Sub) Building owner

Source: JICA Consultant Team

(3) Phasing of Activities

As for the information networking, townscape preservation and management, and cultural inheritance, which were recognized as prioritized activities with discussion with counterpart organizations, the schedules of each activity in the Project period (2020-2021) are supposed as in Table 3.20, although continuous discussion on implementation of each activity is necessary.

Table 3.20: Activity Schedule Proposal of the Project

Approach	Activity	2020			2021		
Information networking	Information exchange network formulation of province, city, and village	■	■	■	■	■	■
Townscape preservation and management	World Heritage Area Clean Day	■	■	■	■	■	■
	Compost Waste Utilization						
	Garbage Separation and Convert-to-Money System (Plastic Bottle)				■	■	■
	Community-based Fire Drill			■		■	■
Cultural inheritance	Boat Race Festival Promotion						
	Guidance for Morning Alms Giving	■	■				
	Cultural Exchange Activity between Luang Prabang and Takayama City			■	■	■	■

Black: First Events

Gray: Activities conducted

Source: JICA Consultant Team

(4) Proposals of Activity Plans and Activity Manuals

According to the analysis of the current situation and the general idea shown before, the activity plans for the preservation and management of the World Heritage Area are proposed below. The activity plans and activity manuals are ordered according to the five approaches.

1) Information Networking

Currently, for the preservation and management of the World Heritage Area, DoICT, DPL, DPWT, and villages are conducting activities individually. However, there is no platform for information sharing about the individual preservation and management activities done by each village, nor any platform for villages to collaborate with the province or the city. Hence, it is currently in collaboration with multiple administrative bodies in the preservation and management of the activities is difficult. On the other hand, in Takayama City, where training in the Project was taken place, the Takayama City Townscape Preservation Party's Association functions as a platform for the 21 Townscape Preservation Parties to collaborate and share information, and also to collaborate with the city office. This structure in Takayama City is what can be expected to be learnt and adopted in Luang Prabang World Heritage Area. Based on this understanding, activity plans for the information networking are proposed as follows:

Information Networking

"Information exchange network formulation of province, city, and village"

< Implementing Organization >

Implementing Organization (Main): DPL

Implementing Organization (Sub): DoICT, UDAA, city, village

< Objectives and expected influences >

This activity aims to form a platform for each organization to share information on the preservation and management activities that they will be conducting. By doing so, sharing the knowledge on issues and solutions on preservation and management will be possible. Also, preservation and management activities will be able to be performed by multiple sectors, enhancing the efficiency and sustainability of preservation and management practices.

< Proposed Activity plan >

- Hold meetings and create opportunities for the province, city, and villages to share ongoing preservation and management activities in the World Heritage Area.
- This platform will also be an opportunity for JICA to introduce the activities of the Project and gain understanding and cooperation

- The first meeting will be held as described later and meetings with the same objective shall be held around twice per year.

< Proposed Activity manual >

The proposal of the activity manual for Information exchange network formulation of province, city, and village is shown in the following.

- Venue
 - Luang Prabang City Office
- Participants
 - DPL
 - DoICT
 - UDAA
 - Luang Prabang City Administration Office
 - Luang Prabang City Office of information culture and tourism
 - Luang Prabang City Fire Station
 - Village heads of villages inside ZPP-Ua (16)
 - Village heads of villages with target ponds of pond water purification experiment (2)
 - JICA headquarters
 - JICA long-term expert
 - JICA Consultant Team
 - Takayama City Office
 - Takayama City Townscape Preservation Party
- Activity Agenda

Table 3.21: Proposed Activity Agenda for Information Exchange Network Formulation of Province, City, and Village

Time	Contents	Main Participants
1:30 p.m. - 1:40 p.m. (10 minutes)	Introduction of the objectives of the meeting	• JICA long-term expert
1:40 p.m. - 2:00 p.m. (20 minutes)	Brief explanation of the JICA project (Management plans)	• JICA long-term expert
2:00 p.m. - 2:30 p.m. (30 minutes)	Introduction of activities in Takayama (Focusing on community-based activities)	• Takayama City Office • Takayama City Townscape Preservation Party
2:30 p.m. - 3:30 p.m. (20 minutes)	Group discussion on future preservation and management activities	• All participants
3:30 p.m. - 4:00 p.m. (60 minutes)	Presentation of group discussions	• All participants

Source: JICA Consultant Team

- Necessary items and services and activity cost (proposal)

Table 3.22: Proposed Necessary Items and Services and Activity Cost for Information Exchange Network Formulation of Province, City, and Village

Items/Services	Unit Price (USD)	Quantity	Unit	Total Amount	Remarks
Paper	0.07	10	Piece	0.7	A1 size
Sticky notes	0.5	9	Set	4.5	3 colors * 3 sets
Pen	0.1	50	Piece	5	2 colors * 25 pieces
Meeting room	25	1	Set	25	
Drinking water	15	1	Set	15	
Invitation letter	19	1	Set	19	Printing and delivery

Source: JICA Consultant Team

< First Activity >

First Information Exchange Meeting of Province, City, and Village

< Outline >

The outline of the first information exchange meeting of province, city, and village is as in Table 3.23.

Table 3.23: The Outline of the First Information Exchange Meeting of Province, City, and Village

Date/Time	3 rd February 2020 13:30-16:00		
Venue	Luang Prabang City Office		
Participants	<ul style="list-style-type: none"> • DPL (1) • DoICT (2) • UDAA (1) • Luang Prabang City Administration Office (2) • Luang Prabang City Fire Station (1) • Luang Prabang City Office of Education and Sports (1) • Village heads of villages inside ZPP-Ua (15) • Village heads of villages with target ponds of pond water purification experiment (2) • JICA headquarters (2) • JICA long-term expert (2) • JICA Consultant Team (6) • Takayama City Office (2) • Takayama City Townscape Preservation Party (1) 		
Agenda	Time	Contents	Main Participants
	13:45-13:50	Introduction of the objectives of the meeting	• JICA long-term expert
	13:50-14:00	Self-introduction	• All participants
	14:00-14:20	Introduction of the Project	• JICA Consultant Team
	14:20-14:45	Introduction of practices in Takayama city	• Takayama City Townscape Preservation Party
	14:45-15:10	Report and impression of the training in Takayama (Feb. 2019)	• Village heads that participated the Takayama training
	15:10-15:45	Group discussion	• All participants
	15:45-16:05	Presentation of group discussions	• All participants
	16:05-16:15	Comments from Takayama city	• Takayama City Office • Takayama City Townscape Preservation Party
	16:15-16:25	Closing remarks	• DoICT • JICA long-term expert
Provided items	Items	Quantity	Remarks
	Paper	5	A1 size
	Sticky notes	6	2 colors * 3 sets
	Pen	32	30 ballpens and 2 thick markers

Source: JICA Consultant Team



Source: JICA Consultant Team

Figure 3.52: Presentation by Village Heads



Source: JICA Consultant Team

Figure 3.53: Introduction of practices in Takayama city



Source: JICA Consultant Team

Figure 3.54: Group Discussion by Village Heads

< Input from Takayama City >

The head of the Takayama City Townscape Preservation Party introduced practices in Takayama city and gave proposals of community-based heritage management in Luang Prabang (Table 3.24).

Table 3.24: Outline of Input from Takayama City

<p>Introduction of activities in Takayama city</p> <ul style="list-style-type: none"> • Takayama did not suffer much damage from World War II, and the townscape remains for 200 years. We share the idea that the townscape, which is a treasure for the area, is what the residents ourselves are to preserve. • Takayama city invites 4 million tourists per year. The main objective is townscape preservation, and tourism promotion comes after this. • In Takayama city, we prepare for the whole year for a 2-days festival. Community bondage is strengthened during the preparation. • We made a book that introduces the activities done by local residents in Takayama city. • The most important aspect is the communication between people. Even in old towns, to invite young people and to renovate is important.
<p>Proposals of ideas in Luang Prabang</p> <ul style="list-style-type: none"> • The most important aspect is that the villagers think by themselves and have fun. • Things shall go well if people have pride in the asset that they have and try to do a variety of activities. • It shall be good if you can conduct just one activity that all the residents participate and have fun. • Many a little makes a mickle.

Source: JICA Consultant Team

< Input of participants in the Training in Japan >

From the village heads that participated in the training in Japan “Community-based Heritage Preservation and Management”, lessons from Takayama city, activities after the training, and problems of the current situation in World Heritage Area were presented (Table 3.25).

Table 3.25: Outline of Input from Participants in the Training in Japan

Lessons from Takayama City	Activities after the Training	Problems of the Current Situation in World Heritage Area
<ul style="list-style-type: none"> • In Takayama city, floats are exhibited in museums, so that the cultural asset is promoted all year around. • Even the narrow walkways were cleaned. • The street drains were also cleaned, so that the water can be used for firefighting. • Solid waste was separated properly. 	<ul style="list-style-type: none"> • The village divided roles of solid waste picking among households in the village (roads inside villages, the small solid waste leftover after the solid waste collection car leaves) • The village bought a net so that solid waste cannot fall in the drainage system, with funding by villagers (LAK 9 million) 	<ul style="list-style-type: none"> • The moral standards of tourists are low. • There are not enough car parking spaces. • Due to lack of knowledge and equipment, self-administrated firefighting activities are difficult to implement. • We cannot avoid unclean environment with the markets operating.

Source: JICA Consultant Team

< Discussion >

In the group discussion session, participants were divided into 2 groups, and the participants wrote down their ideas on activities related to Output 1 on sticky notes, before presenting and discussing the ideas in the groups. After the discussion, the ideas in the groups were presented to all participants. The ideas and opinions in the discussion are as in Table 3.26.

Table 3.26: Outline of Ideas in the Discussion Session

Activities	Reasons to implement the activity as soon as possible	Reasons to wait and take time to prepare for the activity
Information networking	<ul style="list-style-type: none"> • I want to discuss with other people when we are planning to start new activities. • It will be a good opportunity to learn about new things. • This shall be easy to start from. • I would like this meeting to be held more than 2 times per year. 	<ul style="list-style-type: none"> •
All Clean Day	<ul style="list-style-type: none"> • Currently, villages are individually doing cleaning activities, so this shall not be so hard to start. • It is a good opportunity for environmental education to children. • It shall be effective for the enlightenment of people living outside and come to the World Heritage Area that brings solid waste from outside. • It is an activity that enables the community to focus on one issue. 	<ul style="list-style-type: none"> • We cannot clean spaces where the owners live outside the city, drains, and market spaces, so the effectiveness of the activity may be limited. • People that live outside and work inside the World Heritage Area are the people that make the area not clean, so the enlightenment of these people is more necessary.
Guidance of morning alms giving	<ul style="list-style-type: none"> • This is the culture of Luang Prabang, and it shall be inherited from the elderlies to the young generation. • This shall not be difficult, since we do the morning alms giving every morning. • We need to spread the right way of morning alms giving, for the preservation and inheritance of traditional culture. • The participation of tourism-related business operators is important as well. 	<ul style="list-style-type: none"> • The traditional culture of morning alms giving has substantially disappeared already.
others	<ul style="list-style-type: none"> • All activities are related to our everyday lives, so all of them shall not be so difficult to implement. 	<ul style="list-style-type: none"> • Fire prevention by the local community shall be difficult without the help of fire stations. • Budget that can be allocated for fire prevention is limited. • Some households cannot afford to buy water tanks. • We do not know how to use septic tanks.

Source: JICA Consultant Team

<Questionnaire survey >

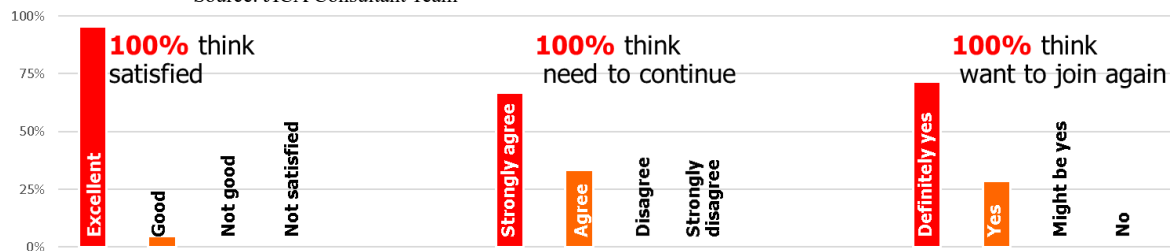
After the activity, a questionnaire survey shown in Table 3.27 was conducted.

All the questions (the satisfaction of the first activity, the necessity of the continuation of the activity, and the motivation to the participation of the next activity) had positive answers from every participant (Figure 3.55). Especially, satisfaction and motivation of village heads were high, compared to administrative officers (Figure 3.56).

Table 3.27: Questionnaire Surveys Conducted after Activities

Village							
Age							
~10	11~20	21~30	31~40	41~50	51~60	61~70	71~
Sex							
Male		Female		Others			
How is your satisfaction about this activity?							
Excellent		Good		Not good		not satisfied	
Do you think this activity should be continued?							
Strongly agree		Agree		Disagree		Strongly disagree	
Do you want to join this activity again?							
Definitely yes		Yes		Might be yes		No	

Source: JICA Consultant Team



Source: JICA Consultant Team

Figure 3.55: Questionnaire Survey Results for the First Information Exchange Meeting of Province, City, and Village (N=21)

	Satisfaction ■ : Excellent ■ : Good	Necessity of continuation ■ : Strongly agree ■ : Agree	Motivation of participation ■ : Definitely yes ■ : Yes
Village heads (N=17)			
Administrative officers (N=4)			

Source: JICA Consultant Team

Figure 3.56: Questionnaire Survey Results for the First Information Exchange Meeting of Province, City, and Village (Cross Tabulation according to Organization) (N=21)

< Summary >

The evaluation and next steps of the first information exchange meeting of province, city, and village is as in Table 3.28.

Table 3.28: The Evaluation and Next Steps of the First Information Exchange Meeting of Province, City, and Village

Positive points	<ul style="list-style-type: none"> Information on activities done by individual villages, the village clean day supported by the Project, and the morning alms giving guidance supported by the Project were shared. The village heads actively spoke about their opinions. The village heads actively proposed their ideas on the effective implementation of the knowledge and experience in Takayama city to Luang Prabang. All of the village heads highly evaluated the importance of this activity, and the high motivation towards participation was seen.
Points that can be improved	<ul style="list-style-type: none"> The speech was sometimes one-way. Administrative officers were observers, and the participation towards the meeting was relatively passive.
Next steps (proposal)	<ul style="list-style-type: none"> Invite village heads in the planning phase of the activity. To clarify the roles of administrative bodies in the meeting. Discussion facilitation in Lao language is favorable. The aim of the meeting shall be to establish a relationship that enables everyday communication between participants.

Source: JICA Consultant Team

2) Townscape Preservation and Management

For the World Heritage Area to sustainably preserve and manage as comfortable and attractive, not only the efforts from the government, but also the participation of the people that live inside the World Heritage Area is necessary. In addition, the participation of business operators and tourists is also important. Streets are public space but are also spaces where the local residents use every day that connect houses. They are also used by tourists and the impression of the streets will be that of the World Heritage Area. Consequently, the street environment will be the key aspect of preservation and management activities and the community-based activities in the street environment shall be promoted.

As townscape preservation and management, “beautification” and “fire prevention” will be emphasized. Beautification is the foundational activity for the World Heritage Area to be preserved as comfortable and attractive and with the active participation of the local community, will contribute to the enlightenment of the local residents. This shall be expected to lead to the sustainability of the preservation and management. Fire prevention is a necessary aspect in inheriting the heritage with many wooden buildings to the future generation. Firefighting in case of fire occurrence shall be conducted by the public sector, including the fire station, but the everyday fire prevention activities shall be conducted by the local community. Also, fire prevention activities are conducted by the local community in Takayama City, where training was held as part of the Project, and with this point, fire prevention activities by the local community can be expected to be developed in Luang Prabang World Heritage Area, referring to the cases in Takayama City.

With the understanding above, activity plans for beautification and fire prevention are proposed according to the following:

i) Beautification

In the World Heritage Area, UDAA collects solid waste twice per week. There are some dust boxes and garbage collecting tanks inside the area, but the solid waste is mainly collected from each household. Also, each household is responsible of the cleaning of the streets in front of each house.

On the other hand, as for activities done by villages, village heads check the cleaning conditions inside their village and some villages conduct village cleaning regularly. Also, in villages with night market and morning market, villages outsource the cleaning to business operators, with the revenue from stalls.

For beautification activities conducted by communities other than the village, there are two main activities stated in the following. Firstly, the simultaneous cleaning done on the last Saturday of every month by “Trash Idol”. The activity started since 2014 by the Hotel Restaurant Association, with the support of UDAA. Since it is a free participation activity, there is no regular participant number, but around 40 people participate every time. Lastly, the “compost recycling” which is introduced by JOCV.

In the activity, organic waste is collected from hotels, guesthouses, and restaurants by UDAA, and is converted into compost. The activity is continuing but is becoming less active after the JOCV left Luang Prabang.



Cleaning Activities by Trash Idol



Organic Waste Collected in Restaurants

Source: Trash Idol Facebook (left), JICA Consultant Team (right)

Figure 3.57: Beautification Activities by Organizations Other than the Village

The Japanese and international examples of beautification activities that will be a reference for Luang Prabang are as follows:

Hải Phòng, Vietnam ~Environmental Education and Enlightenment~

A JICA Partnership Program was held in Hải Phòng, Vietnam for three years from 2013, to enlighten the local community for the appropriate household garbage disposal and the development of related organizations' capacity for environmental education. Whilst the city was suffering unsanitary urban environment of garbage left in streets, due to the growing population and the low interest of citizens towards garbage disposal, environment education of the 3R (Reduce, Reuse, Recycle) and cleaning activities with the enlightenment to the women's community were conducted.

Surabaya, Indonesia ~Waste Reduction~

In Surabaya, Indonesia, since the landfill disposal site was abandoned in 2005, the public sector, business operators, newspaper companies, and the NGO cooperated to enact the Surabaya Green and Clean Campaign, which works for waste management, recycling, beautification, and greening of the urban environment. In the campaign, more than 1,000 communities are participating and with the "Takakura compost", the inexpensive and high-quality composting system introduced by Kitakyushu City, the reduction of waste disposed by households and the rising environmental awareness of the community, were seen.

Nagai City, Yamagata Prefecture ~Compost Branding~

In Nagai City, with the "Rainbow Plan", the composting of organic waste collected from households, and the branding of the agricultural products using the compost are ongoing. In this Rainbow Plan, organic waste collected from around 5,000 households and chaff and cow dung collected from local farmers are composted. The compost is sold as "Rainbow Plan Compost", and part of it is used for the "Rainbow Plan Agricultural Product", that is branded under the certificate standards of the Rainbow Plan. The households separate the organic waste and collect the compost to the 230 collecting space inside the city. The collected organic waste is delivered to the compost center and will be composted. There are also reports of the activity contributing to the rising environmental awareness of the community.

Vientiane Capital, Laos PDR ~Plastic Bottle Convert-to-Money System~

In Vientiane Capital, a JICA Partnership Project was conducted for two years from 2015 to encourage the recycling of the large amount of plastic bottle waste. In general, there are three types of measures

of waste collection; “collection by the public sector” that is often seen in Japan, “collection from collection points” where collection of boxes are set up in front of the shops, and “community-based collection” where the local community gather the garbage to designated places. The social experiment conducted in pilot areas of the project proved that the “community-based collection” is the simplest, low-cost measure that can gain cooperation from the local community. The simple and stable incentive that plastic bottles can be converted into money at a decent rate enabled the activity to be sustainable after the closure of the JICA Partnership Project.

With the recognition and reference examples above, community-based activity plans and manuals on beautification are proposed as stated below.

Beautification (1) “World Heritage Area Clean Day”

<Implementing Organization >

Implementing Organization (Main): village

Implementing Organization (Sub): UDAA, DoICT, DPL, Luang Prabang City, Hotel Restaurant Association, and Schools

<Objectives and expected influences >

The activity aims to expand the current cleaning activities conducted by individual villages into a cleaning activity across the World Heritage Area. With this, the positive spiral of the expansion of the impact of the activity and the enlightenment of the local community can be expected.

<Proposed activity plan >

- As for the current condition, there are villages that do not conduct regular cleaning activities, and also for the village that conduct regular cleaning activities, the schedule is not the same. Hence, as a first step, two to three villages that are already conducting regular cleaning activities shall join to perform a joint cleaning activity.
- The equipment necessary for the cleaning, such as tongs, gloves, and plastic bags shall be provided by the government or international donors. During the Project, the Project shall provide.
- Organizational structures of different governmental sectors supporting the activity shall be structured.
- By cooperating with the school education and enhancing the participation of school children, participation of households shall be expected. In the school education, environmental education related to the 3Rs (Reduce, Reuse, Recycle) shall be done. In addition, enlightenment to the women’s community is necessary.
- The garbage collected by individual participants shall be collected to dust boxes set up in schools, so that UDAA can efficiently collect the garbage.
- Cooperation with the “Trash Idol” activity shall be considered.
- Plastic bottles that are collected in the activity shall be separated and shall lead to the convert-to-money system discussed later. Starting with plastic bottles, the recycling activities shall expand with correlation with the recycling situation.
- The first activity that is held in February 2020 and the weekly cleaning activity shall gradually expand with more villages participating, and the activity shall aim to be a fundamental activity of the local community.

<Proposed Activity manual >

The proposal of the activity manual for World Heritage Area Clean Day is shown in the following.

- Target Area
 - Villages inside ZPP-Ua
 - Villages with target ponds of pond water purification experiment
- Participants

- Residents of Villages (around 50 per village)
- School students (around 50 - 100 per school)
- DPL (5)
- DoICT (5)
- UDAA (5)
- Luang Prabang City Administration Office (5)
- Luang Prabang City Office of Education and Sports (5)
- JICA expert

The participant shall expand in line with the expansion of the target area.

- Activity Agenda

Table 3.29: Proposed Activity Agenda for World Heritage Area Clean Day

Time	Content	Place	Responsible person/organization
6:45 a.m. - 7: 20 a.m. (35 minutes)	Explanation of the activity Photo session	• School or temple	• JICA expert, JICA Consultant Team, UDAA • All participants
7:20 a.m. - 9: 20 a.m. (120 minutes)	Cleaning activity • Solid waste on roads shall be collected (not mud inside pond) • Solid waste shall be collected in schools	• Inside target area	• All participants
9:30 a.m.	Collection of collected solid waste	• School or temple	• UDAA

Source: JICA Consultant Team

- Necessary items and services and activity cost (proposal)

Table 3.30: Proposed Necessary Items and Services and Activity Cost for World Heritage Area Clean Day

Items/Services	Unit Price (USD)	Quantity	Unit	Total Amount	Remarks
Plastic bags (black)	0.09	400	Pieces	38	
Gloves	0.05	400	Pieces	19	
Masks	0.07	400	Pieces	27	
Garbage picking tongs	1.13	400	Pieces	452	
T-shirts	6.22	400	Pieces	2486	First time only
Caps	1.88	400	Pieces	750	First time only
Broom	1.13	80	Pieces	90	
Dustpan	6.78	20	Pieces	136	
Garbage box	70.06	15	Pieces	560	First time only
Banner	14.13	2	Pieces	28	First time only
Collection of Garbage	63	1	Sets	63	
Drinking Water	0.31	400	Bottles	125	

Source: JICA Consultant Team

<First Activity >


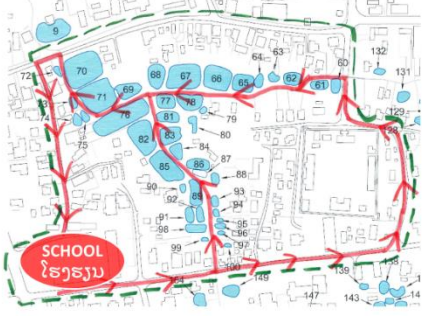
First World Heritage Area Clean Day

< Outline >

As the first event of the World Heritage Area Clean Day, cleaning was conducted in Vatnong Village and Vatsene Village, the central villages with many tourists, and Mano Village and Pongkham Village, where the target ponds for water quality improvement locate (Table 3.31).

Table 3.31: Outline of the First World Heritage Area Clean Day

Date/Time	1 st February 2020 from 7:45	
Target area	City group	Pond group

	<ul style="list-style-type: none"> • Vatnong Village • Vatsene Village  <p>Green line: Target Area Source: JICA Consultant Team</p> <p>Figure 3.58: Target Area in Vatnong Village and Vatsene Village</p>	<ul style="list-style-type: none"> • Mano Village • Pongkham Village  <p>Green line: Target Area Source: JICA Consultant Team</p> <p>Figure 3.59: Target Area in Mano Village and Pongkham Village</p>																											
Participants	<ul style="list-style-type: none"> • Villagers of Vatnong Village (approx. 50) • Villagers of Vatsene Village (approx. 50) • Students of Luang Prabang Elementary School (approx. 100) • DPL (5) • DoICT (3) • UDAA (4) • Takayama City Office • Takayama City Townscape Preservation Party • JICA long-term expert (2) • JICA Consultant Team (3) 	<ul style="list-style-type: none"> • Villagers of Mano Village (42) • Villagers of Pongkham Village (50) • Students of Pongkham Junior High School (35) • UDAA (4) • Luang Prabang City administration office (5) • Luang Prabang City office of education and sports (5) • JICA Consultant Team (3) 																											
Agenda	<table border="1"> <thead> <tr> <th>Time</th> <th>Contents</th> </tr> </thead> <tbody> <tr> <td>7:45-8:00</td> <td>Gather in front of Luang Prabang Elementary School Introduction of activity (by DoICT) Photo Session</td> </tr> <tr> <td>8:00-9:30</td> <td>Cleaning activity <ul style="list-style-type: none"> • Solid waste picking inside target area • Solid waste collection to Nam Kong Road and Nam Khan Road • Solid waste collection by UDAA </td> </tr> <tr> <td>9:30-9:40</td> <td>Gather in front of Luang Prabang Elementary School Questionnaire survey</td> </tr> </tbody> </table>		Time	Contents	7:45-8:00	Gather in front of Luang Prabang Elementary School Introduction of activity (by DoICT) Photo Session	8:00-9:30	Cleaning activity <ul style="list-style-type: none"> • Solid waste picking inside target area • Solid waste collection to Nam Kong Road and Nam Khan Road • Solid waste collection by UDAA 	9:30-9:40	Gather in front of Luang Prabang Elementary School Questionnaire survey	<table border="1"> <thead> <tr> <th>Time</th> <th>Contents</th> </tr> </thead> <tbody> <tr> <td>8:15-8:30</td> <td>Gather at Wat Mano Introduction of activity (by UDAA) Photo Session</td> </tr> <tr> <td>8:30-9:30</td> <td>Cleaning activity <ul style="list-style-type: none"> • Solid waste picking inside target area • Solid waste collection to entrance routes to ponds • Solid waste collection by UDAA </td> </tr> <tr> <td>9:30-9:40</td> <td>Gather at Wat Mano Questionnaire survey</td> </tr> </tbody> </table>		Time	Contents	8:15-8:30	Gather at Wat Mano Introduction of activity (by UDAA) Photo Session	8:30-9:30	Cleaning activity <ul style="list-style-type: none"> • Solid waste picking inside target area • Solid waste collection to entrance routes to ponds • Solid waste collection by UDAA 	9:30-9:40	Gather at Wat Mano Questionnaire survey									
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Source: JICA Consultant Team



Source: JICA Consultant Team

Figure 3.60: Equipment Provision Ceremony



Source: JICA Consultant Team

Figure 3.61: Cleaning Activity Wearing the Same T-Shirts

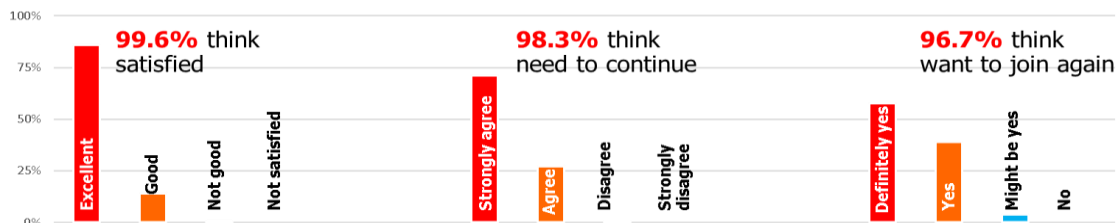


Source: JICA Consultant Team

Figure 3.62: Solid Waste Collection to Designated Spaces

< Questionnaire survey >

After the activity, a questionnaire survey shown in Table 3.27 was conducted. All the questions (the satisfaction of the first activity, the necessity of the continuation of the activity, and the motivation to the participation of the next activity) had positive answers from every participant (Figure 3.63). Participants from the city group relatively answered positively to every question. Motivation to participation of students of Pongkham Junior High School was relatively low (Figure 3.64).



Source: JICA Consultant Team

Figure 3.63: Questionnaire Survey Results for the World Heritage Area Clean Day (N=247)

	Satisfaction (left: City group, right: Pond group)		Necessity of continuation (left: City group, right: Pond group)		Motivation of participation (left: City group, right: Pond group)	
	■ : Excellent ■ : Good ■ : Not Good		■ : Strongly agree ■ : Agree ■ : Disagree		■ : Definitely yes ■ : Yes ■ : Might be yes	
Village (City:N=61) (Pond:N=72)						
School (City:N=70) (Pond:N=31)						
Administrative officers (City:N=10) (Pond:N=3)						

Source: JICA Consultant Team

Figure 3.64: Questionnaire Survey Results for the World Heritage Area Clean Day (Cross Tabulation according to Organization) (N=247)

< Summary >

The evaluation and next steps of the first World Heritage Area clean day is as in Table 3.32.

Table 3.32: The Evaluation and Next Steps of the First World Heritage Area Clean Day

Positive points	<ul style="list-style-type: none"> • 500 kg of solid waste was collected. • The cleaning activities done by individual villages were integrated into a multi-generational and multi-village activity. • Since cleaning activities had been conducted regularly, the event was able to be conducted with little explanation. • Enlightenment effects, such as shop employees watching the activity started to clean, was seen. • The uniform T-shirt and cap brought a sense of unity among participants. • Smooth solid waste collection by UDAA was done. • Many participants enjoyed the event. • The event was highly evaluated by participants.
Points that can be improved	<ul style="list-style-type: none"> • The equipment provided before the event was not brought to every participant. • Participants of the pond group did not manage to be in time, and the event started 30 minutes later than the schedule. • The cleaning was planned to be for 120 minutes, but 90 minutes was enough. • Inefficient cleaning, such as collecting leaves that do not need to be collected and picking leaves with tongs, were seen. • Safety measures were needed when cleaning the walkways along the canals in the pond area. • Some private land was not managed well but was not able to clean because there was no permission. • Many solid waste were floating on the pond water surface, and the feeling that the area became clean was difficult to feel. • UDAA had already cleaned areas near the pond several weeks before the event with support of other donors, so the area was not as in need of cleaning as expected. • Since large plastic bags were used, when fully containing solid waste in the bags, they were too heavy to carry. • When there were no plastic bags available nearby, participants did not pick up the solid waste even when they witnessed them. • When there were many cigarette butts and bin caps, some participants did not collect all of them but instead left some behind.
Next steps (proposal)	<ul style="list-style-type: none"> • Invite other villages to join the activity. • Expand the activity to a larger scale. • For participants that forgot the necessary equipment, secretariats of the activity prepare some reserves. • Prepare a pamphlet that describes the rules of waste picking and warnings to dangerous situations and activities. • To share the schedule beforehand with UDAA, for effectiveness of the activity. • Prepare appropriate measures for the cleaning of dangerous areas and private land. • Prepare measures for the participants to enjoy the activity more.

Source: JICA Consultant Team

Beautification (2) “Compost Recycling Activity”

< Implementing Organization >

Implementing Organization (Main): Hotels, guesthouses, and restaurants

Implementing Organization (Sub): UDAA, village, schools

< Objectives and expected influences >

The activity aims to expand the current compost recycling conducted by 28 hotels, guesthouses, and restaurants, and encourage village-based and school-based recycling activities, so that the composting becomes a World Heritage Area scale activity. By this, the recycling system of compost used for greenery by the villages can be expected.

< Activity plan >

- Current conditions of the compost waste recycle activity (collection by UDAA and damage of compost container) shall be surveyed.
- Necessary equipment or machinery shall be provided by relevant public authorities or international donors. During the Project, the Project shall provide.
- Business operators and local citizens shall be able to use the compost, so that the compost recycle activity is sustainable (example: Waste collectors shall be able to receive compost according to the amount of waste collection).
- A market system shall be made, so that the compost be distributed to organic farmers and the produced organic products be provided in restaurants and hotels inside the city.
- The activity shall collaborate with the school education, by setting up organic waste collection boxes in schools and encouraging school children to bring their house's organic waste for composting.
- In the Project, this activity shall start after the World Heritage Area Clean Day becomes familiar to the local community, which shall be after 2021.

< Necessary items and services and activity cost (proposal) >

Table 3.33: Proposed Necessary Items and Services and Activity Cost of the Compost Recycling Activity

Items/Services	Unit Price (USD)	Quantity	Unit	Total Amount	Remarks
Compost waste tank	23	50	Pieces	1150	
Guidance to participants	56	1	Sets	19	50 people

Source: JICA Consultant Team

Beautification (2) “Garbage Separation & Convert-to-Money System”

< Implementing Organization >

Implementing Organization (Main): UDAA

Implementing Organization (Sub): Village and schools

< Objectives and expected influences >

The activity aims to expand the Garbage Separation and Convert-to-Money System that has already been installed in Vientiane to Luang Prabang. The direct incentive (convert-to-money) is expected to be the first step of the 3Rs.

< Activity plan >

- Current conditions of the Garbage Separation and Convert-to-Money System in Vientiane shall be surveyed, and the appropriate system to install in Luang Prabang shall be discussed.
- The Convert-to-Money system for plastic bottles shall be well informed to local citizens before introduction of the system and enable brought plastic bottles to be converted into money periodically at designated places.
- As a first-step, plastic bottles collected in the World Heritage Area All Clean Day shall be converted into money where the money shall be used to buy necessary equipment for cleaning activities.
- In the early stages, UDAA shall be the responsible authority for the implementation of the system. After the implementation, keen villages shall take over the main responsibility and UDAA shall work as a supportive authority.
- By introducing the system in school education, participation of children and families shall be aimed.
- In the Project, this activity shall start after the World Heritage Area Clean Day becomes familiar to the local community, which shall be after 2021.

< Necessary items and services and activity cost (proposal) >

Table 3.34: Proposed Necessary Items and Services and Activity Cost of the Garbage Separation & Convert-to-Money System

Items/Services	Unit Price (USD)	Quantity	Unit	Total Amount	Remarks
Garbage box	37.5	32	Pieces	1200	2 types of boxes to 28 villages and 4 schools
Workshop	45	1	Sets	45	

Source: JICA Consultant Team

ii) Fire Prevention

In the World Heritage Area, the fire station, the police, and the village organize a firefighting drill for residents and business operators. The firefighting drill is organized once a year and uses fire extinguishers. In 2018, a total of 13 fires occurred in Luang Prabang City and firefighting and fire prevention is an essential activity for the sustainability of the World Heritage Area, that is consisted of many wooden buildings. Also, for the daily fire prevention, the active participation of the local community is important.

Under such circumstance, as part of the water supply project, JICA is planning to supply 45 fire hydrants in Luang Prabang City, of which 38 inside World Heritage Area. For the 21 hydrants planned to be supplied to areas with sensitive townscapes, the hydrants will be underground, and the hydrant supply is planned to be completed in 2022. Since the supply is planned to be after the completion of the Project, direct interference with the hydrants is difficult. However, firefighting technical assistance to fire stations using the hydrants shall be necessary in the near future.

The Japanese and international examples of fire prevention activities that will be a reference for Luang Prabang are as follows:

Takayama City, Gifu Prefecture ~Group Monitoring System~

In Sannomachi Preservation Districts for Groups of Historic Buildings of Takayama City, Gifu Prefecture, there are three townscape preservation parties (Ebisudaigumi, Kamisannomachi, and Kamininomachi townscape preservation party), and each townscape preservation party organizes a self-firefighting group under its administration. In this area, with high density of wooden buildings, the risk of fire spreading is high and the initial firefighting by local residents is important. Each self-firefighting group performs a joint firefighting drill in cases of Culture Property Fire Prevention Days, wherein the group conducts trainings of the usage of fire extinguisher and fire hydrants with the support and advice of the fire station and regional disaster prevention coordinators.

In addition, each self-firefighting group conducts daily drills inspections to firefighting facilities. In 1996 when fire occurred inside the area, the groups have conducted initial firefighting and lifesaving activities which minimized the damage.

Also, in the area, since some houses become vacant at nighttime, a group monitoring system for the early detection of fire is adopted (Figure 3.65). In the system, when fire occurs in one of the houses in the group, the fire alarms of every house in the group are activated, so that the households in the group can conduct initial firefighting.

Water from the water channels inside the city is used for firefighting (Figure 3.66). The channel starts from the Miyagawa River that flows inside Takayama City, around 3 km upstream and leads to the central part of the city. Initially, the channel water was used not only for firefighting but also for laundry and snow melting. In case of fire, the self-firefighting groups will bring special equipment from equipment boxes installed in the streets, dam up the water in the channel, and pump up the water for initial firefighting.



Source: Takayama City

Figure 3.65: Group Monitoring System of Takayama City



Source: Takayama City

Figure 3.66: Firefighting Drills of Takayama City

Shirakawa-go, Gifu Prefecture ~Water Spray Gun Operation and Fire Prevention Patrol by Residents~

In Hagimachi Village, which is designated as World Cultural Heritage, 59 water spray guns that can rotate 360 degrees are installed for the prevention of fire spreading in the Gassho style housings that are vulnerable to fire. For the residents to be able to use the water spray guns on their own, not only do the local government teaches the operation instructions of the water spray guns, but also let the residents use the water spray gun in the annual inspection.

Also, in the village, there is a mutual aid community since the Edo era called “Kumi”, where the fire prevention patrol is conducted based on the Kumi. In Hagimachi Village, the patrol is done four times per day, which is 10:00 a.m., dawn, nighttime, and midnight.



Source: Shirakawa Village

Figure 3.67: Firefighting Drills in Hagimachi Village



Source: JICA Consultant Team

Figure 3.68: Water Spray Gun of Hagimachi Village

Japan ~Disaster Prevention Playing Cards~

“Disaster prevention playing cards”, developed and sold by a private company in Japan, is a card game that offers opportunities to discuss about disaster prevention while playing. The number of cards is the same as ordinary playing cards, but other than the suits, the four marks of “risk”, “prevention”, “damage”, and “resilience” is drawn on each card. By playing with the cards, opportunities to discuss about disasters and talk about one’s experience are offered. By talking about the risks, reaction plans to disasters can be shared beforehand, and the resilience of the community can be enhanced.

With the recognition and reference examples above, community-based activity plan on fire prevention is proposed below.

Fire Prevention “Community-based Fire Drill”

<Implementing Organization >

Implementing Organization (Main): fire station

Implementing Organization (Sub): village, police, and business operators

<Objectives and expected influences >

The activity aims to expand the current annual fire drills considering the planned installation of new fire hydrants and encourage active participation of the village community.

<Activity plan >

- Information on past fire incidents (place and cause) and current/planned fire hydrants shall be organized for better understanding of local citizens and business operators.
- The role of the Security Community of villages shall be expanded and the community shall carry out periodic fire patrol inside the village.
- Fire prevention shall be introduced in school education, so that children and families can understand the importance of fire prevention.
- The activity shall take place in the dry season, and in this Project, the activity shall start in late 2020.

<Necessary items and services and activity cost (proposal) >

Table 3.35: Proposed Necessary Items and Services and Activity Cost of the Community-based Fire Drill

Items/Services	Unit Price (USD)	Quantity	Unit	Total Amount	Remarks
Training of fire-drill by the fire station	65	1	Sets	65	
Fire extinguisher	50	28	Pieces	1400	In critical places

Source: JICA Consultant Team

3) Cultural Inheritance

The World Heritage is a heritage that possess the “Outstanding Universal Value” and for a heritage to be recognized as World Heritage, the heritage needs to satisfy the integrity and authenticity. As in the case of Luang Prabang World Heritage Area, the individual architecture or certain areas with multiple architectures will be considered important contents, but when referring to the standards above, the value of Luang Prabang also consists of the culture, history, and the religious activities that the people have inherited over centuries.

However, according to interview surveys to villages, there are strict regulations to the refurbishment of the historical buildings which consequently the buildings need high expenses for the refurbishment. Therefore, selling and lending the buildings for business purposes and the decrease of the original residents in the area are continuously seen. Foreign business operators and investors that do not fully understand the culture and history of the area takeover the buildings for development and business purposes, and hence the risks of the culture inherited changing inside the World Heritage Area are increasing. If this situation will continue in the future, the World Heritage Area may change into a “theme park”.

In order to prevent such situation to happen, community-based activities to inherit the culture and history of the World Heritage Area shall be promoted. In the Project, “festivals”, “mornings alms giving”, and “manner education” will be featured as components of cultural inheritance.

As for the festivals, in the World Heritage Area, the three main festivals of the new year festival in April (Pi Mai Lao), boat racing festival in September, and the lantern festival in November (Boun Lai Heua Fai) exist. Each festival is an important event in terms of cultural inheritance, but particularly for the boat racing, villages are the main units of the teams for the boat racing and village-owned boats tend to be kept inside temples. Hence, in terms of enhancing the bondage of the village community and enhancing the communication between villages and temples, the promotion of the boat racing festival

is relevant to the idea of the Project and is needed to be promoted through community-based activities in the World Heritage Area. This idea has an overlap with the “Yatai-gumi” seen in Takayama City as well. Also, these typical events in Luang Prabang are held in the low season of tourism. The promotion of festivals does not only enlighten the cultural identity of the local residents, but also shall be effective in terms of tourism promotion. Therefore, the aspect of tourism promotion shall be implemented when promoting the festival and events.

As for the morning alms giving, regarding the fact that the World Heritage Area is the sacred place of Theravada Buddhism, it is an important daily religious event connecting renunciant monks and residents. However, as discussed previously, the sustainability of the morning alms giving is in danger, due to the decrease of originally local residents and the increase of residents and business operators not fully understanding the religious culture. Also, in one aspect, the morning alms giving itself is now becoming to be an event for tourism and some local business operators are witnessed to sell Khao Nyao at an insanely high price to tourists. Consequently, the improvement of morning alms giving is an urgent task.

As for manner education, there are problems already concerning the loss of traditional lifestyle especially among the youth and the activities by tourists that do not understand the cultural and religious manners that have been performed and inherited in the World Heritage Area. Cultural lifestyle is not what should be forced to perform to future generations, but to understand its meanings and values correctly and offering the opportunity to inherit is essential. As for manners of tourists, considering the opening of the China-Laos High-Speed Railway expected in 2021, current activities of enlightenment to tourists shall be promoted.

The Japanese and international examples of cultural inheritance activities that will be a reference for Luang Prabang are shown in the following:

Takayama City, Gifu Prefecture ~”Yatai-Gumi of the Takayama-sai”~

In Takayama City, since the Edo era, “Sanno-sai” is held in spring and “Yahata-sai” is held in autumn, and the two festivals are collectively named as “Takayama-sai (Takayama Festival)”. This Takayama Festival is counted as the three most beautiful festivals of Japan and was registered as UNESCO Intangible Cultural Heritage in 2016. In the Takayama Festival, 23 floats are demonstrated, and these floats are maintained by the local community units called “Yatai-gumi”. Takayama Festival is an event that invites many tourists, but at the same time, the “Yatai-gumi” is the foundation of the townscape preservation parties, which is the essential community unit of the townscape preservation and management in Takayama City.

The budget of the “Yatai-gumi” comes from the membership fee of the members and the subsidy from the national government. The membership fee depends on the size of the “Yatai-gumi”, but as in the case of Kamisannomachi Yatai-gumi, 55 households pay the membership fee of around JPY 20,000 per household and is used for the operation of the Takayama Festival and the maintenance fee of the floats. Other than this, sponsorship money is provided from business operators inside Takayama City.

Also, to secure the manpower for these cultural events to be sustainable, in the Plan for the maintenance and improvement of the historical scenic beauty in Takayama City, the city is proposing to structure a mechanism to connect the operators of traditional festivals and its supporters.



Source: Takayama City

Figure 3.69: Takayama Festival



Source: Takayama City

Figure 3.70: Music Playing in Takayama Festival

Vigan City, Philippines ~Buridek Children's Museum~

Vigan City, the capital city of the province of Ilocos Sur in Northern Philippines, with the 16th century architecture of the harmony of Spanish colonial style and the Chinese cultural style in its old town, was registered as World Cultural Heritage in 1999. For the Biguenos (Vigan locals) to be proud of the history and culture of Vigan and be positive and active towards heritage preservation, the city is promoting its history, tradition, and culture through its website, Facebook page, fan page, pamphlets, movies, newsletters, books, postal stamps, and workshops to children. Also, in collaboration with the University of Santo Tomas-Center for the Conservation of Cultural Property and the Environment in the Tropics, cultural heritage mapping of tangible and intangible cultural properties was conducted. Also, Buridek Children's Museum was established for the purpose to teach about the history, tradition, and culture of Vigan to children inside and outside Vigan. The activities above were valued and Vigan City was awarded as Best Practices of World Heritage Management by UNESCO.

With the recognition and reference examples above, community-based activity plan on cultural inheritance is proposed below.

Cultural Inheritance (1) "Boat Race Festival Promotion"

<Implementing Organization >

Implementing Organization (Main): village

Implementing Organization (Sub): DoICT, DPL, and schools

< Objectives and expected influences >

The boat race in September is an important event for the enhancement and inheritance of the local culture and community. Also, as the festival celebrates the end of the rainy season, it shall be an important event for tourism promotion. This activity aims to promote the village-based activities and promote the boat race festival as an opportunity to express the identity of the local community, the World Heritage Area, and the city.

< Activity plan >

- In terms of enhancing the community bondage within the villages, the preparation period towards the event is important. A system shall be organized that does not only focus on winning the boat race, but also focusing on the attitude towards the event and the fun in the preparation of the event.
- Sub-events shall be held in line with the boat race festival to enhance bondage inside the community, such as cleaning of the seats for viewing, with the active participation of the village. Sub-events by school students are also effective in inviting participation of families.

- Festivals are a limited period tourism event but are precious opportunities for tourists to communicate with the local residents and understand the local culture. Promotion campaign of the boat festival shall be carried out for better understanding of the festival to tourists, such as promotion videos and pamphlets for tourist information centers.
- Takayama City offers opportunities for tourists to understand the local traditional culture of the Takayama Festival in seasons without festivals, by exhibiting the floats used in the Takayama Festival. However, in Luang Prabang, the boats for the boat racing is often kept inside temples. The boats used in the race shall be exhibited for tourists' better understanding of the culture, especially in villages with many tourists visiting.
- Recognizing the promotion of the boat race festival as the first-step, promotion of the new year festival and the lantern festival shall also be promoted, respectively, to enjoy the festivals all season and offer opportunities to understand the local traditional culture.
- In the Project, targeting the boat race festival in September 2021, the activities shall start from early 2021.

< Necessary items and services and activity cost (proposal) >

Table 3.36: Proposed Necessary Items and Services and Activity Cost of the Boat Race Festival Promotion

Items/Services	Unit Price (USD)	Quantity	Unit	Total Amount	Remarks
Guidance brochure	1000	1	Sets	1000	
Promotion video shooting	1500	1	Pieces	1500	

Source: JICA Consultant Team

Cultural Inheritance (2) “Guidance for Morning Alms Giving”

< Implementing Organization >

Implementing Organization (Main): DPL

Implementing Organization (Sub): DoICT, Luang Prabang City, temples, and village

< Objectives and expected influences >

The activity aims to secure the sustainability of the morning alms giving, by preventing it from deviating from its original purpose and organizing it as an opportunity for tourists to participate in the traditional culture. For this, guidelines for tourists and local residents shall be made. Also, opportunities for tourists to learn the traditional way of morning alms giving shall be provided, by instructors teaching tourists in morning times when the actual morning alms giving is taking place. Moreover, the enlightenment of local residents towards the inheritance of the local traditional culture is also expected as a result of this activity.

< Activity plan >

- Currently, tourists are led by tour guides or directly go to the streets and participate in the morning alms giving by getting the offering rice from local residents. In this situation, it is questionable whether the tourists are actually understanding the reasons and methods of the morning alms giving. Pamphlets for tourists shall be provided so that they understand the reasons and methods of the morning alms giving before participating.
- There are cases witnessed where local business operators sell the Khao Nyao to the tourists at an insanely high price. Currently, Luang Prabang City is trying to control these activities and there needs to be capacity strengthening of this control.
- By utilizing the manner teachers to the local residents, that Luang Prabang City is currently training, morning alms giving demonstration activities shall be regularly conducted to tourists. Enlightenment through actual demonstration shall create opportunities for tourists to understand and experience the local traditional culture. The demonstration shall be held around once a week, mainly in the high season of tourism.

< Proposed Activity manual >

The proposal of the activity manual for Information exchange network formulation of province, city, and village is shown in the following.

- Venue
 - Around route of Alms Giving in the village
- Participants
 - Tourists (around 20 people per activity)
 - Lao instructor for Morning Alms Giving manners (from Luang Prabang City)
 - Villagers
 - DPL
 - DoICT
 - Luang Prabang City administration office
 - Luang Prabang City office of information, Culture and tourism
 - JICA long-term expert
- Activity Agenda

Table 3.37: Proposed Activity Agenda for Guidance for Morning Alms Giving

Time	Agenda	Place	Responsible person/organization
5:00 a.m.	Gather at the venue	• Target area	• All participants
5:00 a.m. - 5:20 a.m. (20 minutes)	• Explanation of the traditional manner of Morning Alms Giving • Photo session	• Target area	• Instructor • All participants
5:20 a.m. - 6:40 a.m. (80 minutes)	Demonstration and actual practice of Morning Alms Giving	• Target area	• Instructor • Tourists

Source: JICA Consultant Team

- Necessary items and services and activity cost (proposal)

Table 3.38: Proposed Necessary items and services and activity cost for Guidance for Morning Alms Giving

Items/Services	Unit Price (USD)	Quantity	Unit	Total Amount	Remarks
Instructor	100	1	Set	100	
Translator (English-Lao)	150	1	Set	150	
Equipment	300	1	Set	300	

Source: JICA Consultant Team

< First Activity >

First Guidance for Morning Alms Giving

< Outline >

The outline of the first guidance for morning alms giving is as in Table 3.39.

Table 3.39: The Outline of the First Guidance for Morning Alms Giving

Date/Time	2 nd February 2020 5:00-7:00		
Venue	Wat Sene		
Participants	<ul style="list-style-type: none"> • DoICT (2) • Villagers of Vatsene Village (3) • Tourists (Thailand: 9, USA: 5, Denmark: 2, Japan: 5) • JICA headquarters (1) • JICA long-term expert (2) • JICA Consultant Team (6) • Takayama City Office (2) • Takayama City Townscape Preservation Party (1) 		
Agenda	Time	Contents	Place

	4:30-5:00	Preparation in front of Wat Sene	Front of Wat Sene
	5:00-5:15	Invite tourists	Front of Wat Sene
	5:15-5:20	Introduction of activity (by JICA long-term expert)	Inside Wat Sene
	5:20-5:45	Guidance for morning alms giving (by villagers of Vatsene village)	Inside Wat Sene
	5:45	Drum	
	5:45-5:50	Cleaning hands	Front of Wat Sene
	5:50-6:30	Actual demonstration of morning alms giving	Front of Wat Sene
	6:30-6:35	Water pouring	Inside Wat Sene
	6:35-6:45	Photo session Closing remarks (by DoICT)	Inside Wat Sene
Provided items and resources	Items and resources		Quantity
	Villagers for guides		1
	Translator (English-Lao)		2
	Khao Nyao		24
	Khao Nyao sweets		24
	Chairs		24
	Scarf		24

Source: JICA Consultant Team



Source: JICA Consultant Team

Figure 3.71: Guidance by Villager



Source: JICA Consultant Team

Figure 3.72: Demonstration of Morning Alms Giving



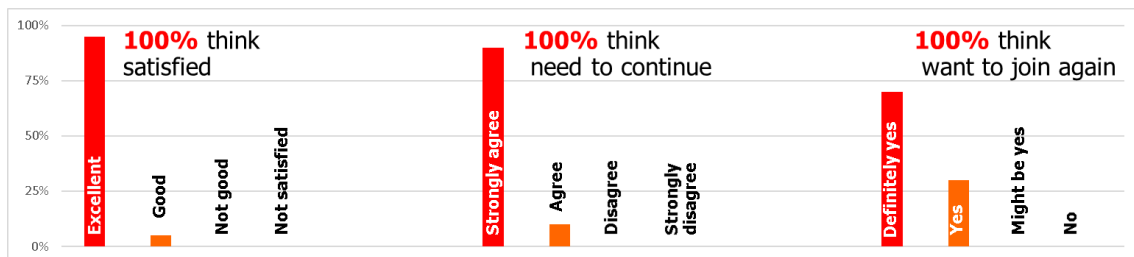
Source: JICA Consultant Team

Figure 3.73: Group Photo of the Activity

< Questionnaire survey >

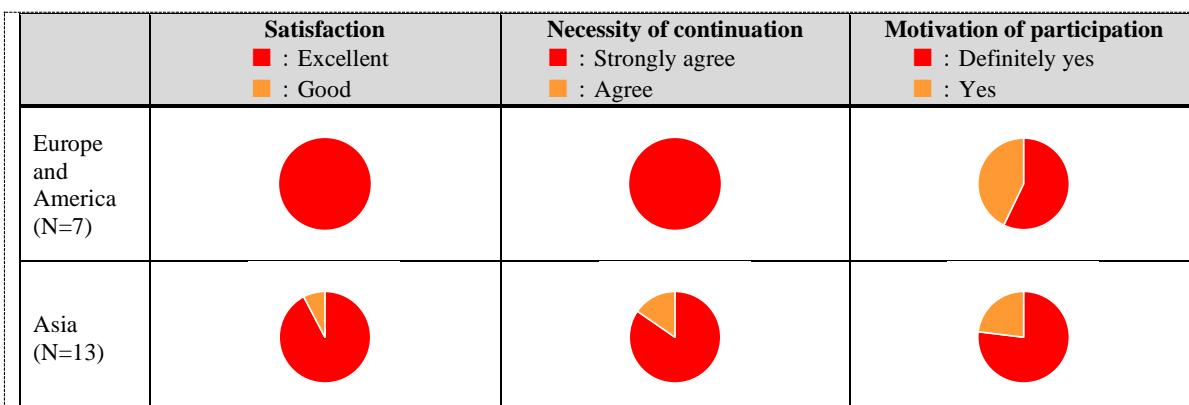
After the activity, a questionnaire survey shown in Table 3.27 was conducted.

All the questions (the satisfaction of the first activity, the necessity of the continuation of the activity, and the motivation to the participation of the next activity) had positive answers from every participant (Figure 3.74). The activity was highly evaluated among every nationality (Figure 3.75).



Source: JICA Consultant Team

Figure 3.74: Questionnaire Survey Results for the Guidance for Morning Alms Giving (N=20)



Source: JICA Consultant Team

Figure 3.75: Questionnaire Survey Results for the Guidance for Morning Alms Giving (Cross Tabulation according to Region) (N=20)

< Summary >

The evaluation and next steps of the first guidance of morning alms giving is as in Table 3.40.

Table 3.40: The Evaluation and Next Steps of the First Guidance of Morning Alms Giving

Positive points	<ul style="list-style-type: none"> Active participation of Vatsene Village was seen. Tourists evaluated the activity highly. Tourists strongly agreed with the concept of the activity.
Points that can be improved	<ul style="list-style-type: none"> For the high satisfaction of tourists, smooth orientation was needed. However, the secretariats did not fully understand the orientation, and the time management was up to the villagers. As a rule, participants of the morning alms giving cannot touch things except offerings after they wash their hands, but because of the arrangement of the venue, some participants touched their shoes after washing their hands. Although DoICT promoted the event with their Facebook page for registration in advance, there were no applicants. To reach the target number of participants, we directly proposed to tourists the night before the activity and the morning of the day of activity and asked for participation. Because we hired a morning alms giving guide as translator, the translator was able to flexibly react to the inadequate explanation by the villager. However, the translator sometimes explained to the tourist before the villager and did not fulfill the translating work that was requested. At first, the same activity was planned in Vatnong Village, but was rejected due to the lack of villager that can act as the guide.
Next steps (proposal)	<ul style="list-style-type: none"> Do rehearsals for the activity and clarify the time distribution of the activity. Improve the PR measures of the activity (not only posting on the DoICT Facebook page, but also promote in tourist centers and guesthouses) Share the contents and orders of explanation, so that many villagers can act as guides. Clarify the roles of the translator.

Source: JICA Consultant Team

Cultural Inheritance (3) “Cultural Exchange Activity between Luang Prabang and Takayama”

< Implementing Organization >

Implementing Organization (Main): DoICT and Takayama City

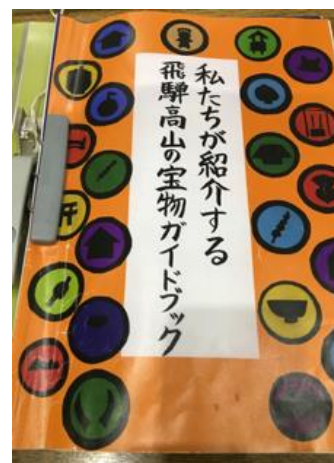
Implementing Organization (Sub): Schools (Luang Prabang and Takayama City), DPL, and village

< Objectives and expected influences >

In everyday lives, people are often unaware of the uniqueness of the culture that they live in. However, by communicating with people from other cultural backgrounds, people witness the differences and can understand their own culture easily. This can lead to the attachment of their culture. Also, the process of trying to tell other people about one selves culture enables one to study and understand one's culture. This activity aims to enhance cultural understanding by connecting schools of Luang Prabang and Takayama City and conduct cultural exchange activities.

< Activity plan >

- At first, certain classes of junior high schools in Luang Prabang and Takayama City are designated. In the classes, students shall discover about their own cities' culture and attractive aspects and make preparation for presentation.
- Once the preparation is finished in both schools, opportunities for mutual exchange shall be provided by tele-conferencing both cities.
- In the Project, coordination among teachers of both schools shall start in 2020 and the cultural exchange shall start from 2021.



Source: JICA Consultant Team

Figure 3.76: Guidebook of Takayama's Treasures

< Necessary items and services and activity cost (proposal) >

Table 3.41: Proposed Necessary items and services and activity cost for Cultural Exchange Activity between Luang Prabang and Takayama

Items/Services	Unit Price (USD)	Quantity	Unit	Total Amount	Remarks
Document preparation	30	1	Set	30	
Meeting expense (including internet)	44	1	Set	44	

Source: JICA Consultant Team

4) Public Facility Management

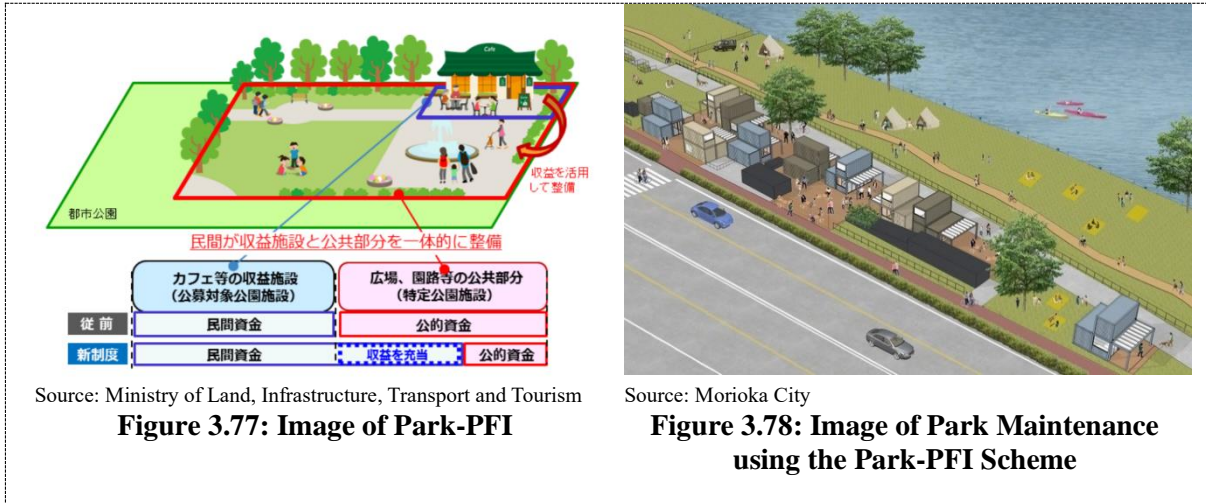
Public facility management shall be conducted by the public sector's responsibility. For the World Heritage Area to be maintained as a comfortable environment, maintenance of the public facilities shall be conducted appropriately and regularly. However, since budget is limited, the approach of inviting the participation of business operators and local residents are important. Roads, parking spaces, public toilets, telecommunication facilities, and riverbanks are the main public facilities and services inside World Heritage Area, and management and restoration measures of these are proposed.

Examples of public facility management activities that will be a reference for Luang Prabang are as follows:

Japan ~Park-PFI~

Park-PFI is a scheme that enables private business operators to operate shops and restaurants for the benefit of the park users and the maintenance and restoration of the park facilities by using the profit made from the shops and restaurants. It is a methodology that decreases the monetary burden of the public sector in park management by inviting the investment from the private sector and benefiting the park users by improving quality parks and user experiences in the parks³⁶.

³⁶Park-PFI Utilization Guideline for the Quality Improvement of Urban Parks (Ministry of Land, Infrastructure, Transport and Tourism)



Source: Ministry of Land, Infrastructure, Transport and Tourism

Figure 3.77: Image of Park-PFI



Source: Morioka City

Figure 3.78: Image of Park Maintenance using the Park-PFI Scheme

With the recognition and reference examples above, activity plans on public facility management are proposed below.

Public Facility Management (1) “Public Toilet Management Improvement”

< Implementing Organization >

Implementing Organization (Main): DPL

Implementing Organization (Sub): UDAA

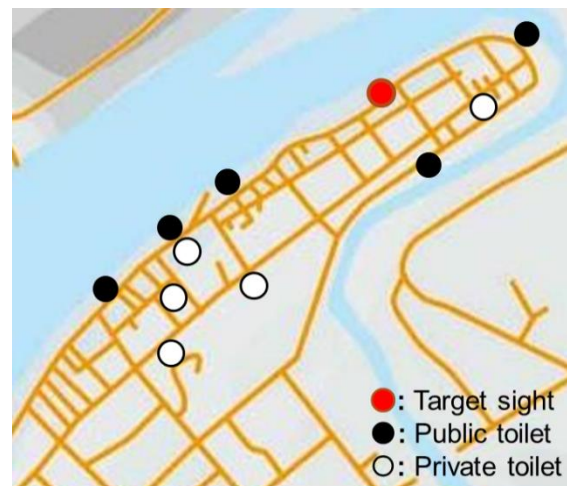
< Activity plan >

- Currently, five public toilets are installed along the Mekong River and Khan River, but some facilities have graffiti printed on and are broken. This activity aims to renovate the toilets. Also, the public toilets currently installed are scattered and there is a lack of public toilets in the central areas of World Heritage Area. Hence, this activity also aims to install a new public toilet at the same time.
- Also, at the same time, for the sustainability of the management of the public toilets, capacity building of the responsible organizations for preservation and management shall be conducted by the documentation of public toilets management manuals.
- The estimated cost for the activity is USD 22,000.



Source: JICA Consultant Team

Figure 3.79: Current Situation of Public Toilets



Source: JICA Consultant Team

Figure 3.80: Location of Existing and Proposed Toilets

Table 3.42: Proposed Implementation Schedule of Public Toilet Management Improvement

Schedule	2019	2020	2021
Pilot Toilet		Construction	management
Other toilet		Management improvement	

Source: JICA Consultant Team

Public Facility Management (2) “Public Garden Improvement”

< Implementing Organization >

Implementing Organization (Main): DPL and UDAA

< Activity plan >

- The park along the Mekong River shall be renovated. The target park is located between the provincial office and the Mekong River, with the total area of 3,350 m².
- There is a plan made by DPL to renovate the park but is only put into action in the south-west part of the park, which is currently managed by UDAA. On the other hand, the north-east part of the park has a better potential, with a relatively large flat space, the scenery of the Mekong River being good and locating next to a boat landing space, but is not maintained well, with bad accessibility of pedestrians and without public toilets nearby. In the improvement activity, the north-east part of the park shall be designated as the improvement priority area, with vegetation management, walkway installation, and public toilet installation. At the same time, for the sustainability of the management of the park, park management manuals shall be documented.
- The estimated cost for the activity is USD 68,000.



Source: JICA Consultant Team

Figure 3.81: Location of Target Park



Source: JICA Consultant Team

Figure 3.82: Current Situation of the North-east Part of the Target Park (Not Maintained)



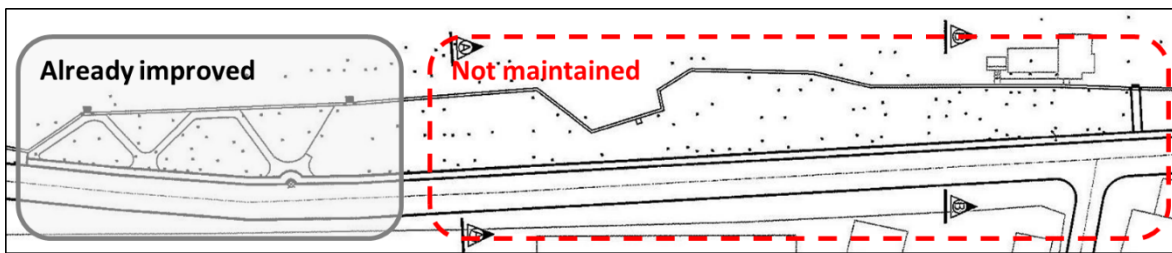
Source: JICA Consultant Team

Figure 3.83: Current Situation of the South-west Part of the Target Park (Already Improved)



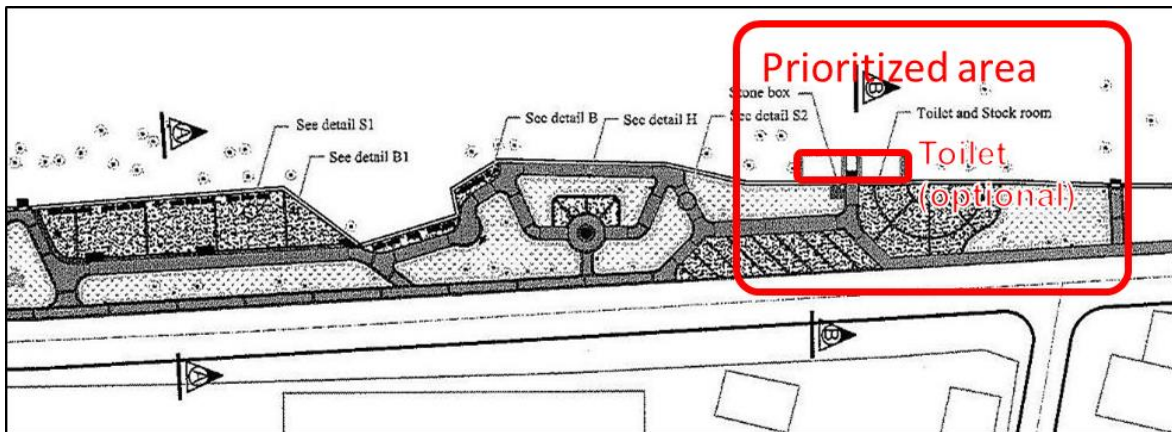
Source: JICA Consultant Team

Figure 3.84: Scenery from the North-east Part of the Target Park



Source: DPL (Partially modified by the JICA Consultant Team)

Figure 3.85: Plan of the Target Park



Source: DPL (Partially modified by the JICA Consultant Team)

Figure 3.86: Park Improvement Plan and Prioritized Area

Table 3.43: Proposed Implementation Schedule of Public Park Improvement

Schedule	2019	2020	2021
Hard		Construction	
Soft			management

Source: JICA Consultant Team

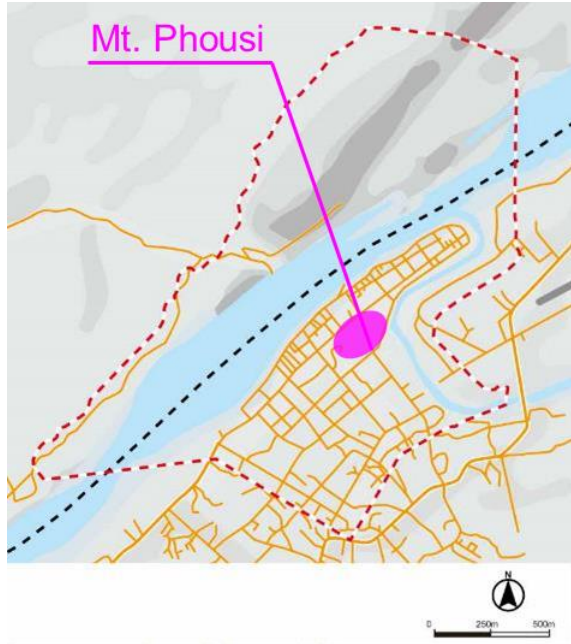
Public Facility Management (3) “Phousi Viewpoint Improvement and Technical Funding”

< Implementing Organization >

Implementing Organization (Main): DPL

< Activity plan >

- Phousi Hill is considered as one of the main tourist destinations inside the World Heritage Area, with many tourists visiting. This facility, owned by Luang Prabang Province, is currently managed by local residents subcontracted by the province. However, there are trees in danger of collapsing along the walkways towards the viewpoint and the landscape management to secure the safety of the tourists is insufficient. Also, the viewpoint on the summit of the mountain is small and there is a danger of tourists slipping down from the viewpoint.
- The activity aims to secure the safety of the tourists by appropriate landscape management and expansion work of the viewpoint and preparation of the increase of tourists expected.
- Also, even though Luang Prabang Province is charging entrance fees for Phousi Hill, since the revenue is under management of the national government, the usage of the revenue is not under Luang Prabang Province’s decision. Hence, under the current system, entrance fee of the Phousi Hill cannot be allocated to the landscape management or the expansion work of the viewpoint. On the other hand, there is a technical fund scheme where the province can control the budget of the fund, with the condition that income, expenditure, activity plans, and budget allocation plans are approved by the national government, that is operated under the ordinance from the minister of finance.
- Therefore, the establishment of the technical fund for Phousi Hill viewpoint improvement by Luang Prabang Province and the allocation of the entry fee to the improvement are proposed. For this, the management responsibility of the technical fund shall be clarified, and the budget allocation plans need to be approved by the national government.
- The estimated cost for the activity is USD 111,000.



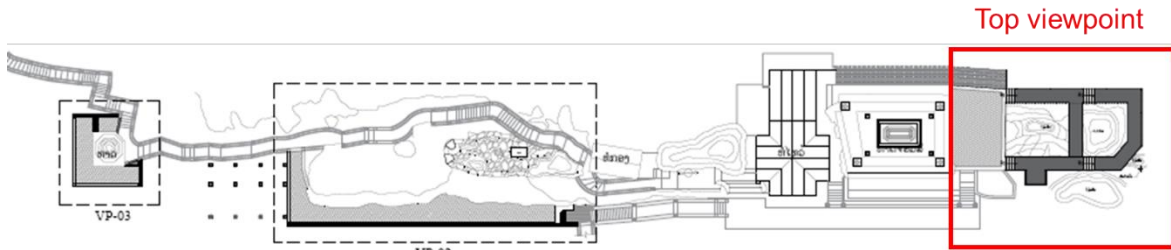
Source: JICA Consultant Team

Figure 3.87: Location of Mount Phousi



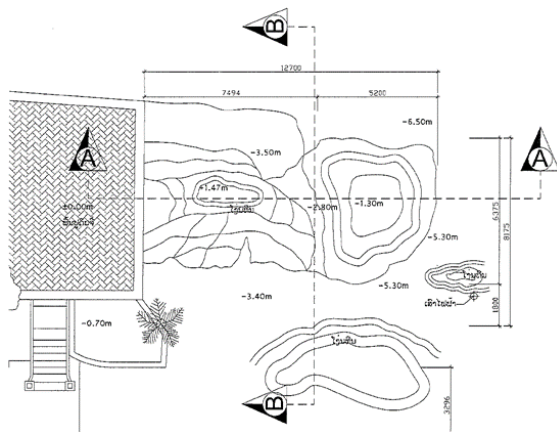
Source: DPL

Figure 3.88: Unstable Trees Lying on Walkway



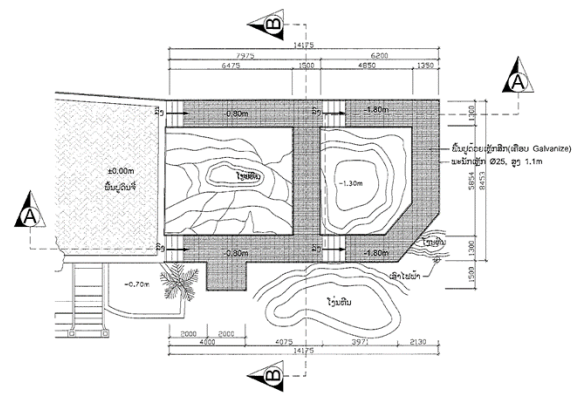
Source: DPL (Partially modified by the JICA Consultant Team)

Figure 3.89: Plan of Mount Phousi



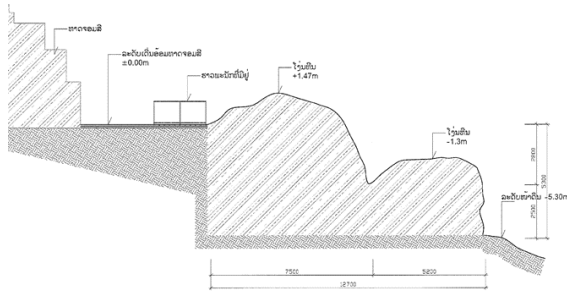
Source: DPL

Figure 3.90: Viewpoint Ground Plan (Current Situation)



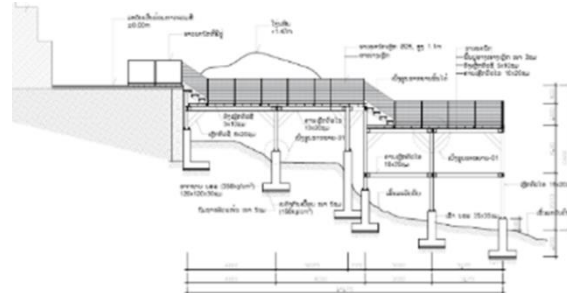
Source: DPL

Figure 3.91: Viewpoint Ground Plan (After Improvement)



Source: DPL

Figure 3.92: Viewpoint Elevation Plan (Current Situation)



Source: DPL

Figure 3.93: Viewpoint Elevation Plan (After Improvement)

Table 3.44: Proposed Implementation Schedule of Mount Phousi View Improvement and Technical Funding

Schedule		2019	2020	2021
View point design improvement	Hard	Design review Cost estimation	Bidding	Construction Defect inspection
	Soft	Technical transfer on safety management		Safety management during construction
Landscape management	Hard	Site survey	Landscape design	Landscape improvement & management
	Soft	Formation of landscape management organization		Capacity enhancement of Landscape management
Technical fund management		Preparation of Mt. Phousi management plan	Development of Mt. Phousi management mechanism including "technical fund"	

Source: JICA Consultant Team

5) Historic Architecture Preservation

Currently, PSMV designates 610 buildings inside the World Heritage Area as buildings that need preservation and restoration, of which 34 houses and temples are identified as in need of restoration and architectural surveys and restoration is under preparation. AFD is supporting the architectural preservation and restoration works of the buildings inside the World Heritage Area.

However, the financial power and manpower of the administrative body and donors are limited and for the promotion of historic architecture preservation, installation of other measures is necessary. Activities for historic architecture preservation are proposed under this understanding.

The Japanese and international examples of historic architecture preservation activities that will be references for Luang Prabang are as follows:

Angkor Wat, Cambodia ~West Approach Restoration Project~

Angkor Wat was registered as World Cultural Heritage in 1992 with the surrounding remains and currently invites more than 4,000,000 visitors per year. The west approach is a bridge approach with a length of 200 m and width of 12 m that spans over the moat. It is said to be used by more than 1,000 people every day. The south half of the approach was restored by *École Française d'Extrême-Orient*

in the 1960s, but the north half is just the same way as in its beginning, and there is a danger of collapsing. The second construction period of the restoration project of this west approach was partially collected by crowdfunding by Sophia Asia Center for Research and Human Development. The crowdfunding project was opened on the crowdfunding service “Ready for” on January 25, 2018 and achieved its first target of JPY 10,000,000 on March 28, 2018 and reached the final funding amount of JPY 17,179,000³⁷.

Takayama City, Gifu Prefecture ~Crowdfunding of TEMPLE HOTEL Takayama Zenkoji~
Takayama Zenkoji Temple located in the central part of Takayama City for more than a century, inviting visitors from faraway with lodging facilities, but in recent years, more than 95% of the visitors were foreign tourists. For the restoration of old facilities, the temple started a crowdfunding project with the target of JPY 1,500,000 on August 31, 2017 and finished the crowdfunding on October 30, 2017 with the final funding amount of JPY 1,788,000. For the return to the investors, the temple provided charms, stamp books, and accommodation vouchers. It also appealed the importance of introducing Japanese history and culture to foreign tourists as the social significance of the project.

With the recognition and reference examples above, activity plan on historic architecture preservation is proposed below.

Historic Architecture Preservation “Heritage Building Rehabilitation Crowdfunding”

< Implementing Organization >

Implementing Organization (Main): DPL

Implementing Organization (Sub): Building owner

< Activity plan >

- Crowdfunding is a mechanism through which information on activities are announced and those who are willing to support the activity are asked for support through the internet. The scheme enables project implementers that do not have enough budget to collect funding, but for the effective collection of funding, it is important to provide attractive returns for the funders and appeal for the social significance of the project.
- The activity aims to establish a crowdfunding project for the preservation of historic architecture and implementing the restoration project after the collection of enough funding. For the establishment of crowdfunding projects, project name, target funding amount, and return to the funders need to be declared. Also, the social significance of the preservation of the historic architecture inside the World Heritage Area need to be effectively appealed.
- The estimated cost for the activity is USD 2,000.

³⁷ Readyfor website

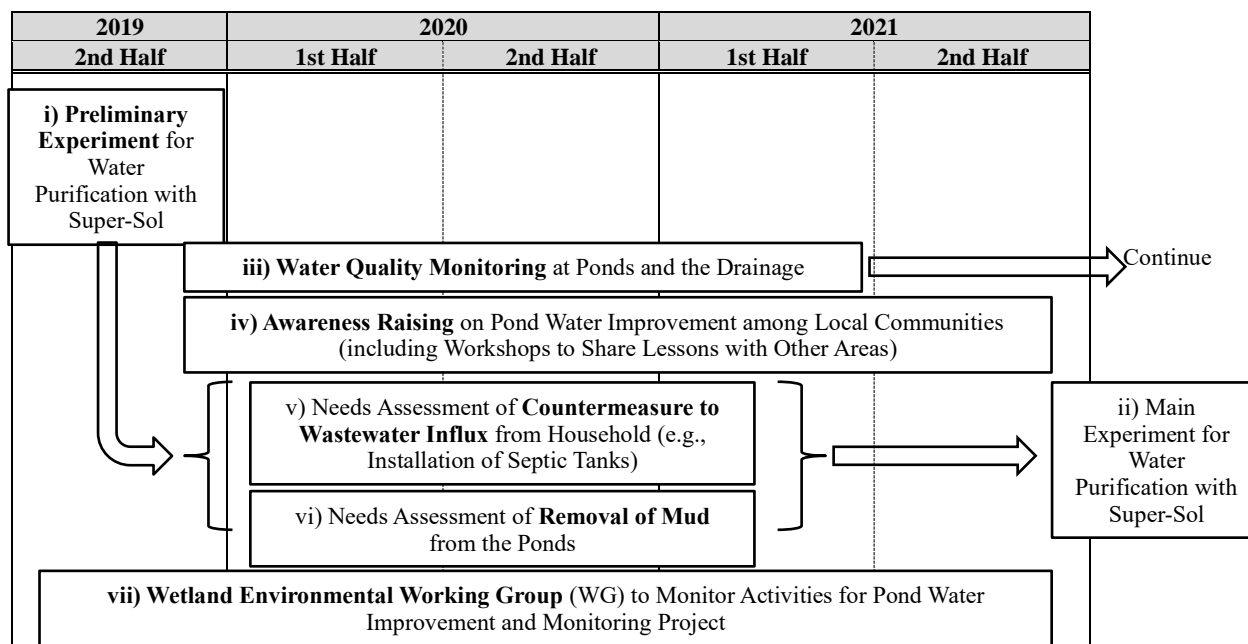
Table 3.45: Proposed Implementation Schedule of Heritage Buildings Rehabilitation Crowdfunding

<i>Schedule</i>	<i>2019</i>		<i>2020</i>		<i>2021</i>	
Crowdfunding management		Preparation for crowdfunding	Establishment of the fund	Run the fund		
Rehabilitation of one heritage building		Building survey for selection of building	Rehabilitation work			

Source: JICA Consultant Team

6) Pond Water Improvement and Monitoring Project Plan and Manual Proposal

Figure 3.94 shows the flow of activities and their implementation schedule in the Pond Water Improvement and Monitoring Project.



i) Preliminary Experiment: to confirm effect of Super-Sol with pond water in aquariums. Completed in the consultants works.

iii) Water Quality Monitoring: to regularly monitor water quality in ponds and drainage

iv) Awareness Raising: to raise awareness on pond water among local communities

v) Countermeasure to Wastewater Influx: to prevent wastewater influx from households

vi) Removal of Mud: to remove mud, a source of poor water quality, at the bottom of ponds

vii) Wetland Environment WG: to monitor and share progress of activities among stakeholders

“Main Experiment” will presupposes “v) Countermeasure to Wastewater Influx” and “vi) Removal of Mud”, and it seems difficult to implement the main experiment during the Project period.

Source: JICA Consultant Team

Figure 3.94: Flow of Activities and their Implementation Schedule in the Pond Water Improvement and Monitoring Project

The following explains the detailed preparation and implementation process:

i) Preliminary Experiment for Water Purification with Super-Sol

The preliminary experiment has already been implemented and results are shown in 3.5.2. A manual for the next implementation, based on the review of current practice, is summarized below.

a) Objectives

To provide basic data to help develop the methodology for the main experiment, by monitoring changes in water quality among samples in aquariums with different volumes of Super-Sol and by examining the degree of water quality improvement and its speed depending on the volume of Super-Sol.

b) Methodology

There are four aquariums per pond that were filled with sampled pond water, and 0%, 0.5%, 1.0% and 2.0% of Super-Sol to the water volume were added, respectively. Changes in water quality are monitored by measuring pH, transparency, and water temperature at a fixed time on a fixed day of every week.

c) Target Groups

Target groups for the preliminary experiment for water purification with Super-Sol are as follows (Table 3.46):

Table 3.46: Target Groups of the Preliminary Experiment for Water Purification with Super-Sol

Category	Organization / Individuals	Brief description, Roles, and Representatives
Public Sector	UDAA	Several officers
	DPL	Supervisors
	Mano / Pongkham villages	Village leaders need to understand the activities
	(Water Supply State-Enterprise)	Advice to UDAA and DPL on water analysis (upon necessity)
Private Sector	Pond Owners	Cooperation to the experiment including water sampling from ponds and feedback of the experiment results
Other	N/A	

Source: JICA Consultant Team

d) Equipment

Necessary equipment for the preliminary experiment for water purification with Super-Sol are as follows:

- 0.5 kg of Super-Sol per pond for experiment
- 8 aquariums (60 cm x 30 cm x 30 cm)
- pH meter with thermometer (1)
- Transparency meter (1)
- 4 water containers (25 L)
- Waterproof digital camera (1)
- Electronic scale (to measure the weight of Super-Sol to put into aquariums)
- Net to contain Super-Sol in water and stone to prevent floating

The volume of Super-Sol to put into aquarium has four categories from 0% to 2.0%, which is because; ① 0.5% and 1.0% of Super-Sol were used in the main experiment in Takayama City, and ② the target area is not appropriate for the use of heavy machines and manual implementation is required and weight of 2.0% Super-Sol for relatively small pond No. 93 (approximate volume is 38 m³) is calculated 190 kg (calculation is explained later), which would be the upper limit for manual implementation of the main experiment.

The weight of Super-Sol to put into aquarium is calculated as seen below (% to the volume).

Volume of an aquarium: $0.6 \times 0.3 \times 0.3 = 0.036 \text{ m}^3 = 36 \text{ L}$ (25 L of pond water is filled; water depth is 14 cm.)

Specific gravity of Super-Sol: $0.45 \text{ kg/L} = 450 \text{ g/L}$

Based on these, weights of 0.5%, 1.0%, 2.0% of Super-Sol to the water volume are calculated as shown in Table 3.47.

Table 3.47: Weights of Super-Sol, 0.5%, 1.0% and 2.0% to the Water Volume

% to the Volume	Volume of Super-Sol (L)	Weight of Super-Sol (g)
0%	$25 \times 0 =$	0
0.5%	$25 \times 0.005 =$	0.125
1.0%	$25 \times 0.01 =$	0.25
2.0%	$25 \times 0.02 =$	0.5
Total		393.75

Source: JICA Consultant Team

Therefore, one set of Super-Sol (0%, 0.5%, 1.0%, 2.0%) per pond weighs about 400 g, equivalent to 0.9 L.

e) Preparation

Necessary procurements of equipment and services for the preliminary experiment for water purification with Super-Sol are as shown in Table 3.48 and Table 3.49.

Table 3.48: List of Equipment for the Preliminary Experiment

Item	Quantity	Procured in	Price	Remarks
Aquarium (60 cm x 30 cm x 30 cm)	8	Luang Prabang	LAK 400,000 x 8 = LAK 3,200,000	
pH Meter with Thermometer	1	Vientiane	LAK 1,637,000	Hanna Instruments, pHep H198107
Transparency Meter	1	Japan / Vientiane	USD 92	Tokyo Garasu Kikai (TGK), 792-80-61-15
Water Container (25 L)	8	Luang Prabang	LAK 50,000 x 8 = LAK 400,000	
Waterproof Digital Camera, with an SD Card	1	Vientiane	USD 210	FujiFilm, FinePix XP130
Electronic Scale	1	Luang Prabang	LAK 100,000	Puliheng, SF-400

Source: JICA Consultant Team

Table 3.49: List of Services for the Preliminary Experiment

Service	Procured in	Price	Remarks
Detailed Water Quality Analysis by a specialized agency (8 parameters: pH, BOD, COD, DO, SS, E. coli, Total Bacteria, and Total Nitrogen)	Private company in Vientiane (Phanthamit Analytical Lab. Co., Ltd.) (Water Supply State-Enterprise in LPB cannot test BOD and other parameters.)	USD 228 / sample	Pond water at the beginning of the preliminary experiment, and water from aquariums at the end of the experiment are sampled for quality analysis. A month is needed to process and receive the results.

Source: JICA Consultant Team

f) Process

Examples of a four-days process of the preliminary experiment for water purification with Super-Sol are as shown in Table 3.50.

Table 3.50: Examples of an Implementation Process of the Preliminary Experiment

Date	Activity	What to do	Remarks
In advance	Preparation for procurement of equipment and services	Coordinate with JICA and the Project on procurement of equipment and services, which includes the budget	Collect information from UDAA and national staff
	Procurement of equipment	Procure aquarium, pH meter, transparency meter, water containers, and waterproof digital camera before the JICA experts come to LPB	Transparency meter should be procured in Japan. Turbidimeter should be considered.
	Prior consultation with UDAA	Prior consultation is needed with UDAA for; set up experiment site with aquariums within UDAA facility, selection of officers for the experiment and methodology of the experiment. As soon as aquariums are prepared, they need to be set up in UDAA.	E-mail communication is fully utilized in advance. Data analysis and report writing should be discussed in LPB.
	Prior consultation with pond owners	Inform pond owners providing water for the preliminary experiment of sampling date and ask for permission.	Coordinate with UDAA.
	Selection of water quality analysis agency	Select water quality analysis company for detailed analysis of water both at the beginning	Water Supply State-Enterprise cannot analyze

Date	Activity	What to do	Remarks
		and at the end of the preliminary experiment.	BOD and other parameters.
	Preparation for explanation at WG	JICA Expert will explain the preliminary experiment at WG and its presentation and handouts should be prepared.	Coordinate WG agenda and the presentation.
1 st day	Arrival of the JICA Expert in LPB and meeting among the Project staff	Super-Sol is brought in from Japan as hand luggage of the JICA Expert.	Prepare "Certificate of Measurement" in Eng. to prove ingredients of Super-Sol.
	Wetland Environmental WG Meeting	JICA Expert will explain the preliminary experiment with Super-Sol. Develop network and share information.	Interpreter between the Japanese and Lao should be prepared. Participation of village leaders is preferred.
2 nd day	Field visit to ponds and sampling of water from the ponds	After visiting all ponds in Mano and Pongkham villages, visit, meet, and interview the owners of the ponds for sampling. After sampling, move to UDAA to fill the aquariums with sampled water. Leave overnight to settle down.	Invite UDAA and DPL officers-in-charge and village leaders. Water containers, bucket, and funnel should be prepared.
	Preliminary experiment	Advise the officers how to use pH meter and transparency meter, what to record with digital camera, and how to record data	Use the manual for the officers to review.
3 rd day	Preliminary experiment	Measure pH, temperature, transparency in each aquarium, and take photos. Observe skills and actions of the UDAA officers and advise where necessary.	Attach greyscale chart to the sidewall of aquarium to assist transparency
	Preliminary experiment (detailed water quality analysis)	Sample water at the ponds for detailed analysis and send them to the selected water quality analysis agency.	Transfer method of samples to the agency should be confirmed in advance.
4 th day	Report to DoICT/DPL/UDAA	Not only reporting of activities, but also explaining likely results to come	Arrangement needed
	Departure of the JICA Expert from LPB		
Post-period	Regular monitoring	UDAA officer will monitor pH, transparency and temperature at a fixed time on fixed day of every week.	Data should be shared by e-mail every time.
	Data collection and analysis, report development	Summarize data until the end, analyze them and compile a report which will be discussed the way forward.	Data analysis and report preparation may need technical transfer to the officers.
	Detailed water quality analysis by the agency	Water in each aquarium is sampled and sent to the water quality analysis agency for detailed analysis.	Discuss the structure of the report with the officers-in-charge and advise where necessary.

Source: JICA Consultant Team

g) Training Needs

Examples of training needs for of the preliminary experiment for water purification with Super-Sol are seen in Table 3.51.

Table 3.51: Training Needs for the Preliminary Experiment

Type	Timing	Target people	Contents
JICA Short-term Expert	1 st : beginning of the preliminary experiment	UDAA, DPL, village leaders, other stakeholders	<ul style="list-style-type: none"> • Explanation and consensus building on activities in general at WG • Advice for the preliminary experiment • Suggestion on pond water improvement

Type	Timing	Target people	Contents
	2 nd : 1 month after the end of the preliminary experiment	UDAA, DPL, village leaders, and other stakeholders	<ul style="list-style-type: none"> • Advice on data analysis of the preliminary experiment • Support for reporting the results of the preliminary experiment at WG • Discussion on the way forward
Training in Japan	1 st : after January 2020	UDAA, DPL, and village leaders	<ul style="list-style-type: none"> • Parameters and environmental standard in water • Measurement of water quality in surface water • Water environment improvement with local participation
Training in Laos (Water Supply State - Enterprise)	1 st : after January 2020 2 nd : appropriately	UDAA and DPL	<ul style="list-style-type: none"> • Training on methodology of water quality analysis (based on an assumption that the water enterprise has basic knowledge on analysis of water pollution) • Practice of water quality data analysis
Others (seminars, etc.)	WG: 1 month after the end of the preliminary experiment	UDAA, DPL, village leaders, and other WG members	<ul style="list-style-type: none"> • UDAA explains results of the preliminary experiment at WG • Discussion on the way forward, based on the results

Source: JICA Consultant Team

ii) Main Experiment for Water Purification with Super-Sol

The original plan was to proceed to the main experiment following the preliminary experiment, however, it has been discussed that the main experiment should presuppose steady implementation of “v) countermeasure to wastewater influx” and “vi) removal of mud”, to set up an implementation environment for the main experiment. Some argue that it seems difficult to implement the main experiment during the Project period. This plan describes the main experiment as “Main Experiment for Water Purification with Super-Sol”, and only discuss its “Objectives”, “Methodology”, and “Target Groups”.

a) Objectives

To monitor the degree and speed of water quality improvement and its seasonal change, by putting a certain volume of Super-Sol into ponds

b) Methodology

- ① Put Super-Sol in some containers that water can freely go through, sink them in ponds No.93 and No. 97 which took part in the preliminary experiment, monitor pH, transparency, and water temperature.
- ② Sample water every three months and send them to the analysis agency for detailed analysis.

c) Target Groups

Target groups of the main experiment are shown in Table 3.52.

Table 3.52: Target Groups of the Main Experiment for Water Purification with Super-Sol

Category	Organization / Individuals	Brief description, Roles, Representatives, etc.
Public Sector	UDAA	Several officers
	DPL	Supervisors
	Mano / Pongkham villages	Village leaders need to understand the activities
	(Water Supply State-Enterprise)	Advice to UDAA and DPL on water analysis (upon necessity)
Private Sector	Pond Owners of No. 93 and No. 97	Cooperation for the main experiment, such as installation of access bridge in the ponds and regular visits by UDAA for experiment implementation
Other	UNESCO	Need to confirm if the installation of access bridge in the ponds is regarded as change of state and acceptable

Source: JICA Consultant Team

iii) Water Quality Monitoring

Monitoring of water quality in all ponds and drainage in the target area is highly needed in the area, as requested by village leaders.

a) Objectives

- ① To raise interests and knowledge of pond owners in pond maintenance and management, which in future will form a basis for community-based management of ponds.
- ② To understand the current status of water quality and volume in ponds and drainage and their seasonal changes, which will be a baseline data to improve water quality in the whole area.
- ③ At Pond No.93 and No.97, two sets of data will be compared before and after implementation of countermeasures to wastewater influx and removal of mud (discussed later), and to examine the impact of the countermeasure and mud removal.

b) Methodology

- ① (All Ponds and the Drainage, Monthly) UDAA and DPL monitor and measure pH, transparency, water temperature, water level, and mud thickness at all ponds and four fixed points along the drainage every month. UDAA and DPL should consider raising awareness and interests of the pond owners, by active communication with them, joint measurement, discussion on issues of pond, and information exchange on pond management.
- ② (Fixed Observation, Quarterly) Water is sampled every three months at designated fixed observation points, six ponds, and two fixed points along the drainage. The sampled water is sent to the analysis agency for detailed analysis in five parameters (BOD, COD, DO, E. coli, and Total Nitrogen).
- ③ These monitoring should be continued for one year ~ one and a half year, after which the activity will be reviewed. Thereafter, these monitoring will be continued as a regular activity of UDAA and DPL.

c) Target Groups

Target groups of the water quality monitoring are shown in Table 3.53.

Table 3.53: Target Groups of Water Quality Monitoring

Category	Organization / Individuals	Brief description, Roles, Representatives, etc.
Public Sector	UDAA	Several officers
	DPL	Supervisors
	Mano / Pongkham villages	Village leaders need to understand the activities
	(Water Supply State-Enterprise)	Advice to UDAA and DPL on water analysis (upon necessity)
Private Sector	All pond owners, Owners of the ponds targeted for pond water quality monitoring, and neighboring people to fixed points along the drainage	Monthly monitoring targets all ponds and the owners are involved to raise their interests and awareness on water quality. People are expected to cooperate in sampling water from target ponds and the drainage, to raise interests in water quality in the whole area.

Source: JICA Consultant Team

d) Equipment

Necessary equipment for the water quality monitoring are as follows;

- pH meter with thermometer (1)
- Pure water to wash pH meter (13 L)
- Transparency meter (1) (Procurement of turbidity meter should be considered)
- Waterproof digital camera (1)

- Pole measure (2 m) (1)

e) **Process**

The implementation process of the water quality monitoring is as shown in Table 3.54.

Table 3.54: Implementation Process of Water Quality Monitoring

No.	What to do	Remarks
1	Discuss and agree on monitoring methodology with UDAA, DPL, village leaders, and pond owners	Cooperation with stakeholders is essential through sharing info and consensus, in particular, officers of UDAA and DPL who implemented the preliminary experiment should be involved.
2	Design details of the monitoring methodology, as well as methodology of data analysis in advance.	Need to estimate the time length for each process.
3	Procure equipment (pH meter)	Confirm in advance if procurement is possible in Laos. If not, have it procured in Japan.
4	Measure pH, transparency, water temperature, and water level. at all ponds and four fixed points along the drainage every month.	See the map below for candidate sites for the fixed points. Consider educational impact on pond owners to raise their awareness and interests in pond environment.
5	Sample water at eight fixed points every three months and send them to the analysis agency for detailed analysis.	Coordinate with the Chief Advisor in advance for service procurement and payment procedure. Consider cooperation with NGOs on awareness raising.
6	Compile and analyze data at the end of the monitoring and write a report.	Discuss with the officer-in-charge structure of the report in advance and advise him/her necessary place. Compare data before and after the countermeasures and mud removal and examine their effects.
7	Coordinate with UDAA and DPL to implement the activity as their regular work	Key is their understanding of its necessity.

Source: JICA Consultant Team

Candidate sites for the fixed observation points are shown in Figure 3.95.

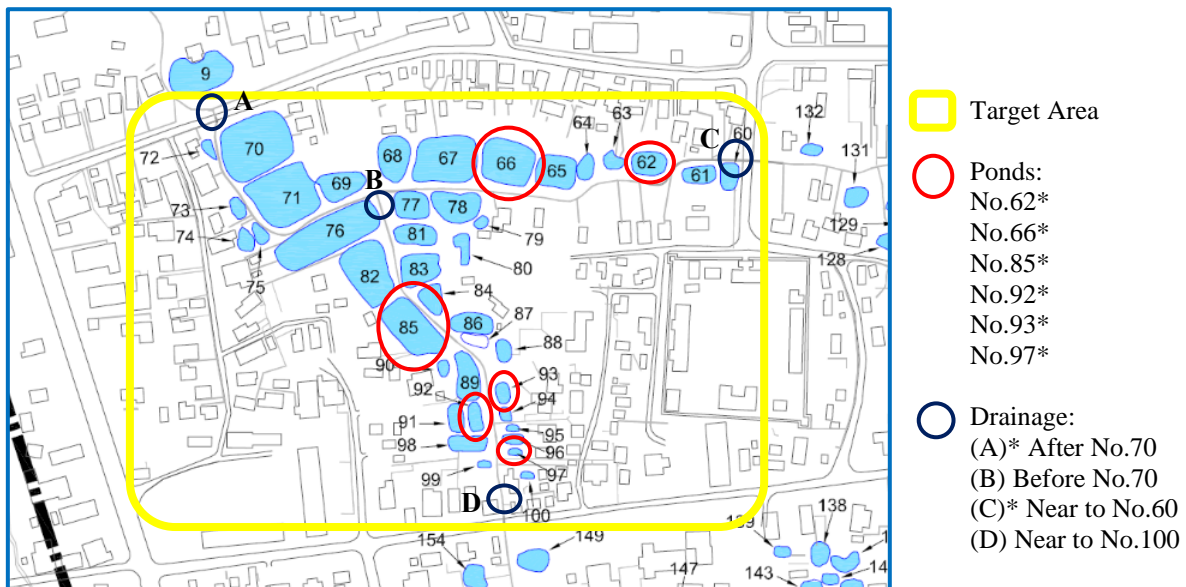


Figure 3.95: Fixed Points of Water Quality Monitoring (For Detailed Analysis)

Pond No. 93 and 97 cooperated with the preliminary experiment with Super-Sol and provided pond water. Other than these, one well-managed pond and one not-managed pond are selected from each village, totaling two ponds from each village. No. 62 and 66 from Mano Village, and No. 85 and 92 from Pongkham Village are selected. Drainage points near to Pond No. 60 (C) and 100 (D) are entry

points of the drainage into the target area, while a point before pond No. 70 (B) is a confluence of the two drainage, and a point after No. 70 (A) is an exit of the drainage from the target area. (A) and (C), exit and entry points, are selected as the fixed observation points for detailed analysis.

f) Training Needs

Examples of training needs for the water quality monitoring are as shown in Table 3.55.

Table 3.55: Training Needs for the Water Quality Monitoring

Type	Timing	Target people	Contents
JICA Short-term Expert	At WG after implementation of the monitoring is confirmed	UDAA, DPL, village leaders, and other stakeholders	• Explanation and consensus building on the activities at WG
Training in Japan	1 st : after January 2020	UDAA, DPL, and village leaders	• Parameters and environmental standard in water • Measurement of surface water quality • Water environment improvement with local participation
Training in Laos (Water Supply State-Enterprise)	1 st : after January 2020 2 nd : appropriately	UDAA and DPL	• Training on methodology of water quality analysis • Practice of water quality data analysis • Training on sampling and water quality analysis in the field
Training in Laos (Water Quality Analysis Agency)	1 st : April 2020	UDAA, DPL, and Water Enterprise	• Interpretation of the results of quarterly detailed water quality analysis
	2 nd : September 2021	UDAA, DPL, and Water Enterprise	• Compiling all data of detailed analysis and discussion on the outcome with the stakeholders
Others (seminars, etc.)	At WG meetings	UDAA, DPL, village leaders, and other WG members	• Explanation and consensus building on the activities at WG

Source: JICA Consultant Team

With the experiences of the preliminary experiment, the officers of UDAA and DPL are now familiarized to use the equipment and to measure pH, transparency, and water temperature. Through the monitoring, more opportunities are expected for local communities and officers of UDAA and DPL to talk about pond water quality, which will lead to raising awareness of local communities. Officers of UDAA and DPL are also expected to increase their interests in real situation in the field and to have higher motivation for pond water improvement.

iv) Awareness Raising among Local Communities

a) Objectives

Continuous and sustainable activities for pond water improvement require improved awareness of local communities and their self-reliant proactive actions on the ground. Physical means such as countermeasures towards wastewater from households and mud removal and moral support through daily pond maintenance with raised awareness of local communities are expected to function in parallel to sustainable water quality improvement activities.

Towards the end of the project activities, shared-learning workshops will be conducted to share lessons learned from various activities for pond water improvement with local communities in the target area and neighboring areas and to expand the pond water improvement to other areas. Such workshops are expected to facilitate awareness raising on pond water improvement in other areas, leading to actual improvement in many areas.

b) Methodology

Individuals working in Laos, or appropriate NGOs/individuals based in Thailand, will be selected to work with them. Target of awareness raising is not only the pond owners, but also wider local communities neighboring ponds, that will benefit in the improvement of pond water which is explained carefully along with their livelihood. An environment that local communities feel easy and comfortable to participate should be developed, such as workshops and collaboration with trash-picking event. Site visits to learn advanced case studies are one of the options. As such, any learning opportunities to improve pond water are fully utilized with local communities, wherein the learnings should be put into practice.

At the end of all activities in the Project, UDAA will organize a workshop with village leaders of the target area, village leaders of neighboring villages with ponds, pond owners, and DPL to share lessons learned from the activities, to discuss how to utilize such lessons in other areas, and how to develop activities in the future. Field visits will also be conducted. To effectively raise awareness among the workshop participants, the number of participants will be limited, in order to divide workshop opportunities into several occasions and several areas. Other effective means will always be pursued such as cooperation with NGOs that are experienced in awareness raising

c) Target Groups

Target groups of the awareness raising among local communities are stated in Table 3.56.

Table 3.56: Target Groups of the Awareness Raising among Local Communities

Category	Organization / Individuals	Brief description, Roles, Representatives, etc.
Public Sector	UDAA	Several officers
	DPL	Supervisors
	Mano / Pongkham Villages	Village leaders need to understand the activities
Private Sector	All pond owners	Understanding the status of respective ponds and capacity building of pond management
	Local communities neighboring ponds	Raising awareness of household wastewater treatment and water environment

Source: JICA Consultant Team

d) Equipment

Considering the contents and methodologies adopted in activities, necessity of equipment will be discussed with partner individuals or NGOs,

e) Process

The process of awareness raising among local communities is shown in Table 3.57.

Table 3.57: Implementation Process of Awareness Raising among Local Communities

No.	What to do	Remarks
1	Collect information on NGOs/individuals that have been working or have the capacity to work on pond water improvement in Laos or Thailand, then shortlist them.	RECOFTC* based in Thailand is a promising candidate but continue collecting information to other NGOs.
2	Share information and discuss with UDAA, DPL, and village leaders about the shortlisted NGOs, to determine selection criteria. Share with them the common image of awareness raising activities too.	Advantage for NGOs/individuals with experiences in pond water improvement with local communities.
3	Interview those shortlisted NGOs/individuals and select a candidate. (need to confirm what type of contract is appropriate)	Discuss details such as what to do, frequency, possibility of support to the monitoring, and payment.
4	Conduct a baseline survey on awareness of local communities.	Coordinate with UDAA, DPL, and village leaders.
5	UDAA joins awareness raising activities for local communities, such	Consider ToT (Training of Trainers) for

No.	What to do	Remarks
	as workshops, to learn the methodologies.	UDAA
6	Participate in the water quality monitoring and trash-picking event to seek for synergy opportunities with awareness raising.	Need to closely cooperate with UDAA
7	Consider site visits to learn advanced case studies if any.	Need to consider budget and prior coordination is necessary.
8	Conduct a survey at the end of awareness raising activities to compare the results with that of the baseline survey. Compile all activities, analyze them, then write a report.	Discuss structure of the report with the officer-in-charge in advance and advise the necessary place.
9	Extract lessons from all activities as a preparation for shared-learning workshops.	Review all activities with UDAA and DPL, to jointly extract lessons.
10	Select communities to invite to the workshops and develop a workshop implementation plan.	Discuss with UDAA and DPL for sound coordination with communities
11	Design workshop rough schedule, including visits to an advanced community, activities in the community, and its timeframe.	Borrow workshop venue from local temples. Translate handouts to Lao as much as possible.
12	Implement workshops (several times)	Pay attention to the responses from participants from other areas and consider possibilities of extension.
13	Compile participants list, presentations, questions, and answers, to write a report at the end of the workshops.	Discuss the structure of the report with the officers-in-charge in advance and advise where necessary.

Source: JICA Consultant Team

*RECOFTC (<https://www.recoftc.org/>)

Current official name is “The Center for People and Forests”. It is an NGO actively working on forest conservation in ASEAN region through trainings. It has expertise in environmental education and gender issues in natural resource management. Their experience and knowledge on water environment management in urban area is unknown, however, their good network is expected to introduce some appropriate NGOs in Laos or neighboring countries.

f) Training Needs

The examples of training needs for the awareness raising among local communities are stated in Table 3.58. There are varieties of training needs, due to extraction from various activities.

Table 3.58: Training Needs of Awareness Raising among Local Communities

Type	Timing	Target people	Contents
JICA Short-term Expert	At WG after implementation of the activities is confirmed	UDAA, DPL, village leaders, and other stakeholders	• Explanation and consensus building on the activities at WG
Training in Japan	1 st : after January 2020	UDAA, DPL, and village leaders	• Water environment improvement with community participation
Training in Laos (Water Supply State-Enterprise)	1 st : after January 2020 2 nd : appropriately	UDAA and DPL	• Training on methodology of water quality analysis (based on an assumption that the water enterprise has basic knowledge on analysis of water pollution) • Practice of water quality data analysis • Training on sampling and water quality analysis in the field
Training in Laos (Analysis Agency)	1 st : April 2020	UDAA, DPL, and Water Enterprise	• Interpretation of the results of quarterly detailed water quality analysis
	2 nd : September 2021	UDAA, DPL, and Water Enterprise	• Compiling all data of detailed analysis and discussion on the outcome with the stakeholders
Training in Laos (Advanced)	1 st : as soon as finding advanced case study 2 nd and onward	UDAA, DPL, and village leaders	• Field visits to advanced case studies in Laos to learn activities and community participation.

Type	Timing	Target people	Contents
case studies)	depend on necessity		
	1 st : appropriately	UDAA	• Conduct ToT to UDAA to develop capacity for awareness raising among communities.
Others (seminars, etc.)	Alongside with WG meetings	UDAA, DPL, village leaders, and other WG members	• UDAA reports and discusses with WG members on progress of awareness raising activities among local communities.

Source: JICA Consultant Team

v) Countermeasures to Wastewater Influx

a) Objectives

One of the main causes of deteriorating pond water is considered influx of wastewater from households. Preventing direct influx of wastewater from household to ponds is being discussed to improve not only pond environment but also wetland environment in the whole target area. Installation of septic tanks to treat wastewater is one of the options and its extension to wider areas can be considered with necessary information such as cost and timeframe.

b) Methodology

Survey should be done to record influx of wastewater from household to ponds at No. 93 and 97 and examine if installation of septic tanks in the market is feasible or not. If feasible, install them, if not, consider other means. Whatever the means, it is necessary to prevent direct influx of wastewater into ponds.

As of September 2019, a septic tank for five to eight pax of family use has the capacity of 1,600 L, its size is 1.5 m high and 1.4 m wide and sold at LAK 2,600,000 in Luang Prabang. Price of the same septic tank including shipping and installation services is LAK 5 million where installation takes about a week. Major users of such septic tanks in Luang Prabang City are hotels and restaurants, but not many residences for local people have them.

Maintenance of septic tanks requires some time and effort, such as frequent removal of trash. Septic tank installation in each household means that it becomes individual property of each household, which attracts another discussion if it is appropriate to support in ODA scheme.

c) Target Groups

Target groups of the countermeasures towards wastewater influx are stated in Table 3.59.

Table 3.59: Target Groups of Countermeasures to Wastewater Influx

Category	Organization / Individuals	Brief description, Roles, Representatives, etc.
Public Sector	UDAA	Several officers
	DPL	Supervisors
	Mano / Pongkham villages	Village leaders need to understand the activities
Private Sector	Pond owners of No. 93 and 97, and their neighbors	Survey on wastewater influx into ponds and cooperation for installation of septic tanks next to their ponds
Others	UNESCO	Need to confirm if septic tank installation is accepted

Source: JICA Consultant Team

d) Equipment

Necessary equipment for the countermeasures to wastewater influx are as follows:

- Measuring tape (30 m) (1)
- Septic tank (select appropriate size and specification)
- Septic tank installation service
- Refurbishment of kitchen area, if necessary, for installing a septic tank

e) Process

The process of countermeasures to wastewater influx is seen in Table 3.60.

Table 3.60: Implementation Process of Countermeasures to Wastewater Influx

No.	What to do	Remarks
1	Survey on septic tanks, including size, price, distributors, installation methodology and price, and maintenance	If procurement in Luang Prabang is difficult, consider that in Vientiane.
2	Identify locations of wastewater influx into ponds, and conduct needs assessment to find out where to install septic tanks	Joint activity with UDAA. The assessment should clarify the necessity of refurbishment in kitchen area.
3	Discuss the details of the septic tank installation with village leaders, pond owners, household which may have a septic tank installed, UDAA and DPL. To those who do not want a septic tank in their ponds or households, other means should be considered.	Explain that septic tank installation inevitably requires owner's frequent maintenance. Train the owners on its maintenance and frequency and make sure the owners actually practice it.
4	Prepare for contract out septic tank installation and procure the tanks if necessary.	Collect information in advance on service providers for installation.
5	Install septic tanks and refurbish the kitchen area if necessary.	UDAA should be prepared to supervise it.
6	At completion of installation, request the service provider to submit a report, check the contents, and advise the septic tank owners how to maintain them.	Record location, date, and household of septic tank installation. Such record is necessary to compare the data of the main experiment and water quality monitoring before and after the installation.

Source: JICA Consultant Team

f) Training Needs

Examples of training needs for the countermeasures to wastewater influx are stated in Table 3.61. However, an option of "not installing" can be discussed in prior consultation with stakeholders.

Table 3.61: Training Needs for Countermeasures to Wastewater Influx

Type	Timing	Target people	Contents
JICA Short-term Expert	At WG after implementation of the activities is confirmed	UDAA, DPL, village leaders, and other stakeholders	• Explanation and consensus building on the activities at WG

Source: JICA Consultant Team

As an alternative, the installation of drainpipe is considered to have household wastewater directly release to the drainage. This scenario means that wastewater is collected from the drainage and water quality is severely deteriorated. In the rainy season, rain may dilute the wastewater, however, wastewater may be concentrated due to evaporation in the dry season, and environmental degradation may become worse. Another concern is the negative impact on environment of downstream. Due to such reasons, installation of drainpipe is not promising now.

vi) Removal of Mud

a) Objectives

Thick mud accumulates in many ponds, which is not only smelly, but also being a factor of water quality degradation. Removal of mud is considered to improve pond water environment and wetland environment in the whole target area. Trial of mud removal as a model case is also considered to collect information on labor, cost, and time required. Such information is necessary to extend mud removal to other areas.

b) Methodology

A DPL officer and the owner of pond No. 85 has an experience of removing mud from his pond. (Pond No. 85 is fenced out and out of the subject in the Pond Survey in January 2019.) He shared his experience below.

- The thickness of the mud was about 30 cm and he used an electric pump to take the water out of the pond and dried mud.
- Mud along the pond edge was raked and he spread lime over mud.
- Rain fed water in the pond and confirmed that water quality was improved.

Owner of the Pond No. 66 also have an experience of mud removal. The methodology was; emptied the pond, raked mud manually into the drainage, and left the pond as it was and waited for water to come from the bottom. It took about two weeks to fill the pond with water.

These experiences suggest that removal of mud requires taking water out of the pond, either by using electric pump or other means, and raking mud out to the drainage manually. Considering the environment of the drainage and the downstream, it should avoid the dry season because washing down the drainage can be slower. These activities are voluntary works by local pond owners, which suggests that people with good awareness on pond management can mobilize themselves relatively easily. An approach should be practical, in which various methodologies and ideas on mud removal are provided to local communities, environmental awareness is raised through education activities, and mud removal is adopted as an activity for a better environment to put into practice. Treatment of removed mud needs to be considered.

Based on the abovementioned, the status of mud accumulation in Pond No. 93 and 97 should be surveyed and the process of removing it should be considered. The advantage and disadvantage of using electric pumps and manual raking, feasibility, easiness of extension to other areas should be examined, as well as treatment of the removed mud.

c) Target Groups

Target groups of the removal of mud are as stated in Table 3.62.

Table 3.62: Target Groups of the Removal of Mud

Category	Organization / Individuals	Brief description, Roles, Representatives, etc.
Public Sector	UDAA	Several officers
	DPL	Supervisors
	Mano / Pongkham villages	Village leaders need to understand the activities
Private Sector	Owners of Pond No. 93 and 97, and their neighbors	Survey on mud accumulation and cooperation in mud removal activities
Others	UNESCO	Depending on mud removal methodology, it needs to confirm if it is acceptable.

Source: JICA Consultant Team

d) Equipment

Necessary equipment for the removal of mud are as follows:

- Measuring tape (30 m) (1)
- Depends on the methodology adopted

e) Process

The process of the removal of mud is shown in Table 3.63.

Table 3.63: Implementation Process of the Removal of Mud

No.	What to do	Remarks
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1	Survey on mud accumulation (thickness, type, space to keep mud, distance to the drainage, location of pump if using, and experiences in neighboring ponds)	First priority is to get the permission from the pond owners to remove the mud. The work requires taking water out and period and season of the work should also be agreed.
2	Discuss and build consensus on concrete methodology for mud removal with UDAA, DPL, village leaders, pond owners, and other stakeholders.	It is a model case to try to extend to other areas, therefore, methodology should consider easiness for future extension.
3	Remove the mud in the methodology agreed.	It should include how to treat the removed mud.
4	Confirm water is back in the pond and monitor its quality (pH, transparency, water temperature, and water level)	Detailed water quality analysis is conducted in the fixed-point monitoring.
5	Write a report compiling activities of mud removal and use it for future extension.	Record methodology, date, period, issues in works, and treatment of removed mud

Source: JICA Consultant Team

f) Training Needs

Training needs for the removal of mud are stated in Table 3.64.

Table 3.64: Training Needs for the Removal of Mud

Type	Timing	Target people	Contents
JICA Short term Expert	At WG after implementation of the activities is confirmed	UDAA, DPL, village leaders, and other stakeholders	· Explanation and consensus building on the activities at WG

Source: JICA Consultant Team

vii) Wetland Environment Working Group (WG)

a) Objectives

The Wetland Environment Working Group (WG) is formed with members of government agencies concerning pond water improvement, such as DPL, DoICT, DPWT, Dept. of Natural Resources and Environment, UDAA, Dept. of Health, Mano Village, and Pongkham Village. The objective is to regularly share information on activities for pond water improvement, to deepen understanding, and to set up a cooperative environment for the Project.

b) Methodology

The WG meeting is held eventually to share the progress of various activities for pond water improvement, to analyze issues and expected roles of respective agencies, and to discuss smooth implementation.

As previously described, the 1st Wetland Environment WG was organized on August 19, 2019, and a short-term expert from Techno Eco Co., Ltd. explained about the preliminary and the main experiments, to which government agencies expressed their high expectation to pond water improvement. The 2nd WG was held on 29th November 2019, where the results of the preliminary experiment were shared, and the way forward were discussed.

The Wetland Environment WG provides an important opportunity for relevant agencies to monitor activities for pond water improvement and it is an effective tool to maintain attention of these government agencies to pond water improvement.

c) Target Groups

Target groups of the wetland environment WG are shown in Table 3.65.

Table 3.65: Target Groups of the Wetland Environment WG

Category	Organization / Individuals	Brief Description, Roles, Representatives, etc.
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Public Sector	UDAA	Several officers
	DPL	Supervisors
	Other concerning agencies	DoICT, DPWT, and Dept. of Natural Resources and Environment
	Mano / Pongkham villages	Village leaders need to understand the activities

d) Process

Process for the implementation of the wetland environment WG is stated in Table 3.66.

Table 3.66: Implementation Process of the Wetland Environment WG

No.	What to do	Remarks
1	Discuss and agree with DPL, UDAA, and village leaders, on the 1 st WG meeting	Prior consultation is crucial. Coordinate with the timing of the visit by JICA short-term Expert.
2	Prepare handouts and set a venue.	Venue is a meeting room at DPL. Need to arrange an interpreter between Lao and Japanese.
3	Take minutes at the meeting.	Local staff should record participants, presentation, and questions and answers.
4	Review activities with UDAA and DPL and agree on the timing of next WG meeting.	Good to have common image of rough interval of WG meeting, such as biannually, in advance.
5	Repeat the process of WG meeting.	Need to have regular meeting with UDAA and DPL.

Source: JICA Consultant Team

e) Training Needs

There are no training needs for the wetland environment WG.

Training needs in activities for pond water improvement and monitoring project can be summarized as stated in Table 3.67.

Table 3.67: Summary of Training Needs

Type	Timing	Target people	Contents
JICA Short-term Expert	1 st : beginning of the preliminary experiment	UDAA, DPL, village leaders, and other stakeholders	<ul style="list-style-type: none"> Explanation and consensus building on activities in general at WG Advice for the preliminary experiment Suggestion on pond water improvement
	2 nd : 1 month after the end of the preliminary experiment	UDAA, DPL, village leaders, and other stakeholders	<ul style="list-style-type: none"> Advice on data analysis of the preliminary experiment Support for reporting the results of the preliminary experiment at WG Discussion on the way forward
	At WG after implementation of activities is confirmed	UDAA, DPL, village leaders, and other stakeholders	<ul style="list-style-type: none"> Explanation and consensus building on the activities at WG
Training in Japan	1 st : after January 2020	UDAA, DPL, and village leaders	<ul style="list-style-type: none"> Parameters and environmental standard in water Measurement of surface water quality Water environment improvement with local participation
Training in Laos (Water Supply State-Enterprise)	1 st : after January 2020 2 nd : appropriately	UDAA and DPL	<ul style="list-style-type: none"> Training on methodology of water quality analysis (based on an assumption that the water enterprise has basic knowledge on analysis of water pollution) Practice of water quality data analysis Training on sampling and water quality analysis in the field
Training in Laos (water quality analysis agency)	1 st : April 2020	UDAA, DPL, and Water Enterprise	<ul style="list-style-type: none"> Interpretation of the results of quarterly detailed water quality analysis
	2 nd : September 2021	UDAA, DPL, and Water Enterprise	<ul style="list-style-type: none"> Compiling all data of detailed analysis and discussion on the outcome with the stakeholders

Type	Timing	Target people	Contents
Training in Laos (advanced case study)	1 st : as soon as finding advanced case study 2 nd and onward depend on necessity	UDAA, DPL, and village leaders	• Field visits to advanced case studies in Laos to learn activities and community participation.
	1 st : appropriately	UDAA	• Conduct ToT to UDAA to develop capacity for awareness raising among communities.
Others (seminars, etc.)	WG: 1 month after the end of the preliminary experiment, or alongside with WG meetings	UDAA, DPL, village leaders, and other WG members	<ul style="list-style-type: none"> • UDAA explains results of the preliminary experiment at WG • Discussion on the way forward, based on the results • Explanation and consensus building on the activities at WG • UDAA reports and discusses with WG members on progress of awareness raising activities among local communities.

Source: JICA Consultant Team

Training in Japan is accepted by Takayama City, Gifu Prefecture, therefore, theme of training in Takayama is explored.

Living Environment Division, Environmental Policy Department, Takayama City, conduct water quality survey at 19 points of 11 rivers in the city every year. Five parameters of pH, BOD, SS, DO and E. coli are measured. Besides, integrated river survey is conducted in July, including biological test to monitor benthos, and regular water quality test is implemented twice a year in October and February to monitor water quality changes through a year. Such tests and surveys can be a good example to monitor water quality in ponds and drainage.

<http://www.city.takayama.lg.jp/kurashi/1000024/1000130/1001293.html> (in Japanese)

The Living Environment Division also organizes “Takayama City Residents Meeting for Comfortable Environment Development”, to partnership with local communities, business enterprises, civic organizations and governments for environmental conservation in the city. Such participatory approaches involving local communities and business entities should be effective not only for pond water improvement but also other environmental rehabilitation.

<http://www.city.takayama.lg.jp/kurashi/1000024/1000130/1001262.html> (in Japanese)

“Training in Laos (Water Supply State-Enterprise)” refers to an image of lectures on parameters of water quality analysis and how to compile data, by the Deputy head of Water Treatment Plant Section, Phanom Treatment Plant, Luang Prabang Water Supply State-Enterprise, located at the outskirts of Luang Prabang. Water Supply State-Enterprise supplies water, and 15 parameters can be tested at the enterprise as in Table 3.68.

Table 3.68: Parameters that Can be Tested at the Enterprise

• pH (H+)	• Nitrate Ion (NO ₃ -)	• Fluoride (F-)
• Turbidity	• Nitrite Ion (NO ₂ -)	• Iron (Fe)
• Color	• Total Hardness	• Copper (Cu)
• Odor and Taste	• Chloride (Cl-)	• Zinc (Zn)
• M. Alkalinity	• Electric Conductivity (EC)	• Total Dissolved Solids (TDS)

Source: JICA Consultant Team based on the interview to the Water Supply State-Enterprise

There are ten parameters in “Environmental Standard for Water Pollution” under “Environmental Standard for Conservation of Living Environment” in Japan, most of which are different from the parameters that Water Enterprise in Luang Prabang can be tested (Table 3.69).

Table 3.69: Environmental Water Quality Standards in Japan

pH	E. coli
BOD (Biochemical Oxygen Demand)	T-N (Total Nitrogen)
COD (Chemical Oxygen Demand)	T-P (Total Phosphorus)
SS (Settable Solids)	n-hexane extract

DO (Dissolved Oxygen)	Zinc (Zn)
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Source: Environmental Water Quality Standards Concerning the Conservation of the Living Environment

Therefore, if you wish that the Water Enterprise in Luang Prabang lecture on parameters for water quality analysis, it is necessary to confirm if the enterprise is able to explain ten parameters for water pollution, not 15 parameters for water supply.

Advantages of training by the Water Enterprise include; facilitation of collaboration among public organizations in Luang Prabang City, relatively easier coordination, expectation of cooperation even after the Project, and effective use of developed capacity of the Water Enterprises supported by JICA.

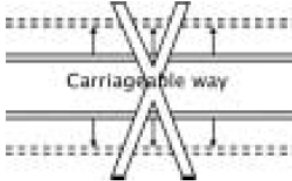
“Training in Laos (Water Quality Analysis Agency)” refers to the company in Vientiane (Phanthamit Analytical Lab Co., Ltd.), to which the Project requested detailed water quality analysis at the preliminary experiment. This company is specialized in analysis of water pollution, and analysis of data from the ponds in Luang Prabang with their advices and guidance is expected to provide the stakeholders in Luang Prabang with practical lessons and viewpoints on the status of pond water.

3.7 Improvement Proposals to Regulations

In the World Heritage Area, there are 15 types of regulations to architecture and land use, according the zones set by PSMV. The World Heritage Area is managed appropriately based on these current regulations, where there is no need of a drastic change in this regulation. Below are minimal improvement proposals.

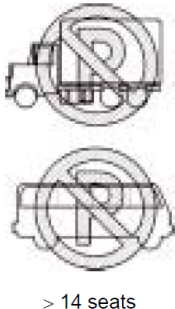
- Target buildings for preservation: The regulations for target buildings for preservation are the fundamental aspect of the World Heritage Area preservation. Changes to this shall be considered unnecessary.
- General buildings: The current regulation of the layout of buildings (protection perimeters) is efficient, thus changes shall be considered unnecessary.
- Panels and signboards: Panels and signboards are under regulation and the installation standards are clearly described (contents, colors, and shape). Also, the transitional period of this regulation is set as seven years. Hence, changes to this shall be considered unnecessary.
- Roads and parking: Due to the increase in transportation, the environment of the World Heritage Area is changing. Also, negative influences from the Laos-China Railway expected to open in 2021 are also a concern. With these external factors, for the World Heritage Area to be able to flexibly adapt to the changes that it shall face, improvement shall be needed for articles related to road expansion, parking lots, and accessibility. Inside ZPP-Ua, PSMV regulates parking of vehicles with more than 13 seats (Article 12). However, there are no regulations for vehicles with less seats but has equivalent impact on the road surface, such as trucks. Therefore, introducing weight into the standards of regulations on vehicle parking inside ZPP-Ua shall be proposed.

Table 3.70: PSMV (Articles Related to the Road System)

<p>Article 4: Scope of prescription on public domain</p>	<p>Road system: Enlargement of the coverage of existing carriage way is prohibited. Heightening of the roadway level of existing carriage way should remain exceptional. Enlargement of pedestrian way or their transformation into carriage ways is prohibited. Creation of new carriage or pedestrian way is prohibited except if it was planned on Graphic Documents.</p> <p>Road works should respect recommendations mentioned in the fascicle n° 6: roads, of the Recommendation notebook and the Technical Notebook n°1: roads.</p> <p>Public equipment: They will be implemented on those lands, which are allocated for them according to the reserves consigned on the Graphic Documents.</p> <p>Plantations: Works concerning with plantations to be implemented should respect principles mentioned in the fascicle n° 5: Fences & Vegetation, of Recommendation Notebook as well as indications of Graphic Documents.</p>	
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Source: PSMV

Table 3.71: PSMV (Articles Related to Parking)

<p>Article 12 Parking</p>	<p>12-1-Parking of trucks and buses and public transport vehicles with a capacity more than 14 seats is prohibited in the zone.</p> <p>12-2-Private vehicles must park in locations foreseen for this purpose.</p> <p>12-3- Public transport vehicles must park in locations foreseen for this purpose (Reserved locations shown in graphic documents of the Heritage Preservation and Development Master Plan.</p>	 <p>> 14 seats</p>
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Source: PSMV

Table 3.72: PSMV (Articles Related to Prohibited Traffic)

<p>Article 2 Activities prohibited</p>	<ul style="list-style-type: none"> - Noisy or polluting activities (Vehicles repair shops, discotheques, fuel stations); - Big hotels (existing hotels are not concerned by this prohibition); - Manufacturing facilities; - Workshops with more than 100 m²; - Shops with an area of more than 100 m² and warehouses with an area of more than 100 m²; - Professional production of poultry and swine (poultry raising for no more than 20 heads for family consumption is tolerated). - Traffic prohibited for trucks of more than 3.5 tons, buses and public transport vehicles with a capacity more than fourteen seats. In order to allow deliveries, road service to a port and construction yards, traffic of trucks more than 3.5 tons could be authorized by exemption upon the conditions defined by the administration. - Parking in public domain (from eight a.m. to seven p.m.) outside zones reserved for this purpose of all motorized vehicles, except bicycles and "tuk-tuks"; - Parking in private land of trucks, buses and public transport vehicles with capacity more than fourteen seats. - Installation of advertisement boards, banners and other installations are prohibited. (This prohibition does not concern those public information boards and temporary installations for less than seven days. 	
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Source: PSMV

- Preservation standards of ponds: Currently, regulations target every pond inside the World Heritage Area for preservation and land filling are restricted. Especially, land filling of ponds included in the water system may stop the water from the upstream, thus causing severe damage to the environment. On the other hand, small ponds outside the water system and not connecting to the surrounding rivers are not utilized and the mosquitos from those ponds are reported to be causes of environmental damage (based on interview surveys to DPL). Therefore, deregulating the condition (such as excluding ponds that have less possibility of worsening the environment by filling, selected by criteria such as the current management condition, size, inflow and outflow situations, from the preserving pond list) of pond preservation for the upgrading of the environment of the surrounding areas of small ponds outside the water system shall be proposed.



Source: PSMV

Figure 3.96: Current Area of ZPP-N

Table 3.73: PSMV (Articles Related to pond preservation)

<p>Article 2 General prescriptions concerning zones of the Area</p>	<p>2-1- Scope of prescriptions on Natural forested zones</p> <p>Natural and forested zones correspond in the perimeter of the Heritage Protection Zone to hills of the right bank of the Mekong. They will be conserved in original state.</p> <p>Existing constructions can be conserved and restored or improved. However, volume of buildings can not be modified, except roofing where its slope can be increased. Although in the frame work of some activities settlement of small buildings constructed exclusively with perishable materials (softwood, bamboo, straw) whose coverage on the ground will not exceed 20 m² and with a COS less than 0.05 for the whole plots belonging to the same owner will be authorized.</p> <p>2.2. Scope of prescriptions on wetlands</p> <p>Wetlands are defined in the perimeter on the ZPP-N by several networks of ponds pouring into the Mekong through Nam Khane.</p> <p>These zones can be constructed only with use of light materials following traditional techniques (softwood, bamboo, straw) except eventual part laying underwater of supports and by taking into account of the flooding degree of the plots and under reserve of installation of a drainage system.</p> <p>Ponds and marshy plots inscribed in the perimeter will be strictly conserved. Particular attention will be paid also to the unity formed by Wetlands both in geographic and hydraulic point of view.</p> <p>In case of intentional or accidental refill they can be re-dug by conserving placement and original volume.</p>
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Source: PSMV

Chapter 4 Output 2 Fund Mechanism for Sustainable Maintenance of Historical Buildings in the World Heritage Area

4.1 Data Collection and Calculation for Preservation Cost

In this section, data collection on the cost for the preservation and management of the World Heritage Area, and the calculation of the necessary cost according to the collected data is shown. The cost can be classified into 3 categories; 1. Project implementation (infrastructure development and tourism development), 2. Architecture restoration, 3. Townscape preservation and maintenance. The sources of 1 and 2 are the priority projects considered by DPL, and the sources of 3 are the services conducted by UDAA (park maintenance, road and sewage maintenance, roadside tree maintenance, solid waste collection). Below show the details.

4.1.1 Necessary Cost for Project Implementation (Infrastructure Improvement and Tourism Promotion)

The priority project list by DPL was used as reference for the calculation of the necessary cost for project implementation (infrastructure and tourism development) in the World Heritage Area. As the period for DPL's priority projects is 5 years, the total amount here shall be defined as for 5 years.

The priority projects of DPL for 2015 to 2020 is shown in Table 4.1. It includes infrastructure improvement, tourism promotion, restoration of religious architecture, and restoration of historic architecture. The total implementation cost of the projects is around USD 2,961,000 in 5 years. Most of the projects shown in the table have not been implemented yet as of the end of the Mission, and it is well predicted that the projects will be regarded as prioritized in future plans as well.

Table 4.1: 2015-2020 Priority Projects of DPL (Cost for Project Implementation)

No	Project name	Location of project	Amount (LAK)	Amount (USD)
I	Tourism Promotion Projects		3,055,108,000	348,359
1	Viewpoints Project	Phousi Hill	906,575,000	103,372
2	Tree Protection Project	Phousi Hill	569,710,000	64,961
3	Public garden behind the Governor's Office Project	That Luang Village	1,578,823,000	180,025
II	Restoration of Religion buildings Projects		812,970,000	92,699
1	Restoration of Pahuaok Temple No: 511	Phousi Hill	430,650,000	49,105
2	Restoration of Inventory Building No: 537	Vat That Village	382,320,000	43,594
III	Restoration of Ancient Buildings Projects		5,224,548,000	595,730
1	Restoration of Inventory Building No: 325	Pakham Village	957,857,000	109,220
2	Restoration of Inventory Building No: 58	Meunna Village	732,105,000	83,478
3	Restoration of Inventory Building No: 440	Visoun Village	602,910,000	68,747
4	Restoration of Inventory Building No: 129	Pakham Village	1,033,560,000	117,852
5	Restoration of Inventory Building No: 231	Pakham Village	861,300,000	98,210
6	Conference Hall of the World Heritage Office Project	Xiengthong-Khili Village	1,036,816,000	118,223
IV	Infrastructure Improvement Projects		16,871,091,100	1,923,728
1	Khan Riverbank Protection Project	Heritage Protection Area	10,413,764,000	1,187,430
2	Boundary of Phousi Project	Phousi Hill	1,617,350,000	184,418
3	Public Toilets Project (5 Points)	Heritage Protection Area	947,755,000	108,068
4	Boundary of PSMV and Buffer Zone Projects	PSMV & Buffer zone	1,232,040,000	140,483
5	Parking Project	Heritage Protection Area	751,443,100	85,683
6	Drainage System Project	Heritage Protection Area	979,585,000	111,697
7	Footpath on the Khan and Mekong Riverbank Project	Heritage Protection Area	929,154,000	105,947
	Total Cost of All Projects		25,963,717,100	2,960,515

Source: DPL (Internal document)

Architecture restoration costs shall be extracted for the calculation for the necessary cost for project implementation (infrastructure improvement and tourism promotion). The amount is calculated as around USD 2,270,000 in 5 years. Hence, the annual necessary cost for project implementation (infrastructure improvement and tourism promotion) is estimated as USD 454,417.

4.1.2 Necessary Cost for Architecture Restoration

Buildings registered as in need of restoration in the World Heritage Area are public owned, private owned, and religious facilities, with a total of 611 buildings. Since 1999, most of the buildings have undergone partial restoration activities. Since 2010, USD 468,000 have been spent for the restoration of 16 buildings (18 projects) with support from international donors from Europe, targeting public owned buildings and religious facilities. The restoration cost per building is USD 53,000 on average, although the restoration cost varies among buildings. Apart from buildings restored by DPL, 273 privately owned buildings have been restored by private works. For reference, Table 4.2 shows the buildings and cost of DPL restoration works.

Table 4.2: Restored Buildings by DPL (for reference)

No	Construction Projects	Construction Value		Year
		LAK	USD	
1	Restoration of Conservation Building No. 119	222,592,104	25,381	2010-2011
2	Restoration of Conservation Building No. 322	573,291,775	65,370	2011-2012
3	Restoration of Conservation Building No. 299	959,669,700	109,426	2011-2012
4	Restoration of Conservation Building No. 300	387,014,375	44,129	2011-2012
5	Restoration of Conservation Building No. 301	955,268,862	108,925	2011-2012
6	Building - Repairing Ceiling + Bathroom of Primary School of Prabang	326,126,000	37,187	2012-2013
7	Restoration - Repair Xiengthong Temple Phase II	1,375,986,767	156,897	2012-2013
8	Restoration - Restoration of AHAM Temple Phase I (Conservation Building No. 524)	212,000,000	24,173	2013-2014
9	Restoration - Repair Monks' House of Sop Temple	152,000,000	17,332	2013-2014
10	Restoration - Repair Monks' House of Xiengthong Temple	191,000,000	21,779	2013-2014
11	Restoration - Repair Xiengthong Temple Phase III	1,015,985,020	115,848	2013-2014
12	Reproduction of Phasatipatai Secondary School (Conservation Building No.: 139)	686,000,000	78,221	2013-2014
13	Repairs of Phasatipatai Secondary School (Conservation Building No.: 331)	340,000,000	38,769	2013-2014
14	Reproduction of Phasatipatai Secondary School (Conservation Building No.: 138)	120,000,000	13,683	2013-2014
15	Restoration - Restoration of Wat Aham Temple (Conservation Building No. 524).	77,805,000	8,872	2014-2015
16	Repairing the Building of the State Office Building, No. 279	43,760,000	4,990	2015-2016
17	Restoration Monks' House of Wat Vixoun (Conservation Building No. 530)	306,000,000	34,892	2015-2016
18	Restoration - Restoration Pahock Temple (Conservation Building No. 511)	483,500,000	55,131	2016-2017

Source: DPL

Also, information on cost on road architecture improvement and pavement improvement have been collected by interview surveys to construction material stores in Luang Prabang, and the price units by materials (blocks, wood, roofs, etc.) and work types (roof work, wall work, fence work, etc.) were identified. The cost unit for new house construction is relatively expensive, since heavy machinery cannot enter the World Heritage Area (USD 500 per m² inside the World Heritage Area, while USD 350

per m² outside the World Heritage Area). Unit price by material is shown in Table 4.3, and unit price by work type is shown in Table 4.4.

Table 4.3: Unit Price by Material

No	Description	Unit	Price			Remarks
			LAK	THB	USD	
1	Heritage Brick	No.	2,000		0.2281	More than 2,000 fee for transport
2	Normal Brick	No.	600		0.0684	More than 2,000-3,000 will be LAK 550
3	Small-sized Brick	No.	500		0.0570	If many will be at LAK 450
4	Roof Brick	Plate	700		0.0798	If more than 10,000. - will be at LAK 680.-
5	Cement	Ton	950,000		108.3238	
6	Steel Bar	Ton	590,000		67.2748	10 m long
7	O-type Steel Pipe	No.	180,000		20.5245	8 m long
8	O-type Steel Pipe	No.	60,000		6.8415	8 m long
9	Aggregate	m ³	320,000		36.4880	
10	River Aggregate	m ³	320,000		36.4880	
11	Sand	m ³	300,000		34.2075	
12	Soil	m ³	40,000		4.5610	
13	Normal Wood	m ³	4,000,000		456.1003	
14	Special Wood	m ³	18,000,000		2052.4515	If special size will be at LAK 20,000,000
15	Special Wood	m ³	10,000,000		1140.2509	
16	Special Wood	m ³	18,000,000		2052.4515	
17	Wood for Form	m ³	2,700,000		307.8677	
18	C-PAC	Plate	12,000	35	1.3683	
19	Normal Roof Material	Plate	12,000		1.3683	Up to spec about LAK 12,000 to LAK 22,000
20	Roof Material (Zinc)	Plate	22,000		2.5086	Up to spec about LAK 22,000 to LAK 25,000

Source: JICA Consultant Team (Interview at Site)

Table 4.4: Unit Price by Work Type (in the World Heritage Area)

No.	Item	Unit	Unit Price (USD)
1	Roof and Roof Structure	m ²	180
2	Torch's Wall	m ²	40
3	Fence	m	30
4	Drainage	m	80
5	New House Construction*	m ²	500
6	Paved Walkway (DBST)	m ²	35
7	Paved Walkway by Concrete	m ²	90
8	Paved Road by Concrete	m ²	150
9	Grass	m ²	5

Area. The unit price outside of the World Heritage area is around USD 350/m².

Source: JICA Consultant Team

According to DPL, there are 34 buildings designated as in need of restoration. For cost calculation, the 2 religious facilities (USD 93,000) and 6 historic buildings (USD 596,000) in the DPL priority project list (Table 4.1) will be referred.

Accordingly, necessary cost for architecture restoration is USD 688,000, and the annual cost is calculated as USD 137,686.

4.1.3 Necessary Cost for Townscape Preservation and Maintenance

Other than necessary restoration of architecture, there is a necessity of maintaining a clean and comfortable environment for tourists. Data were collected for costs related to these activities.

As for necessary cost for townscape preservation and maintenance, the activity list provided by UDAA (Table 4.5) was referred to. According to the list, the cost for management of public parks and gardens is USD 26,112, the cost for roadside tree maintenance is USD 23,717, the cost for road cleaning is USD 53,064, the cost for solid waste collection is USD 3,914, and the cost for cleaning of road drainage is USD1,855. This number is only a proposed amount by UDAA and is not an approved budget.

**Table 4.5: Cost of Townscape Preservation and Maintenance
(2-Year Cost According to Activities by UDAA)**

No	Item	Unit	Quantity	Unit Cost (LAK)	Amount (LAK) (2 years)	Amount (USD) (2 years)	Amount (USD) (1 year)
I	Management of Public Park / Garden (2019 and 2020)				229,000,000	26,112	13,056
1	Cleaning the garden at Mithtaphap Park (8 places)	MM	24	1,500,000	36,000,000	4,105	2,052
2	Cleaning three separate places in Nasimphant Village	MM	24	1,500,000	36,000,000	4,105	2,052
3	Cleaning the garden near Luang Prabang Old Airport	MM	24	1,500,000	36,000,000	4,105	2,052
4	Cleaning the garden post office - three separate places at the Kaitalang Police Office (5 places)	MM	24	1,500,000	36,000,000	4,105	2,052
5	Cleaning the garden at three separate places in Visoun and Meuna Village (4 places)	MM	24	1,500,000	36,000,000	4,105	2,052
6	Cleaning the fountain and the backside of LPB Government Office	MM	24	1,500,000	36,000,000	4,105	2,052
7	Grass motor cutter	Unit	2	6,500,000	13,000,000	1,482	741
II	Urgent Work (Disaster which may occur during Jun - Sep 2019 and 2020)				46,400,000	5,291	2,645
1	Garbage truck	4 times a year	8	1,200,000	19,200,000	2,189	1,095
2	Garbage truck 3.5 T	4 times a year	8	550,000	8,800,000	1,003	502
3	Garbage truck 2.5 T	4 times a year	8	450,000	7,200,000	821	410
4	Motor woodcutter	4 times a year	8	250,000	4,000,000	456	228
5	Waste/garbage pickers	10 persons/time	8	450,000	7,200,000	821	410
III	Cutting Trees Along the Main Road (2019 and 2020)				208,000,000	23,717	11,859
1	Nan Khan River Intersection to construction office	twice a year	4	18,000,000	72,000,000	8,210	4,105
2	Dala Market Intersection to three separate places in Pakham Village	twice a year	4	15,000,000	60,000,000	6,842	3,421
3	In front of three separate places in Sythan school	twice a year	4	11,000,000	44,000,000	5,017	2,509
4	In front of Naviengkham School	twice a year	4	5,000,000	20,000,000	2,281	1,140
5	In front of Bountue Shop	twice a year	4	2,000,000	8,000,000	912	456
6	In front of Apai School	twice a year	4	1,000,000	4,000,000	456	228
IV	Cleaning Road (2019 and 2020)				288,000,000	32,839	16,420

No	Item	Unit	Quantity	Unit Cost (LAK)	Amount (LAK) (2 years)	Amount (USD) (2 years)	Amount (USD) (1 year)
1	Khao San Road to Phu Vao Road	once a week	96	500,000	48,000,000	5,473	2,737
2	Road washing	once a week	96	500,000	48,000,000	5,473	2,737
3	Three separate Kaisone	once a week	96	500,000	48,000,000	5,473	2,737
4	Monument Kayson to three separate post office	once a week	96	500,000	48,000,000	5,473	2,737
5	Road washing	once a week	96	500,000	48,000,000	5,473	2,737
6	Three separate Kaitalang to intersection post office	once a week	96	500,000	48,000,000	5,473	2,737
V	Cleaning Road (2019 and 2020)				180,000,000	20,525	10,262
1	Kaysone Phomvihane Street	MM	24	1,500,000	36,000,000	4,105	2,052
2	Three separates of Kaysone Monument to Post Office	MM	24	1,500,000	36,000,000	4,105	2,052
3	Souphanuvong Street	MM	24	1,500,000	36,000,000	4,105	2,052
4	Three separate Arphai to four separate Mithtaphap	MM	24	1,500,000	36,000,000	4,105	2,052
5	Four separate post office to three separate Pakham	MM	24	1,500,000	36,000,000	4,105	2,052
VI	Collection of Solid Waste along the Road (unknown garbage 2019 and 2020)				34,560,000	3,941	1,970
1	Garbage trucks (5 tons)	once a week	96	300,000	28,800,000	3,284	1,642
2	Waste/garbage pickers	2 persons/time	96	60,000	5,760,000	657	328
VI I	Cleaning of Main Drainage (2019 and 2020)				371,700,000	42,383	21,192
1	Cleaning the drain in Tatluang Village	m	2	70,000	85,120,000	9,706	4,853
2	Cleaning the drain in Mano Village	m	2	70,000	55,160,000	6,290	3,145
3	Cleaning the drains in Naviengkham Village	m	2	70,000	138,040,000	15,740	7,870
4	Cleaning the drains in Pongkham and Phonpheng villages	m	2	70,000	93,380,000	10,648	5,324
VI II	Cleaning of Road Drainage (2019 and 2020)				16,268,000	1,855	927
1	Drainage behind the Provincial Office	m	2	7,000	3,402,000	388	194
2	Drainage near the Visoun Temple	m	2	7,000	2,772,000	316	158
3	Drainage at the Curve near the Phayathiep Temple	m	2	7,000	1,106,000	126	63
4	Drain in front of Women's Union	m	2	7,000	1,442,000	164	82
5	Drain in front of Khaitaleng	m	2	7,000	2,338,000	267	133
6	Drain in front of Phouvao Hotel	m	2	7,000	1,512,000	172	86
7	Drain behind the Medical School	m	2	7,000	3,696,000	421	211
	Total				1,373,928,000	156,662	78,331

Source: UDAA

Consequently, the annual necessary cost for townscape preservation and maintenance is estimated as USD 78,331.

4.1.4 Calculation of Total Necessary Cost for Preservation and Maintenance of the World Heritage Area

Since the collected data differs in its implementation period, the costs were calculated according to the period of the priority projects of DPL, which is 5 years. Annual cost was calculated by dividing the amount by its period. As a result, the necessary cost for preservation and maintenance of the World Heritage Area was calculated as USD 3,352,171 for 5 years, and USD 670,434 annually (Table 4.6).

Table 4.6: Estimated Cost of the Preservation and Management of the World Heritage Area

No	Description	5-Year Cost (USD)	Annual Cost (USD)
1	Cost for Project Implementation (Infrastructure Improvement and Tourism Promotion)	2,272,087	454,417
2	Cost for Architecture Restoration	688,429	137,686
3	Cost for Townscape Preservation and Maintenance	391,656	78,331
4	Total	3,352,171	670,434

4.2 Data Collection of Financial Source for the World Heritage Preservation

Finance in Laos is implemented by law, governmental decrees, and guidelines. Fund operation is also implemented in accordance with this system and must be consistent with relevant laws and governmental decrees.

Laws related to heritage preservation are mainly the National Budget Law, Tourism Law, and National Heritage Law. Particularly, because of the National Budget Law identifying the basics of finance, the budgets and funds shown in the Tourism Law and National Heritage Law are required to be consistent with the National Budget Law.

Luang Prabang Province, Ministry of Information, Culture and Tourism (hereinafter referred to as “MICT”), and DPL have been coordinating with related agencies to establish “Luang Prabang World Heritage Preservation Fund”. Outline of these laws and the fund are shown below.

4.2.1 Laws

(1) National Budget Law (2015)

The National Budget Law is a law that defines budget management and finance at the central and local level. The law also says that finance at the central and local level is to be controlled by the government. Outline of the National Budget Law is shown below.

- Purpose: To manage revenue and expenditure efficiently and transparently.
- Basic policy of finance: All revenue and expenditure are managed by the central government, where budgeting procedure is conducted by the central government, while expenditure is enforced according to an annual plan. Excess expenditure is approved only by the central government. Balance of payments is to be ensured. Finance is to be enforced accurately. Local governmental finance is to be enforced in accordance with the central government policy. Customs and taxes are managed by the central government. Budget allocation to sectors and local governments is approved by the National Assembly.
- Financial Source: Revenue is classified into four categories; tax, non-tax (such as rent, concession, and interest), grant (bilateral and international organizations), and social support.

As shown above, it is stated in the National Budget Law that finance is to be enforced under the control of the central government.

(2) Tourism Law (2013)

Tourism Law is a law that defines management to promote tourism and to preserve/develop the country with sustainability in developing and expanding culture, history, and natural tourism. Tourism includes travel, relaxation, entertainment, cultural exchange, sports, health promotion, and research. Luang Prabang is positioned as the national tourism resource.

The National Tourism Fund is described in the Tourism Law. Outline of the fund is shown below.

- The fund aims for tourism promotion, human resource development, facility development, public relations, marketing, and others.
- Financial source is fiscal finance, support from individuals and organizations (domestic and overseas), and tourism revenue (events and exhibitions).

(3) National Heritage Law (2012)

The National Heritage Law defines management, utilization, preservation, protection, and restoration regarding heritage in Laos including cultural heritage, historical heritage, and natural heritage. The enforcement also aims to improve and raise public education and awareness. National heritage includes tangible objects, intangible items, moveable or immovable property, and living or non-living organisms. Heritage is divided into local, national, and global levels based on importance. The World Heritage “Town of Luang Prabang” is positioned as world-class historical and cultural heritage. MICT is defined as the ministry that has jurisdiction over the heritage.

A fund is described in the National Heritage Law (Part VII National Heritage Fund, Article 60, 61). Necessity of fund establishment for sustainable preservation, protection, restoration, and development regarding heritage is mentioned. Financial source is as follows:

- Public finance
- Donor support
- Support of individuals and organizations (domestic and overseas)
- Heritage revenue: entrance fee, publication, research, tourism, and fine
- Subsidy
- Other heritage-related activities

Management of the fund must be based on the National Budget Law and related laws.

4.2.2 Budget and Income Source of Luang Prabang Province

In the Mission, JICA consultant team conducted data collection on budget and income sources of Luang Prabang Province. However, since the data is sensitive, systematic and exhaustive survey and data collection was difficult. The collected data differed in period, and some were only oral brief explanation. Clear discussion has been difficult, but we have listed the information below as much as possible for the future discussion in the Project.

(1) Budget of Luang Prabang Province

The general budget of Luang Prabang Province is managed by the Department of Finance (hereinafter referred to as “DOF”) while public investment budget is managed by the Department of Planning and Investment (hereinafter referred to as “DPI”). According to DOF figures, the total revenue is USD 40 million, and expenditure is USD 74 million. The revenue is composed of 12.3% from the central government and 87.7% from the province. Of this expenditure, 64.0% is allotted for staffing costs. Public investment cost in the expenditure is USD 7.3 million (Table 4.7).

Table 4.7: Budget of Luang Prabang Province (2018)

No.	Description	Million LAK	USD	Share
I	All Revenue	356,664	40,668,613	100.0%
I-1	Central Revenue	43,983	5,015,221	12.3%
I-2	Provincial Revenue	312,680	35,653,392	87.7%

No.	Description	Million LAK	USD	Share
(1)	Taxes	293,488	33,464,948	82.3%
	Regular Tax	216,246	24,657,517	60.6%
	Land	11,222	1,279,621	3.1%
	Fees	18,735	2,136,312	5.3%
	Academic Income (technical fund)	47,283	5,391,497	13.3%
(2)	Property	18,643	2,125,754	5.2%
(3)	Managed by the governor and private sector business cooperation	550	62,691	0.2%
II	All Expenditure	656,715	74,881,971	100.0%
(1)	Salary and Subsidies	420,542	47,952,374	64.0%
(2)	Support (meting)	63,360	7,224,624	9.6%
(3)	Administration	77,141	8,795,978	11.7%
(4)	Social Activity	17,940	2,045,628	2.7%
(5)	Reserve Expense	13,215	1,506,807	2.0%
(6)	Investments	64,517	7,356,560	9.8%

Source: DOF, Luang Prabang Province

Of the budget that can be considered as investments, budget of DoICT is USD 659,933, which is 6.5% of the total of the Province (Table 4.8). In the table, there is no clear separation between the 3 main activity sectors of DoICT, which is information, culture, and tourism. According to interview surveys to DoICT, in the 2018 budget, the rough estimation of the ratio of each sector is; 30% to information, 35% to culture, and 35% to tourism, although this number differs yearly. As for reference, in the 2019 budget, projects such as radio station repair (information sector), construction of an art school (culture sector), Phousi hill landslide protection, museum sidewalk repair, Kuang Si waterfall toilet renovation (tourism sector) were included.

Table 4.8: Luang Prabang Province Budget for Public Investment (2019)

Sector	LAK	USD	Share
Total (I+II+III)	88,767,000,000	10,121,665	100.00%
I Economy Sector	38,622,521,700	4,403,936	43.51%
Agriculture and forestry	5,077,472,400	578,959	5.72%
Industry and trade	1,287,121,500	146,764	1.45%
Construction and transportation	15,827,156,100	1,804,693	17.83%
Energy and minerals	7,491,934,800	854,269	8.44%
Natural resources	1,704,326,400	194,336	1.92%
Post office and economy	7,225,633,800	823,904	8.14%
II Cultures and Social sector	30,624,615,000	3,491,974	34.50%
Education and sports	14,824,089,000	1,690,318	16.70%
Public health	7,847,002,800	894,755	8.84%
Information, culture and tourism	5,787,608,400	659,933	6.52%
Labor welfare	2,165,914,800	246,969	2.44%
III Administration and Others	19,519,863,300	2,225,754	21.99%

Source: DPI, Luang Prabang Province

Budget of DPL is shown in Table 4.9. Total expenditure is USD 92,930. Among them, the share of personnel cost (75%) and administration cost (17%) is 92% of the expenditure. From these facts, we can assume that budget for project implementation in the World Heritage Area is hardly allocated.

Table 4.9: DPL Budget (2018)

No	Items	LAK	USD	Share
I	All income (technical income)	18,000,000	2,052	
I-1	Technical income (Service fee)	18,000,000	2,052	
II	All expenses	815,000,000	92,930	100.00%
II-1	Normal expense	797,000,000	90,878	97.79%
II-2	Technical expense	18,000,000	2,052	2.21%
(1)	Salary	606,000,000	69,099	74.36%
(2)	Supporting salary	53,000,000	6,043	6.50%
(3)	Administration	138,000,000	15,735	16.93%
(3)-1	Normal administration	78,000,000	8,894	9.57%

No	Items	LAK	USD	Share
(3)-2	Electricity	36,000,000	4,105	4.42%
(3)-3	Water supply	6,000,000	684	0.74%
(3)-4	Administration (Technical)	18,000,000	2,052	2.21%
(4)	Differences - Promote	20,000,000	2,281	2.45%
(5)	Differences - Promote (Technical)	0	0	
(6)	Other pays	0	0	
(7)	Property	0	0	
(8)	Public investment	0	0	

Source: DPL

Budget of UDAA is shown in Table 4.10. Total expenditure is USD 341,795. Among them, personnel costs share 28%, and technical expense share 66%.

Table 4.10: UDAA Budget (2018)

No	Items	LAK	USD	Ratio
I	All income (technical income)	2,095,635,000	411,840	100%
I-1	Commission fee	274,780,000	31,332	13.11%
I-2	Technical Income (Service fee)	304,651,000	34,738	14.54%
I-3	Collection of Garbage and others	1,516,204,000	172,885	72.35%
II	All expense	2,997,541,000	341,795	100.0%
II-1	Normal expense	1,012,741,000	115,478	33.8%
(1)	Salary	822,859,140	93,827	27.5%
(1)-1	Salary of permanent staff	786,507,840	89,682	26.2%
(1)-2	Normal Support	36,351,300	4145	1.2%
(2)	Other Support	29,882,160	3407	1.0%
(5)	Normal Administration fee	130,000,000	14,823	4.3%
(5)-1	Fuel	63,000,000	7184	2.1%
(5)-2	Office Supply	12,200,000	1391	0.4%
(5)-3	Electricity and Water supply	40,000,000	4561	1.3%
(5)-4	Outsource Service	4,800,000	547	0.2%
(5)-5	Transportation	10,000,000	1,140	0.3%
(6)	Other Expense	30,000,000	3,421	1.0%
II-2	Technical expense	1,984,800,000	226,317	66.2%
(1)	Salary and Support	696,130,000	79,376	23.2%
(3)	Administration	1,288,670,000	146,941	43.0%
(3)-1	Fuel	720,887,000	82,199	24.0%
(3)-2	Outsource Service	195,805,000	22,327	6.5%
(3)-3	Meeting, seminar and Training	1,080,000	123	0.0%
(3)-4	Event	5,350,000	610	0.2%
(3)-5	Other Expense	365,548,000	41,682	12.2%

Source: UDAA

(2) Other Related Income Source

There are five heritage facilities that collect entrance fees, i.e.: Phousi Hill, museum, Xiengthong Temple, Visoun Temple, and Aham Temple. The revenue in 2018 was USD 1.7 million. The revenue from these facilities is managed by the Provincial Department of Finance which reports to the central government (Table 4.11).

Table 4.11: Revenue from Entrance Fee (2018)

	Facility	LAK	USD	Number of Visitors (Estimated by Revenue)
1	Phousi Hill	4,211,045,000	480,165	210,552
2	Museum	6,795,500,000	774,857	226,517
3	Visoun Temple	226,000,000	25,770	11,300
4	Xiengthong Temple	3,677,000,000	419,270	183,850
5	Aham Temple	155,000,000	17,674	7,750
	Total	15,064,545,000	1,717,736	639,969

Source: DoICT

DoICT is responsible for the overall management of the facilities, but actual management is conducted by each village and temple under the instruction of DoICT (Table 4.12)

Table 4.12: Outline of Facility Management

	Facility	Owner	Manager	Implementing Agency	Charge
1	Phousi Hill	DoICT	DoICT	DoICT OB/Village	7% of Revenue
2	Museum	DoICT	DoICT	DoICT	Fixed amount
3	Visoun Temple	DoICT	Village and Monk (Under Supervision of DoICT)	Village	7% of Revenue
4	Xiengthong Temple	Central Government	Village and Monk (Under Supervision of DoICT)	Village	7% of Revenue
5	Aham Temple	DoICT	Village and Monk (Under Supervision of DoICT)	Village	7% of Revenue

Source: DoICT

(3) Current Situation of Necessary Cost and Budget

As was shown in 4.1.4, USD 670,434 was estimated as an annual cost necessary for the preservation and maintenance of the World Heritage Area. Of the cost, project implementation cost (USD 454,417) and architecture restoration cost (USD 137,686) is hoped to be implemented as responsible sectors of DPL and DoICT. However, as is seen in the annual expense of DPL, currently, necessary project implementation budget is not allocated, hence project implementation is difficult. For the sustainable preservation and management of the World Heritage Area, reallocation of provincial budget and securement of new income sources such as funds, discussed in the next section, shall be needed. On the other hand, the USD 78,331 of the townscape preservation and maintenance is mainly of UDAA's responsibility, and a constant amount of budget allocation and public service is seen. However, as discussed in Chapter 3, still there are problems seen in the World Heritage Area. Allocating more budget or promoting community-based activities by non-public sectors such as villagers shall be needed.

4.2.3 World Heritage Preservation Fund

(1) Progress in the Establishment of World Heritage Preservation Fund

The Luang Prabang World Heritage Preservation Fund was established in 2009 based on an order of Luang Prabang Provincial Governor. However, enforcement has been postponed because of comments from the Prime Minister's Office. The main reasons are as follows:

- Funds cannot be established by the Governor's order: Under the National Budget Law, finance is defined to be managed by the central government. This is to prevent imbalance between provinces caused by the independent management of budget and expenditure at the provincial level. Because of the activities that are conducted between ministries, funds related to Luang Prabang, an important area in Laos, are to be established by the Prime Minister's Decree.
- Financial source unclear: Transparency of activities, costs, and financial source is the most important thing in establishing funds. This is to prevent financial shortage related to expenditure.
- As support from the central government is required in case of financial shortage, it is necessary to clarify self-finance and the central governmental support.

Under the direction of the Prime Minister's Office in April 2019, DoICT and DPL have worked on to formulate the Prime Minister's Decree, which is to include articles defining financial source, expenditure, activities, and management system.

Although Luang Prabang Province has submitted a proposal for the fund of the central government, discussion on the contents is slow. Discussion has to be accelerated to establish the Prime Minister's Decree.

Contents of the Luang Prabang World Heritage Preservation Fund (hereinafter referred to as “LWHPFL”) proposed by Luang Prabang Province are shown below.

- I. General Provisions: Objectives of the establishment of LWHPFL and Duties
- II. Organization of LWHPFL: Organization structure, fund management committee, rights and duties of fund management committee, and rights and duties of secretariats.
- III. Sources of Fund and Income of LWHPFL: Sources of fund and income of LWHPFL and tax exemption
- IV. Administration and management of fund: management and use of fund, request for funding, and monitoring of the project
- V. Account audit and reporting: Account auditing and reporting

In addition, estimated sources of income are attached to the fund. Sources of fund are the contributions from the tourism industry (hotel, guesthouse, restaurant, night market, and shops) and revenue from tourism sites (dividing into tourism and heritage management). Revenue from the tourism industry is estimated from LAK 166 million (USD 19,000)/year.

(2) Comments to LWHPFL

Comments to LWHPFL are summarized below.

- Items necessary for request for fund establishment are covered (income source and fund management)
- Fund source is assumed to be contribution from hotel, restaurant, shop, night market, but it is necessary to examine the implementation (willingness to pay by the stakeholders).
- Fund cannot cover necessary cost for maintenance of the World Heritage Area. Use of fund is mentioned but the details are necessary to be examined. Costs of the detailed items, midterm/long term expenditure plan, and cost-benefit analysis are needed. Phousi Hill Preservation, for example, is composed of many items where the annual expenditure plan has to be prepared.
- Standard of fund allocation has to be clearly defined based on priority in line with the overall plan and strategy, cost-benefit impact, adding value to the heritage site, and contribution to tourism development.
- In addition, condition/criteria for fund allocation has to be clearly defined, which shall be prepared based on the priority in the long-term plan, cost-benefit, additional value to the assets, and contribution to tourism development.

(3) Challenges regarding the Establishment of the World Heritage Preservation Fund

Challenges for the establishment of the Luang Prabang World Heritage Preservation Fund are as follows:

- Laos needs to secure its own financial source as the number of donor support has declined:
Support from outside countries, mainly from the AFD, has been provided for the World Heritage Area Preservation, but recently support has declined. Hopefully, Laos will be able to self-finance the preservation of its heritage. It is necessary for Laos to secure its own financial source for its heritage preservation. Even though the source is mentioned in the proposed fund, additional funding such as contribution from the general public has to be secured.
- Detailed regulations on heritage management are not yet well-prepared:
In Laos, governmental decrees are to be enacted based on the law. However, decrees for tourism and heritage are not publicly accessible. Therefore, there are many points that are not clear in implementing the law. For example, revenue from entrance fees of museums and temples is often collected as the tourism source while it is possible to translate it as the heritage financial source. It is necessary to enact governmental decrees for tourism and heritage to clarify the definition between tourism financial source and heritage financial source.
- Detailed regulations for heritage fund operation are not yet well-prepared:

World Heritage Management is under the tourism and culture sectors. The Fund Management Committee has proposed that they have the same members as the World Heritage Preservation Committee (Chairman is the Vice Governor). It is possible to manage the heritage and fund together. On the contrary, the details of fund management (committee operation, short-/middle-/long-term strategy on the preservation and development of the World Heritage Area and fund allocation) have to be developed.

4.3 Case Studies of the World Heritage Management

Examples related to the World Heritage Management are shown below. Sites with cityscape that have been designated as World Heritage sites, like Luang Prabang, were selected. The examples include the Gassho-Zukuri farmhouses of Shirakawa-go and Gokayama in Japan, and Hoi An in Vietnam. These two cases were studied in the “JICA Data Collection Survey on Tourism Development in Luang Prabang” and introduced at the workshops attended by Lao staffs. Further surveys will be made to be used as reference of the fund.

4.3.1 Case: Shirakawa-go

(1) Outline of Shirakawa-go

Shirakawa Village, located in the northwestern part of Gifu Prefecture (Figure 2.1), is a rural village surrounded by steep mountains. It has a population of about 1,700 people (as of 2013) and a village area of approximately 356 km², of which 95.7% is rich forest area, and parts of which include parks such as the Hakusan National Park and Amo Prefectural Natural Park. The village is one of the heaviest snowed areas in Japan and was once called a hidden village because of the heavy snow that had cut off its interaction with the surrounding villages in the winter. While the weather in the summer is nice and cool, the village is fully covered with snow in the winter.

Ogi-Machi, a village in Shirakawa, is located on the river terrace created by the Sho River. The Gassho-Zukuri houses, which are highly regarded as one of the most rationally developed village houses, are buildings that were devised to countermeasure heavy snow. Saltpeter-making and silk cultivation are workable at the same time. These Gassho-Zukuri houses have been passed down with surrounding buildings, farmlands, and the natural environment as a whole. In 1976, they were designated as the Preservation District for Groups of Traditional Buildings. In 1995, together with the Suganuma and Ainokura Villages of the Gokayama, (Nanto City and Toyama Prefecture), they were registered as the historic villages of Shirakawa-go and Gokayama.

Figure 4.2 shows the pictures of the Shirakawa Village.



Source: JICA Consultant Team

Figure 4.1: Location of Shirakawa Village



Source: Website of Shirakawa Village and Outline of Shirakawa Village World Heritage Site Master Plan

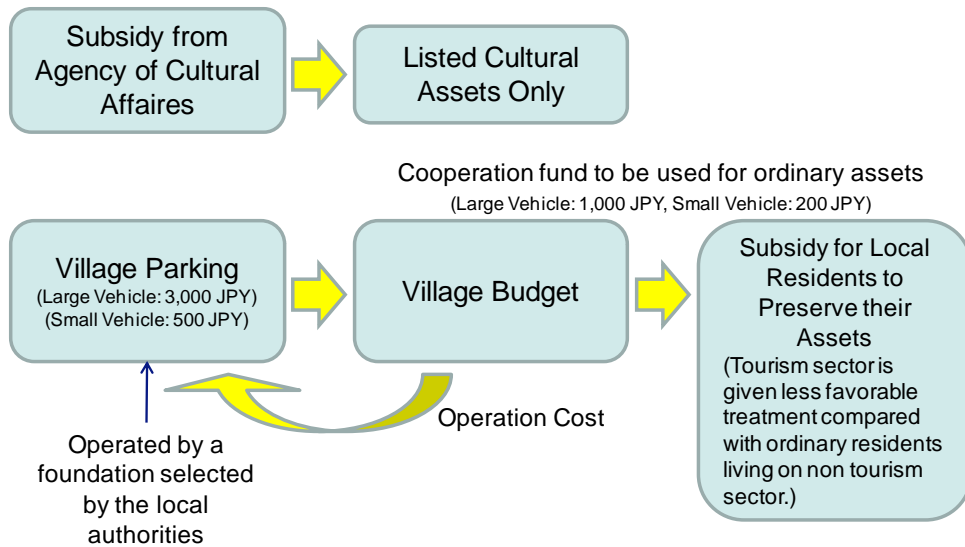
Figure 4.2: Shirakawa Village

(2) Actions of Shirakawa Village for Financial Sustainability

In Shirakawa Village, the following efforts have been made to preserve the environment of the World Heritage Area and to become financially stable for sustainable preservation of the cityscape.

- Thanks to the opening of the entire Tokai Hokuriku Expressway in 2008, access by vehicles has improved dramatically. As a result, the number of tourists, which was 770,000 people in 1996 increased to 1.5 million in 2013 (doubling over 20 years). On the other hand, Shirakawa-go has become a transit type of tourist destination while the average period of stay has been shortened (average of 1 hour).
- To control the traffic in the World Heritage Area, large vehicle traffic regulation started in September 2009 (900 m around the center, 9:00 a.m. - 4:00 p.m.), while sightseeing vehicle entry has been restricted since April 2014 (1,000 m around the center, 9:00 a.m. - 4:00 p.m.).
- Three parking areas, charging an amount of JPY 500 for regular cars and JPY 3,000 for large cars, have been set up since vehicle entry into the village has been restricted. Of the collected fees, JPY 200 from regular cars and JPY 1,000 from large cars are used for Gassho Fund, Cooperation Fund for World Heritage Village Preservation.
- In other words, a part of the revenue from parking charges is added in the budget revenue of the SHIRAKAWA-GO WORLD HERITAGE SITE GASSHO STYLE PRESERVATION TRUST, General Incorporated Foundation in the name of the Cooperation Fund for World Heritage Village Preservation (JPY 13.5 million in FY2014). This accounts for 10% of the foundation's revenue that is to be used for village maintenance and as subsidy for operations.

The flow of money from the parking fees, wherein part of which is returned to the local residents in the preservation area, is shown in Figure 4.3.



Source: Prepared by the JICA Consultant Team based on interviews with Shirakawa Village

Figure 4.3: Flow of Parking Fees Returning to Local Residents

4.3.2 Case: Hoi An

(1) Outline of Hoi An

Hoi An, located 30 km south of Da Nang, the central city of Vietnam (Figure 4.4), is a medium-size city of Quang Nam Province with a population of about 120,000.

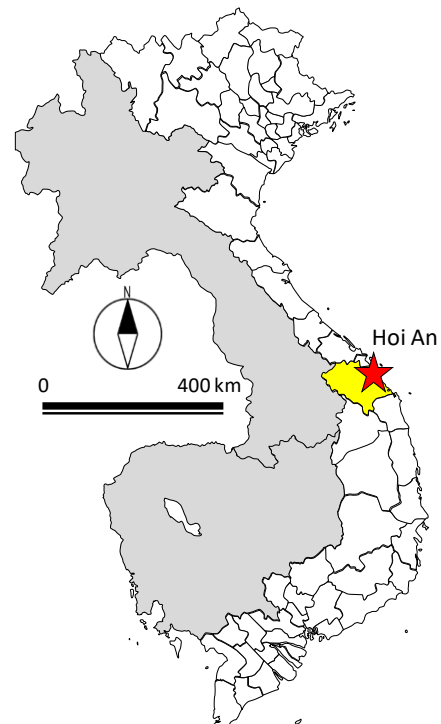
Located at the Cua Dai mouth of the Thu Bon River, Hoi An was known as *Faifoo* in the 15th to 17th centuries and had a prosperous history of an east-west trade city with India, China, Japan, Indonesia, Portugal, Italy, and others.

In Hoi An Old Town, there are many attractions, such as the Japanese covered bridge and cityscape, which indicate that the town has long experienced cultural exchange with Japanese merchants and other foreign countries. In Hoi An Old Town, many traditional occupations, customs, folk songs, literature, and food culture have been preserved.

In addition to the Japanese Covered Bridge, the attractions include Phuc Kien Assembly Hall (Chinese Assembly Hall built in 1773), Guangdong Assembly Hall (Guangdong Chinese Assembly Hall, founded in 1786), Hainan Assembly Hall, Chaozhou Assembly Hall, Quan Cong Temple, Quan Thang House (Chinese house built about 380 years ago), Tan Ky House (designated as “Number One National Treasure of the Socialist Republic of Vietnam” by the Ministry of Culture, Sports and Tourism of Vietnam before World Cultural Heritage registration), and Phung Hung House.

Currently, on the 14th of the lunar calendar, use of electrical lights and entry of motorbikes are prohibited in the Hoi An Old Town, a rare case of a pedestrian-only “paradise” in Vietnam.

Hoi An Old Town was certified as a World Cultural Heritage by UNESCO in 1999.



Source: JICA Consultant Team

Figure 4.4: Location of Hoi An

(Mentioned above is based on the website of the Ministry of Culture, Sports, and Tourism of Vietnam).

Figure 2.1 shows pictures of Hoi An Old Town.



Source: JICA Consultant Team

Figure 4.5: Hoi An Old Town

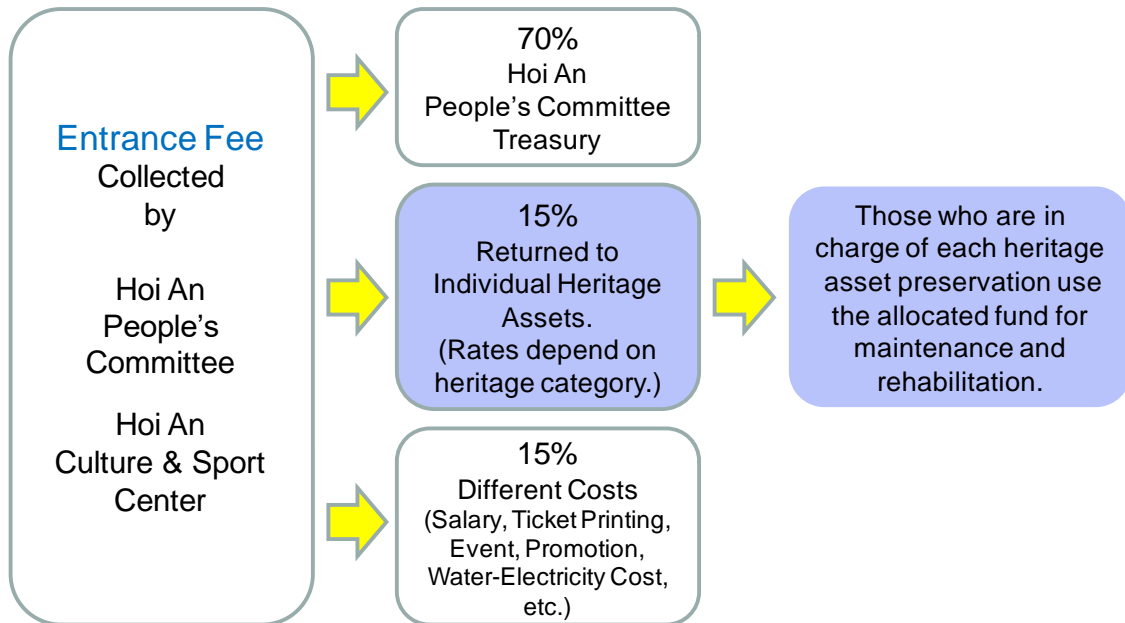
(2) Actions of Hoi An for Financial Sustainability

In Hoi An, the following efforts have been made to preserve the environment of the World Heritage Area and to become financially stable for sustainable preservation of the cityscape.

- To ensure comfort of pedestrians by prohibiting vehicle entry to the Old Town during the appointed times.
- To collect entrance fees (VND 120,000/person valid for 24 hours) from tourists at the ticket offices, which are installed at the boundary of the vehicle entry prohibited areas.
- Tourists pay the entrance fee and receive multiple tickets that are used for entering different attractions such as old houses scattered in the Old Town.
- Caretakers/residents of old houses and other attractions collect the tickets from the tourists, submitted them to the department in charge, then receive subsidy that are used for historical building preservation.

The flow of money from the collected tickets, wherein part of which returned to residents in the preservation area, is shown in Figure 4.6.

Seventy percent of the entrance fees goes to the Hoi An People's Committee Treasury. About 15% is used to pay for the costs such as staffing, ticket printing, events, promotions, and utilities while the other 15% is returned to the residents in exchange of the tickets collected.



Source: Formulated by the JICA Consultant Team based on interviews with the People's Committee Treasury

Figure 4.6: Flow of Entrance Fees Returning to the Residents

4.3.3 Philippines: Historical Town of Vigan

(1) Outline of the World Heritage

Vigan is the provincial capital of Ilocos Sur Province located in the northwestern coastline of Luzon Island. Established in the 16th century, Vigan is the best-preserved example of a planned Spanish colonial town in Asia. Although Ilocos Sur was colonized in 1572 by Spain, it was well known to Japan and China through trade. Its 16th century Spanish architecture reflects the coming together of cultural elements from elsewhere in the Philippines, from China and Europe, resulting in a culture and cityscape that have no parallel anywhere in the East and South-East Asia.

(2) World Heritage Management

Through the “Vigan Conservation Program as a Tool for Development”, cultural mapping project, which has identified and documented cultural heritage resources, local arts and crafts, crafts persons and practitioners of intangible cultural heritage, and a City Public Safety and Disaster Risk Reduction Management Office were established, as well as, the fire safety measures such as preventing the use of fireworks within the protected zones was adopted. Composed of owners of historic properties within the protected zones, the Save Vigan Ancestral Homeowners Association, Incorporated (hereinafter referred to as “SVAHAI”) was organized to empower homeowners and enable their active participation in the conservation programme of the city government.

(3) Fund Management Mechanism

The Vigan City Government is responsible for the world heritage management. Fund management is also the responsibility of the Vigan City Government.

(4) Income Source

The “Vigan Conservation Program as a Tool for Development” has the following fund sources:

- Preservation fund: 1% of city revenue is allocated.
- Revenue from tourism and world heritage related enterprises (river cruise and Buridek Children’s Museum).

Through the establishment of tourism and heritage-related enterprises, income is secured for the preservation program and promotion of preservation activity.

4.3.4 Cuba: Old Havana and its Fortification System

(1) Outline of the World Heritage

Havana was founded in 1519 by the Spanish. By the 17th century, it had become one of the Caribbean's main centers for shipbuilding. Although it is today a sprawling metropolis of 2 million inhabitants, its old center retains an interesting mix of Baroque and neoclassical monuments, and a homogeneous ensemble of private houses with arcades, balconies, wrought-iron gates, and internal courtyards.

(2) World Heritage Management

The State passed the Decree No. 143 in 1993. Such law named Old Havana a "Priority Zone for Preservation" and granted the Office of the Historian of Havana City (hereinafter referred to as "OHCH") where the legal rights to carry out an integral development plan with self-financing character. Details are described below.

- Preparation of a spatial plan in the re-development program based on archaeological research results.
- Preparation and implementation of building control in the historic area and its surrounding area.
- Implementation of preservation and restoration based on the plan and building control mentioned above.
- Operation of cultural facilities including museum, library, and historic center.

The number of residents restored in the fortification is shown in Table 4.13. The number of residents restored has increased since 1995. It is assumed to be the result of development-reinvestment cycle managed by the OHCH and linking with participation of restoration by the residents due to acceleration of economic activity in Havana.

Table 4.13: Trend of the Number of Residents Restored in Fortification

Implementing agency Year	OHCH	Other Institutions	Self-Restoration	Total
1980-1984	3	34	642	679
1985-1989	19	65	714	798
1990-1994	41	35	837	913
1995-2001	305	161	2412	2878
Total	368	259	4605	5268

Source: The City Planning Institute of Japan, Reports No. No. 4-3, October 2010, Higuchi, Hato

(3) Fund Management Mechanism

OHCH manages fund including the revenue and expenditure (fund allocation) of related enterprises.

(4) Income Source

OHCH is authorized by the Government of Cuba to establish related tourism service enterprises such as accommodation and restaurants. Income breakdown of OHCH is shown in Table 4.14. Eighty-six percent of the revenue is from the tourism service enterprises including hotel, restaurant, real estate (rent), and travel guide.

Table 4.14: Revenue Breakdown of OHCH (2004)

Breakdown	Amount (USD 1,000)
Tourism service enterprises	30,477
International partner	2,746

Breakdown	Amount (USD 1,000)
Debt	2,695
Tax from enterprises operating in the priority zone of the preservation area	2,300
Total (excluding debt)	35,522

Source: The City Planning Institute of Japan, Reports No. No. 4-3, October 2010, Higuchi, Hato

(5) Expenditure Allocation

OHCH has a policy on “re-invest in the preservation and restoration development” in which revenue generated from the city development is re-invested and sustain small return. Fund allocation by OHCH is shown in Table 4.15. Forty-five percent of the revenue is re-invested in the projects in the area, which secure sustainable financial condition of the enterprises and at the same time, the preservation/restoration re-development is implemented in the priority zone of the preservation area. Thirty-five percent of the revenue is allocated to social project/program, which contributes to improve the economic condition through linkage with policy on the welfare in the priority zone of the preservation area, which promotes self-effort to restore residents.

Table 4.15: Expenditure Allocation by OHCH

Expenditure Breakdown	Share (%)
Re-investment for the project in the territory	45
Allocation to social project/program	35
Saving for disaster, development outside the historic area	20

Source: The City Planning Institute of Japan, Reports No. No. 4-3, October 2010, Higuchi, Hato

4.3.5 Other Sites (Non-Japanese sites)

Other examples of the World Heritage management are shown below. Among the best practices recognized by UNESCO World Heritage Committee, examples of World Heritage sites similar to Luang Prabang (site designated as spatial area) were selected. Table 4.16 shows the list of the sites.

Table 4.16: Sample of World Heritage Management (Non-Japanese Sites)

Name of Site	Country	Management	Fund and Fund Management Strategy
Angkor Wat	Cambodia	Restoration	<ul style="list-style-type: none"> Strengthen the accountability and transparency of the Angkor ticketing system Extend other sources of revenue that are generated by concession contracts granted to private companies operating in Angkor Park, such as elephant tour, balloon service, electric car service, and other specific services. Finance is supported from international organizations
Archaeological Ensemble of Merida	Spain	Establishment of Consortium “Monumental, Historical-Artistic and Archaeological City of Mérida” (local government, Ministry of Culture, association, community organization, construction, and architect) Search, restoration, and research of heritage, community enlightenment (education)	<ul style="list-style-type: none"> Contribution from the institutions included in the Consortium (means a 20% of the income) Income from the economic activities: archaeology, merchandising, and touristic activities (30% of income) Income from the Monumental Ensemble Management (ticket offices), that are the basis of the entity maintenance (means 50% of the income). A sponsorship way which allows the citizens and entities to take part in the Mérida heritage protection and recover social spaces
Coffee Cultural Landscape of Colombia	Colombia	Coffee producer support	<ul style="list-style-type: none"> Financial support from the Colombian Coffee Growers Federation and the Ministry of Culture. Tax from the mining and hydrocarbons industries

Name of Site	Country	Management	Fund and Fund Management Strategy
			<ul style="list-style-type: none"> • These revenues will go to a regional development fund and to a science and technology innovation fund, these two funds will finance the strategic projects in the municipalities and regions where no exploration projects have been carried out
Historic and Architectural Complex of the Kazan Kremlin	Russia	Restoration, Museum operation Public relations by IT	<ul style="list-style-type: none"> • Establishment of fund (donation) • The Kazan Kremlin Museum-Reserve rents out some of provisioning services to the population, which is becoming a permanently stable growing source of revenue in the historic monument premises
Historic Centre of Oaxaca and Archaeological Site of Monte Albán	Mexico	Restoration of assets Safety measure (fire prevention) Research and development and education	<ul style="list-style-type: none"> • Revenue from ticket sales in the World Heritage Area • Fund allocation • Support from international organizations

Source: UNESCO

4.3.6 Others (Japanese sites)

Examples of UNESCO World Heritage are summarized below. Most of the World Heritage in Japan are designated as “Cultural Properties” by the national government or local government prior to be designated as UNESCO World Heritage. Preservation and development of the heritage is based on the current laws and regulations including Cultural Property Protection Law, Natural Park Law, City Planning Law, Landscape Law, and Forestry Law. In principle, management of the heritage is the responsibility of the individual owner or organizations, which possess the heritage. Subsidy (national government, prefecture government, and city government) is provided for the restoration and acquisition of property and land based on the Cultural Property Protection Law.

Management of independent building (Tomioka Silk Mill and Himeji Castle) is the responsibility of the local government. While management of aggregate (cluster) of facilities (Nikko, Iwami Ginzan, and Munakata) is administered by the preservation council, historical society, and NPO.

There are two types of fund, i.e.; the fund managed by the private sector and the fund established by the administration and managed by the administration and/or historical society. For fund managed by the private sector (Munakata), collected fund (contribution) is contributed to the management organization. There are two types of fund established by administration, i.e.: fund source from the government (Iwami Ginzan), fund solely by donation (Nagasaki). Table 4.17 shows the cases of World Heritage in Japan.

Table 4.17: Management of World Heritage (Japanese sites)

Name of World Heritage	Management	Income and Income Source
Iwami Ginzan Silver Mine and its Cultural Landscape (Ota City, Shimane Prefecture) http://ginzan-npo.jp/kyodo_fund/fund.html	NPO Iwami Ginzan Preservation Council is responsible for preservation and management.	<ul style="list-style-type: none"> • Iwami Ginzan Fund is established by Ota City and Shimane Prefecture for the purpose of securing fund for preservation and utilization of the heritage (Total JPY 380 million, JPY 230 million from contribution, JPY 150 million from administration). NPO is managing the fund. • Preservation and utilization of fund: general, education, preservation, restoration, and subsidy for stay
Sacred Island of Okinoshima and Associated Sites in the Munakata Region (Munakata City, Fukuoka Prefecture)	Preservation and Utilization Council of "Sacred Island of Okinoshima and Associated Sites in the Munakata Region" is preserving and managing the heritage	<ul style="list-style-type: none"> • Munakata Festival established the fund and the collected fund is donated to the council: http://munafund.jp
Sacred Sites and Pilgrimage Routes in the Kii Mountain Range (Wakayama Prefecture) http://www.sekaiisan-	Wakayama Prefecture is preserving and managing the assets based on the world heritage ordinance. Management organization is designated in the World Heritage	<ul style="list-style-type: none"> • There is no information about the fund • Prefecture government and city government are preserving and utilizing the assets based on related laws and regulations

Name of World Heritage	Management	Income and Income Source
wakayama.jp/protect/jourei.html	Preservation Plan. The council was established in prefecture and city as a coordination tool.	
Hidden Christian Sites in the Nagasaki Region (Nagasaki Prefecture) http://www.bunka.go.jp/seisaku/bunkazai/shokai/sekai_isan/ichiran/1407709.html	Subsidy is provided for the restoration based on Cultural Property Protection Law.	<ul style="list-style-type: none"> • Fund: Nagasaki Prefecture established the fund, which is used for subsidy for restoration. • Fund source is donation. Three donation boxes are set in Sasebo City • http://kirishitan.jp/information/donations

Source: Related Websites

4.4 Recommendation for World Heritage Preservation Fund

Although studies had been done to consider fund establishment that can be managed by Luang Prabang Province independently, it has been made clear that with the current system in Laos, it is difficult to manage the provincial finance without the involvement of the central government. Luang Prabang Province is considering collecting fund from entrance fee and tourism sector (hotel and restaurants). On the other hand, it has been confirmed that the fund can mainly be managed by the province if provincial financial source becomes clear. For that reason, the enforcement of Prime Minister's Decree that is currently being prepared is important.

Considering the operation of other World Heritage sites, fund source for heritage preservation can be categorized into three, namely: support from administration or international donors, revenue from operation (entrance fee), and donation from individual and companies.

In order to establish the fund, preservation activities have to be clarified, fund sources based on activities have to be secured, operation organization has to be established, discussion between provincial government and national government has to be accelerated, and contribution has to be secured.

4.4.1 Revenue / Expenditure Planning Based on Actual Heritage Preservation Activities

To enact the Prime Minister's Decree for fund establishment, it is necessary to clarify the purpose, activities, financial source, and management system regarding the fund. The fund proposed does not have details even though the coverage of the fund is mentioned. Heritage preservation activities and expenditure plans have to be prepared for mid- to long-term period.

4.4.2 Finding Heritage Financial Source

Finding the heritage financial source is necessary to establish the fund because there is duplication of fund sources between tourism and heritage. Either separating the fund for tourism and heritage or unifying the fund has to be examined.

- Define "tourism" and "heritage" clearly and use a part of the tourism financial source as heritage financial source.
- Identify heritage financial source independently. Consider alternatives otherwise burden of tourism increases. Define "heritage" clearly and clarify standard of allocation.

In addition to financial source of the fund, consideration is needed to establish another mechanism to find support from the private sector. Since donations from general public and from companies are important element of the fund, a framework in which contribution can be integrated as fund source has to be developed. Temples in Takayama City have used "crowdfunding" to maintain facilities. Use of crowdfunding is to be considered for restoration of preservation buildings in Luang Prabang.

4.4.3 Progress in Discussion for the Need of Fund Establishment

The Luang Prabang Provincial Government has applied to the central government for fund establishment. According to the DPL, provincial decisions (financial source and fund management) have already been

agreed by related agencies of the province. Considerations on detailed matters are required between the province and central government in the future.

Chapter 5 Output 3 Pilot Project for Rural Area Development

5.1 Data Collection and Survey Result of Alternative Tourism Resources

5.1.1 Site Survey Results (Catalogues of Tourism-related Regional Development Activities)

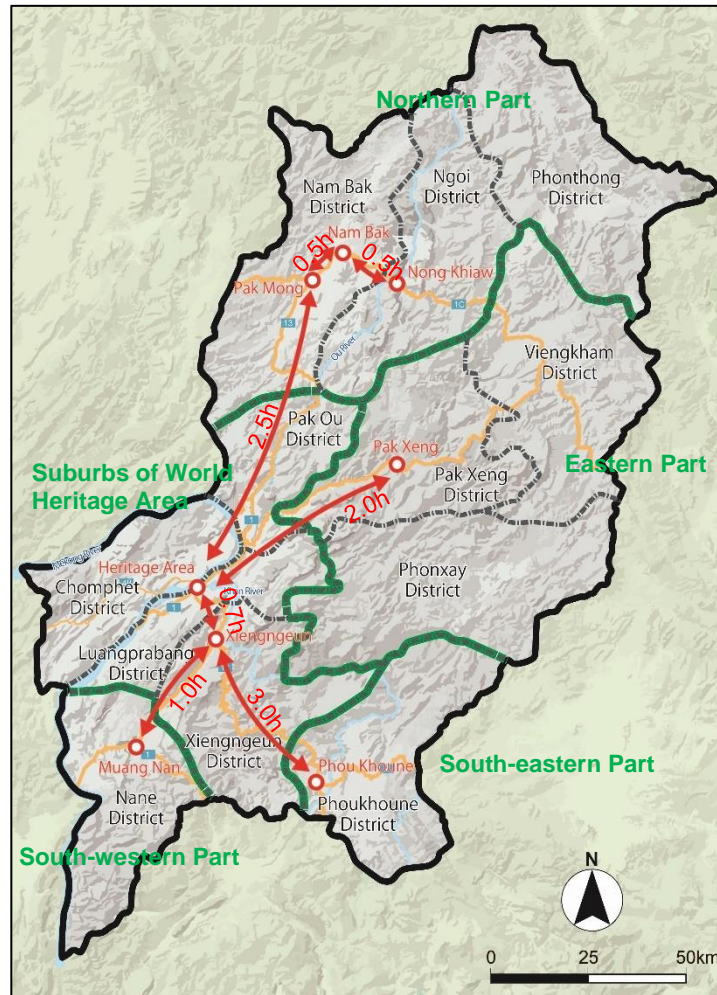
For new development of tourism resources in the rural district, based on statistics currently available and DoICT project candidates, site surveys were conducted in areas including the suburbs of the World Heritage Area, north, east, southeast and southwest (Table 5.1). Figure 5.1 shows regional divisions and required time of travel between main areas (access between all sections are limited to land travel).

Table 5.1: Classification of Rural District

Classification	District Name	Number of Domestic Tourists	Number of Foreign Tourists	Total
World Heritage Area	Town of Luang Prabang and UNESCO World Heritage	137,415* ¹	474,307* ¹	611,722* ¹
Suburbs of the World Heritage Area	Luang Prabang District excluding World Heritage Area, Pak Ou District, Chomphet District, and Xiengngeun District	26,042* ²	84,693* ²	110,735* ²
Northern Part	Nam Bak District, Ngoi District, and Phonthong District	4,292	14,542	18,834
Eastern Part	Viengkham District, Pak Xeng District, and Phonxay District	3,238	1,021	4,259
South-eastern Part	Phou Khoune District	2,218	535	2,753
South-western Part	Nan District	5,204	1,512	6,716

* Luang Prabang District is not included in the number of tourists

Source: Interview from Each District Office by the JICA Consultant Team



Source: JICA Consultant Team

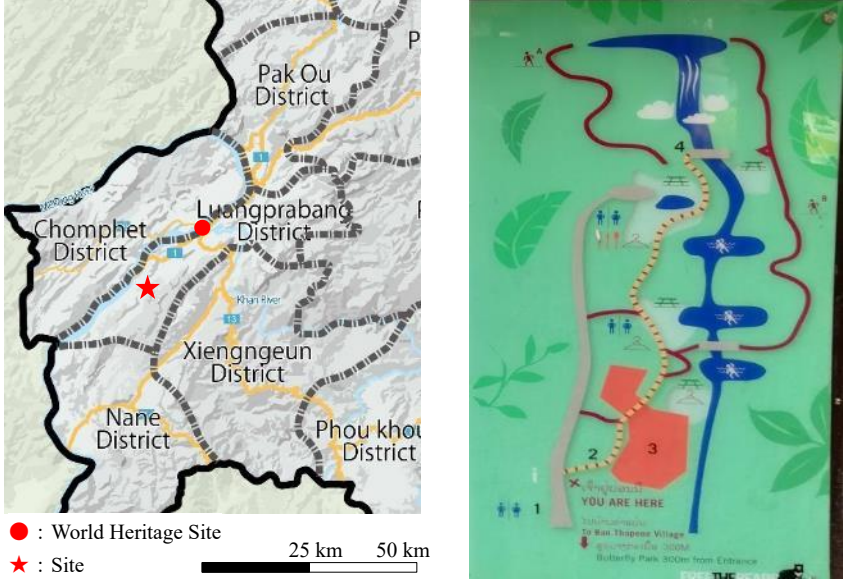


Figure 5.1: Classification of Rural District and Required Time of Travel between Main Areas



(1) Suburbs of the World Heritage Area

Because its location, which is closed to the World Heritage Area, the suburbs of the World Heritage Area have most tourists (both Lao and foreigners) among the five regional classification. According to statistics of DoICT and districts, it can be judged that 95% of all tourists travel and stay in the World Heritage Area and its suburbs.

In the suburbs of the World Heritage Area, many tourism resources including the most popular Kuang Si Waterfall and Pak Ou Cave are already in use. The main purpose of this output is to increase the number of tourists in the rural district, where economic benefits from tourism are not too many. However, the number of tourists in the rural district is closely linked to the number of tourists in the World Heritage Area, which is the main tourist destination of Luang Prabang Province. Therefore, enhancing attraction of the suburbs of the World Heritage Area is, in one way, important to create tourism opportunities for the rural district.

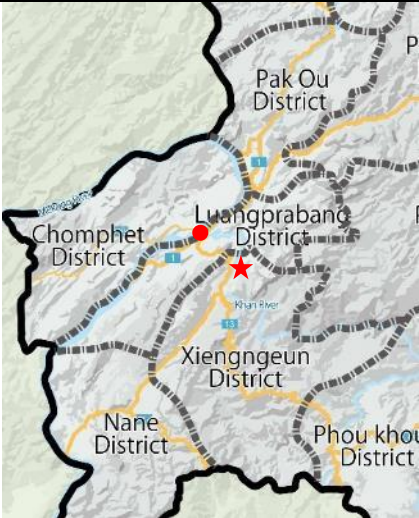

Table 5.2: Site Survey Result of Alternative Tourism Resources (Kuang Si Waterfall)

Serial Number	No. 1.1.
Name	Kuang Si Waterfall
Attraction	<ul style="list-style-type: none"> Waterfall, hiking trail, bear park
Site	Kuang Si Waterfall, Luang Prabang District
Map	 <p>● : World Heritage Site ★ : Site</p> <p>25 km 50 km</p>
Access	<p>(Transportation and Traveling Time)</p> <ul style="list-style-type: none"> 40 minutes by car on National Route 1 from the World Heritage Area. <p>(Access Condition)</p> <ul style="list-style-type: none"> National Route 1 is paved asphalt in all sections.
Current State	<p>(Tourism Resources)</p> <ul style="list-style-type: none"> Spectacular waterfall (Required time from the entrance: 1 hour on foot). Hiking trails going up to the upstream of the waterfall (required time from the biggest waterfall: 1.5 hour on foot). Bear watching and environmental education at the Bear Rescue Center. <div style="display: flex; justify-content: space-around;"> <div>  <p>Waterfall</p> </div> <div>  <p>Bear Rescue Center</p> </div> </div> <p>(Tourism Infrastructure)</p> <ul style="list-style-type: none"> The viewpoint at the area where the largest waterfall can be seen is in good condition. Other waterfall viewpoint areas are not well-maintained. Deck paths are partly available but mostly tree roots are exposed due to foot pressure of tourists and visitors walking in the area.

		
	<p>Viewpoint in front of the waterfall (Other)</p> <ul style="list-style-type: none"> • Entrance fee: LAK 20,000/person 	
Potential	<ul style="list-style-type: none"> • One of the most popular destinations, as for the World Heritage Area, increase in its attraction will raise the level of tourism in Luang Prabang Province. 	

Source: JICA Consultant Team (including the figures inside the table)


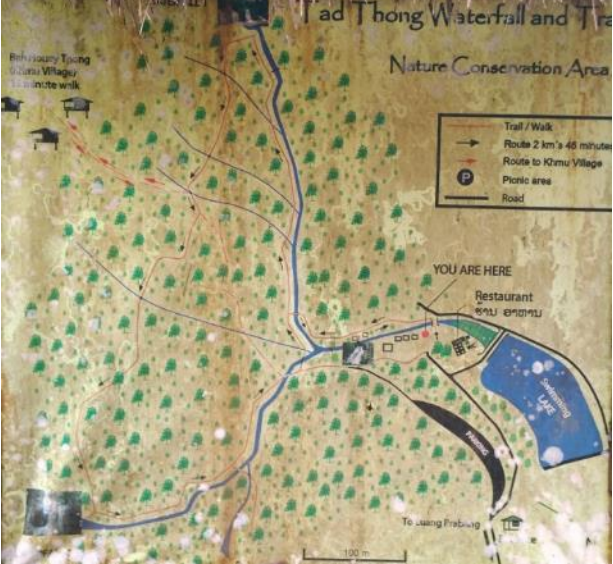
Table 5.3: Site Survey Result of Alternative Tourism Resources (Sae Waterfall)





Serial Number	No. 1.2.
Name	Sae Waterfall
Attraction	• Waterfall, Elephant Riding
Site	Tad Sae, Luang Prabang District
Map	 <p>● : World Heritage Site ★ : Site</p> <p>25 km 50 km</p> 
Access	<p>(Transportation and Traveling Time)</p> <ul style="list-style-type: none"> • 30 minutes by car on National Route 13 and 10 minutes by boat from the World Heritage Area. <p>(Access Condition)</p> <ul style="list-style-type: none"> • National Route 13 is paved asphalt in all sections.
Current State	<p>(Tourism Resources)</p> <ul style="list-style-type: none"> • Sae Waterfall is a popular tourist destination, just after the most popular Kuang Si Waterfall, where tourists can enjoy significant amount of water flowing down beautifully. • Elephant ride in the site is available. • Hiking trails are available. • Activities such as ziplines that travel through the forest are also available.

	 <p>Waterfall (Tourism Infrastructure)</p> <ul style="list-style-type: none"> • Good condition to get to the most spectacular viewpoint area. • Toilets are available. <p>(Other)</p> <ul style="list-style-type: none"> • As of March 2019, pipe installation work is underway to let the stored water on the upstream flow downstream (assumed to be the solution due to lack of water flow during the dry season). 	 <p>Elephant Riding</p>  <ul style="list-style-type: none"> • Pipe Installation Work to Let Water from the Upstream Flow Downstream
Potential	<ul style="list-style-type: none"> • Attractive waterfall with other activities such as elephant riding are not available in Kuang Si Waterfall. In addition, since traveling time from the World Heritage Area is shorter than that of the Kuang Si Waterfall, the potential of this place to be more popular and attractive is high if more progress is made in the tourism development. 	

Source: JICA Consultant Team (including the figures inside the table)

Table 5.4: Site Survey Result of Alternative Tourism Resources (Thong Waterfall)

Serial Number	No. 1.3.	
Name	Thong Waterfall	
Attraction	• Waterfall, hiking trails, Khmu Tribe Village	
Site	Houay Village and Thong Village, Luang Prabang District	
Map	  <p>● : World Heritage Site ★ : Site</p> <p>25 km 50 km</p> <p>100 m</p>	
Access	(Transportation and Traveling Time)	

	<ul style="list-style-type: none"> • 20 minutes by car on National Route 13 and 10 minutes on unpaved road from the World Heritage Area. • 20 minutes on foot between the collapsed point (as of February 2019) and the area. <p>(Access Condition)</p> <ul style="list-style-type: none"> • National Route 13 is paved asphalt in all sections. • Unpaved road has collapsed and is not accessible by car.  <ul style="list-style-type: none"> • Collapsed Unpaved Road on the Way to Waterfall
<p>Current State</p>	<p>(Tourism Resources)</p> <ul style="list-style-type: none"> • River trails going up in the mountains are available: waterfall and hiking can be enjoyed. • The hiking trails are connected to Thong Village (Khmu Tribe Village), which is a good place to stop by for a quick break along the way (traveling time: about 1.5 hours). • Ponds were once used for swimming, but currently, these are not deep enough because sediments from the upstream have flowed into the ponds.  <p>Waterfall</p>  <p>Pond with Rotten Swimming Facility</p> <p>(Tourism Infrastructure)</p> <ul style="list-style-type: none"> • Viewpoint areas around the waterfall are not so well-maintained also, no facilities are available therefore waterfall watching is not comfortably enjoyed. • Small wooden pavilions are installed but consequently have become rotten. <p>(Other)</p> <ul style="list-style-type: none"> • Entrance fee: LAK 20,000/ person. • From September to December is the high season with many visitors. • Restaurants are open only between October and December. • Operated by a private company (Luang Prabang View Hotel). • About 90% of the visitors are westerners. • Highly different between the high season and the low season due to decline in water volume during the dry season and inflow of sediment from the upstream.  <ul style="list-style-type: none"> • Water volume is evidently insufficient during the dry season
<p>Potential</p>	<ul style="list-style-type: none"> • A certain number of tourists visit during the high season and there is so much room for improvement. Potential is high. • Although water volume is too little to enjoy the waterfall, hiking trails with moderate undulations and changes, if maintained properly, can be good exercise activities.
<p>Area of Challenge</p>	<ul style="list-style-type: none"> • The right to operate this tourist facility belongs to a private company. • Attractiveness may be adversely affected by inflow of sediment from the upstream.

Source: JICA Consultant Team (including the figures inside the table)



(2) Northern Part

Ngoi District in the north has tourist destinations such as the scenic and nostalgic Nong Khiaw and Goi Village, its attraction is differently from the World Heritage Area. Famous for textiles, Na Nyang Village in Nam Bak District attracts many tourists. Actually, the north has the second largest number of tourists after the suburbs of the World Heritage Area, which is among the five classified regions. The number of foreign tourists exceeds the number of domestic tourists only in suburbs of the World Heritage Area and the north. However, connectivity from the World Heritage Area is bad. For example, it is located over three hours away from the World Heritage Area with only two regular vans per day (seating capacity: 18 people/day). In addition, the number of tourists is only 2% of the total of Luang Prabang Province, so compared with the World Heritage Area, it can be said that development in this region is on the way.

The region is expected to be developed into a main tourist destination as it is on the candidate list of DoICT projects. Also, the Deputy Director General of DoICT said in a meeting that this region would be given higher priority to be a tourist hub in the rural district.

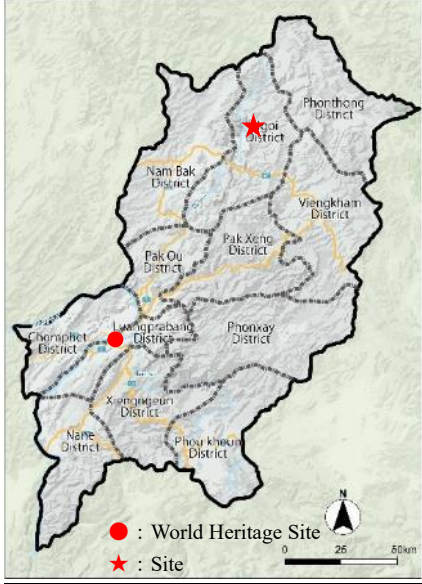


Table 5.5: Site Survey Result of Alternative Tourism Resources (Nong Khiaw)


Serial Number	No. 1.4.
Name	Nong Khiaw
Attraction	<ul style="list-style-type: none"> • Tourist hub in the northern part • Scenery / view, beginner-friendly climbing, caves, playing in the rivers, village visit, nostalgic scenery, sense of hidden visit
Site	Nong Khiaw, Ngoi District
Map	<p>The map shows the outline of Luang Prabang Province with its districts: Phonthong, Ngoi, Nam Bak, Viengkham, Pak Xeng, Pak Ou, Phoukhouay, Phongsavan, Xiangkhouang, Phoukhouang, Nam, and Phongsavan. A red dot indicates the World Heritage Site (Luang Prabang) and a red star indicates the Nong Khiaw site. A scale bar shows 0, 25, and 50 km, and a north arrow is present.</p>
Access	<p>(Transportation and Traveling Time)</p> <ul style="list-style-type: none"> • 3.5 hours by car on National Route 13 from the World Heritage Area. Two regular vans per day (seating capacity: 18 people / day) • No boat available from the World Heritage Area (due to the construction of China-supported dam underway on the Ou River). <p>(Access Condition)</p> <ul style="list-style-type: none"> • National Route 13 connecting the World Heritage Area to Nong Khiaw is paved asphalt. However, road condition become bad or is in restoration work during the rainy season when landslides, rock fall, road collapses, and the like frequently occur.
Current State	<p>(Tourism Resources)</p> <ul style="list-style-type: none"> • Two view deck areas (required time: four-hour round trip from the center of Nong Khiaw) • Patok Cave and Pha Kuang Cave (required time: about two hours respectively plus 40 minutes round trip from the center of Nong Khiaw). • Activities in the Ou River such as cruising.

		
	<p>Photogenic Scenery (Tourism Infrastructure)</p> <ul style="list-style-type: none"> • 22 guesthouses and four hotels mainly located along the river. • There are some saunas and massage shops. • Used as a boat port bound for Muang Goi Village (required time: two-hour round trip by boat. Details of Muang Goi Village are as shown in Table 1.1). <p>(Other)</p> <ul style="list-style-type: none"> • Good environment for tourists. • Many western backpackers and young Lao people visiting the area. • Many tourists stopped over as it takes as long as four hours to travel by car from the World Heritage Area. • Oranges and various agricultural products are cultivated along the river. • A big gap in between the peak season and off season. • A recent decrease in the number of tourists can be observed, due to access restriction of ships from Luang Prabang. The restriction is because of the recent dam construction. • Nutritive products such as mushrooms, river shrimps (only for two weeks), and mountain frogs are available at the beginning of the rainy season. 	
<p>Potential</p>	<ul style="list-style-type: none"> • Highly potential to be a tourist hub in the northern part since a certain number of tourists come in. • Tourists can enjoy the unique scenery of Laos and can have a look at the local life. • Hold climbing competition by using viewpoints. • Improve activities such as zip lines (go on foot, return by zip lines). • Create maps that focus on “walking”. • Invite deluxe class hotels. • Possible to develop a two-night and three-day (or more) tour with spectacular stopover in the area to enjoy the tourism resources such as Nayang Village and local markets located on the way to the World Heritage Area. • DoICT sees the place as one of the priority areas for tourism development. 	
<p>Area of Challenge</p>	<ul style="list-style-type: none"> • Low awareness. • Few souvenirs that are nice and unique. • Transportation from the World Heritage Area is inconvenient (increase regular connections). • Safety at the viewpoints and caves are not well ensured. • No toilets available at the tourist destinations such as viewpoints and caves. • Saunas and massage shops are not clean enough. • Lack of transportation in Nong Khiaw with few tuk-tuk available because the place is small and not so many tourists visit the area. 	

Source: JICA Consultant Team (including the figures inside the table)

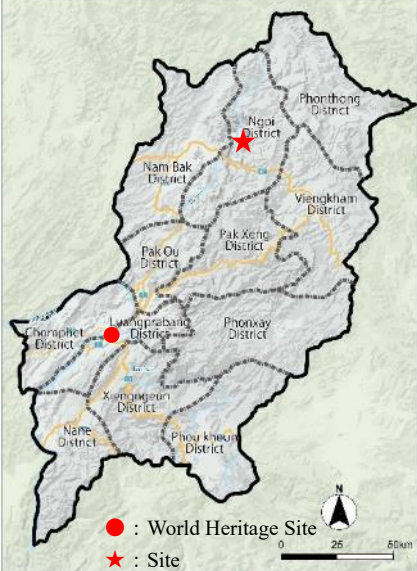


Table 5.6: Site Survey Result of Alternative Tourism Resources (Muang Ngoi Village)



Serial Number	No. 1.5.
Name	Muang Ngoi Village
Attraction	<ul style="list-style-type: none"> • Tourist hub in the northern part • Scenery / view, beginner-friendly climbing, caves, village visit, nostalgic scenery, sense of hidden visit
Site	Muang Ngoi Village, Ngoi District
Map	 <p>● : World Heritage Site ★ : Site</p>
Access	<p>(Transportation and Traveling Time)</p> <ul style="list-style-type: none"> • 3.5 hours by car on National Route 13 from the World Heritage Area through Nong Khiaw. Two regular connections per day between the World Heritage Area and Nong Khiaw. • About an hour by boat from Nong Khiaw (traveling time from the World Heritage Area: about 4.5 hours). About ten regular connections per day (depending on seasons. One-way ticket: LAK 50,000) between Nong Khiaw and Muang Ngoi Village. • From Nong Khiaw, car is usable but not usual. <p>(Access Condition)</p> <ul style="list-style-type: none"> • National Route 13 connecting the World Heritage Area to Nong Khiaw is paved asphalt. However, road condition become bad or is in restoration work during the rainy season when landslides, rock fall, road collapses, and the like frequently occur. • The section between Nong Khiaw and Muang Ngoi Village is passable to vehicle. However, unpaved and mostly in bad condition, being impassable to vans which are generally used for tourists in the World Heritage Area (during the dry season, only four-wheel drive vehicles, motorbikes, and the like can travel). • Dangerous in case of heavy rain and the like because the Ou River is shallow and small boats are used. <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  <p>Boat from Nong Khiaw</p> </div> <div style="text-align: center;">  <p>Boat landing place (with no signboards of the village name)</p> </div> </div>
Current State	<p>(Tourism Resources)</p> <ul style="list-style-type: none"> • The main street of the village goes straight to the mountains. Beautiful scenery. • Main street is short enough for a good walk • One good viewpoint area. (Beginner-friendly climbing crags are available, but safety management is questionable)

	<ul style="list-style-type: none"> • Hiking trails are available. On the way, tourists can visit the caves and villages and can see many animals as well. • On the site booking is available for activities such as kayaking. • Many picturesque spots and landscape (nature, townscape, shops, lives of people)  <p>Beautiful Film-like Nostalgic Scenery of Laos (Tourism Infrastructure)</p> <ul style="list-style-type: none"> • Tourist information, restaurants, bars and souvenir shops are available on the main street. • 12 guesthouses along the river are available (around LAK 100,000 per night). • Five restaurants are available on the main street (Lao, Western, Indian, etc.). • Wifi connection is available at the accommodations, but signal is weak. • Few paved roads so tourists can only travel by foot. • Facilities such as schools are in good condition and people look nice and kind. • Behind the site are industries such as Lao liquor production, boat propeller production, and agricultural product production, and others. <p>(Other)</p> <ul style="list-style-type: none"> • Most travelers are backpackers (no one brings their suitcase). • Nearly 90% of tourists are westerners. • A big gap between the peak season and off season.
Potential	<ul style="list-style-type: none"> • Has high potential to be a new tourist hub since a certain number of tourists come in. • Mountains, rivers, people, animals, and the touch of nostalgic scenery (what makes Luang Prabang look urban) • "Isolated land" "hard to reach destination but want to go" • Good location for expanding campsites (disclosure of information to developers) • Easy to collect entrance fees and the like because entries to the village are limited. • To introduce know-how of livestock raising and create brand products • Possible to develop a two-night and three-day (or more) tours by stopping over to enjoy tourism resources such as Nong Khiaw, Sopkong Village and local markets located on the way from the World Heritage Area. • DoICT sees it as one of the priority areas for tourism development.
Area of Challenge	<ul style="list-style-type: none"> • Attractiveness of Muang Ngoi Village is not known by tourists accurately. • Infrastructure is not well-developed. Especially emergency response at night is not possible. • Excess in number of people may affect the village's attractiveness. • Transportation in Muang Ngoi Village other than walking.

Source: JICA Consultant Team (including the figures inside the table)

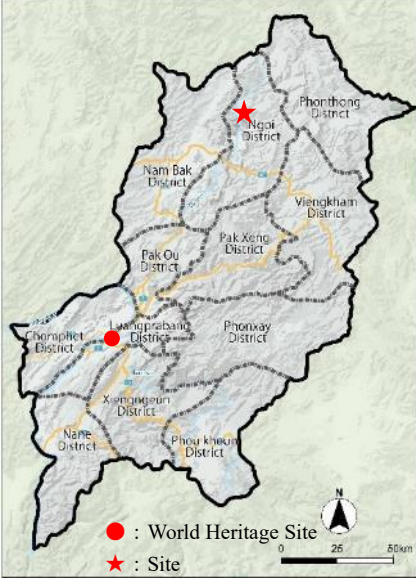
Table 5.7: Site Survey Result of Alternative Tourism Resources (Sopkong Village)




Serial Number	No. 1.6.
Name	Sopkong Village
Attraction	· Farming experience, organic farming, cafe, volunteer, homestay, village visit, waterfall
Site	Sopkong Village, Ngoi District
Map	 <p>The map shows the administrative boundaries of Luang Prabang province, divided into several districts: Phonthong, Ngoi, Nam Bak, Viengkham, Pak Xeng, Pak Ou, Phoukay, Luang Prabang, Chomphet, Xomngoun, Nam, and Phoukhoum. A red dot indicates the World Heritage Site (Luang Prabang), and a red star indicates the location of Sopkong Village in Ngoi District. A scale bar and north arrow are also present.</p>
Access	<p>(Transportation and Traveling Time)</p> <ul style="list-style-type: none"> • 3.5 hours by car on National Route 13 from the World Heritage Area through Nong Khiaw. Two regular connections per day. • About 30 minutes by boat from Nong Khiaw (traveling time from the World Heritage Area: about four hours). About ten regular connections per day (depending on season). • An hour by mountain bike from Nong Khiaw. • From Nong Khiaw, car is usable but not usual. <p>(Access Condition)</p> <ul style="list-style-type: none"> • National Route 13 connecting the World Heritage Area to Nong Khiaw is paved asphalt. However, road condition become bad or is in restoration work during the rainy season when landslides, rock fall, road collapses and the like frequently occur. • The section between Nong Khiaw and Sopkong Village is passable to vehicle. However, unpaved and mostly in bad condition, so it impassable to vans which are generally used for tourists in the World Heritage Area (during the dry season, only four-wheel drive vehicles, motorbikes and the like can travel). • Dangerous in case of heavy rain since the Ou River is shallow and small boats are used. <div style="display: flex; justify-content: space-around;">   </div> <p style="display: flex; justify-content: space-around;"> Boat Landing Place View of the Ou River from the Boat Landing Place </p>
Current State	<p>(Tourism Resources)</p> <ul style="list-style-type: none"> • Mook Waterfall (trip takes an hour one-way on foot) • Yensabai Organic Farm (trip takes 30 minutes one-way on foot) • There is an organic farm and an accompanying restaurant run by a Lao from Ngoi District. This farm offers free homestay to foreign tourists in exchange of their cooperation to help in activities such as farming and facility maintenance (four to five Western women were home-stayed at the time of the survey visit).

	<ul style="list-style-type: none"> The owner wants to provide tourists with an experience of traditional village life in Laos, as a result, it makes profit to the village. http://yensabaiorganicfarm.com/ Demonstration and sale of handicrafts are conducted. <div style="display: flex; justify-content: space-around;">   </div> <p style="display: flex; justify-content: space-around;"> Organic Farm (Tourism Infrastructure) Handicraft Demonstration </p> <ul style="list-style-type: none"> No restaurants or accommodations found in Sopkhong Village. No signal of mobile phone carriers and no wire-line phones at Yensabai, an accommodation. <p>(Other)</p> <ul style="list-style-type: none"> Handicraft is sold in Sopkhong Village.
Potential	<ul style="list-style-type: none"> Tourists can enjoy the scenery unique to Laos and experience local life. Possible to develop tour products related to ecotourism. Many tourists stop by Muang Ngoi Village mainly to visit Mook Waterfall or Yensabai Organic Farm, but required time is long. Better to have specialty products that can differentiate between neighboring villages. Possible to develop a two-night and three-day (or more) tour by stopping over to enjoy the tourism resources such as Nayang Village, local markets and Nong Khiaw located on the way from the World Heritage Area.
Area of Challenge	<ul style="list-style-type: none"> Low awareness (about 20-30 people per day, estimated figure at the time of the survey). Safety issues such as communication and transportation during an emergency may be a bottleneck.

Source: JICA Consultant Team (including the figures inside the table)

Table 5.8: Site Survey Result of Alternative Tourism Resources (Sob Jam Village)

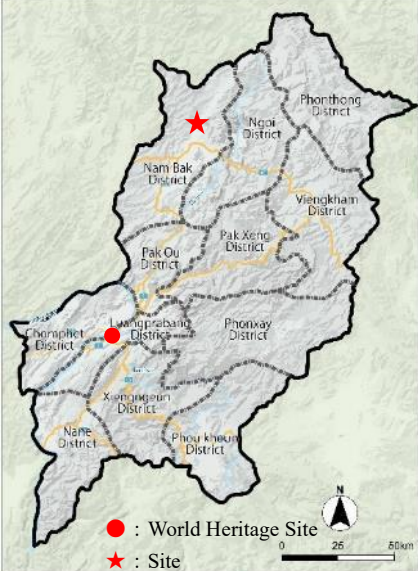


Serial Number	No. 2.7.	
Name	Sob Jam Village	
Attraction	<ul style="list-style-type: none"> Popular for rustic textiles, homestay 	
Site	Sob Jam Village	
Map	 <p style="text-align: center;"> ● : World Heritage Site ★ : Site </p>	
Access	(Transportation and Traveling Time)	

	<ul style="list-style-type: none"> • 3.5 hours by car on National Route 13 from the World Heritage Area through Nong Khiaw (two regular connections per day). About an hour by boat between Nong Khiaw and Muang Ngoi Village (about 10 regular connections per day (depending on seasons). Thirty minutes by boat between Muang Ngoi Village and the area (no regular connection but based on negotiation. Total traveling time: about five hours). • 3.5 hours by car on National Route 13 from the World Heritage Area through Nong Khiaw (two regular connections per day). About 1.5 hours by boat between Nong Khiaw and the area (no regular connection but based on negotiation. Total traveling time: about 5 hours). <p>(Access Condition)</p> <ul style="list-style-type: none"> • National Route 13 connecting the World Heritage Area to Nong Khiaw is paved asphalt. However, road condition become bad or is in restoration work during the rainy season when landslides, rock fall, road collapses and the like frequently occur. • The section between Nong Khiaw and Muang Ngoi Village is passable to vehicle. However, unpaved and mostly in bad condition, so it is impassable to vans which are generally used for tourists in the World Heritage Area (during the dry season, only four-wheel drive vehicles, motorbikes, and the like can travel). Dangerous in case of heavy rain since the Ou River is shallow and small boats are used. <div style="text-align: center;">  <p>Boat Landing Place</p> </div>
<p>Current State</p>	<p>(Tourism Resources)</p> <ul style="list-style-type: none"> • Tourists can see demonstration of textiles on the main street. • Silk textiles are saleable. • Nostalgic scenery of Laos, where tourists can see broom grass drying on the street and the like. <div style="text-align: center;">  <p>Textile weaving</p> </div> <div style="text-align: center;">  <p>Natural landscape</p> </div> <p>(Tourism Infrastructure)</p> <ul style="list-style-type: none"> • 4 guesthouses <p>(Other)</p> <ul style="list-style-type: none"> • Around 200 tourists visit this place per year
<p>Potential</p>	<ul style="list-style-type: none"> • Possible to develop a day-tour from Muang Ngoi Village. • Possible to develop high-quality souvenirs by using the produced silk textiles. • Tourist can possibly experience the rural lives in Laos by home stay and others.
<p>Area of Challenge</p>	<ul style="list-style-type: none"> • Although accommodations for a small number of tourists are available, because tourism infrastructure is not well developed, it is better to develop packaged tours based on staying over in Nong Khiaw or Muang Ngoi Village.

Source: JICA Consultant Team (including the figures inside the table)

Table 5.9: Site Survey Result of Alternative Tourism Resources (Nayang Village)

Serial Number	No. 1.8.
Name	Nyang Village
Attraction	Traditional houses of Tai Lue Tribe, quality textiles, home stay, textile experience

Site	Nayang Village, Nam Bak District
Map	 <p>● : World Heritage Site ★ : Site</p>
Access	<p>(Transportation and Traveling Time)</p> <ul style="list-style-type: none"> By car on National Route 13 between the World Heritage Area Buom Village and on unpaved road between Buom Village and the area (traveling time: three hours and 15 minutes). <p>(Access Condition)</p> <ul style="list-style-type: none"> National Route 13 connecting the World Heritage Area to Buom Village is paved asphalt in all sections. However, road condition become bad or is in restoration work during the rainy season when landslides, rock fall, road collapses, and the like frequently occur. Unpaved road from Buom Village to the area is in bad condition.
Current State	<p>(Tourism Resources)</p> <ul style="list-style-type: none"> Hands-on activities (bamboo work, weaving, yarn spinning, dyeing, and paper making) Homestay is available at Tai Lue Tribe houses <p>(Tourism Infrastructure)</p> <ul style="list-style-type: none"> Several Tai Lue houses for homestay are available and all clean. <div style="display: flex; justify-content: space-around;"> <div>  <p>Homestay Facilities</p> </div> <div>  <p>High-floored House Unique to Tai Lue Tribe</p> </div> </div> <p>(Other)</p> <ul style="list-style-type: none"> Orders for fabrics come from foreign countries and boutiques in Luang Prabang and Vientiane. Village appears more economically prosperous. Relationships with various NGOs still exist. Visitors from the west and Japan are seen (Estimating daily tours available at HIS)
Potential	<ul style="list-style-type: none"> DoICT sees it as one of the priority areas for tourism development. High quality textiles are produced. Easy to promote as a “village popular for textiles” by utilizing the already available hands-on activities and accommodations. To provide equipment for quality accommodation to further enhance safety and hygiene. To enhance the unity of houses (Appeal by visual effect). To create PR videos.
Area of Challenge	<ul style="list-style-type: none"> Lack of awareness. No public transportation. Road in bad condition. Distance of about three hours for one-way trip from Luang Prabang. A guide is needed because English is not use in the area (a female guide familiar with textiles). Provide a manual to explain the place in English version, give education.
Remarks	<ul style="list-style-type: none"> Viewpoint of the village side (Identify their need. In a way not to push)

	<ul style="list-style-type: none"> • Example of introducing Lao textiles in Japan. http://www.ponnalet.com/about.html • Differentiate from Houey Hong Vocational Training Centre in Vientiane (something attractive that will make tourists decide to visit all the way) • To come up with something that will make it the "only one" or "number one". • To create a "textile map in Laos" and manual (multiple languages) if seeking to be specific on textiles. • To create additional attraction (to exceed the expected value even a little). • Tai Lue Tribe items. • Possible to develop a one-day tour products.
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Source: JICA Consultant Team (including the figures inside the table)

Table 5.10: Site Survey Result of Alternative Tourism Resources (Pak Mong Village)

Serial Number	No. 1.9.
Name	Pak Mong Village
Attraction	Rest stop, place for all buses going to the north to take a rest, restaurants and souvenir shops
Site	Pak Mong Village, Nam Bak District
Map	
Access	<p>(Transportation and Traveling Time)</p> <ul style="list-style-type: none"> • By car on National Route 13 from the World Heritage area (traveling time: two hours 30 minutes). <p>(Access Condition)</p> <ul style="list-style-type: none"> • Road is paved asphalt in all sections. However, road condition become bad or is in restoration work during the rainy season when landslides, rock fall, road collapses and the like frequently occur.
Current State	<p>(Tourism Resources)</p> <ul style="list-style-type: none"> • A place for buses bounding for north (Nong Khiaw, Bokeo, Oudomxay, Luangnamtha, Phonsali, Muang Khoua, etc.) to take a rest, having an element of "rest stop". • Souvenir shops (food) and restaurants are set up. • Popular with Laotians because rare food that are not found in the World Heritage Area are available. <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>Souvenir Shops for Visitors</p> </div> <div style="text-align: center;"> <p>Souvenirs on Display</p> </div> </div> <p>(Other)</p> <ul style="list-style-type: none"> • Difficult for foreign tourists to use as it may not be of quality and clean enough. • Toilets are not clean.
Potential	<ul style="list-style-type: none"> • It is expected that profits will increase by enhancing the functionality of "rest stop" because traffic is tremendous.

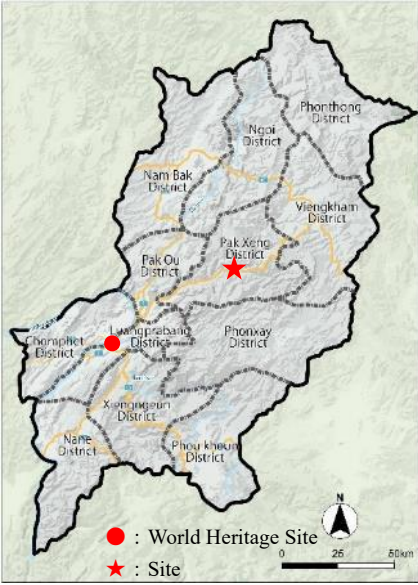

	Improvement of facilities such as bus stop is first required. (toilets and restaurants)
Area of Challenge	<ul style="list-style-type: none"> • Instruction for quality control, displaying expiration date and others seems necessary. • Increase the products. It is good to sell not only food but also handicrafts • It is desirable to have fast food so that tourists can eat in the car (such as Gohei Mochi, a grilled rice cake). • Guidance and education on display methods seems necessary (covered with dust because displayed along road)


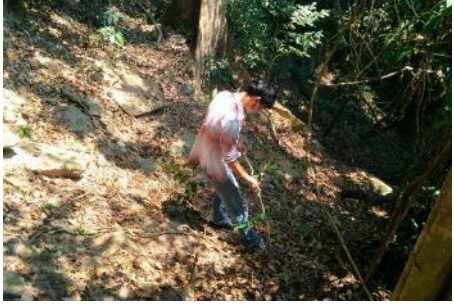


Source: JICA Consultant Team (including the figures inside the table)

(3) Eastern Part

Pak Seng and Viengkham districts in the east, the most underdeveloped tourist destination, have the least number of tourists. However, Pak Seng District is located about two hours from the World Heritage Area by car, which indicate that it has better access from the World Heritage Area than the north and southeast regions; the two regions that have larger number of tourists. Some of majestic natural resources which are not found in other regions have been confirmed, so potential seems to be high.

Table 5.11: Site Survey Result of Alternative Tourism Resources (Pha Tao Cave)

Serial Number	No. 1.10.
Name	Pha Tao Cave
Attraction	Cave
Site	Pha Tao Cave, Pak Xeng District
Map	
Access	<p>(Transportation and Traveling Time)</p> <ul style="list-style-type: none"> • By car from the World Heritage Area toward Pak Xeng (traveling time: 2.8 hours). <p>(Access Condition)</p> <ul style="list-style-type: none"> • Road between World Heritage Area and Pak Xeng is paved asphalt on the entire surface.
Current State	<p>(Tourism Resources)</p> <ul style="list-style-type: none"> • Cave • Historical place used in the wartime.  <p>Vast Cave</p>

	 <p>From Pak Xeng to Houay Va Village</p>	 <p>From Houay Va Village to Lom Waterfall</p>
<p>Current State</p>	<p>(Tourism Resources)</p> <ul style="list-style-type: none"> Waterfall <div style="display: flex; justify-content: space-around;"> <div>  <p>Waterfall (Largest) (Tourism Infrastructure) There is nothing special</p> </div> <div>  <p>Waterfall (Front)</p> </div> </div>	
<p>Potential</p>	<ul style="list-style-type: none"> The vertical drop of the waterfall is higher than that of the Sae Waterfall, and unlike Kuang Si Waterfall and Sae Waterfall, the water flowing through the rocks creates magnificent scenery. The waterfall is known to many Laotians. 	
<p>Area of Challenge</p>	<ul style="list-style-type: none"> At present, there is almost no tourism infrastructure from Pak Xeng to the waterfall. 	

Source: JICA Consultant Team (including the figures inside the table)

(4) South-Eastern Part

Phou Khoune District in the southeast is located between Luang Prabang and Vientiane / Vang Vieng and also between Luang Prabang and Xiang Khong, which was registered as a World Heritage in 2019. Although domestic flights from Luang Prabang International Airport to Vientiane are in service, as land travel is the most common way for Laotians to travel between the two cities, Phou Khoune has been developed into a rest place where large number of buses stop by. In addition, its location, because of the higher altitude in the province³⁸, gives an attractive scenery viewed from the highland.

³⁸ Height of about 1400m above sea level (Reference) 300m high at World Heritage Site

Table 5.13: Site Survey Result of Alternative Tourism Resources (Phou Khoue)

Serial Number	No. 1.12.
Name	Phou Khoue
Attraction	Scenery / view, strawberry farm, camping site, event venue
Site	Phou Khoue, Khoue District
Map	
Access	<p>(Transportation and Traveling Time)</p> <ul style="list-style-type: none"> • 3.7 hours by car on National Route 13 from the World Heritage Area. <p>(Access Condition)</p> <ul style="list-style-type: none"> • Road between World Heritage Area and Pak Xianggeun is paved asphalt on entire surface. • After Xianggeun is a mountain road. Road is partly unpaved or paved but damaged. • Travel time and safety are likely affected by fog and rain.
Current State	<p>(Tourism Resources)</p> <ul style="list-style-type: none"> • Sky view • Located at the junction with Vientiane / Vang Vieng in the south direction and Xiang Khouang in the east direction, having an element as a “rest stop”. • Markets and restaurants with local agricultural products. • Starry sky <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>Sky View</p> </div> <div style="text-align: center;"> <p>Market with Local Products</p> </div> </div> <p>(Tourism Infrastructure)</p> <ul style="list-style-type: none"> • Observation decks and parks. • Strawberry farm and accommodations. <p>(Other)</p> <ul style="list-style-type: none"> • There are many foreign backpackers and Lao families and young people. • It takes one day for a round trip from the World Heritage Area. • Strawberry farming that makes use of the cool climate seems to be the characteristic, both production volume and quality need improvement. • No public transportation to depart from Phou Khoue for nearby village excursion.
Potential	<ul style="list-style-type: none"> • Possible to increase local Laotian customers by setting up campsites with barbecue grills. • Suitable venue for people gathering because of its vast area and location is closed to an important transport hub. • Potential to be a venue for events and festivals.



Area of Challenge	<ul style="list-style-type: none"> • Quality improvement and technical support are required if it focuses on strawberries. • Make strawberry products (e.g., soft ice cream) be specialty products for the rest stop. • Prepare means of transportation for tourists to easily explore nearby villages and markets such as rental for bicycles, motorbike, and tuk-tuk. • At present, tourism attractiveness is small.
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Source: JICA Consultant Team (including the figures inside the table)

(5) South-Western Part

Nan District in the southwest is located between the World Heritage Area and Xayaboury, famous for the elephant festival. National Route 1 connecting the World Heritage Area and Xayaboury is in good condition, so traveling time is shorter compared with other areas (north, east, and southeast) without a feeling of extreme fatigue. On the other hand, because it only takes about two hours for one-way trip between the World Heritage Area and Xayaboury, no accommodations and rest stops gathering in one area were confirmed.

Table 5.14: Site Survey Result of Alternative Tourism Resources (Kacham Waterfall)

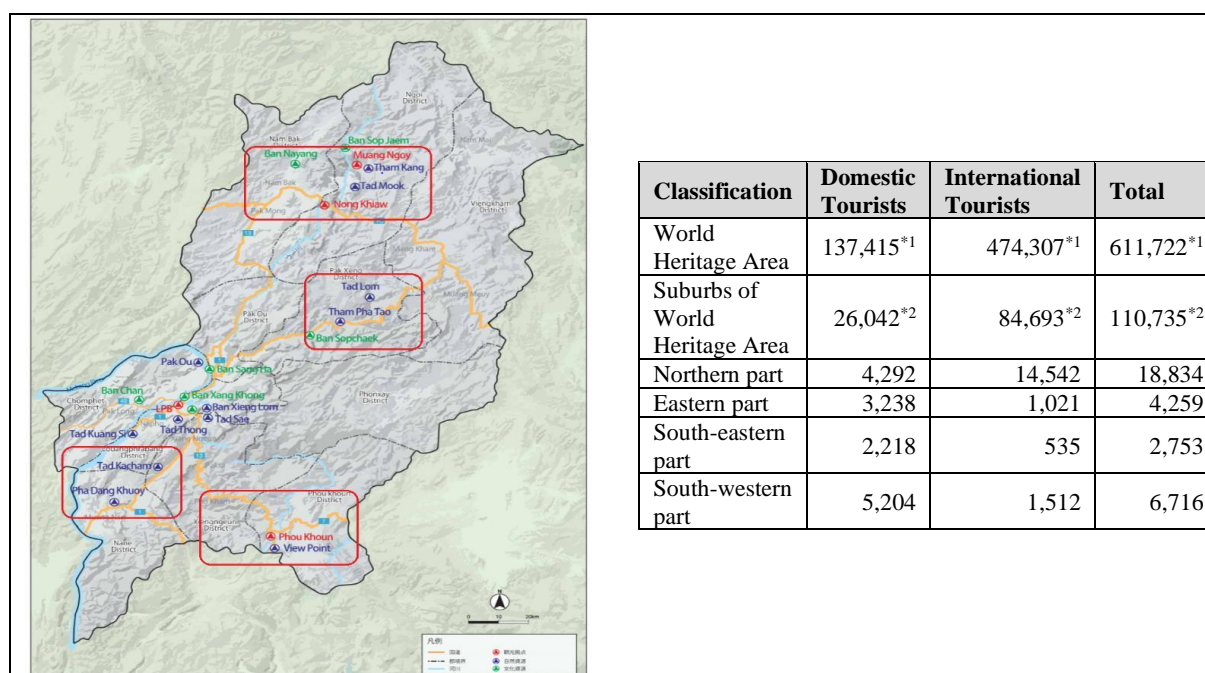
Serial Number	No. 1.13.	
Name	Kacham Waterfall	
Attraction	Waterfall, accommodations, restaurants	
Site	Kacham Waterfall, Xienggeun District	
Map	<p>The map shows the administrative districts of Luang Prabang province: Phonthong, Neoi, Nam Bak, Viengkham, Pak Xeng, Pak Ou, Phonvay, Xienggeun, Nam, and Phou Khouay. A red dot indicates the World Heritage Site, and a red star indicates the location of Kacham Waterfall in the Xienggeun District. A scale bar shows 0, 25, and 50 km, and a north arrow is present.</p>	
Access	<p>(Transportation and Traveling Time)</p> <ul style="list-style-type: none"> • 1.5 hours by car on National Route 1 from the World Heritage Area. <p>(Access Condition)</p> <ul style="list-style-type: none"> • Road is paved asphalt on entire surface. 	
Current State	<p>(Tourism Resources)</p> <ul style="list-style-type: none"> • Waterfall and walking paths <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  <p>Waterfall</p> </div> <div style="text-align: center;">  <p>Walking Paths near the Waterfall</p> </div> </div> <p>(Tourism Infrastructure)</p> <ul style="list-style-type: none"> • Accommodations and restaurants are available near the waterfall. 	

	(Other) <ul style="list-style-type: none"> • Right to operate belongs to a private company. • Condition of accommodations is not good enough to meet tourist needs.
Potential	• Potential to be a destination for a ‘stopover’ on the way from the World Heritage Area to Xayaboury.
Area of Challenge	• It is considered to be difficult for the waterfall to become a tourist destination as it is less attractive compared with Kuang Si Waterfall and Sae Waterfall.

Source: JICA Consultant Team (including the figures inside the table)

5.1.2 Data Collection Survey from Tourists

Tourists in rural districts weigh respectively low in the total number of tourists in Luang Prabang Province (only 4% of the total in the province). In parallel to the site survey, impressions of rural area tourism were collected from the tourists. Currently, among the rural districts, the northern part invites the largest number of tourists, and 80% of the international tourists who visited the rural districts of Luang Prabang Province went to the northern part. Therefore, the survey targets the northern part, including Nong Khiaw and Muang Ngoi.



Source: JICA Consultant Team

Figure 5.2: Distribution of Tourism Destinations and Number of Tourists

Formulation and sales of trial products were conducted in collaboration with a Japanese travel agency to observe the reaction from actual tourists. These were made by assuming the area around Ngoi District in the north to be a candidate destination based on statistics, DoICT’s tourism development plan, and field surveys. Two types of products were sold, i.e.: a package product from / to Japan and an optional product from Luang Prabang. Each product was sold to one group, respectively. The customers’ responses are as follows:

- Both Luang Prabang and Nong Khiaw were better than expected.
- Guides were helpful because there were few guideboards.
- Difficult to have images beforehand as there is little information about the tourist destinations.
- The main part of the tour is to be at the World Heritage Area.
- More time is needed to visit the place considering required time and geographical characteristics.
- Awareness about Laos and Luang Prabang is relatively low in Japan.
- Bought fabric products in large quantities in Na Nyang Village. In their promotional images, Laos is associated with fabric products.

- There are few quality souvenirs, not only in Ngoi, but also in entire Laos.



Source: H.I.S.

Figure 5.3: Trial Products for Candidate Destination

5.2 Data Collection and Survey Result of Handicrafts and Agricultural Products

5.2.1 Site Survey Results (Catalogue of Tourism-related Regional Development Activities)



Site surveys for data collection on handicrafts and agricultural products were conducted in the World Heritage Area and the rural district according to the purposes, respectively.

(1) World Heritage Area

In the World Heritage Area, surveys were conducted to collect data mainly on the current state of sales and consumption related to handicrafts / agricultural products, and the World Heritage Site's attractiveness from the following facilities. Survey results of each facility are shown below.

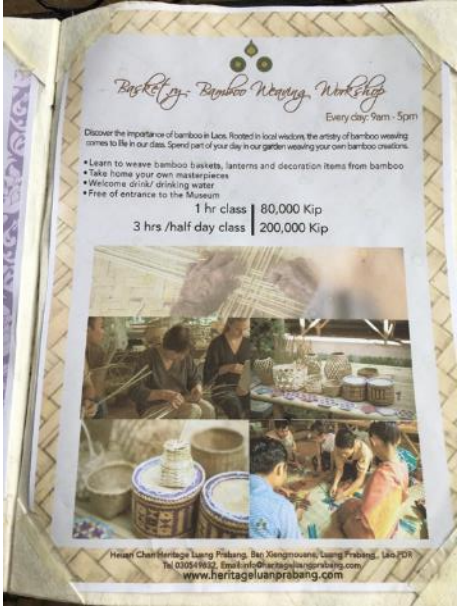



- Handicraft shops
- Handcrafting experience and facilities
- Agricultural product shops
- Restaurants
- Hotels
- Tourism services
- Morning market
- Night market
- Distribution and consumption of handicrafts and agricultural products, traditional culture, festivals, basket, gifts, and wedding

**Table 5.15: Site Survey Result of Handicrafts and Agricultural Products
(Handicraft Shops in the World Heritage Area)**

Serial Number	No. 2.1.
Name	Handicraft Shops in the World Heritage Area
Attraction	<ul style="list-style-type: none"> • There are many handicraft shops in the World Heritage Area that sell products from various places. • Tourists can get to know about handicraft production, its history, and information on the producing villages through some shops that produce by themselves.
Site	Inside the World Heritage Site
Current State	<p>(Product Features)</p> <ul style="list-style-type: none"> • There are many handicraft shops in the World Heritage Area. Given that they have everything from high-quality products to affordable products, it was confirmed that the amount and variety of souvenirs are sufficient. • Products from Thailand, China, etc., other than Laos were also sold. • Although there are high-quality products such as dyed textiles, unique products with "only-one" branding that can only be found in Luang Prabang could not be confirmed. <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  <p>Ock Pop Tok (Other)</p> </div> <div style="text-align: center;">  <p>Hilltribe Heritage</p> </div> </div> <ul style="list-style-type: none"> • Some shops, such as Ock Pop Tok, have their own handcrafting experience facilities.
Potential	<ul style="list-style-type: none"> • The handicraft shops in the World Heritage Area are the most important place for tourists to buy handicrafts easily. • These are also important bases to collect data of tourist needs. • They also can be a base to direct tourists to handicraft villages. • It is expected that handicraft shops will be more revitalized with the possibility to develop original brand products by using the materials and skills of communities in Luang Prabang Province.
Remarks	<ul style="list-style-type: none"> • Quality, packaging, material display, and others of souvenirs could be improved further. • Need to differentiate between local products of Luang Prabang and products from the other regions.




Source: JICA Consultant Team (including the figures inside the table)

**Table 5.16: Site Survey Result of Handicrafts and Agricultural Products
(Handicraft Making Experience Facilities in the World Heritage Area)**

Serial Number	No. 2.2.
Name	Handicraft experience facilities in the World Heritage Site
Attraction	• Handicraft making experience satisfies tourists' desire to learn traditional culture.
Site	In the World Heritage Site
Current State	<p>(Product Features)</p> <ul style="list-style-type: none"> • Heuan Chan Heritage Luang Prabang offers a variety of handicraft experience courses. • Wearing traditional garments limited to use inside the facility and taking pictures are also available. <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  <p>Heuan Chan Heritage Luang Prabang (Bamboo Work Experience)</p> </div> <div style="text-align: center;">  <p>Heuan Chan Heritage Luang Prabang (Wearing Traditional Garment Experience)</p> </div> </div> <ul style="list-style-type: none"> • Ock Pop Tok, a handicraft shop, produces and sells products by upholding the themes of "fair trade", "natural and organic", "handmade in Laos", "tradition and innovation", "collaborate with communities", "women's empowerment". • The Living Crafts Center offers the guests a production work experience. Hands-on activities such as "Natural Dyes Class", "Weaving Class", "Homong Batik Class", and "Bamboo Weaving Class" have been developed to enhance tourist's knowledge of Laos handicrafts. <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  <p>The Living Crafts Centre (Dyeing and Weaving Experience)</p> </div> <div style="text-align: center;">  <p>The Living Crafts Centre (Dyeing Experience)</p> </div> </div>
Potential	• The experience facilities play an important role to enhance purchaser's knowledge and experience that lead to quality improvement of handicrafts and market expansion.
Remarks	• The handicraft making experience facilities in the city are positioned between production sites and shops. If production sites are ready to accept tourists, there should be a mechanism to direct the tourists to the production sites.

Source: JICA Consultant Team (including the figures inside the table)





**Table 5.17: Site Survey Result of Handicrafts and Agricultural Products
(Agricultural Product Shops in World Heritage Area)**

Serial Number	No. 2.3.
Name	Agricultural product shops in the World Heritage Area, Mekong Co-op Organic Shops
Attraction	<ul style="list-style-type: none"> Organic agricultural product producers set up their own shops in the town and sell products of fellow producers. A variety of health-oriented products is available.
Site	In the World Heritage Area
Map	 <p>★ : Site</p>
Current State	<p>(Product Features)</p> <ul style="list-style-type: none"> Health-oriented products from other fellow producers (vegetables, milk, yogurt, honey, etc.) <div style="display: flex; justify-content: space-around;">   </div> <p>Organic Vegetables</p> <p>(Human Resources and Equipment)</p> <ul style="list-style-type: none"> ALaCi: Operated by Agro-ecology Learning and Agrobusiness Cooperation Initiative (an organization that focuses on organic farming. It was launched to support the villages which had been so affected by the drastic change in the Mekong River environment due to dam construction wherein their fishing operations become difficult to maintain.) Cooperative relationship has been built with other organizations that promote sales of locally produced handicrafts for local consumption, organic farming and others in Luang Prabang Province.

	 <p style="text-align: center;">Cooperative Producers</p> <ul style="list-style-type: none"> (Other) • Opened the shop in 2019. • Main customers are restaurants and Western residents in Luang Prabang District.
Potential	<ul style="list-style-type: none"> • High expectation is placed on efforts to cooperate with health-oriented local producers.
Remarks	<ul style="list-style-type: none"> • To find sustainable markets • To develop 'only-one' unique products that only can be found here.

Source: JICA Consultant Team (including the figures inside the table)

**Table 5.18: Site Survey Result of Handicrafts and Agricultural Products
(Restaurants in the World Heritage Area)**

Serial Number	No. 2.4.
Name	Restaurants in the World Heritage Area
Attraction	<ul style="list-style-type: none"> • There are various restaurants and cafes that use local agricultural products. • A base to introduce local agricultural products to tourists who have few opportunities to cook the local agricultural products by themselves. • Restaurants along the river are popular spots for tourists because of the scenery.
Site	World Heritage Area
Current State	<p>(Features)</p> <ul style="list-style-type: none"> • Many of the agricultural products in Luang Prabang Province are consumed in restaurants in the World Heritage Area, that is, distribution network has been established to some extent. • There are very few restaurants offering Lao Lao, especially Lao Hai. • No restaurants to offer edible insects at any time were confirmed except Blue Lagoon. • Blue Lagoon offers four delicious edible insects, namely; "crickets", "locusts", "caterpillars", and "ant's eggs" at any time, which created a wide impact in changing the image of eating insects (the chef is a Laotian who learned his cooking skills and knowledge in Switzerland). <div style="display: flex; justify-content: space-around;">   </div> <p style="text-align: center;">Food Display and Introduction (Blue Lagoon)</p> <div style="display: flex; justify-content: space-around;">   </div> <p style="text-align: center;">Dishes of Edible Insects (Blue Lagoon)</p>

	(Other) • Very few restaurants give detailed explanation or introduction of agricultural products.
Potential	• Restaurants that enhance the added value of local agricultural products and provide them with tourists, are seen as the most important base to develop and spread the agricultural products in Luang Prabang. • Possible to become a base to direct tourists to agricultural products production sites.
Remarks	• To find repeaters by developing seasonal ingredients such as insects, small animals and mushrooms.

Source: JICA Consultant Team (including the figures inside the table)



**Table 5.19: Site Survey Result of Handicrafts and Agricultural Products
(Hotels in the World Heritage Area)**

Serial Number	No. 2.5.
Name	Hotels in the World Heritage Area
Attraction	• A base to collect data from and to disseminate information to tourists. • An important base to connect tourists with the local products and handicrafts.
Site	World Heritage Area
Current State	<p>(Features)</p> <ul style="list-style-type: none"> • Not many local products are used for furniture and fixtures in hotels. • Activity base for tourists and important place to disseminate information. • Luang Prabang View Hotel introduces a wide range of local handicrafts. • Although many hotels introduce tourist tours to tourists, few introduce local agricultural products and handicrafts. <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  <p>Introducing Local Products (Luang Prabang View Hotel)</p> </div> <div style="text-align: center;">  <p>Introducing Sightseeing Tour (Luang Prabang View Hotel)</p> </div> </div> <p>(Human Resources and Equipment)</p> <ul style="list-style-type: none"> • Hotel and Restaurant Association, which consists of companies in Luang Prabang District, conducts activities to vitalize tourism in Luang Prabang Province. • Mr. John Morris Williams (British), the representative of the Hotel and Restaurant Association, is eager to cooperate with the Project. • The Hotel and Restaurant Association has been preparing Lao Food Festival to be held in December 2019. In the festival, local ingredients and dishes in Laos will be introduced while competition will be held too. • Mr. Somsack Sengta, the chef and owner of Blue Lagoon, will take part in the competition as judge (the same chef mentioned previously in the eating insects. Mr. John Morris William said he is the best chef in Laos) <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  <p>Mr. John Morris Williams (Luang Prabang View Hotel)</p> </div> <div style="text-align: center;">  <p>Mr. Somsack Sengta (Blue Lagoon)</p> </div> </div> <ul style="list-style-type: none"> • (Other) • Hotel and Restaurant Association actively conducts community-based cleaning activities. <p>https://wearelao.com/blog/create-blog-entry-28 https://wearelao.com/blog/create-blog-entry-101</p>

Potential	<ul style="list-style-type: none"> • One of the closest facilities to and most familiar with tourists. It is expected that the association will work on to introduce agricultural products, handicrafts, and various events, and direct their attention to production sites. • A vigorous community made up of companies focusing on the World Heritage Area, which can be an implementing body of the Project.
Remarks	<ul style="list-style-type: none"> • Cooperation with the Hotel and Restaurant Association is desired if technology transfer is conducted for individual operators of hotels and restaurants.

Source: JICA Consultant Team (including the figures inside the table)


Table 5.20: Site Survey Result of Handicrafts and Agricultural Products (Travel Agencies in World Heritage Site)

Serial Number	No. 2.6.
Name	Travel agencies in the World Heritage Site
Attraction	<ul style="list-style-type: none"> • Provide means to direct tourists to agricultural product / handicraft production sites. • A base to collect data from and to disseminate information to tourists.
Site	World Heritage Site
Current State	<p>(Features)</p> <ul style="list-style-type: none"> • There are a large number of travel agencies. To make a living, many of tour guides belong to the travel agencies or guide the tours that they provide. • Although the number is limited, tours to visit agricultural product and handicraft production sites and tours for hands-on activities were seen. • While they make profit from tourism resources in the World Heritage Area and Luang Prabang Province, it is hard to say that contribution has been made to preservation and development of historical heritage and traditional culture, for example, signs and an issue on scenery obstruction with car parking on streets. • The percentage of female tour guides wearing traditional garments is relatively high, but it was not confirmed if male guides and drivers wear traditional garments. <div style="display: flex; justify-content: space-around;">   </div> <p>Tiger Trail (Travel Agency) (Human Resources and Equipment)</p> <ul style="list-style-type: none"> • Some opinions were heard that tour guides have little knowledge of agricultural products and handicrafts, so tourists may just pass by when they visit.
Potential	<ul style="list-style-type: none"> • Having a good mechanism that fosters economic activities of travel agencies leading to preservation and development of historical heritage and traditional culture, integrating sustainability into the full cycle.
Remarks	<ul style="list-style-type: none"> • Consider merits of each side in a way not to be considered too pushy when visiting agricultural product and handicraft production sites.

Source: JICA Consultant Team (including the figures inside the table)


Table 5.21: Site Survey Result of Handicrafts and Agricultural Products (Morning Market in World Heritage Site)



Serial Number	No. 2.7.
Name	Morning Market
Attraction	<ul style="list-style-type: none"> • Morning market is an attractive destination for tourists in terms of its size and variety (including non-local products). • Local ingredients, especially insects and small creatures, stimulate tourist's curiosity. • Seasonal ingredients such as mushrooms and insects may induce tourists to revisit. • Although not many, tourists can enjoy eating sweets and charcoal-grilled meat and fish while walking around.
Site	Narrow street on the west side of the Royal Palace

Map	
Potential	<ul style="list-style-type: none"> • An important place for producers, who do not have own shops, to sell directly and find what the market trend is. • Potential to be a base to direct tourists from the town to local production sites.
Remarks	<ul style="list-style-type: none"> • Need to improve hygiene. • Most products have no price display, so it requires price negotiation. • Opportunity for tasting, size, quantity, information, packaging.

Source: JICA Consultant Team (including the figures inside the table)

**Table 5.22: Site Survey Result of Handicrafts and Agricultural Products
(Night Market in World Heritage Site)**

Serial Number	No. 2.8.
Name	Night Market
Attraction	<ul style="list-style-type: none"> • In terms of size and variety (including non-local products), Night market is an attractive destination where tourists can see local crafts without moving from one place to another. • Inexpensive goods are also offered to tourists looking for souvenirs. • Selecting a variety of products gives a sense of joy, an experience like a theme park that tests their expertise on knowledge and price negotiation. • Although limited in range, tourists can also sample processed agricultural products while walking around the area and surrounds.
Site	Main street in the World Heritage Site
Map	
Current State	(Product Features)

	<ul style="list-style-type: none"> • Handicrafts unique to Laos are sold at the night market. • Handicrafts sold include products not only from Luang Prabang Province but also from the outside of the province and foreign countries as well. • An activity for differentiation has been conducted by certifying that handicrafts are locally produce. <div style="display: flex; justify-content: space-around;">   </div> <p style="display: flex; justify-content: space-around;"> Various Products (Other) Line of Stalls </p> <ul style="list-style-type: none"> • In selling, not only producers but also hired vendors and those who purchase and sell products by themselves were also confirmed. According to some reports, while tourists do not know well about the products made in Luang Prabang Province, copies of the certificate were saturated.
Potential	<ul style="list-style-type: none"> • An important place for producers, who do not have own shops, to sell directly and find what the market trend is. • Potential to be a base to direct tourists from the town to local production sites. • The Department of Information, Culture, and Tourism, located at the edge of the night market, has the potential for development in cooperation with the night market. • Need to prepare and introduce QR codes that disseminate information (such as production sites, producers, materials, history, maps, and direction) to deepen the understanding for local products.
Remarks	<ul style="list-style-type: none"> • Most products have no price display so require negotiation to purchase. • Local products and non-local products are sold without distinction. • It can be said that one of the Night Market's attractiveness is the state of non-uniformity or controlled chaos. • Uniform arrangement may reduce the attractiveness.

Source: JICA Consultant Team (including the figures inside the table)



(2) Rural District


In the rural district, surveys were conducted to collect data regarding the current state of handicrafts/ agricultural product production sites, in collaboration with tourism, and the market from the following facilities. Survey results of each facility are shown below.

- Pottery village (Chan Village)
- Organic farming ALaCi
- Insect farming
- Lao- Lao (rice whisky) Village
- Paper-making village (Xang Khong Village)
- Textile villages small enough to walk (Xang Khong Village and Xieng Lek Village)
- Textile (ODOP) village (Pha Nom Village)
- Lacquer craft Village
- Hmong tribe embroidery Village
- Laos Buffalo Dairy
- River weed village (Buom Village)
- Dyed textiles village (Na Yang Tai Village / Tai Lue Tribe)
- Sob Jam Village

1) Suburbs of World Heritage Area

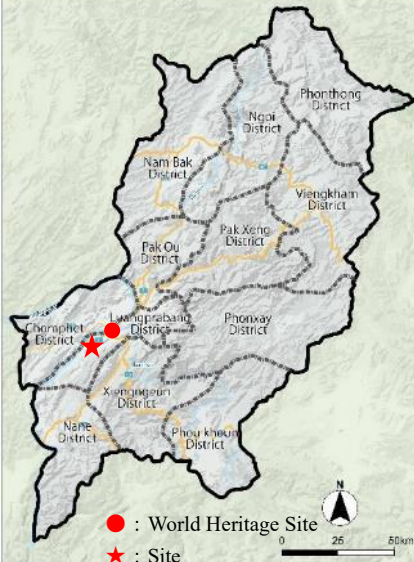
**Table 5.23: Site Survey Result of Handicrafts and Agricultural Products
(Pottery Village and Chan Village)**





Serial Number	No. 2.9.
Name	Pottery village (Chan Village)
Attraction	<ul style="list-style-type: none"> • A traditional pottery village since the 16th century. • Pots made with simple techniques and characteristic kilns.
Site	Chan Village, Chomphet District
Map	<p>● : World Heritage Site ★ : Site</p>
Access	<p>(Transportation and Traveling Time)</p> <ul style="list-style-type: none"> • By ferry between the World Heritage Area and Xiengmaen and by car between Xiengmaen Village and the area (traveling time: about 30 minutes). <p>(Access Condition)</p> <ul style="list-style-type: none"> • Between Xiengmaen Village and Chan Village is unpaved. However, paving work is underway with ADB support.
Current State	<p>(Product Features)</p> <p>A traditional pottery production site supported by foreign donors. Hands-on activities and purchasing products are available. Younger generation has taken a lead to develop pottery experience tours with traditional lunch served for tourists.</p> <div style="display: flex; justify-content: space-around;">   </div> <p>Traditional Pottery (Human Resources and Equipment)</p> <ul style="list-style-type: none"> • Six households make traditional pots. A characteristic traditional kiln is used alternately by the six households in one place. • Machines to knead porcelain clay and high-temperature gas kilns were provided to the village by South Korea. • However, although product quality was improved with the high-temperature gas kilns that use new glazes, no markets have not been found so gas charges cannot be paid, use of the kilns therefore is limited. • Machines for soil kneading provided by South Korea were used effectively.

	<ul style="list-style-type: none"> Manual potter's wheels are very old. ADB has been developing a huge facility for production of traditional pots that the six families make.  <p>ADB Supported Facility (Other)</p> <ul style="list-style-type: none"> Villagers are not trained to explain pottery to tourists while knowledge of tour guides is not sufficient. It was pointed out that more preparation is required to offer opportunities for the tourists to fully understand and enjoy pottery. No information was available about how to operate and find the maintenance cost for the ADB-supported facility. DoICT said it would be possible to discuss operation and management after the facility is completed and transferred to the provincial government.
Potential	<ul style="list-style-type: none"> Attractive place since it is close to the center of the town and has a history and unique pottery. Prepared to accept tours including hands-on pottery activity tours after completion of the ADB-supported facility construction.
Remarks	<ul style="list-style-type: none"> Because the ADB project does not include support to develop hands-on pottery activities, the preparation is needed. Need to develop new works and find new markets in addition to the current traditional pottery. Decrease in amount of clay produced in the area.

Source: JICA Consultant Team (including the figures inside the table)

**Table 5.24: Site Survey Result of Handicrafts and Agricultural Products
(Organic Farming AlaCi)**

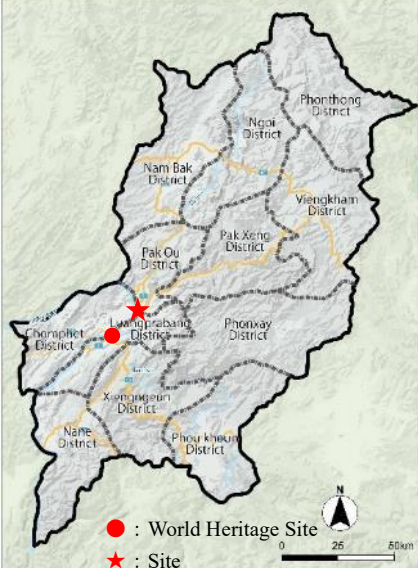


Serial Number	No. 2.10.
Name	Organic Farming AlaCi
Attraction	<ul style="list-style-type: none"> Villager-based permaculture organic farming
Site	Opposite side of Leung Village, Luang Prabang District
Map	 <p>● : World Heritage Site ★ : Site</p>
Access	<p>(Transportation and Traveling Time)</p> <ul style="list-style-type: none"> By ferry between the World Heritage Area and Xiengmaen Village, by car between Xiengmaen Village and Pak Leung Village, and by boat Pak Leung and the area (traveling time: one hour). One hour by boat from the World Heritage Area.

	<p>(Access Condition)</p> <ul style="list-style-type: none"> • Between Chomphet and Pak Leung Village is paved asphalt. • Regular ferry service to the opposite bank available.
<p>Current State</p>	<p>(Product Features)</p> <ul style="list-style-type: none"> • Three sites of the farmland, three sites of permaculture farmland • A variety of crops are cultivated. <div style="display: flex; justify-content: space-around;">   </div> <p>Organic Farming</p> <p>(Human Resources and Equipment)</p> <ul style="list-style-type: none"> • ALaCi: Agro-ecology Learning and Agribusiness Cooperation Initiative • ALaCi is an organization that focuses on organic farming. It was launched to support the villages, which had been so affected by the drastic change in the Mekong River environment due to dam construction, the result being that their traditional fishing methods have become difficult to maintain. <div style="display: flex; justify-content: space-around;">   </div> <p>Activity Brochure</p>
<p>Potential</p>	<ul style="list-style-type: none"> • An attractive tourist destination for permaculture experience. • Able to have a look at simple village life. • In the process of considering accepting tourists, followed by need to formulate future tourist support system.
<p>Remarks</p>	<ul style="list-style-type: none"> • Not mass tourism farms per se, rather a destination for a smaller number of tourists who are interested in permaculture. • Only a shop opened in the World Heritage Area, functioning in aid of providing contact information to visitors.

Source: JICA Consultant Team (including the figures inside the table)

**Table 5.25: Site Survey Result of Handicrafts and Agricultural Products
(Insect Farming Village)**

<p>Serial Number</p>	<p>No. 2.11.</p>
<p>Name</p>	<p>Insect farming village</p>
<p>Attraction</p>	<ul style="list-style-type: none"> • Eating insects is an attractive and traditional food culture in Laos. • Opportunities to see and experience insect farming.
<p>Site</p>	<p>Has Hien Village of Luang Prabang District, Parkxieng Village of Pak Ou District and others.</p>


<p>Map</p>	
<p>Access</p>	<p>(Transportation and Traveling Time)</p> <ul style="list-style-type: none"> • 30 minutes by car on National Route 13 from the World Heritage Area. <p>(Access Condition)</p> <ul style="list-style-type: none"> • Road is paved, on entire surface.
<p>Current State</p>	<p>(Product Features)</p> <ul style="list-style-type: none"> • Insects for farming are weevil and two types of crickets. • Trades of weevil include larvae and breeding pairs. <div style="display: flex; justify-content: space-around;"> <div>  <p style="text-align: center;">Crickets</p> </div> <div>  <p style="text-align: center;">Weevil</p> </div> </div> <p>(Human Resources and Equipment)</p> <ul style="list-style-type: none"> • Insect farming was fairly standardized <p>(Other)</p> <ul style="list-style-type: none"> • Products are sold through the internet, such as Facebook. Inquiries come from Thailand as well. • The farming cycle takes 45 days for both crickets and weevils • The selling price is LAK 40,000/ kg for crickets and LAK 100,000/ kg for weevils. • Before being sold, crickets are given only pumpkins for three days and weevils are given bananas for two days for better intestine condition to enhance the taste.
<p>Potential</p>	<ul style="list-style-type: none"> • Eating insects is gaining increasing attention worldwide. • The Food and Agriculture Organization (FAO) issued a survey report on eating insects in Laos in 2014. • Possible to promote Laos as a leading country for eating insects in the world.

	<ul style="list-style-type: none"> Quality control including cleaning the intestine to enhance the taste before shipment can be used for its branding. Possible to be an attraction that bring tourists to Luang Prabang in addition to visiting the world heritage.
Remarks	Reform awareness of eating insects.

Source: JICA Consultant Team (including the figures inside the table)

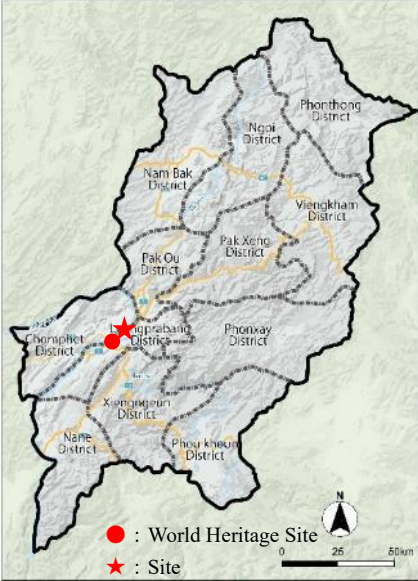
**Table 5.26: Site Survey Result of Handicrafts and Agricultural Products
(Lao Lao - Rice Whisky – Xang Hai Village)**



Serial Number	No. 2.12.
Name	Lao Lao Village (Xang Hai Village)
Attraction	<ul style="list-style-type: none"> Lao-Lao is a traditional and typical whisky-making in Laos. Utilization of sticky rice produced in large amount Utilization of undistilled Lao wine and liquor lees.
Site	Xang Hai Village and others and Pak Ou District
Map	<p>● : World Heritage Site ★ : Site</p>
Access	<p>(Transportation and Traveling Time)</p> <ul style="list-style-type: none"> 40 minutes by car on National Route 13 from the World Heritage Area. 30 minutes by boat from the World Heritage Area. <p>(Access Condition)</p> <ul style="list-style-type: none"> Road is paved on entire surface.
Current State	<p>(Product Features)</p> <ul style="list-style-type: none"> Made of two types i.e.: red and white, sticky rice using traditional methods. Tourists can get to know about Lao-Lao production and enjoy the wine tasting in villages. The villages make and sell textiles in addition to Lao-Lao. Distilled liquor is called Lao-Kao and the undistilled is called Lao-Sato. Medicinal liquor made by mixing scorpions, cobras and the like in the distilled Lao- Kao was put on the market. However, there are information that in 2019, putting cobras inside the bottle has been prohibited. <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>Middle: Distilled Liquor Lao-Kao</p> </div> <div style="text-align: center;"> <p>Traditional Medicinal Liquor</p> </div> </div>

	<p>Left: Lao Sato (White Sticky Rice) (Cobra, Scorpion, and Centipede) Right: Lao Sato (Red Sticky Rice) (Human Resources and Equipment)</p> <ul style="list-style-type: none"> • Even today, Lao-Lao is produced made of local materials with traditional distillation process.  <p>Traditional Distillation Process (Other)</p> <ul style="list-style-type: none"> • Tourists stop on the way by boat that travels between Pak Ou Cave and Luang Prabang. • Lao-Lao remains popular for local older people while young people find it less attractive. • Even in traditional weddings, western whiskey is often used, so Lao-Lao is considered to be inexpensive and a low-quality liquor. • Liquor lees are used for livestock feed.
Potential	<ul style="list-style-type: none"> • When it comes to Lao Hai, the liquor before distillation, various product development is possible as process of sake-making can also be applicable. • Liquor lees can be used in various ways. • Possible to develop high-quality branding tailored to tourist preference.
Remarks	<ul style="list-style-type: none"> • Need to dispel the idea, outdated image of traditional liquor. • Need to diversify product development and promotion via public relations.

Source: JICA Consultant Team (including the figures inside the table)

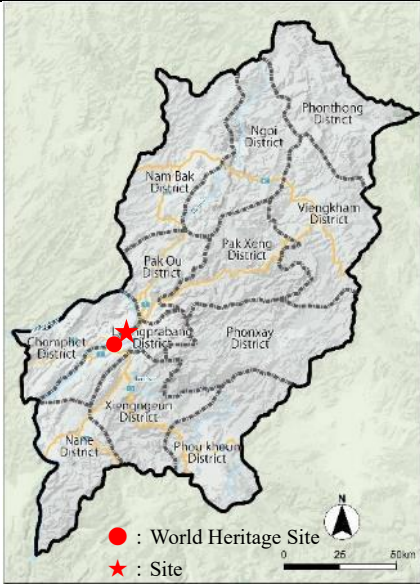
**Table 5.27: Site Survey Result of Handicrafts and Agricultural Products
(Paper-Making Village: Xang Khong Village)**



Serial Number	No. 2.13.
Name	Paper making village (Xang Khong Village)
Attraction	<ul style="list-style-type: none"> • Attractive and traditional handmade paper • Simple and natural texture
Site	Xang Khong Village, Luang Prabang District
Map	
Access	<p>(Transportation and Traveling Time)</p> <ul style="list-style-type: none"> • 20 minutes by car from the World Heritage Area. • 30 minutes on foot from the World Heritage Area over the bamboo footbridge of the Khan River during the dry season. <p>(Access Condition)</p> <ul style="list-style-type: none"> • Road is paved on entire surface.
Current State	(Product Features)

	<ul style="list-style-type: none"> • Tourists can visit to buy handmade paper of mulberry stems and others, in addition to a tour to see its production process. • A variety of handicrafts made from handmade paper are sold.
	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  <p>Explanation Text</p> </div> <div style="text-align: center;">  <p>Explanation Text</p> </div> </div>
Potential	<ul style="list-style-type: none"> • To use as basic materials that can be applied to various handicrafts.

Source: JICA Consultant Team (including the figures inside the table)


**Table 5.28: Site Survey Result of Handicrafts and Agricultural Products
(Textile Village: Xang Khong Village and Xieng Lek Village)**

Serial Number	No. 2.14.
Name	Textile village (Xang Khong Village and Xieng Lek Village)
Attraction	<ul style="list-style-type: none"> • Textile villages that are close enough to walk from the World Heritage Area • Tourists can see the precise textile process. • Various products are sold.
Site	Xang Khong Village and Xieng Lek Village, Luang Prabang District
Map	 <p>● : World Heritage Site ★ : Site</p>
Access	<p>(Transportation and Traveling Time)</p> <ul style="list-style-type: none"> • 20 minutes by car from the World Heritage Area. • 30 minutes on foot from the World Heritage Area over the bamboo footbridge over the Khan River during the dry season. <p>(Access Condition)</p> <ul style="list-style-type: none"> • Road is paved on entire surface.
Current State	<p>(Product Features)</p> <ul style="list-style-type: none"> • Xang Khong Village and Xieng Lek Village have quite a few textile workshops. • Product price and quality are different from each workshop.

	 <p>Dyed Textiles Shop</p>	 <p>Textiles and Shop</p>
	 <p>Textile Workshop</p>	 <p>Gallery and Shop</p>
Potential	<ul style="list-style-type: none"> Close enough to go on foot from the World Heritage Area. Tourists can enjoy looking around the respective workshops. 	
Remarks	<ul style="list-style-type: none"> A workshop guide map would be handy. 	

Source: JICA Consultant Team (including the figures inside the table)

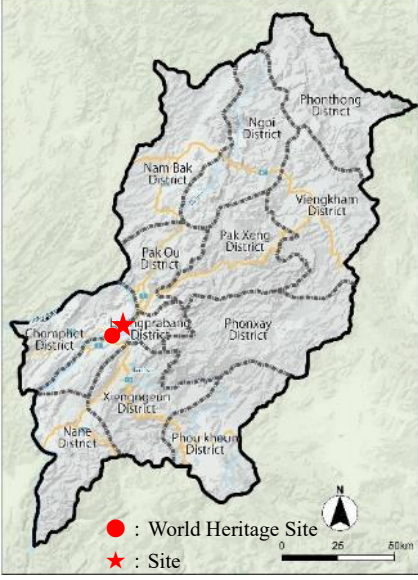
**Table 5.29: Site Survey Result of Handicrafts and Agricultural Products
(Textile Village: Pha Nom Village)**





Serial Number	No. 2.15.
Name	Handicraft centre, textile village (Pha Nom Village)
Attraction	<ul style="list-style-type: none"> Primarily textiles, in abundance
Site	Pha Nom Village, Luang Prabang District
Map	 <p>● : World Heritage Site ★ : Site</p>
Access	<p>(Transportation and Traveling Time)</p> <ul style="list-style-type: none"> 15 minutes by car from the World Heritage Area. <p>(Access Condition)</p> <ul style="list-style-type: none"> Road is paved on entire surface.

<p>Current State</p>	<p>(Product Features)</p> <ul style="list-style-type: none"> • Unlike Xang Khong of the textile village, there is One District One Product (hereinafter referred to as “ODOP”) handicraft center, the base for villager’s production and sales. • Many of the products are textiles sold at reasonable price, but small goods suitable for souvenirs are not well developed. • Products are sold in the night market and sold to Thailand and other countries upon receiving orders. <div style="display: flex; justify-content: space-around;">   </div> <p>ODOP Handcraft Centre</p> <p>(Other)</p> <ul style="list-style-type: none"> • Assistance from the United Nations (UN) and Switzerland have been provided. • Located on the way to Kuang Si Waterfall
<p>Potential</p>	<ul style="list-style-type: none"> • Possible to develop into a destination for stopover on the way to Kuang Si Waterfall.

Source: JICA Consultant Team (including the figures inside the table)

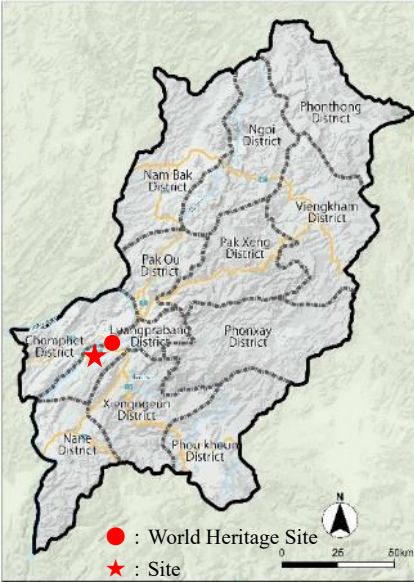
**Table 5.30: Site Survey Result of Handicrafts and Agricultural Products
(Lacquer Craft Village: Khom Khuang Village)**





<p>Serial Number</p>	<p>No. 2.16.</p>
<p>Name</p>	<p>Lacquer craft village (Khom Khuang Village)</p>
<p>Attraction</p>	<ul style="list-style-type: none"> • Traditional lacquer craft
<p>Site</p>	<p>Khom Khuang Village, Luang Prabang District</p>
<p>Map</p>	 <p>● : World Heritage Site ★ : Site</p>
<p>Access</p>	<p>(Transportation and Traveling Time)</p> <ul style="list-style-type: none"> • 20 minutes by car from the World Heritage Area. <p>(Access Condition)</p> <ul style="list-style-type: none"> • Partly unpaved but in good road condition.
<p>Current State</p>	<p>(Product Features)</p> <ul style="list-style-type: none"> • The lacquer finish is given to baskets used for alms giving ceremony and others. Red and black are basic colors.

		
		
	<p>Product</p> <p>Pasting Tonoko Powder on Bamboo Basket</p> <p>(Other)</p> <ul style="list-style-type: none"> Recently, spray coating has become more popular than lacquer. Difficulties in developing products and markets. 	<p>Unfinished Bamboo Basket</p> <p>Prototype Partly Exposing Unfinished Bamboo Basket</p>
<p>Potential</p>	<ul style="list-style-type: none"> In the hope to develop lacquer craft unique to Luang Prabang. Use lacquer craft to develop new small goods such as fountain pens. 	
<p>Remarks</p>	<ul style="list-style-type: none"> Need to differentiate traditional lacquer from spray. 	

Source: JICA Consultant Team (including the figures inside the table)

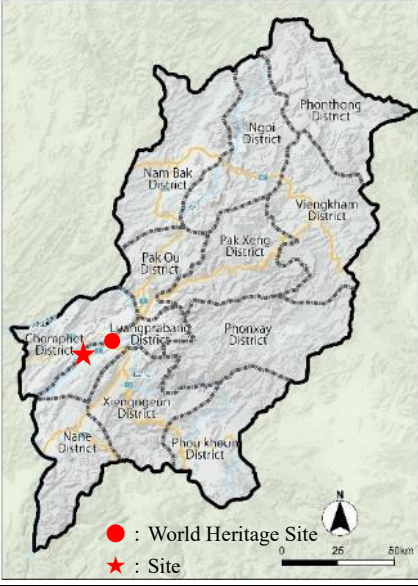


**Table 5.31: Site Survey Result of Handicrafts and Agricultural Products
(Embroidery Village: Naoun Village)**

<p>Serial Number</p>	<p>No. 2.17.</p>	
<p>Name</p>	<p>Embroidery village (Naoun Village)</p>	
<p>Attraction</p>	<p>• Hmong tribe embroidery</p>	
<p>Site</p>	<p>Naoun Village, Luang Prabang District</p>	
<p>Map</p>		

Access	(Transportation and Traveling Time) <ul style="list-style-type: none"> • 30 minutes by car on National Route 1 from the World Heritage Area. (Access Condition) <ul style="list-style-type: none"> • Road is paved on entire surface.
Current State	(Product Features) <ul style="list-style-type: none"> • Hmong Village: Many Hmong embroidery. • Need to improve quality. • Children wearing Hmong garments encouraged tourists to purchase products including non-Hmong products around small shops. <div style="display: flex; justify-content: space-around;"> <div>  <p>Hmong Traditional Craft</p> </div> <div>  <p>Stalls along improved pathways</p> </div> </div> (Other) <ul style="list-style-type: none"> • There was a sign of ADB's Community-based Tourism Development Project. • A contrived performance rather than authentic cultural expression. <div style="display: flex; justify-content: space-around;"> <div>  <p>Sign of ADB Project</p> </div> <div>  <p>Show-Off Style Sales</p> </div> </div>
Potential	<ul style="list-style-type: none"> • Possible to be a destination for a stopover on the way to Kuang Si Waterfall • Establish facilities to introduce Hmong culture
Remarks	<ul style="list-style-type: none"> • Enhance the traditional culture, authenticity over performative shows.

Source: JICA Consultant Team (including the figures inside the table)

Table 5.32: Site Survey Result of Handicrafts and Agricultural Products (Laos Buffalo Dairy)

Serial Number	No. 2.18.
Name	Laos Buffalo Dairy
Attraction	Collaboration with local communities regarding livestock and environmental education on the buffalos.
Site	Laos Buffalo Dairy
Map	 <p>● : World Heritage Site ★ : Site</p>
Access	<p>(Transportation and Traveling Time)</p> <ul style="list-style-type: none"> • 40 minutes by car on National Route 1 from the World Heritage Area. <p>(Access Condition)</p> <ul style="list-style-type: none"> • Road is paved on entire surface.
Current State	<p>(Product Features)</p> <ul style="list-style-type: none"> • Laos Buffalo Dairy: Livestock and environmental education on the theme of buffalos. Production of cheese and yogurt. • Joyful tour experience that can be highly appreciated as efforts to stimulate knowledge and contribute to the community. <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  <p>Buffalo Breeding</p> </div> <div style="text-align: center;">  <p>Dairy Products Made and Sold</p> </div> </div>
Potential	<ul style="list-style-type: none"> • A destination for a stopover on the way to Kuang Si Waterfall. • Development method with a story. Joy can be felt and learnt via this project.

Source: JICA Consultant Team (including the figures inside the table)



2) Northern Part

**Table 5.33: Site Survey Result of Handicrafts and Agricultural Products
(River Weed Village: Boum Village)**

Serial Number	No. 2.19.
Name	River weed village (Boum Village)
Attraction	• River weed is an authentic ingredient in local cuisine
Site	Boum Village, Nam Bak District
Map	
Access	<p>(Transportation and Traveling Time)</p> <ul style="list-style-type: none"> • Three hours by car on the National Route 13 from the World Heritage Area. <p>(Access Condition)</p> <ul style="list-style-type: none"> • Entire road is paved surface.
Current State	<p>(Product Features)</p> <ul style="list-style-type: none"> • Produce river weed, one of Luang Prabang's representative ingredients. <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>River Weed Drying Shelves</p> </div> <div style="text-align: center;"> <p>River Weed Drying Shelves</p> </div> </div> <ul style="list-style-type: none"> • (Other) • River weed had been produced by making use of change in the water level of the river, but the dam construction has made the water level more consistent, resulting in difficulty in producing these weeds. • The river weed drying shelves lined up along the road which garnered attention of tourists but drying along the dusty road is not suitable in terms of hygiene.
Potential	<ul style="list-style-type: none"> • Attractive as a tourist destination, chance to visit the production site of one Luang Prabang's representative ingredients.
Remarks	<ul style="list-style-type: none"> • Hygiene management

Source: JICA Consultant Team (including the figures inside the table)

**Table 5.34: Site Survey Result of Handicrafts and Agricultural Products
(Dyed Textile Village: Nayang Tai Village)**

Serial Number	No. 2.20.
Name	Dyed textiles village (Nayang Tai Village)
Attraction	<ul style="list-style-type: none"> • Handspun cotton yarn, natural dyeing, and Tai Lue tribe textiles • Scenic vista, life of Tai Lue Tribe
Site	Nayang Tai Village, Nam Bak District
Map	<p>● : World Heritage Site ★ : Site</p>
Access	<p>(Transportation and Traveling Time)</p> <ul style="list-style-type: none"> • By car on National Route 13 between the World Heritage Area and Buom Village and on unpaved road between Buom Village and the site (3 hours 15 minutes). <p>(Access Condition)</p> <ul style="list-style-type: none"> • National Route 13 has an entirely paved surface. • Unpaved road from Buom Village to the area is in bad condition.
Current State	<p>(Product Features)</p> <ul style="list-style-type: none"> • Life and textiles of Tai Lue Tribe and local vista attract tourists. <p>Although homestay programs are available, many tourists only pass by, so efforts are needed to establish a mechanism that welcomes the tourists to spend more time for something new and in exchange, make a profit for the local community.</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  <p>Indigo Dyeing</p> </div> <div style="text-align: center;">  <p>Indigo Vat</p> </div> </div> <p>(Other)</p> <ul style="list-style-type: none"> • Assistance from GIZ and others have been provided. • According to interviews to villagers, research units from Shibaura Institute of Technology have been conducting architectural research in Nayang Tai village for several years.

	
	Direction Board at Branch Point Viewed from the National Route 13
Potential	<ul style="list-style-type: none"> • Life and textiles of Tai Lue Tribe and cityscape attract tourists. • Develop short-stay programs.
Remarks	<ul style="list-style-type: none"> • Cooperation with many support organizations. • Need to review GIZ final report.

Source: JICA Consultant Team (including the figures inside the table)

5.3 Selection of Pilot Projects and Proposals of Pilot Project Plans

5.3.1 Selection of Pilot Project Candidates

(1) Overall Idea and Candidate List

With the longlist (Table 5.35) based on survey results presented in the previous sections, the JICA Consultant Team have discussed with counterparts about DoICT's tourism development priorities and possibilities of trainings in Japan, and have narrowed down the list into nine pilot project candidates.

Table 5.35: Longlist of Pilot Project Candidates

Area	No.	Concerned Village and Organization	Tourism Resource	Handicraft and Agricultural Products
World Heritage Area	1	Shops / restaurants / hotels		X
	2	Morning market		X
	3	Night market		X
	4	Travel agencies		X
Suburbs of the World Heritage Area	5	Kuang Si Waterfall	X	
	6	Sae Waterfall	X	
	7	Thong Waterfall	X	
	8	Chan Village		X
	9	ALaCi (organic farming)		X
	10	Has Hien Village / Parkxieng Village (insect farming village)		X
	11	Xang Hai Village (Lao-Lao Village)		X
	12	Xang Khong Village (paper-making village)		X
	13	Xang Khong Village / Xieng Lek village (dyeing village)		X
	14	Pha Nom Village (textile village)		X
	15	Khom Khuan Village (lacquer village)		X
	16	Naoun Village (embroidery village)		X
	17	Laos Buffalo Dairy		X
Northern Part	18	Nong Khiaw Village	X	
	19	Muang Ngoi Village	X	
	20	Sopkong Village	X	

Area	No.	Concerned Village and Organization	Tourism Resource	Handicraft and Agricultural Products
	21	Sob Jam Village	X	
	22	Pak Mong Village	X	
	23	Buom Village (river weed village)		X
	24	Nayang Tai Village (dyed textile village)		X
Eastern Part	25	Pha Tao Cave	X	
	26	Lom Waterfall	X	
South-eastern Part	27	Phou Khoun	X	
South-western Part	28	Kacham Waterfall	X	

(Greyed shows villages and organizations that relate to the nine pilot project candidates)

Source: JICA Consultant Team

(2) Outline of the Pilot Project Candidates

1) Traditional Handicraft Villages Revitalization Pilot Project

Table 5.36 shows the outline of traditional handicraft villages revitalization pilot project in the pottery village.

Table 5.36: Outline of Traditional Handicraft Villages Revitalization Pilot Project (Pottery Village)

Objective	To create a mechanism for tourists to bring profit to the production village
Target Area	Pottery Village (Chan Village)
Target People	DoICT, Villagers of Chan Village, Potters
Hard Component	<ul style="list-style-type: none"> Provision of necessary equipment for new pottery product development
Soft Component	<ul style="list-style-type: none"> Expert(s) dispatchment from Japan New product development workshop Tourism training workshop (management, hospitality, safety, and sanitation, profitability) Products trade fair (matching support with tourism related companies) (twice) Training in Japan
Cooperation of Takayama City	Support from pottery artists of Takayama City
Estimated Cost	USD 11,000

Source: JICA Consultant Team

Table 5.37 shows the schedule of traditional handicraft villages revitalization pilot project in the pottery village

Table 5.37: Schedule of Traditional Handicraft Villages Revitalization Pilot Project (Pottery Village)

	2020	2021
Hard Component	<ul style="list-style-type: none"> Provision of necessary equipment for new pottery product development 	
Soft Component	<ul style="list-style-type: none"> New product development workshop Tourism training workshop (management, hospitality, safety, sanitation, profitability, etc.) Products trade fair (matching support with tourism related companies) (twice) 	

Source: JICA Consultant Team

Table 5.38 shows the outline of traditional handicraft villages revitalization pilot project in the weaving and dyeing village.

**Table 5.38: Outline of Traditional Handicraft Villages Revitalization Pilot Project
(Weaving and Dyeing Village)**

Objective	To create a mechanism for tourists to bring profit to the production village
Target Area	Weaving and dyeing village (Nayang Tai Village)
Target People	DoICT, Villagers of Nayang Tai Village
Hard Component	<ul style="list-style-type: none"> Provision of necessary equipment for weaving and dyeing production experience program Installation support of information center facilities
Soft Component	<ul style="list-style-type: none"> New product and service development workshop Development and implementation of a short-term and homestay experience program Tourism training workshop (hospitality, safety, sanitation, and profitability) Products trade fair (matching support with tourism related companies) (twice) Expert(s) dispatchment from Japan Training in Japan
Cooperation of Takayama City	Learning from craft production experience facility of Takayama City
Estimated Cost	USD 33,400

Source: JICA Consultant Team

Table 5.39 shows the schedule of traditional handicraft villages revitalization pilot project in the weaving and dyeing village

**Table 5.39: Schedule of Traditional Handicraft Villages Revitalization Pilot Project
(Weaving and Dyeing Village)**

	2020	2021
Hard Component	<ul style="list-style-type: none"> Provision of necessary equipment for weaving and dyeing production experience program Installation support of information center facilities 	
Soft Component	<ul style="list-style-type: none"> New product and service development workshop Development and implementation of a short-term and homestay experience program Tourism training workshop (hospitality, safety, sanitation, and profitability) Products trade fair (matching support with tourism related companies) (twice) 	

Source: JICA Consultant Team

2) Lao Liquor and Related Products Development Pilot Project

Table 5.40 shows the outline of Lao liquor and related products development pilot project.

Table 5.40: Outline of Lao Liquor and Related Products Development Pilot Project

Objectives	<ul style="list-style-type: none"> To utilize sticky rice in large quantities To improve the value of "Lao-Lao" To utilize leftover which squeezed liquor "Sake-Kasu"
Target Area	<ul style="list-style-type: none"> Ban Xang Hai World Heritage Area (e.g., cooking school, agricultural test site)
Target People	DoICT, university, hotels, restaurants, shops
Hard Component	Provision of necessary equipment for production development
Soft Component	<ul style="list-style-type: none"> Expert(s) dispatchment from Japan New product development workshop Competition and tasting event program for product promotion Tourism training workshop (hospitality, safety, sanitation, and profitability) Products trade fair (matching support with tourism related companies) (twice) Training in Japan
Cooperation of Takayama City	Support from Japanese sake production company in Takayama City
Estimated Cost	USD 21,000

Source: JICA Consultant Team

Table 5.41 shows the schedule of Lao liquor and related product development pilot project.

Table 5.41: Schedule of Lao Liquor and Related Products Development Pilot Project

	2020	2021
Hard Component	<ul style="list-style-type: none"> Provision of necessary equipment for weaving and dyeing production experience program Installation support of information center facilities 	
Soft Component	<ul style="list-style-type: none"> New product and service development workshop Development and implementation of a short-term and homestay experience program Tourism training workshop (hospitality, safety, sanitation, profitability, etc.) Products trade fair (matching support with tourism related companies) (2 times) 	

Source: JICA Consultant Team

3) Ou River Villages Tourism Development Pilot Project

Table 5.42 shows the outline of the Ou River villages tourism development pilot project.

Table 5.42: Outline of the Ou River Villages Tourism Development Pilot Project

Objective	<ul style="list-style-type: none"> To develop Ban Nong Khiaw, Ban Muang Ngoi, Ban Sop Khong and Ban Sop Jam along the Ou River as the second destination of the province
Target Area	<ul style="list-style-type: none"> Villages along the Ou River (Nong Khiaw Village, Muang Ngoi Village, Sop Khong Village, Sop Jam Village)
Target People	DoICT, Ngoi District, village residents along the Ou River, hotels, and restaurants
Hard Component	<ul style="list-style-type: none"> Improvement of information center function Improvement of shoreside for boat access (access stairs and floating boat decks) Installation of unified guidance signboards
Soft Component	<ul style="list-style-type: none"> Tourism training workshop (hospitality, safety, sanitation, profitability, and solid waste) Technical transfer training for improvement of agricultural products (including linkage with "Insect Food Culture Branding Pilot Project") PR in the information center
Cooperation of Takayama City	<ul style="list-style-type: none"> Know-how sharing of tourism management and public relations in the rural area Tourism hospitality training
Estimated Cost	USD 28,200

Source: JICA Consultant Team

Table 5.43 shows the schedule of the Ou River villages tourism development pilot project.

Table 5.43: Schedule of the Ou River Villages Tourism Development Pilot Project

	2020	2021
Hard Component	<ul style="list-style-type: none"> Improvement of information center function 	<ul style="list-style-type: none"> Improvement of shoreside for boat access
Soft Component	<ul style="list-style-type: none"> Tourism training workshop Technical transfer training for improvement of agricultural products PR in the information center 	

Source: JICA Consultant Team

4) Kuang Si Waterfalls and its Axis Development Pilot Project

Table 5.44 shows the outline of Kuang Si Waterfalls and its axis development pilot project.

Table 5.44: Outline of Kuang Si Waterfalls and its Axis Development Pilot Project

Objective	<ul style="list-style-type: none"> To develop Ban Nong Khiaw, Ban Muang Ngoi, Ban Sop Khong and Ban Sop Jam along the Ou River as the second destination of province
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Target Area	• Villages along the Ou River (Nong Khiaw Village, Muang Ngoi Village, Sop Khong Village, Sop Jam Village)
Target People	DoICT, Ngoi District, village residents along the Ou River, hotels, and restaurants
Hard Component	• Improvement of information center function • Improvement of shoreside for boat access (access stairs and floating boat decks) • Installation of unified guidance signboards
Soft Component	• Tourism training workshop (hospitality, safety, sanitation, profitability, and solid waste) • Technical transfer training for improvement of agricultural products (including linkage with “Insect Food Culture Branding Pilot Project”) • PR in the information center
Cooperation of Takayama City	• Know-how sharing of tourism management and public relations in the rural area • Tourism hospitality training
Estimated Cost	USD 46,800

Source: JICA Consultant Team

Table 5.45 shows the schedule of Kuang Si Waterfalls and its axis development pilot project.

Table 5.45: Schedule of Kuang Si Waterfalls and its Axis Development Pilot Project

	2020	2021
Hard Component	• Installation of unified guidance signboards	
	• Rehabilitation and development of pedestrian and safety facilities	
	• Pavement of community roads	
Soft Component	• Tourism training workshop	

Source: JICA Consultant Team

5) Phou Khoun Tourism Development Pilot Project

Table 5.46 shows the outline of Phou Khoun tourism development pilot project.

Table 5.46: Outline of Phou Khoun Tourism Development Pilot Project

Objective	• To enhance the functions as a traffic junction among Luang Prabang, Vang Vieng, Vientiane, and Xieng Khouang
Target Area	• Around the intersection between Route 13 and Route 7
Target People	DoICT, Phou Khoun District Office, shops and restaurants in viewpoint, and famers
Hard Component	N/A
Soft Component	• Tourism training workshop (hospitality, safety, sanitation, and profitability) • Technical transfer training for improvement of agricultural products
Cooperation of Takayama City	• Know-how sharing of tourism development, management and public relations in the rural area • Tourism hospitality training
Estimated Cost	USD 12,000

Source: JICA Consultant Team

Table 5.47 shows the schedule of Phou Khoun tourism development pilot project.

Table 5.47: Schedule of Phou Khoun Tourism Development Pilot Project

	2020	2021
Soft Component	• Tourism training workshop (hospitality, safety, sanitation, and profitability) • Technical transfer training for improvement of agricultural products	

Source: JICA Consultant Team

6) Traditional Culture Respect Improvement Pilot Project

Table 5.48 shows the outline of traditional culture respect improvement pilot project.

Table 5.48: Outline of Traditional Culture Respect Improvement Pilot Project

Objectives	<ul style="list-style-type: none"> • To improve the respect of traditional culture • To improve the knowledge of traditional culture • To increase the rate of wearing traditional costumes and improve the attractiveness by integration with the townscape
Target Area	• World Heritage Area
Target People	DoICT, Lao National Institute of Tourism and Hospitality, restaurants, hotels, shops, traditional wear producers and shop owners, and tourism related companies
Hard Component	N/A
Soft Component	<ul style="list-style-type: none"> • Establishment of a promotion organization for business • Workshop for the introduction of Japanese advanced experiences • Photo competition • Website development and management
Cooperation of Takayama City	• Introduce Japanese Traditional Hospitality “Omotenashi” and new movement “Kimono-Rental” “Kimono-passport” “Kimono-Kentei”
Estimated Cost	USD 10,400

Source: JICA Consultant Team

Table 5.49 shows the schedule of traditional culture respect improvement pilot project.

Table 5.49: Schedule of Traditional Culture Respect Improvement Pilot Project

	2020	2021
Soft Component	• Establishment of a promotion organization for business	
	• Workshop for introduction of Japanese advanced experiences	
	• Photo competition	
	• Website development and management	

Source: JICA Consultant Team

7) Insect Food Culture Branding Pilot Project

Table 5.50 shows the outline of insect food culture branding pilot project.

Table 5.50: Outline of Insect Food Culture Branding Pilot Project

Objective	• To create a new global base in Luang Prabang
Target Area	• World Heritage Area
Target People	DoICT, university, hotels, and restaurants
Hard Component	N/A
Soft Component	<ul style="list-style-type: none"> • Establishment of a promotion organization for insect food branding • Workshop for implementation of the activities • Verification of the activity “Edible insects in Lao PDR” by FAO • Products fair and international insect conference • Website development and management
Cooperation of Takayama City	• Cooperation with insect museum of the world “Sekai no kontyukan” in Takayama City
Estimated Cost	USD 16,400

Source: JICA Consultant Team

Table 5.51 shows the schedule of insect food culture branding pilot project.

Table 5.51: Schedule of Insect Food Culture Branding Pilot Project

	2020	2021
Soft Component	• Establishment of a promotion organization for insect food branding	
	• Workshop for implementation of the activities	
	• Verification of the activity “Edible insects in Lao PDR” by FAO	
	• Products fair and international insect conference	
	• Website development and management	

Source: JICA Consultant Team

8) International Heritage Walk Pilot Project

Table 5.52 shows the outline of international heritage walk pilot project.

Table 5.52: Outline of International Heritage Walk Pilot Project

Objectives	<ul style="list-style-type: none"> • To organize international events in Luang Prabang to raise international awareness • To hold a walking event and build an international network • To encourage students' participation on walking activities with international walkers and empower local people as well as the small and medium enterprises in Luang Prabang Area as the venue of the event
Target Area	• 5 km, 10 km and 20 km routes starting from the World Heritage Area
Target People	DoICT, Luang Prabang Walking Association (Newly established)
Hard Component	N/A
Soft Component	<ul style="list-style-type: none"> • Establishment of a walking association as the organizing committee • Preparation for the international event (study tours, expert dispatchment, carrying out trial events) • Website development and management
Cooperation of Takayama City	<ul style="list-style-type: none"> • Learning from walking route setting of Takayama City • Sharing knowledge on health vitalizing walking projects
Estimated Cost	USD 22,400

Source: JICA Consultant Team

Table 5.53 shows the schedule of international heritage walk pilot project.

Table 5.53: Schedule of International Heritage Walk Pilot Project

	2020	2021
Soft Component	• Establishment of a walking association as the organizing committee	
	• Preparation for the international event	
	• Website development and management	

Source: JICA Consultant Team

9) Service Industry Re-evaluation Pilot Project

Table 5.54 shows the outline of service industry re-evaluation pilot project.

Table 5.54: Outline of Service Industry Re-evaluation Pilot Project

Objectives	<ul style="list-style-type: none"> • To increase the use of local handicrafts and local agricultural products in service industry • To improve the environment in service industry
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	<ul style="list-style-type: none"> To improve the mindset towards heritage preservation (shifting from emphasizing material prosperity to cultural prosperity)
Target Area	<ul style="list-style-type: none"> World Heritage Area
Target People	DoICT, Lao National Institute of Tourism and Hospitality, restaurants, hotels, shops
Hard Component	N/A
Soft Component	<ul style="list-style-type: none"> Establishment of an organization for re-evaluation system Implementation of the activities (making regulation and guideline of evaluation item and method) Website development and management
Cooperation of Takayama City	<ul style="list-style-type: none"> Promotion system of local production for local consumption at hotels and restaurants in Takayama City
Estimated Cost	USD 337,400

Source: JICA Consultant Team

Table 5.55 shows the schedule of service industry re-evaluation pilot project.

Table 5.55: Schedule of Service Industry Re-evaluation Pilot Project

	2020	2021
Soft Component	<ul style="list-style-type: none"> Establishment of organizations 	
	<ul style="list-style-type: none"> Holding workshops 	
	<ul style="list-style-type: none"> Website development and management 	

Source: JICA Consultant Team

(3) Evaluation and Specification of Pilot Projects

Referring to the objectives of the Project and Output 3, out of the nine pilot project candidates, actual pilot projects that will be supported by the Project were selected. In the selection, priority evaluation was conducted according to the following four indicators of priority.

1) Feasibility for sustainability

It is necessary that Luang Prabang Province and local organizations can continue the projects after the Project is finished. Therefore, the economic feasibility of the project is prioritized.

2) Contribution to the local economy

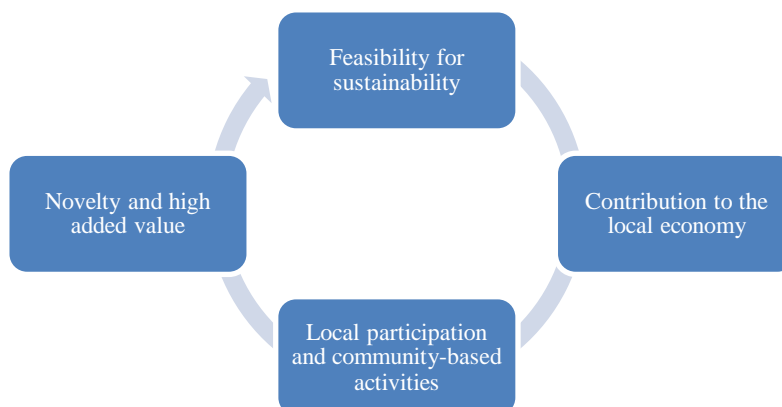
The positive impact of the Project and projects continuing the Project shall not be just for the implementers, but also for the vitalization of related industries and economic growth of the local community. Therefore, the contribution to the local community is prioritized in the selection.

3) Local participation and community-based activities

The pilot project shall hand down the traditional culture to future generations. Therefore, participation of local residents, that are the descendants of traditional cultures is prioritized in the selection.

4) Novelty and high added value

There are already various supports conducted in Luang Prabang Province, hence, for the effectiveness of the Project, overlaps with existing projects need to be avoided, and high added value in the pilot project is needed. Therefore, novelty and the high added value are prioritized in the selection.



Source: JICA Consultant Team

Figure 5.4: Concept for the Pilot Projects

Table 5.56 shows the evaluation of the nine pilot projects based on the above four indicators. Based on this result, the JICA Consultant Team and counterpart organizations discussed in the 2nd JCC, on pilot projects to be implemented in the Project. As a result, the three candidates that were ranked as high priority were selected ((1) Traditional Handicraft Villages Revitalization Pilot Project, (2) Lao Liquor and Related Products Development Pilot Project, and (3) Ou River Villages Tourism Development Pilot Project)

Table 5.56: Evaluation of Pilot Projects

No.	Project name	Feasibility	Contribution to local economy	Local participation	High added value	Priority
(1)	Traditional Handicraft Villages Revitalization Pilot Project	☑☑☑	☑☑☑	☑☑	☑☑	High
(2)	Lao Liquor and Related Products Development Pilot Project	☑☑☑	☑☑☑	☑☑	☑☑	High
(3)	Ou River Villages Tourism Development Pilot Project	☑☑	☑☑☑	☑☑	☑☑	High
(4)	Kuang Si Waterfalls and its Axis Development Pilot Project	☑☑	☑☑	☑☑	☑	Middle
(5)	Phou Khoun Development Pilot Project	☑	☑☑☑	☑	☑	Low
(6)	Traditional Culture Respect Improvement Pilot Project	☑	☑☑	☑☑☑	☑☑	Middle
(7)	Insect Food Culture Branding Pilot Project	☑☑	☑☑	☑	☑☑☑	Middle
(8)	International Heritage Walk Pilot Project	☑	☑	☑☑	☑☑	Low
(9)	Service Industry Re-evaluation Pilot Project	☑☑	☑☑	☑	☑	Low

Selected projects are greyed.

Source: JICA Consultant Team

5.3.2 Proposal of Project Plans for Pilot Projects and Start-up Support

(1) Traditional Handicraft Village Revitalization Pilot Project

1) Pottery (Chan Village)

i) Outline

The target site Chan Village is located about 30 minutes away from the World Heritage Area. This village has been producing traditional pottery since the 16th century and is characterized by rustic

techniques and unique kilns. In the traditional techniques that they use, a kiln is installed under the ground, so rainwater invades not only from surface water but also from the ground during the rainy season, causing the kiln to be unusable. Moreover, the number of tourists is limited although it is possible to make a day trip from the World Heritage Area where most tourists visit.

In response to this situation, ADB is providing support mainly for hardware such as ceramic equipment and road maintenance, while KOICA is providing technical support for ceramic production.

In this project, support will be provided for studying the operation and management methods of the ADB supported pottery production facilities and for promoting community-based tourism.

ii) Stakeholders

Table 5.57 shows the stakeholders involved in Chan Village pottery production

Table 5.57: Stakeholders of the Traditional Handicraft Village Revitalization Project (Pottery / Chan Village)

Category	Organization	Description
Public	DoICT	Department of Information, Culture and Tourism of Luang Prabang Province Comprehensive management of international support and Luang Prabang public works Key Person: Director of Tourism Marketing
	Chomphet District DoICT	Examination of ADB-supported pottery facility management Key Person: Deputy Director
	Chan Village	Chan Village resident's organization. Responsible for various operations and implementation under the guidance of senior government official Key Person: Village head
Private	Existing Six Households	Six households who have been performing pottery activities in the village. Main support for international donors
	ADB Support Facility Management Group	A group that operates ADB-supported pottery facilities consisting of six existing households. DoICT established roles and management methods, but the details of the activities and financial resources for facility operation and management costs have not been determined specifically, and they are not functioning effectively. Currently under review by Chomphet District DoICT and DoICT. Key Person: Representative of the Management Group
	Chan village youth group	In addition to producing ceramics, the youth group is engaged in experiential tourism for local ingredients and traditional culture. In addition, the village practiced cleaning up and installed information boards. In addition, the group is practicing cleaning the villages and installing explanation boards.
	Tourism operator	The villagers' effort has begun to provide from inspection-passing type to experience-based type tourism. * Tourism operator (Hotel, cruising company, and travel agency)
Other	ADB	The following facility maintenance support will be provided. There is no support for technical guidance on pottery production. <ul style="list-style-type: none"> • Pottery production and storage facilities • Exhibition facility for explanation of production pottery and pottery village • Toilet facilities • Rest facilities • Open space • Road maintenance from the ferry boat pier to the village
	KOICA	Support for pottery production <ul style="list-style-type: none"> • High temperature gas kiln equipment • Ceramic clay making machine from soil • Glaze : Pottery finishing material • Ceramics technical guidance • Accepted pottery training in Korea

Source: JICA Consultant Team

iii) Challenges

Table 2.84 shows the problems and challenges related to pottery production in Chan Village.

**Table 5.58: Challenges in Traditional Handicraft Village Revitalization Project
(Pottery / Chan Village)**

Problem	Description	Challenge
• Insufficient market development	No differentiation from other local products • Uses imported glaze. • Inadequate promotion / information • Pottery production facilities have been prepared with the support by ADB, but the management organization is not functioning effectively, and there is no system for ordering, production, or sales.	• Market development • Effective use of ADB support facilities • Enhancement of promotion
• Community-based tourism has not been penetrated	• Prefectures, district and villages are not conducting specific studies on community-based tourism. • The existing six households, where support is concentrated do not have the viewpoint of community-based tourism. • Limited efforts for experience-based tourism	• Promotion of community-based tourism • Transition from inspection-passing type to experience-based type tourism.
• Business development of tourism business is limited.	• Participation of tourism operators for experience-based tourism is limited.	• Involvement of tourism operators
• Support is concentrated in the existing six households only	• The existing six households have inherited traditional ceramics, but their motivation for improvement is low. • DoICT and Chomphet District DoICT give preferential treatment to the existing six households and concentrates international donor support to the existing six households. • Support is not benefiting other organizations that are motivated and active in the village.	• Transfer technology to motivated individuals and organizations

Source: JICA Consultant Team

iv) Objectives and Measures for Technical Transfer

Based on the above, the objectives and measures for technology transfer are set as follows:

- Market development
 - Development of new pottery products utilizing the characteristics of clay
 - Development of local glaze (utilization of waste glass)
 - Marketing targeting women (mud dyeing, mud beauty treatment, mud play)
- Effective use of ADB support facilities
 - ADB-supported pottery facility management method
 - Holding events using the open space (pottery festival)
- Promotion / PR activities
 - Promotion / PR activities of Chan Village to the World Heritage Area and overseas
 - Promotion / PR activities using SNS
- Promotion of Community-based Tourism and Experience-based Tourism
 - Establishment of community revitalization resident organization;
 - Formulation of a tourism program on the village side (experience of local tours utilizing local materials, and exchange experience with local residents)
 - Creating a pleasant environment for tourists to visit, eliminating and disposing of garbage, and setting up explanation board
- Engagement of tourism operators

- Promoting the use of pottery at hotels and restaurants and guiding them to the village.

v) **Project Plan Proposal**

Table 5.59 shows the proposed hard and soft components of this pilot project.

**Table 5.59: Traditional Handicraft Village Revitalization Project
(Pottery / Chan Village) Activity Plan (Draft)**

Input	Content	Overview	
Hard Component		General pottery equipment is supported by ADB / KOICA. For sustainable development implementation, priority should be given to the use of familiar equipment and materials, so physical support is not necessary at this stage.	
Soft Component	Dispatch of Short-term Experts	Date / Period	① 2019/8 (1 week)
		Target	All concerned
		Content	Conduct local discussions and consider future technology transfer policies
		Date / Period	② 2020/8 (1 week)
		Target	All concerned
		Content	Confirmation of operation status of ADB support facilities and examination of usage methods Confirmation and examination of new pottery products and glaze development
		Date / Period	③ 2021/4 (1 week)
		Target	All concerned
		Content	Implementation of pottery performance at the pottery festival Expansion to activities that are not limited to pottery making
	Training in Japan	Date / Period	① 2019/10 (2 weeks)
		Target	Potter
		Content	Pottery technology training and market understanding, glaze development prototype
		Date / Period	② 2020/1 (1.5 month)
		Target	Potter
		Content	Pottery technology training and market understanding, glaze development prototype
		Date / Period	③ 2021/1 (1 week)
		Target	Potter and festival organizer
		Content	Pottery technology training and market understanding Pottery performance training at the Pottery Festival
	Training Workshop	Date / Period	① 2020/4 (2 days)
		Target	Community revitalization resident organization
		Content	Development training for new pottery and examination of creating a tourist acceptance system
		Date / Period	② 2020/7 (2 days)
		Target	Community revitalization resident organization
		Content	Development training for new pottery and examination of creating a tourist acceptance system
Date / Period		③ 2020/10 (2 days)	
Target		Community revitalization resident organization	
Content		Development training for new pottery and examination of creating a tourist acceptance system	
Date / Period		④ 2021/1 (2 days)	
Target		Community revitalization resident organization	
Content		New pottery development training, Pottery Festival Implementation Meeting	
Date / Period		⑤ 2021/4 (2 days)	
Target		Community revitalization resident organization	
Content		New pottery development training, Pottery Festival Implementation Meeting	
Date / Period	⑥ 2021/7 (2 days)		
Target	Community revitalization resident organization		

Input	Content	Overview	
		Content	Development training for new pottery and examination of creating a tourist acceptance system
		Date / Period	⑦ 2021/10 (2 days)
		Target	Community revitalization resident organization
		Content	Development training for new pottery and examination of creating a tourist acceptance system
		Estimated Cost	USD 5,000
	Seminar Event	Date / Period	2020/4 (1 week)
		Target	Community revitalization resident organization
		Content	Implementation of Fam Trip Implementation of inspection and consultation for travel agencies, hotels, restaurants, bloggers, media, etc.
		Date / Period	2021/4 (4 days)
		Target	Community revitalization resident organization
		Content	Implementation of pottery festival, Introducing new products, pottery art contests, Pottery performance with the cooperation of short-term experts
		Estimated Cost	USD 6,000

Source: JICA Consultant Team

2) Dying and Weaving (Nayang Tai Village)

i) Outline

The target site Nayang Tai Village is located three hours and 15 minutes north of the World Heritage Area. Day trips from the World Heritage Area are not common due to the long time required, but it has the potential as a stopover for sightseeing in the direction of Nong Khiaw. Dying and woven products such as hand-spun cotton yarn, natural dyeing and Tai Lue fabrics are very popular, and some households produce products at the orders of retailers in the World Heritage Area. In addition, can enjoy old-fashioned cityscapes, Tai Lue living scenery, and experience homestay.

In this project, promotion of experience-based tourism and support for implement traditional dyeing and weaving processes, and cultural information support.

ii) Stakeholders

Table 5.60 shows the stakeholders involved in Nayang Tai Village dyeing and weaving production.

Table 5.60: Stakeholder in the Traditional Handicraft Village Revitalization Project (Dyeing and weaving / Nayang Tai Village)

Category	Organization	Description
Public	DoICT	Department of Information, Culture and Tourism of Luang Prabang Province Comprehensive management of international support and Luang Prabang public works Key Person: Director of Tourism Marketing
	Nam Bak District DoICT	Subordinate organization of DoICT
	Chan Village	Resident organization in Nayang Tai Village. Functions as a resident organizer Key Person: Village head
Private	Area revitalization inhabitant organization of Nayang Tai Village	Villagers, mainly the village head, are working together to improve and manage the village. During the GIZ support activities, Fam Trips were conducted for travel agencies, hotels, restaurants, bloggers, media, etc. from several countries. The village actively responds to guidance and support from each support organization. Key Person: Village head, Vice village head
	Homestay facilities	An organization that operates facilities for homestay experiences for tourists. Actively disseminating information with the cooperation and guidance of GIZ and DoICT.

	Tourism operator	There are some businesses that handle experience-based type tourism, but at present there are many inspection-passing type tourisms.
Other	GIZ	Luang Prabang-Handle with Care, which supported the development of local specialties, was implemented.

Source: JICA Consultant Team

iii) Challenges

Table 5.61 shows the problems and challenges related to dying and weaving production in Nayang Tai Village.

Table 5.61: Challenges in dying and weaving production in Nayang Tai village

Problem	Description	Challenge
<ul style="list-style-type: none"> • Too short time for stay 	<ul style="list-style-type: none"> • Visitors visiting the village mainly stop on their way to Nong Khiaw, and the stay time is limited to about one hour. • Preparation of homestay program is in progress, but there is no experience program available for stay of few hours (traditional yarn dyeing, and weaving can be experienced, but there is not enough time in a few hours). • There is no toilet for tourists. • There are few exhibits at the traditional museum. • Participation of tourism operators for experience-based tourism is limited. • There was an opinion from a homestay experience person that toilet improvement and pest control were insufficient. 	<ul style="list-style-type: none"> • Transition from inspection-passing type to experience-based type tourism.

Source: JICA Consultant Team

iv) Objectives and Measures for Technical Transfer

Based on the above, the objectives and measures for technology transfer are set as follows.

- Transition from inspection-passing type to experience-based type tourism.
 - Development of dyeing technology that can be experienced in a short time (indigo dyeing, mud dyeing, Hida-Zome³⁹) Technology transfer from Hida-Zome is considered effective.
 - Formulation of a tourism program on the village side (experience of local tours utilizing local materials, and exchange experience with local residents)
 - Improvement of traditional museum exhibits (dye weaving process (from cotton to yarn making) equipment display)
 - Information board about village tradition and dyeing and weaving
 - Introduction of walking routes and cultivation areas for cotton and dyeing materials (promotion of excursions in the village)
 - Held an event (Dyeing and Weaving Festival)
 - Installation of public toilets
 - Collaboration with DOIC (manufacturing and branding high-quality products)
 - Survey on the satisfaction of travelers who have experienced homestay using SNS

v) Project Plan Proposal

Table 5.62 shows the proposed hard and soft components of this technology transfer.

Table 5.62: Traditional Handicraft Village Revitalization Project (Dying and Weaving / Nayang Tai Village) Activity Plan (Draft)

Input	Content	Overview
Hard Component	Dyeing and weaving equipment	Traditional museum exhibiting dyeing and weaving equipment from cotton to yarn, and dyeing and weaving Producing equipment necessary for the experiment

Input	Content	Overview	
		(Rather than purchasing equipment, local villagers make use of the local materials).	
		Estimated Cost	USD 10,000
	Information board	An information boards showing the traditional culture and walking routes in the village will be installed.	
		Estimated Cost	USD 10,000
	Toilet	Consider installing a public toilet for tourists near the community center.	
		Estimated Cost	USD 2,400
Soft Component	Dispatch of Short-term Experts	Date / Period	① 2020/1 (1 week)
		Target	All concerned
		Content	Discuss on-site discussions and consider future technology transfer policies. Grasping the possibility of dye-proof using [Hida Zome] Hida dyeing technology
		Date / Period	② 2020/8 (1 week)
		Target	All concerned
		Content	Understanding of local natural dyes and introduction of dyeing and weaving techniques. Examination and introduction of possibility of linking dyes with other crafts
		Date / Period	③ 2021/4 (1 week)
		Target	All concerned
		Content	Introduction of support for the dyeing and weaving festival, [Hida Zome] Hida dyeing technology and Hida festivals. Evaluation of dyed and woven works
	Training in Japan	Date / Period	① 2020/1 (2 weeks)
		Target	Dyeing and weaving producer.
		Content	[Hida Zome] Hida dyeing technology training, Understanding handicraft experience type facilities Inspection of possibility of cooperation with other crafts such as Japanese paper and bamboo craft
		Date / Period	② 2021/1 (1 month)
		Target	Dyeing and weaving producer, and festival organizer
		Content	Market understanding of dyeing and weaving works, prototype development at dyeing and weaving festival
	Training Workshop	Date / Period	① 2020/4 (2 days)
		Target	All villagers
		Content	Dyeing and technical training by DOIC Community-based Tourism Workshop including experience-based type tourism by DoICT
		Date / Period	② 2020/7 (2 days)
		Target	All villagers
		Content	Dyeing and technical training by DOIC Community-based Tourism Workshop including experience-based type tourism by DoICT
		Date / Period	③ 2020/10 (2 days)
		Target	All villagers
		Content	Dyeing and technical training by DOIC Community-based Tourism Workshop including experience-based type tourism by DoICT
Date / Period		④ 2021/1 (2 days)	
Target		All villagers	
Content		Dyeing and technical training by DOIC	

Input	Content	Overview	
			Community-based Tourism Workshop including experience-based type tourism by DoICT
		Date / Period	⑤ 2021/4 (2 days)
		Target	All villagers
		Content	Dyeing and weaving festival implementation meeting
		Date / Period	⑥ 2021/7 (2 days)
		Target	All villagers
		Content	Dyeing and technical training by DOIC Community-based Tourism Workshop including experience-based type tourism by DoICT
		Date / Period	⑦ 2021/10 (2 days)
		Target	All villagers
		Content	Dyeing and technical training by DOIC Community-based Tourism Workshop including experience-based type tourism by DoICT
		Estimated Cost	USD 5,000
	Seminar Event	Date / Period	2020/4 (1 week)
		Target	All villagers
		Content	Implementation of Fam Trip Implementation of inspection and consultation for travel agencies, hotels, restaurants, bloggers, media, etc.
		Date / Period	2021/4 (4 days)
		Target	All villagers
		Content	Implementation of dyeing and weaving festival, Introducing new products, new product contests, and potential for dyeing and weaving with the cooperation of short-term experts
		Estimated Cost	USD 6,000

Source: JICA Consultant Team

(2) Lao-Lao and Related Product Development Pilot Project (Xang Hai Village)

i) Outline

The target site, Xang Hai Village, is located about 30-40 minutes from the World Heritage Area. It has a potential as a stop-in place for day trips from the World Heritage Area and Pak Ou Cave sightseeing. Lao-Lao is a traditional liquor that represents Laos. Lao-Lao uses glutinous rice cultivated actively in Laos as a raw material

In this project, technology transfer such as improvement of product quality and utilization of by-products will be implemented.

ii) Stakeholders

Table 5.63 shows the stakeholders involved in Xang Hai Village Lao-Lao production

Table 5.63: Stakeholders in the Lao-Lao and Related Product Development Project

Category	Organization	Description
Public	DoICT	Department of Information, Culture and Tourism of Luang Prabang Province Comprehensive management of international support and Luang Prabang public works Key Person: Director of Tourism Marketing
	Pak Ou District DoICT	Subordinate organization of DoICT Key Person: Director
	Xang Hai Village	Resident organization in Xang Hai Village.

Category	Organization	Description
		Active initiatives in the village. Key Person: Village head
Private	Lao-Lao producer	The village has 15 households engaged in Lao-Lao brewing. Participated in the October training in Japan and learned about brewing and hygiene management in Takayama City. The knowledge of being a former teacher is expected to be shared with the community after returning home. Key Person: Participants of the training in Japan
	Dyeing and weaving producer	In addition to Lao-Lao brewing, the village has a weaving industry. However, they are sold together with other regional products and imported products.
	Tourism operator	There are many sightseeing tours in the village as a one-stop for boat tours to the Pak Ou Cave from the World Heritage Site. Since many sightseeing tours have already been established, cooperation with the village is required.
Other	Souphanouvong University Faculty of Agriculture and Forestry Resources Lao Korean Science and Technology Center (LKSTC)	R&D facility established with the support of Korea (KOICA) Knowledge and facilities related to brewing such as distillation facilities. Collaboration with standardization of Lao-Lao brewing such as hygiene management, bottling, packaging, development of new products and by-products is expected. Key Person: Deputy Director Marketing Specialist Deputy Director of Food Science and Technology
	ADB	Support the installation of local road pavements, gutters, toilets, parking lots, etc. Considering local industry support as community support as second-stage support
	Co-op Okinawa	Implemented the JICA Partnership Program entitled "Project for Enhancement of Cooperative Function in Attapeu Province through Formation of Lao-lao Producers Cooperative" and supported the formation of cooperatives. Learning from past efforts is expected

Source: JICA Consultant Team

iii) Challenges

Table 5.64 shows the problems and challenges related to Lao-Lao production in Xang Hai Village.

Table 5.64: Challenges in the Lao-Lao Production in Xang Hai Village

Problem	Description	Challenge
• Low quality	• Poor product variety. • Insufficient use of Lao wine (before distillation) and by-products • Manufacturing is excessive. • Loose hygiene management in the manufacturing process.	• Establishing Lao-Lao standard
• Low recognition	• For tourists, it is not a liquor that enjoys taste, but a strong image as a tonic medicine containing snakes and scorpions. • It is recognized as an old-fashioned and cheap liquor for Laotians.	• Enhancement of promotion
• Only an individual household activity	• Manufacturing methods vary greatly from one household to another • There is a possibility of cost reduction by joint purchase of raw materials and market development by joint wholesale.	• Establishment and operation of Lao-Lao brewery cooperatives
• Community-based Tourism has not been penetrated	• There is no local organization.	• Promotion of Community-based Tourism

Source: JICA Consultant Team

iv) Objectives and Measures for Technical Transfer

Based on the above, the objectives and measures for technology transfer are set as follows:

- Establishment of Lao-Lao standard
 - Quality test of water, Lao wine, Lao liquor, yeast currently used and produced in the village
 - Development of new products (Lao wine before distillation, various Lao liqueurs)
 - Utilization of by-products (use of Lao-Lao lees, cooking, sweets, cosmetics, beauty treatment, livestock feed)
 - Collaboration with Souphanouvong University (Quality inspection, bottling, and packaging)
 - Learning from the co-op Okinawa (utilizing Chura Lao development experience)
 - Cooperation with tourism operators (product use at hotels and restaurants)
- Establishment of Lao-Lao standard
 - Quality test of water, Lao wine, Lao liquor, yeast currently used and produced in the village
- Promotion / PR activities
 - Promotion / PR activities to the World Heritage Area and overseas using SNS
 - Holding events (installing a tasting bar for newly developed products)
 - Support for opening a brewery information center
- Establishment and operation of Lao-Lao brewing cooperative
 - Establishment of brewing cooperative (learning from the formation of Chura Lao Cooperative, Co-op Okinawa)
 - Cost reduction by joint purchase of materials and equipment
 - Understanding reasonable prices through cost accounting
- Promotion of Community-based Tourism
 - Establishment of community revitalization resident organization that can practice Community-based Tourism

v) Project Plan Proposal

Table 5.65 shows the proposed hard and soft components of this technology transfer.

Table 5.65: Project Plan Proposal for Lao-Lao and Related Product Development Project

Input	Content	Outline	
Hard Component		Sanitary management / quality control / manufacturing efficiency, development of new products received guidance from LKSTC Hard Component is not assumed.	
Soft Component	Dispatch of Short-term Experts	Date / Period	① 2019/8 (1 week)
		Target	All concerned
		Content	Conduct local discussions and consider future technology transfer policies
		Date / Period	② 2020/8 (1 week)
		Target	All concerned
		Content	Confirmation of Lao-Lao brewery cooperative management, hygiene management, quality control, cost accounting status confirmation, confirmation of Lao-Lao standard. Lao wine before distillation, trial development of various types of Lao liqueur, trial development of products using the by-products "Lao-Lao lees". "Lao-Lao lees" is the leftover bits from the Lao-Lao making process.
		Date / Period	③ 2021/4 (1 week)
		Target	All concerned
		Content	Lao-Lao brewery festival implementation support, Evaluation of prototypes from Lao-Lao and by-products

Input	Content	Outline		
Training in Japan	Training in Japan	Date / Period	① 2019/10 (2 weeks)	
		Target	Lao-Lao brewer	
		Content	Brewing technology training and hygiene management training and market understanding, How to use "Sake Kasu: Sake lees, by product of Sake production" and its potential	
		Date / Period	② 2020/1 (1.5 month)	
		Target	Lao-Lao brewer	
		Content	Brewery technology and quality control training and market understanding. Trial production using sake lees.	
		Date / Period	③ 2021/1 (1 month)	
		Target	Lao-Lao brewer, festival organizer	
		Content	Brewing technology and quality management training and market understanding. Prototype development at the Lao-Lao brewing festival	
	Training Workshop	Training Workshop	Date / Period	① 2020/4 (2 days)
			Target	Community revitalization resident organization
			Content	Establishment and operation of Lao-Lao brewery cooperatives. Lao-Lao brewery hygiene management and quality control.
			Date / Period	② 2020/7 (2 days)
			Target	Lao-Lao Brewery Cooperative Community revitalization resident organization
			Content	Brewery hygiene management and quality control, Establishing and sharing Lao-Lao standards, Bottling, packaging
Training Workshop	Training Workshop	Date / Period	③ 2020/10 (2 days)	
		Target	Lao-Lao Brewery Cooperative Community revitalization resident organization	
		Content	Development of pre-distilled Lao wine and various types of Lao liqueurs, Product development using the by-products "Lao-Lao lees".	
		Date / Period	④ 2021/1 (2 days)	
		Target	Lao-Lao Brewery Cooperative Community revitalization resident organization	
		Content	Lao-Lao brewery festival implementation review meeting	
		Date / Period	⑤ 2021/4 (2 days)	
		Target	Lao-Lao Brewery Cooperative Community revitalization resident organization	
		Content	New Lao-Lao brewery development training, Lao-Lao brewery festival implementation review meeting	
Training Workshop	Training Workshop	Date / Period	⑥ 2021/7 (2 days)	
		Target	Lao-Lao Brewery Cooperative Community revitalization resident organization	
		Content	Development training for new brewery product and examination of creating a tourist acceptance system	
		Date / Period	⑦ 2021/10 (2 days)	
Training Workshop	Training Workshop	Target	Lao-Lao Brewery Cooperative Community revitalization resident organization	
		Content	Development training for new brewery product and examination of creating a tourist acceptance system	
		Estimated Cost	USD 15,000	

Input	Content	Outline	
Seminar Event		Date / Period	2020/4 (1 week)
		Target	Lao-Lao Brewery Cooperative Community revitalization resident organization
		Content	Implementation of Fam Trip Implementation of Inspection and consultation for travel agencies, hotels, restaurants, bloggers, media, etc.
		Date / Period	2021/4 (4 days)
		Target	Lao-Lao Brewery Cooperative Community revitalization resident organization
		Content	Implementation of Lao-Lao brewing festival New product introduction, new product contest, Introducing the possibility of brewing with the cooperation of short-term experts
		Estimated Cost	USD 6,000

Source: JICA Consultant Team

(3) Ou River Watershed Villages Tourism Development Pilot Project

i) Outline

The target sites include villages (Nong Khiaw, Muang Ngoi, Sop Khong, and Sop Jam) located along the Ou River in the northern part of Ngoi District. It takes between 3.5 hours and 4.5 hours of travel time from the World Heritage Area. Nong Khiaw, the largest village in the northern part, has the greatest number of visitors and accommodation offerings among the rural areas and is a base village for touring to other villages. Although still limited, the number of visitors reaches 20,000 people annually, attracting primarily western visitors who are interested in village life and nostalgic scenery, which are not found inside the World Heritage Area. It also boasts its natural tourism related resources such as viewpoints and caves. On the priority list for tourism development, which DoICT has formulated, it is expected to be a new tourist site.

Although awareness of Nong Khiaw and other villages along the Ou River has increased over time, tourism resources are not fully utilized due to lack of coordinated infrastructure and limited human resource capacity.

The project is set to assist in improving community-based hospitality for tourism and in raising awareness via public relations efforts.

ii) Stakeholders

Table 5.66 shows the stakeholders related to the tourism development for the villages along the Ou River.

Table 5.66: Stakeholders of Ou River Villages Tourism Development Pilot Project

Category	Organization	Description
Public	Division of Information, Culture and Tourism of Ngoi District	Responsible for enforcement of tourism policy Key person: Division Head
	Nong Khiaw Village	Responsible for village management Key person: Village Head
	Muang Ngoi Village	Responsible for village management Key person: Village Head
	Sop Jam Village	Responsible for village management Key person: Village Head
	Sop Khong Village	Responsible for village management Key person: Village Head

Category	Organization	Description
Private	Accommodation Association of Nong Khiaw Village	Local organization composed of about 40 facilities. It organizes meetings to discuss accommodation and restaurants. Key Person: Organization's Head
	Accommodation Association of Muang Ngoi Village	Local organization composed of about 20 facilities. It organizes meetings to discuss accommodation and restaurants. Key Person: Organization's Head
	Boat Association of Ngoi District	Local organization composed of about 70 boat operators. It allocates boat operations. Key Person: Organization's Head
	Textiles Association of Sop Jam Village	Composed of 35 village households Head: Head of Association
	Tour Operators of Nong Khiaw Village	Composed of about seven tour operators Roles: To arrange accommodation for tourists
	Tour Operators of Luang Prabang	Composed of tour operators at the center of Luang Prabang Province who can help in sending tourists to rural areas and play a role in stimulating demand.
	Villagers	Take the lead in community-based tourism development
Other	Lao National Institute of Tourism and Hospitality (hereinafter referred to as "LANITH")	It provides education for basic knowledge on tourism and its cooperation for the project is expected.

※Accommodation associations of Sop Khong and Sop Jam are not found.

Source: JICA Consultant Team

iii) Challenges

Table 5.67 shows the problems and challenges in tourism development for the villages along the Ou River.

Table 5.67: Challenges in the Ou River Villages Tourism Development

Problem	Description	Challenge
• Limited tourist information	• Ou River sightseeing from Luang Prabang and visits to villages from Nong Khiaw are not promoted because information on tours and attractions in villages due to lack of tourist information centers and signs. • Locally produced specialties such as textiles and river weed are only sold at households.	• To increase tourist information • To promote sales of locally produced specialties
• Difficult to find villages from the Ou River	• Visitors have difficulty getting to the villages by boat in the Ou River without direction signs. • Tourist's safety is unconfirmed due to poor arrangement of ferry crossings. • There is a concern of soil loss at the riverbank due to foot pressure as the ferry crossing area is unpaved and stairways are not installed.	• To improve and promote the ferry crossings
• No community-based tourism available	• Villagers are not active members to make the tourist sites more attractive (Awareness about hospitality and hygiene among the villagers is limited).	• To improve village hospitality
• Quality gap between tour operators	• Caves, waterfalls, trekking and the like are managed by hired private operators. • Some operators lack sufficient safety management for outdoor activities while quality of medical intuitions is low.	• To improve capacity building of tour operators

Source: JICA Consultant Team

iv) Objectives and Measures for Technical Transfer

Based on what has been described above, planning and purpose of technical transfer are set as below:

- To improve tourist & visitor satisfaction
 - To install direction and tourism signs at the ferry crossings of the Ou River;

- To set up tourist centers;
- To set up stores for sales of locally produced specialties; and
- To develop items and cuisine made with locally produced specialties (river shrimp).
- To stimulate demand for tourism
 - To install direction and tourist signs in the ferry crossings of the Ou River;
 - To set up tourist centers; and
 - To increase public relations to parties related to tourism by using IT.
- To encourage participation of tour operators and villagers
 - To organize seminars to study good examples of community-based tourism development;
 - To build capacity of community-based tourism leaders; and
 - To organize trainings on service, hospitality, hygiene and safety.

v) Project Plan Proposal

Table 5.68 shows planning for technical transfer including components of assistance and physical equipment.

Table 5.68: Project Plan Proposal for the Ou River Villages Tourism Development Pilot Project

Input	Content	Outline	
Hard Component	Tourist center	Place	DoICT-managed area near the Nong Khiaw Bridge and Muang Ngoi
		Content	Set up a staffed tourist center for tour and safety information. It is expected to be a base for tours in the northern part with functions to offer the latest tour information with QR code and walking maps, sell locally produced specialties, provide meeting opportunities with villagers and offer book lending service for longer stay. The implementation is expected along with training on service and hospitality and office work PC training; as mentioned below.
		Estimated Cost	USD 10,000
	Direction signs	Place	Near the ferry crossings of Nong Khiaw, Muang Ngoi, Sop Khong and Sop Jam
		Description	Install direction signs in Lao and English
		Estimated Cost	USD 3,200
	Tourist signs	Content	In front of the tourist center of Nong Khiaw Village and the opposite side of the bridge Near the ferry crossings of Muang Ngoi Village, Sop Khong Village and Sop Jam Village (possible to install with direction signs)
		Description	Install signs that provide outline and features of villages, guides on attractions, maps and QR code (detailed tour information including hotels and restaurants and safety information)
		Estimated Cost	USD 6,000
Soft Component	Short-term experts	Date / Period	①May 2020 (1 week)
		Target	All
		Content	Organize 1st Seminar on Sustainable Community-based Tourism. Field visit to study village situations and villager's roles
		Date / Period	②June 2020 (1 week)
		Target	All
		Content	Organize 1st seminar on how to improve the quality of tourist sites Field visit to study situations in tourism development for the Ou River villages
Date / Period	③August 2020 (1 week)		

Input	Content	Outline	
		Target	All
		Content	Organize 2nd Seminar on Sustainable Community-based Tourism Discuss challenges for community-based tourism development
		Date / Period	④September 2020 (1 week)
		Target	All
		Content	Organize 2nd seminar on how to improve quality of tourist sites Discuss in the future plans
		Date / Period	⑤November 2020 (1 week)
		Target	All
		Content	Organize 3rd Seminar on Sustainable Community-based Tourism Discuss in the future plan
	Trainings in Japan/3rd country	Date / Period	①2020 April – October (6 months)
		Target	Nong Khiaw Accommodation Association and Sop Jam Textiles Association
		Content	Organize OJT trainings in Takayama City (at tourist centers and the like) / 3rd country for creation of leadership in the tourist centers
	Trainings on hospitality	Date / Period	①May 2020 (2 weeks)
		Lecturer	LANITH
		Target	About 12 people in 2 groups (total 24 people) from Information, Culture and Tourism Division of Ngoi District, Nong Khiaw Village, Muang Ngoi Village, Sop Jam Village, Sop Khong Village, tour operators of Nong Khiaw Village, Nong Khiaw Accommodation Association and Muang Ngoi Accommodation Association
		Content	Organize a training on hospitality, manners, hygiene and cuisine in Luang Prabang
		Date / Period	②2020 August (1-2 days)
		Lecturer	LANITH
		Target	Participants from the 1st training
		Content	Discuss situation at Ngoi District and give guidance
		Estimated Cost	USD 2,000
		Trainings on the latest tour information	Date / Period
	Lecturer		JOCV Members (private sector public relations)
	Target		About 5 people from Information, Culture and Tourism Division of Ngoi District, Nong Khiaw Village, Muang Ngoi Village, Sop Jam Village, Sop Khong Village, tour operators of Nong Khiaw Village, Nong Khiaw Accommodation Association, Muang Ngoi Accommodation Association
	Content		Organize an intensive training on how to collect the latest tour information and promote public relations in Luang Prabang
	Date / Period		②August 2020 (1-2 days)
	Lecturer		JOCV members (private sector public relations)
	Target		Participants from the 1st training
	Content		Discuss situation at Ngoi District and give guidance
	Estimated Cost		USD 2,000
	Training on quality tourist sites		Date / Period
		Lecturer	Short-term experts
		Target	Information, Culture and Tourism Division of Ngoi District, Nong Khiaw Village, Muang Ngoi Village, Sop Jam Village, Sop Khong Village, tour operators of Nong Khiaw Village and Luang Prabang
		Content	Organize a training to study how to improve the situation at tourist sites and learning branding theory in Luang Prabang

Input	Content	Outline	
		Date / Period	②September 2020 (1-2 days)
		Lecturer	Short-term experts
		Target	Information, Culture and Tourism Division of Ngoi District, Nong Khiaw Village, Muang Ngoi Village, Sop Jam Village, Sop Khong Village, tour operators of Nong Khiaw Village and Luang Prabang
		Content	Organize a training to study how to improve the situations in tourist sites, branding and examples of the Ou River villages and how to improve the cases (to be held in Luang Prabang)
		Estimated Cost	USD 2,000
	Training on sustainable community-based tourism	Date / Period	①May 2020 (1-day)
		Lecturer	Short-term experts
		Target	All
		Content	Organize a training to study good examples of community-based tourism and how to offer advice and encouragement. (to be held in Nong Khiaw)
		Date / Period	②August 2020 (1-2 days)
		Lecturer	Short-term experts
		Target	All
		Content	Organize training to study challenges and resources of villages, come up with advertising slogans and set goals. (to be held in Nong Khiaw)
		Date / Period	③November 2020 (1-2 days)
		Lecturer	Short-term experts
		Target	All
		Content	Organize a training to study the progress (trial & error) from the 1st training, utilize the advertising slogans, tourism development goals and the PDC cycle. (to be held in Nong Khiaw)
		Estimated Cost	USD 3,000

Source: JICA Consultant Team

Chapter 6 Lessons from the Mission and Recommendations for the Future

6.1 Lessons from the Mission

(1) Sharing the Overall Aim of the Project (Overall)

The aim of the project is “to enhance the capacity development of related organizations”. However, during the Project, the Consultant Team was repeatedly asked from counterpart organizations about the budget of the pilot projects. It seemed that they were more interested in implementing actual projects, and the Consultant Team faced the situation that the aim of the Project is not understood. Understanding of the counterpart is considered to be developed through repetitive explanation during the Project, and the effort of gaining understanding and sharing the aims among stakeholders of the project is needed.

(2) Information Sharing (Overall)

In the mission, for approximately 1 year, the JICA Consultant Team has conducted discussions with counterpart organizations in the process of analysis of the current situation and proposals of pilot projects. However, some counterpart organizations pointed out that the progress of the Mission is not sufficiently shared. The project should have organized occasions for regular reports and discussions with the counterpart organizations for a more effective understanding.

(3) Enhancement of Ownership (Overall)

In order to appropriately preserve and manage the World Heritage Area, enhancement of ownership of counterpart organizations is necessary. During the Mission, we have witnessed that the counterpart organizations understand the importance of World Heritage preservation and tourism development. However, as for actual implementation of projects, due to the limitation of budget resources, the reliance to international donors is high, and there is a necessity to continue to enhance the counterpart organizations’ ownership.

(4) Establishing Efficient Structures for Project Implementation (Overall)

Since the project area is a regional city in Lao PDR, it was difficult to hire a national staff with high English skills and high project coordination skills. Also, one of the reasons for this difficulty was in the fact that the beginning phase of the project was in the high seasons of tourism in the project area. For an effective project implementation in a short period of time, measures such as advance coordination or budget allocation was needed.

(5) Conducting Trial Events (Output 1)

In the Mission, as a trial event for preservation and management activities in the World Heritage Area, a cleaning activity, guidance of morning alms giving, and an information exchange meeting was carried out. In the cleaning activity, approximately 340 local residents from 4 villages participated. In the morning alms giving, with the guidance of villagers, approximately 20 tourists participated. In the information exchange meeting, representatives of 17 villages participated. This means that the actual activities in the proposed activity plans have already started to be implemented. Generally, the events received positive feedbacks from the participants, and opinions that agreed in continuing the activities were much seen. From now on, by the efforts of counterpart organizations and JICA experts, we expect that these events do not end as just a trial, but to develop and expand as regular activities, with a more active participation from villages and villagers.

(6) Bottom-up Preservation and Management (Overall)

Currently, under supervision of UNESCO, the provincial government, especially DPL, is actively implementing management activities of the World Heritage Area. There are 28 villages inside the World Heritage Area, but mutual communication among villages are not frequently seen, and many

preservation and management activities are ordered in a top-down manner from the public sector. For the Town of Luang Prabang to continue to be an area strongly related to the regional culture and the lifestyle of the people, establishing a community-based bottom-up organizational structure is necessary. As is described above, through trial events, we were able to feel the will and enthusiasm of the residents to a certain extent. The continuous effort of expanding these community-based preservation and management activities and shifting the main role from administrative organizations to the community is recommended. Also, within the administrative sector, cooperation between the province and the city is necessary.

(7) Pond Water Improvement (Output 1)

In the Mission, JICA Consultant Team have been continuously shared information and opinions with the community about pond water improvement and monitoring through workshops. However, there were cases seen where the residents did not fully understand the rules that they are obligated in the World Heritage Area. There needs to be an effort to organize a continuous opportunity for the public sector and the residents to discuss and understand the rules. Also, through activities, it is recommended that the community itself organizes their own self-disciplinary rule for the environmental preservation and effective utilization of the ponds that are in line with the existing rules inside the World Heritage Area.

(8) Cooperation with Takayama City on Pond Water Improvement (Output 1)

In pond water improvement, activities were conducted with support of Takayama City. Initially, the Project started with the given condition that Super-Sol of Techno Eco Co., Ltd. shall be used. The preliminary data did not show confidential results that the material can show its expected functions on-site, and finally it turned out that the results of the actual experiment conducted in the project showed that Super-Sol does not have a significant improvement effect on the pond water in Luang Prabang. In order to fully utilize the technology and knowledge that Japanese business operators have, not only narrowing down business operators as a given condition but inviting the Consultant Team in the preliminary stages of selecting the cooperating business operators could have been effective.

(9) Introducing Crowdfunding in Architecture Restoration (Output 2)

Luang Prabang World Heritage Area consists of many private-owned buildings. There are restrictions in investing public budget in the restoration projects of private-owned buildings, and currently the buildings need to be restored at their own expense. Therefore, few buildings are currently restored. As was proposed in the 2nd JCC, in order to promote the architecture restoration, building owners and Luang Prabang Province need to cooperate to work on new measures of financing, such as crowdfunding.

(10) Survey Period (Output 3)

The harvest season of the agricultural products that were targeted in the Project vary, so it was difficult to cover all the unique agricultural products of the province in the short survey period. Fruits, mushrooms, and insects were promising candidates for development, but their development was difficult to propose because of the gap between the survey period and its harvest season.

(11) Counterpart Organizations (Output 3)

In the initial stage of the Project, JICA Consultant Team proposed a cooperation with DOIC and agricultural departments, especially in components related to agricultural products. However, because of the implementation structure of the Project, active participation and cooperation with such departments was difficult. After the 2nd JCC, DOIC took part in the Project, but a more efficient proposal could have been done with the cooperation of human resources that already have had decent knowledge in product development in the initial stages of the Project.

(12) Cooperation with Business Operators (Output 3)

Private business operators were positive in proposals of new activities, but because of the implementation structure of the Project, the possibility of cooperation with business operators was limited. For the establishment of a sustainable society, the cooperation of producers, distributors and consumers is considered to be a necessary aspect. Not with just a support that does not self-sustain without the aid of the public sector, but with a scheme where private business operators can actively participate and invest, more efficient outcomes can be expected.

(13) Branding of Luang Prabang (Output 3)

The approved pilot projects are mainly dealing with problems already apparent. However, for the future, establishing a new image of Luang Prabang and branding strategies aiming for the international society shall be important. On the other hand, some of those pilot projects are already running in the private sector, and promising outcomes are expected.

(14) Alternate Tourism Resources (Output 3)

The surveys of the Project for tourism resources in the rural districts of Luang Prabang revealed new values and unfound resources of Laos. Neither are suitable for destinations of mass-tourism, but the “unfound” aspect and its inconvenience are the core values of these places. If they can provide an only-one experience for tourists, there is a good chance of those tourism resources to be vitalized.

(15) Hospitality (Outcome 3)

Even with support of external factors, as long as the local residents do not have pride in their village, or do not have the will to entertain tourists, the support shall not lead to regional tourism development. However, no significant will of entertaining tourists were seen by the villagers during the survey of the Project. The enlightenment towards hospitality shall be necessary.

6.2 Recommendations for the Future

(1) Monitoring and Evaluation of Pilot Projects and Activities (Overall)

The proposed activities and projects shall be conducted by the counterpart organizations according to the plans. Also, after the Project, counterpart organizations shall autonomously carry on projects and activities. For the sustainability of World Heritage preservation and management and tourism development, monitoring and evaluation with the from the viewpoint of technical transfer, cooperation between organizations, and secure financial resources is necessary.

(2) The Influences of Lao-China High Speed Railway (Output 1)

Lao-China High Speed Railway is expected to largely influence the World Heritage Area in the near future. This project is planned to link Kunming of China and Vientiane Capital with a railway, and construction projects are rapidly operating for the opening in 2021. A station is expected to open in the suburban area of Luang Prabang, and large influences on the World Heritage Area, such as the increase of tourists from China and foreign investment to development activities are expected. There may be positive impacts in terms of tourism development, but there is a large chance of negative impacts to the area without proactive measures such as securing manners inside the World Heritage Area, tourism management, traffic congestion mitigation, and investment management. Forecasting the impact and preparing proactive measures is necessary.

(3) Pond Water Improvement (Output 1)

Water quality monitoring in ponds and drainage shall be the fundamental data of future activities, thus shall be continuously conducted. Enlightenment of residents and pond water improvement with active participation of the local community is important and providing an environment for the local community

to actively participate, such as workshops and cleaning events is preferable. Also, clarifying the needs that local residents have towards ponds and being compatible with water quality and water quantity is needed. Finally, water quality improvement with Super-Sol may be reconsidered after other measures have been conducted.

(4) Support for the Establishment of Funds (Output 2)

Discussions on the establishment of Luang Prabang World Heritage Preservation Fund is ongoing with orders from the central government. Although the establishment within 2019 was initially aimed, the fund is not yet established as of the end of the Mission. For the establishment of the fund, cooperation between the central government and the provincial government is necessary. When conducting pilot projects and activities, follow-up on discussions on fund establishment is needed, such as reminding discussions to the provincial government and the central government and studying on financial resources of the fund.

(5) Implementation and Expansion of Pilot Projects (Output 3)

In the Mission, we regarded the pilot projects as projects that are to be implemented to other villages in the future and proposed multiple steps for implementation. In the implementation stages of the pilot projects, implementation with the viewpoint of expansion to other regions, cooperation with other operators, and sustainable development is recommended.

(6) Cooperation with Business Operators for Sustainability (Output 3)

The projects proposed were not only support programs for the village administration, but also to secure sustainability of the project and enhance the ease of getting around of tourists. Not only the sales support of the “Michi-no-eki” projects seen in the One Village One Product Movement, but also practices for creating shared value among private business operators is recommended.

(7) Lessons from Takayama City (Output 3)

In the Project, obstacles for the establishment of a sustainable society were seen, such as persistence to vested rights, exclusion of newcomers, getting used to being supported by donors, and the noncooperation between the public and private sectors. In these points, much is to learn from Takayama city. Takayama City’s basic approach is to consider how to support private business operators that can contribute to the society and industry. These approaches well deserved to be learned, and Luang Prabang is hoped to learn from Takayama City and overcome the obstacles for the implementation of projects and the sustainability of the region.

(8) Alternate Tourism Resource Development (Output 3)

The increase of tourists in Luang Prabang Province, accessibility improvement and PR activities shall lead to the increase of tourists in the northern part of the province. When broadening the horizon, tourism in Luang Prabang is the compass of tourism in Laos. If Laos is to aim to be a tourism nation, it is recommended for the national government to designate Luang Prabang as a special zone for tourism and develop innovative activities to expand to the entire nation. Not only tourism development with aid from international donors, but also there is a need of a fundamental reform of the administrative system of the nation and province, with the mindset change of upper officials to be a servant leader with customers’ perspective. As a long-term project, enlightenment to school children with tourism education is also recommended.

6.3 Conclusion of the Project

This “Project for Capacity Enhancement for Sustainable World Heritage Management and Preservation in Luang Prabang in the Lao People’s Democratic Republic” was done according to the R/D between JICA and Luang Prabang Provincial Government on October 2017. The Project’s purpose is “To enhance the capacity development of related organizations of Luang Prabang in preserving and

managing the World Heritage Area and implementing rural development in the Province”, and in the project period of 3 years, from 2018 to 2020, 4 outputs of “Output 1: Management Body”, “Output 2: Fund Mechanism”, “Output 3: Pilot Project for Rural Area Development”, and “Output 4: Promotion” were the components. The extension of the Project period is currently under consideration.

The project’s counterpart organizations were DoICT and DPL, and for the Japanese side, under the chief advisor, various people, such as other long-term experts, short-term experts, and the consultant team, joined the Project. The 2 uniqueness of the Project is, 1) the work demarcation of the consultant team being in charge of planning from November 2018, and the chief advisor being in charge of implementation from June 2019, and 2) the work being conducted with support of Takayama City (expert dispatchment and accepting training).

The consultant team’s work officially started from the first JCC held on 12th December 2018, and was conducted by 8 experts of Nippon Koei Co., Ltd (additional 1 joined later in the Project). Of the 9, one joined from H.I.S. as an expert of tourism development. The consultant team’s work covered output 1-3 of the 4 outputs, and the contract period was from 27th November 2018 to 31st January 2020, before being extended to 27th March.

The UNESCO World Heritage “Town of Luang Prabang”, is a town with traditional culture and beautiful townscape remaining, and the preservation and inheritance of these to the future is significantly important. However, many problems are becoming more severe, such as the loss of traditional culture due to the outflow of local residents, and environmental pollution and decrease of heritage value due to the increase of tourists. Also, there is a fundamental task of capacity development of staffs of related organizations that should lead the preservation and inheritance. The Project is not a transient one-shot financial aid, but a project that aims to both develop the capacity of administrative officers and offer necessary financial support at the same time. Thus, this project shall be regarded as a meaningful project that emphasizes “sustainability” and “the sense of ownership”.

The consultant team conducted intermittent site surveys, understanding of current conditions, discussion with related organizations, plan formulation and proposal in the 26 M/M assignment, and submitted the interim report in March 2019, submitted the monitoring sheet in June 2019, held the second JCC on 2nd July, submitted the interim report 2 in October 2019, submitted the draft final report in January 2020, and held the third JCC on 5th February 2020, before submitting this final report in March 2020. Additionally, the consultant team supported the 2 trainings in Japan held in February to March 2019 and October 2019 and supported the dispatchment of short-term experts from Takayama City in August 2019, for the effective support of Takayama City to Luang Prabang Province.

As was noted in the last pages of the chapter, we have proposed for the future according to the lessons learned through the progress of the Project. The Project will move on to the next stage of the counterpart organizations, villagers, and business operators cooperating for the implementation of the activities, giving feedbacks from the results, improving and continuing the activities, and expanding to other regions, with the leadership of counterpart organizations and the chief advisor. It shall be important that counterpart organizations, villagers, and business operators understand the concept of the project and move forward for the sustainable development and the inheritance of the World Heritage Area to future generations, through activities planned and proposed by the consultants.

We highly appreciate the cooperation and support of JICA, Takayama City, Luang Prabang Province, Luang Prabang City and other people concerned during the Project. We hope that the outputs of the work contribute to the sustainable development of Luang Prabang Province and the World Heritage Area.

March 2020
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