Promote Waste Management in the Lao Tourism Value Chain through:

Training on waste separation and setting up a collection of low-value single-use plastic waste from tourism businesses in Luang Prabang

FINAL REPORT

February 15, 2023

Table of Contents

1. Interpretation of the Assignment's Objectives

The overall objectives of the consultancy were to improve the waste management practices of MSMEs in the tourism industry supply chain by implementing a pilot initiative in Luang Prabang. The pilot program raised awareness among tourism businesses and staff about single-use plastic waste and encourage them to adopt waste separation practices. The program differs from previous training and campaign on waste management in one critical element: providing collection services which is done by PatiHoub. It further needs to showcase how single-use plastic waste can be transformed into a wide range of products that can be used in tourism.

2. About PatiHoub

PatiHoub is a waste management business in Luang Prabang. Pa-ti means “reform” or “revolution”, and Houb means “design” or “image” in Lao language, which together means to “redesign” plastic waste into valuable products and “revolutionize” the plastics value-chain. PatiHoub aims to solves the plastic waste crisis through a circular and inclusive approach that converts low-value plastic waste into durable, versatile and premium products through a unique, low-carbon process.

The business model utilizes and integrates existing waste management infrastructure and stakeholders to facilitate collection, including municipal waste operators, private recycling buyers, and informal waste collectors. Separated plastic waste will be collected by informal waste collectors and municipal waste trucks and delivered to PatiHoub’s plastics center, where the materials will be shredded, cleaned, pressed, and molded into boards. The recycled plastic boards are strong, durable, weatherproof, anti-mold, easy to clean and non-toxic. They can be cut, screwed, nailed like wood, welded like PVC or HDPE, formed like metal or cardboard and coated like cement, perfect for making floor tiles, roofing, and other construction materials.

3. The Approach and Delivery of the Assignment

There are several issues with previous training on waste management for tourism businesses, including training that was done outside of daily work setting, lack of engagement from the business management and most importantly, lack of a proper collection service. It is challenging to motivate people to separate waste when all kinds of waste are sent to the landfill in the same truck. Informal waste collectors who go around to buy recyclables are said to be elusive. They are not organized and do not usually have a schedule, making it difficult for hotels without enough storage space. To address the abovementioned issues, PatiHoub has adopted the approach described in the following sub-sections.

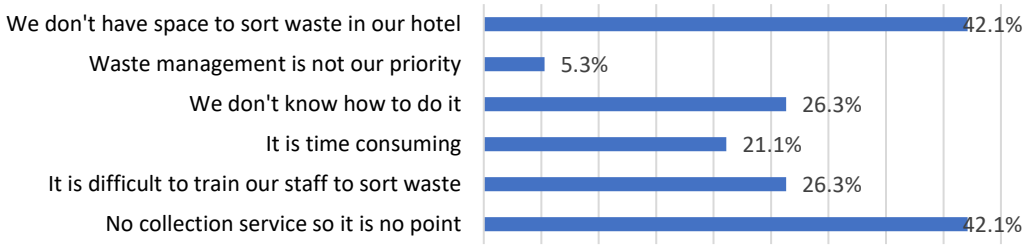
3.1. *Baseline Survey on Waste Management in Hospitality Businesses*

We initially planned to discuss informally with business managers to get an overview of their current waste management practices and invite them to join the training we will provide. Nevertheless, the timing of this assignment falls into the high tourist season (October to March). Therefore, most businesses are extremely busy. Many of them also struggle with staffing issues which have made this high season more hectic than usual. As a result, we launched an online survey (https://forms.gle/Nx2k2oprJZi3b7KG6) and received 49 responses.

Summary of survey responses

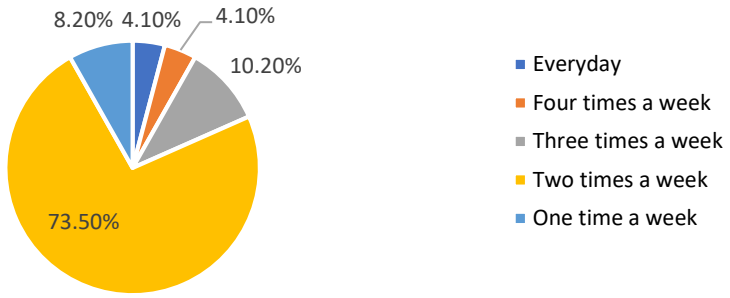
- Most respondents (35 out of 49 – 71.4%) reported that they do sort their waste.
- The most common types of recyclables that are sorted among survey participating businesses include plastic bottles (80%), food waste (77.1%), glass (68.6%), aluminium cans (65.7%) and cardboard (57.1%). Other types of recyclables that are not as common include paper (37.1%) and hazardous waste (31.4%).
- There are two top reasons for not adopting waste separation practices in 42.1% of respondents, including "no collection services, so it is no point" and "we don't have space to sort waste in our hotel". About 26% of respondents cited challenges in staff training and lack of knowledge as a barrier to sorting waste. Other reasons for not separating waste include "waste management is not our priority" (5%) and "it is time-consuming" (21%) (see figure 1).

Figure 1: Why haven't you sorted your waste?



- 47.5% of respondents have their waste collected by the government service, while 52.5% said they worked with a private company.
- Most participating businesses have their waste collected twice a week (73.5%). Only 4.1% of them send their waste out to collection services every day (see figure 2).

Figure 2: How often is your waste collected?

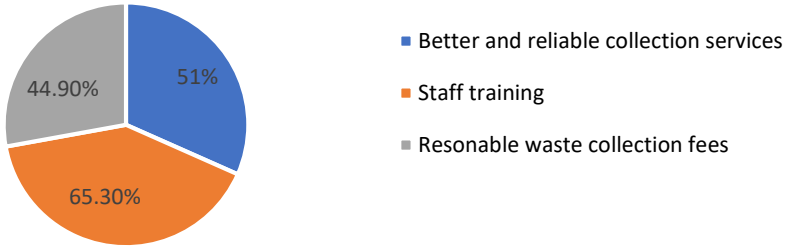


- Most respondents would like to have their waste collected three times a week (53.1%), while 24.5% just want it two times a week. Only 14.3% and 8.2% of them would like their waste collected four times a week and every day, respectively.
- Most businesses that sort their waste give the recyclables to their staff (51%) and/or to the informal waste collectors (51%). Only a few of them (16.3%) bring their recyclables to a recycling shop or have a recycling shop come and pick them up at their property (12.2%). Interestingly,

75.5% of respondents said they give their recyclables away (for free). These findings suggest that income from selling recyclables is not essential to businesses.

- When asked what would help them to start sorting their waste, most businesses (65.3%) chose "staff training", while 51% of them want to have better and more reliable waste collection services (see figure 3).

Figure 3: What would help you start sorting your waste?



3.2. Training on Waste Recovery in Hospitality Businesses

Two half-day training sessions were organized on 11 January 2023 at Maison Souvannaphoum hotel in Luang Prabang Town. The training was delivered in the Lao language with illustrating images and practice exercises to foster the engagement of training participants and improve learning outcomes. As Maison Souvannaphoum is a pilot hotel partner of PatiHoub, training participants were invited to see how waste separation is done at the hotel. Just under 50 businesses registered for the training, 26 of which participated in one of the training sessions. Training presentations are saved in this folder.

At the training, PatiHoub also explained what will be done with the single-use plastic waste collected through an innovative solution based right in Luang Prabang. All participants are given a poster to guide them on how to correctly separate single-use plastics for PatiHoub (see the poster in Lao and English in Figures 6 & 7). The poster was designed by PatiHoub before this consultancy.

Figure 4: A game activity during the training

Figure 5: Participants in the afternoon training session

Figure 6 & 7: A3 Poster "Guidelines for Sorting Plastic Waste" for businesses

3.3. Follow-up coaching and monitoring

Follow-up coaching and monitoring have been provided to companies who joined the training. Ten companies have started separating waste on their property (see figure 8-9). In contrast, some others reported that they were too busy and could not begin to do it yet (e.g., Sanctuary hotel, Pullman).

For those businesses that have started separating waste, there are still some challenges which were expected. Waste separation habits take a long time to form. There are wrong items found in the plastic waste bin (see figure 10-11). After each collection and sorting, feedback is provided to the hotels so that they can improve their separation practices.

PatiHoub has started collecting plastic waste from participating businesses once every two weeks. The average volume collected is 5 kg per week.

Figure 8-9: Plastic Waste Separation at a Hotel in Luang Prabang

4. Conclusions

4.1. Challenges and Recommendations

- This is the first high season after the COVID-19 pandemic; most businesses are busy again. They pay all their attention to servicing customers. Many of them also deal with a severe lack of staff, making day-to-day operations even more hectic. Therefore, many of them did not show up at the training or did not manage to implement and monitor waste separation practices at their properties. It is also challenging to make an appointment with them to provide coaching and follow-up on-site. Perhaps, an extended timeframe and/or implementation during the tourism low-season would have been more effective.

- One-off training on its own is not very effective. Businesses often send some staff to join training but don't follow up with their team after the training, which could mean that the training topic is not highly important to them. A possible solution for this is long-term coaching and follow-up with individual businesses.

Figure 10-11: Wrong Items Found in Plastic Waste Container

4.2. Sustainability

More follow-up coaching and continuous training of new hospitality businesses will be continued by PatiHoub as part of its business strategy as plastic waste generated by tourism businesses is one of the main sources of input materials of Patihoub.

Collection of plastic waste will be maintained at once every two weeks until there is a significant change in the volume of waste. Furthermore, most participating companies are happy with this collection schedule. The amount of waste collected from each business is recorded.

PatiHoub will start producing boards from collected plastic waste from mid-March 2023 onwards.