

**SUSTANABLE URBAN TOURSIM THOURGH LOW CARBON
INITIATIVES: EXPERIENCE FROM CHIANG MAI AND HUE**



THE EMPLOYMENT ASSESSMENT IN CHIANG MAI, THAILAND

**PREPARED BY
CHIANG MAI MUNICIPLAITY**

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EXECUTIVE SUMMARY

A Greenhouse Gas (GHG) inventory study conducted by Chiang Mai Municipality (CMM), showed that in order to reduce GHG emissions by the city, greater emphasis needs to be placed on reducing emissions from the transportation sector. Based on discussions with stakeholders, one of the measures identified was to promote Non-Motorized Transport (NMT) in CMM. This can help reduce emissions from transport as well as increase income generating opportunities for the poor.

The results from the survey at Three Kings Monument Square and moat in Chiang Mai found that the tourists are interested on the NMT campaign. Many domestic and foreign tourists believe that the NMT campaign will help to promote tourism and reduce GHG emission while creating jobs for local people in Chiang Mai. If the municipality provides the good facility/safety for the cycling Thai tourists are willing to travel by cycling. Normally, foreign tourists like to travel by non-motorized transport in the city. However, many tourists are concern about the facility and implementation of NMT concept at the city center because the Chiang Mai moat area frequently faces traffic congestion. It may create problem for bike riders.

In business sector, many operators, such as bicycle rental shops and repair shops, bicycle sellers, vendors, tricycle providers and tour guides think that this campaign will give additional benefits to them. The campaign will increase the number of travelers around the area. It shows that the campaign will help to increase the customers. On the other hand, some businesspersons concern about performance of the campaign. They think that the road is too small to make bike lane, and the traffic congestion is a big issue around the Three Kings Monument Square and the Chiang Mai moat area. They also concerned the safety of cyclist because the other vehicles (e.g. car, red caps, etc.) usually use the bike lane without giving any importance.

However, the study recommended some policy options for ensuring sustainable urban tourism in Chiang Mai municipality through NMT. The municipality needs to prioritize transport infrastructure investments to NMT, including aspects such as safety concerns of the pedestrians and non-motorized vehicle owners, construction of segregated lanes, parking of non-motorized vehicles, control on the activities of street vendors and ensuring smooth flow of NMT traffic, wherever feasible.

1 Introduction

The Three Kings Monument Square is selected to develop a bicycle route in the inner city of Chiang Mai municipality's area. This location is connected with major tourist destinations at the city center. The development of bicycle route will provide alternative mode of transport in different historical attractive places for the visitors.

This paper suggests Chiang Mai municipality to set a lane for bicycle route that connects more hotels in the Three Kings Monument Square, and passes through other major tourist destinations. In first phase, Chiang Mai municipality shall promote non-motorized transport in the Three Kings Monument Square which is around 607 meters along the road (Figure 1). In second phase, it shall extend to other road around Chiang Mai moat approx. 6,000 meters (Figure 2). The promotion of non-motorized transport (NMT) will certainly help to reduce greenhouse gas (GHG) emission and create decent jobs for local people in communities.



Figure 1: Picture around Three Kings Monument Square

The study has identified the possible employment opportunities for the local people which are as follows:

1. Bicycle rental shops
2. Bicycle repair shops
3. Bicycle sellers
4. souvenirs shop
5. Food shop

6. Beverages shop
7. Local tour guide
8. Tricycle provider
9. Information Technology provider related to NMT
10. Parking business and land use
11. Local gallery and
12. Local institution for teaching local food, handicraft, etc.

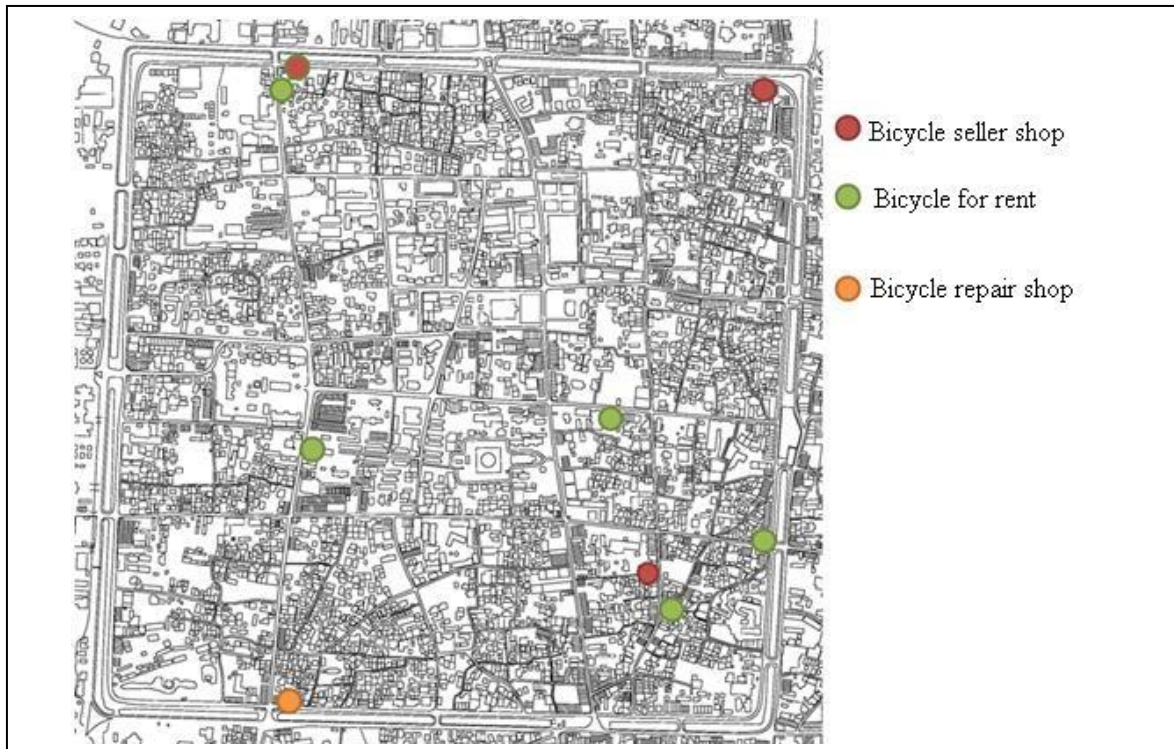


Figure 2: Picture of Chiang Mai moat

2 Research methods

Research questionnaires were developed to collect the primary data and information related to non-motorized transport (NMT) while creating decent jobs for the local people around the Three Kings Monument Square and boundary area. We are approved and tried questionnaires before site visit.

Presently, we have six boundary partners were interviewed and collected key information related NMT and creation of decent jobs. The names of the six boundary partners are:

1. Government officers (in charge of tourism, transportation, city planning, environment);
2. Tourism authority of Thailand, Chiang Mai office;

3. Hotel/guest house managers;
4. Local gallery;
5. Tour Company/ local tourist guides; and
6. Bike parking services.

Semi-structured questionnaires survey was carried out by including tourists (60 people), tricycle providers (10 persons), vendors (20 street vendors and 20 shop owners), and bicycle rental shops, bicycle repair shops, bicycle sellers (altogether 16 shops).

- Tourists (both Thai and foreigner) with different nationalities were interviewed to get their interest on bicycle travel around the city. The equal number of women and men, and different age group of tourists were selected for the interview.
- Vendors who sale food, drinks, souvenirs, etc. along the road and shops closer to Three King Monument Square were randomly selected for the interview to understand how many of their customers came from those who were cycling/ walking in order to assess whether promotion of NMT will lead to more customers along the road or not. It also provides information on existing employees on these businesses.
- Bicycle rental/repair shop; bicycle sellers and tricycles personnel were interviewed to understand the existing business situation in the locality to promote NMT.

3 Results and analysis from survey



Figure 1: Mr. Trinnawat (wearing blue shirt) interviewing the owner of the bike shops

3.1 Thai tourists

3.1.1 General information

This study surveyed 30 Thai tourists including 15 males and 15 female. The ranges of age were between lower than 20 to more than 60 years. Figure 3 presents the ranges of age of the Thai tourist surveys.

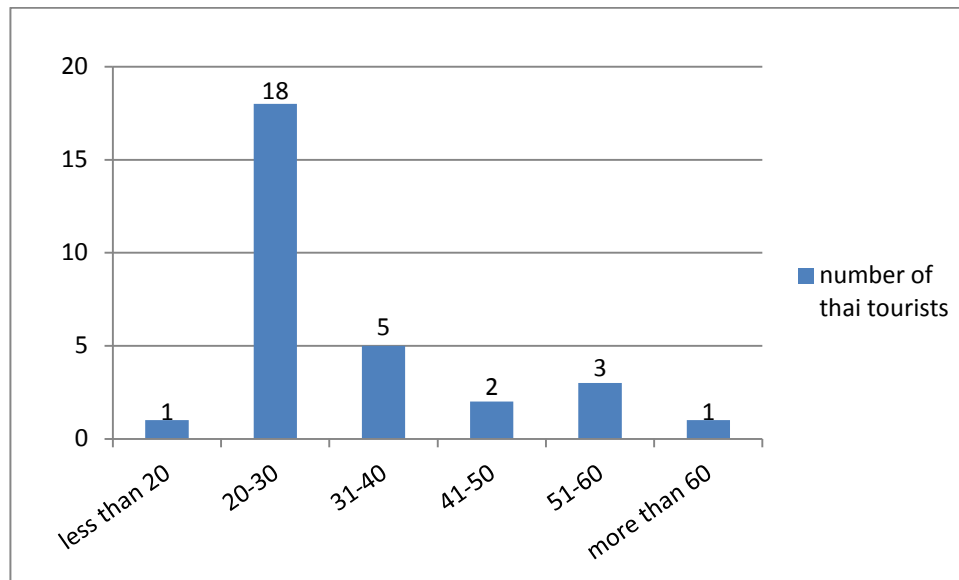


Figure 3: The ranges of age of the Thai tourist survey

3.1.2 Mode of transportation around the city

This study surveyed the mode of transportation that Thai tourists are the most prefer to use around the Chiang Mai moat area.

Figure

Figure 4 shows the mode of transportation around Chiang Mai moat area of Thai tourists. Most of Thai tourists prefer to use a personal car (27%) and a motorcycle (27%). They also gave some opinion about the mode of transportation as follows:

- Personal car:

A personal car is very comfortable and can be used to visit other area easily.

- Motorcycle:

A motorcycle is fast to travel and can be travelled in narrow and shortcut streets.

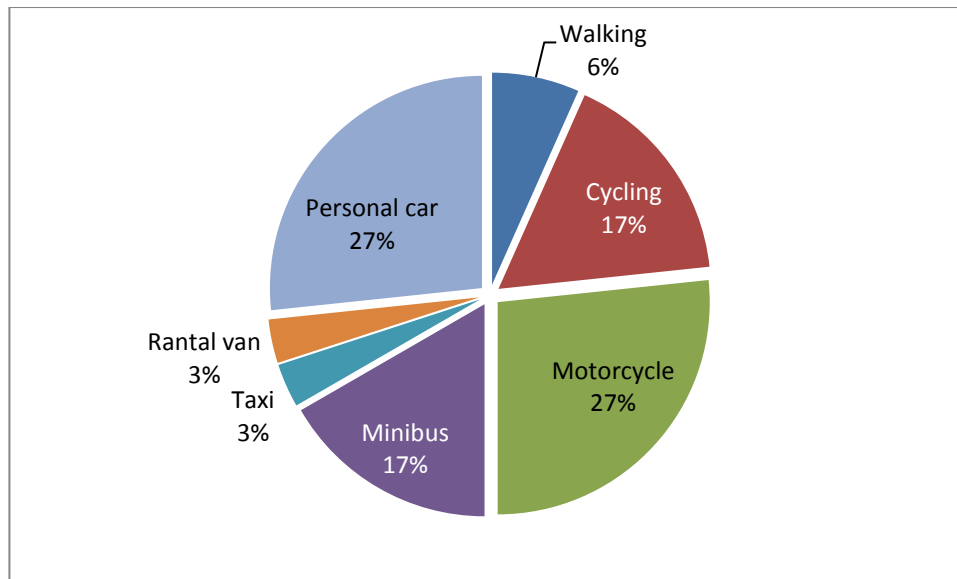


Figure 4: The modes of transport around Chiang Mai moat area for Thai tourists

- **Cycling:**

The Thai tourists prefer to use the bike in the evening time because of the pleasant weather. Traveling by the bicycle is easy that can also save the money, reduce the emission and help to exercise.

- **Minibus (Red Cab):**

Some Thai tourists use minibus to travel to a new place that they do not know.

- **Rental van:**

Usually, Thai tourists use the rental van to travel in a group and go outside the city, but it is very expensive.

- **Taxi:**

Taxi is convenience way to go to city area from the airport, but there are few taxis available in the city area.

- **Walking:**

Walking is good for sightseeing the attraction around the Chiang Mai moat. The tourist can able to take photo and save money, only they have a problem when they want to travel a long distance.



Figure 5: Non-motorized transport in Chiang Mai

3.1.3 Opinion about the NMT campaign

The survey found that most of the Thai tourists agreed the NMT campaign around three kings monument area. Because cycling around the Chiang Mai moat is easy to visit attraction places situated in this locality, and this also help to reduce GHG emission. This campaign promotes the green tourism of the city. They believed if the city provides a safety and more other facility for the cycling, it will increase the number of tourists who want to use the bike for traveling.

However, some Thai tourists think to create the bike lines around Chiang Mai moat is very hard. Because The Chiang Mai moat area is commercial area, so it makes traffic congestion. If the bike lanes are created, the other vehicle will use this lane. The cyclist will be not safe due to this reason.

3.1.4 Suggestion about the NMT campaign

Thai tourists gave some suggestions that the municipality should create the bike lanes around Chiang Mai moat, and the minibus should provide their service outside this area to make safety for bike travelers. The municipality should promote the campaign of car free day, at least one day per week, and promote the cycling travel campaign to be a symbol of this area.

3.2 Foreign tourists

3.2.1 General information

The questionnaires survey was done by interviewing 15 of male and 15 of female foreigner tourists. Mostly of their age were between 20-30 years old and they had not ever been to Chiang Mai before. Therefore, most of them stayed one week to travel the city. Figure 6 presents the ranges of age of foreign tourist survey.

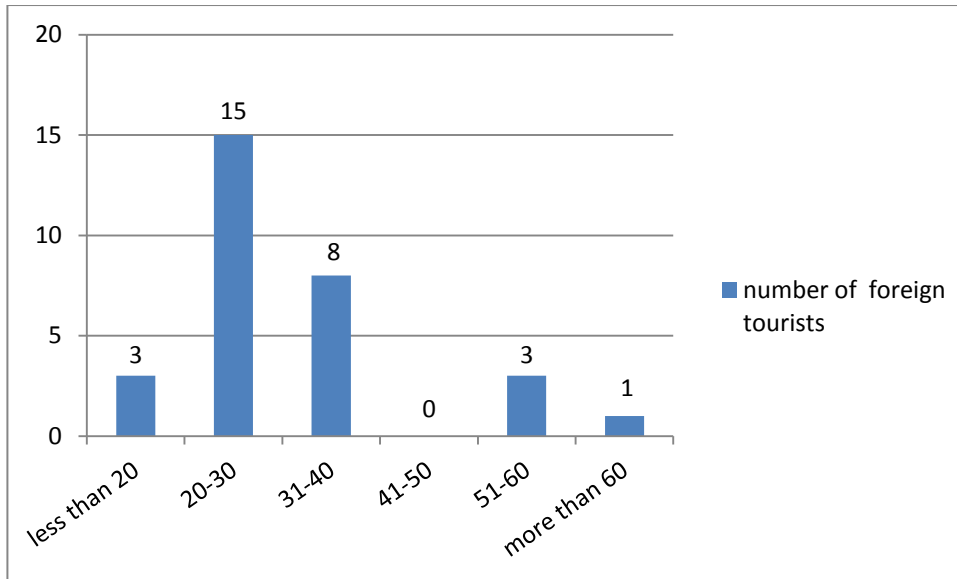


Figure 6: The ranges of age of foreign tourists

3.2.2 Mode of transportation around the city

This study surveyed the mode of transport used by the foreign tourists during their visit in Chiang Mai municipality. Most of them prefer to visit around the Chiang Mai moat area.

Figure7 shows the mode of transports that the foreign tourists used around the Chiang Mai moat area. They also gave some opinions about the mode of transportation including:

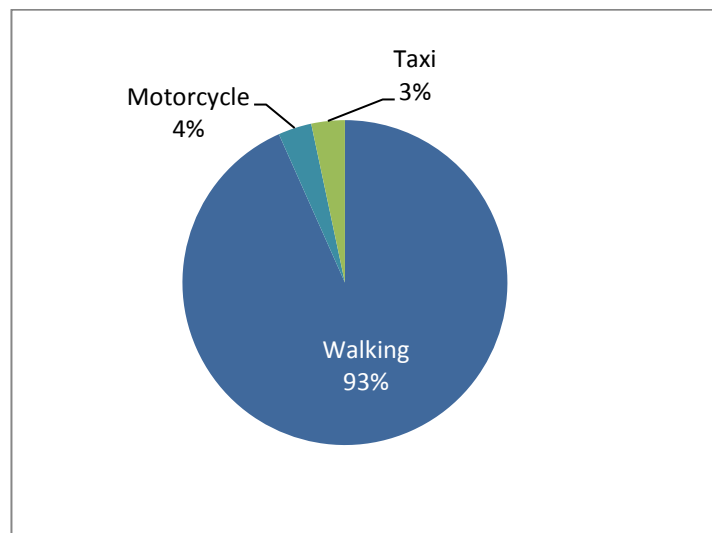


Figure 7: The modes of transport around Chiang Mai moat area for Foreigner tourists



Figure 8: Foreign tourist (left) and traffic condition (right) in Chiang Mai

- Walking:

Chiang Mai is easy to get around and discover the city much better. Visitors can take time and see well the city. All attraction places are near in walking distance. It costs nothing and no bargaining on price or overcharging from the agency. Moreover, visitors can relax and enjoy the ambience of the city. Therefore, it is good for environment and healthy of visitor's life.

- Motorcycle:

A motorcycle is independent way of moving forward and makes fun. Moreover, it is also comfort, quick, faster and travelers can stop wherever they want. On the other hands, some foreigners are not allowed to drive a motorbike.

- Taxi:

Taxi is comfortable, quick and not too much expensive for foreign tourists. It is the easiest way to get away from the airport to the city. Taxi can also provide service when tourists do not know the way and it's faster than minibus.

- Cycling:

Cycle travelers can do something on the body (exercise - - get healthy) and it is also better for environment. Moreover, travelers can see a lot of things in the city.

- Minibus (Red Cab)

It is good for long distances or tours

- Rental vans

The foreign tourists will choose the rental vans when they travel with a big family or group.

3.2.3 Opinion about the NMT campaign

There are some tourists agreed about this campaign, because the cycling is a cheap way to travel, and a route would mean that would not be so much traffic. Therefore, it would be faster and easier to go sightseeing around the city and no noise pollution like Tuk Tuk. Moreover, a bike lane should be considered, but it will not make huge difference, and tourists can use it if the route would be safe. Besides, there are some tourists who never heard about such a bicycle route but would prefer bicycling (rather than motorbike/taxi/van). On the other hands, there were some tourists who did not agree on the concept. They do not think so; most of the traffics are motorbikes cars and so on. Many people don't feel safe going by bike.

3.2.4 Suggestion about the NMT campaign

Some tourists gave a suggestion about Dublin Bike scheme - in Dublin Ireland. The people or tourist usually check Google Stations of bicycles located around the city. The customers will get a card to use a bike, when they finished their travel, they can leave the bike at whatever station close to them. This concept is very popular in Ireland

3.3 Tricycle providers

3.3.1 General information

Almost all tricycle providers are men in Chiang Mai municipality. Most of them are over 50 years old, and they have only primary school education. All of tricycle providers sample have own tricycle. They work around 7-8 hours per day and income 176 Baht/day on an average. There are 2-5 members in the family. Figure9 presents the passengers of tricycle providers.

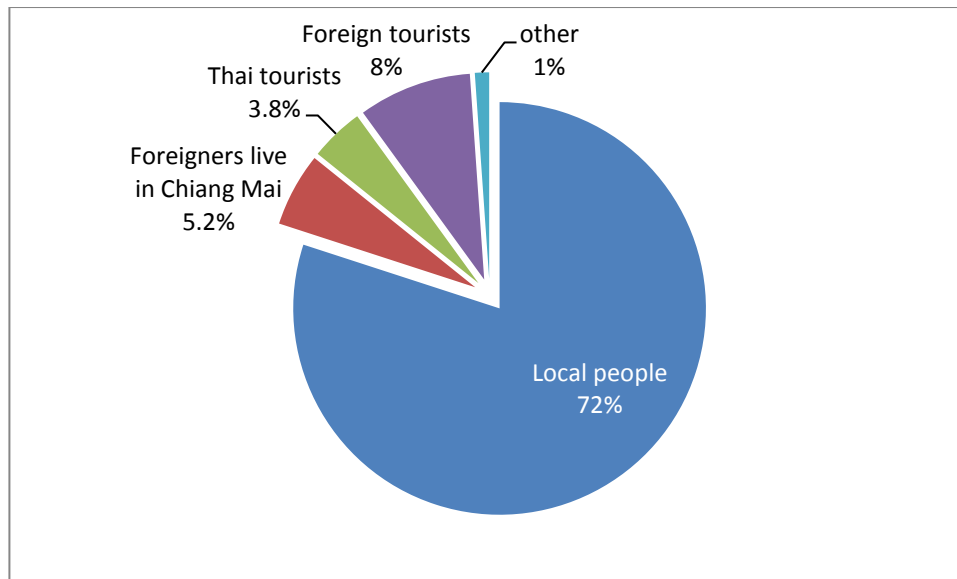


Figure 9: The passengers of tricycle providers

3.3.2 Opinion about the NMT campaign

The tricycle providers agreed about the NMT campaign, because they concern about motorcycle taxi that reduce their income. They want the municipality to create clearly bike lane so, other vehicles do not use.

3.3.3 Suggestion about the NMT campaign

The tricycle providers suggested that the municipality should promote bicycle user that will help to reduce motorcycle user in the city. They also suggested some policies such as low price of rental bike and set up group of bikers in Chiang Mai.

3.4 Vendors

3.4.1 General information

This study surveyed 13 male vendors and 7 female vendors. An average age was 35 years old. The average incomes were 200-5,000 Baht/day.

3.4.2 The mode of transportation of customers to the shops

This study surveyed the mode of transportation that customers used to visit the shops. Figure10 shows the mode of transportation of customers visited to the shops by percentage of total customers.

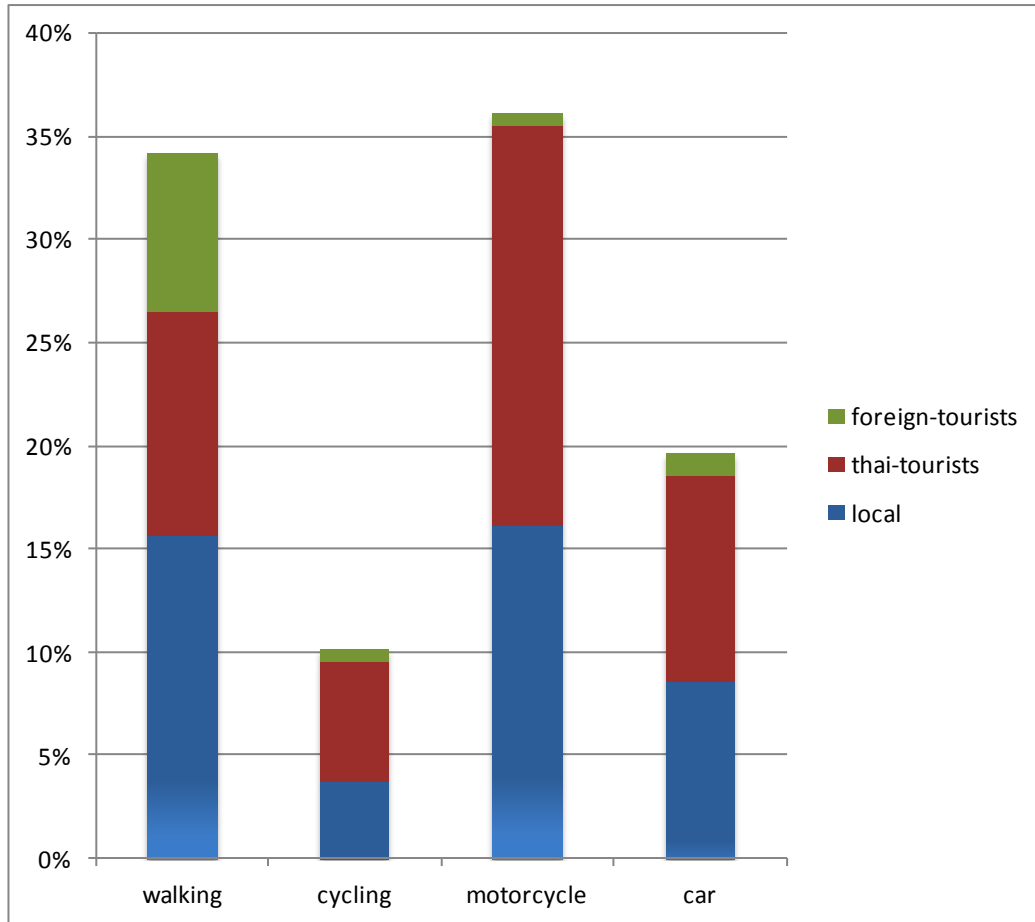


Figure 10: The mode of transportation of customers visiting the Street Vendors (percent of total customers)

3.4.3 Opinion about the NMT campaign

The vendors around 40% think that they will have a benefit, if the NMT campaign is implementation, because the campaign will increase the number of visitors around this area. However, other vendors think this campaign has no effect to their businesses, because they have the base customers that not relate to the number of visitors around this area.

3.4.4 Suggestion about the NMT campaign

The vendors suggest that the city should have more bike lane and make it clear between bike lane and normal lane.

3.5 Traditional Convenience store

3.5.1 General information

The questionnaires survey was carried out by interviewing the convenience store keepers including 6 men owners and 14 women owners. An average age was 41 years, and incomes were 150-30,000 Baht/day.

3.5.2 The mode of transportation of customers to the stores

This section provides information on how the customers visited to the stores. This can help to city authority to find the policy to encourage the people to non-motorized travel. Figure 11 presents the mode of transportation of customers visiting to the store by percentage of total customers.

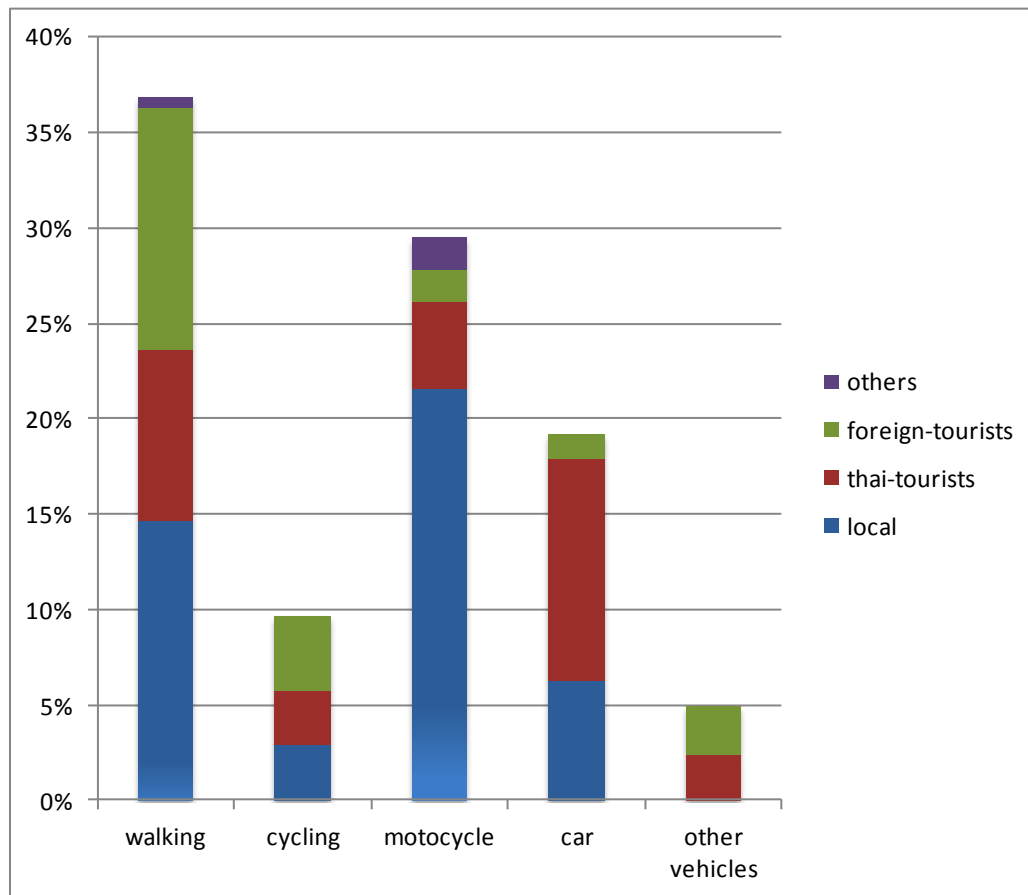


Figure 11: The mode of transportation of customers visiting the Convenience Store (percent of total customers)

3.5.3 Opinion about the NMT campaign

65% of convenience store owners think that they will get the benefits, if the NMT campaign happens. The campaign will increase the visitors around this area. If the travelers use the bike or walk, they will see the store easily.

On the other hand, some of owners think this campaign may have some drawbacks to their store. They think that bike lane will reduce the area of car park. So, the customers will not be convenient. This can reduce the customers to the shops.

3.5.4 Suggestion about the NMT campaign

They suggested the municipality to create the clear bike lane, and provide a good street light for the bikers in the night times. The municipality

should promote this campaign by using local community and make the brochure about the bike route for visitors and local people.

3.6 Bicycle shops (Rental/Retail)

3.6.1 General information

This study surveyed the 6 bike retailers and the 10 rental bike providers. There were 8 men owners and 8 women owners. An average age was around 43 years old and the incomes were 400-3,000 Baht/day.

3.6.2 Groups of Customers

This section presents the groups of customers of bicycle shops. This information helps to understand the groups of people who like to use the bike to travel around Chiang Mai moat area. Figure 12 presents the groups of customers of bicycle shops in Chiang Mai moat area.

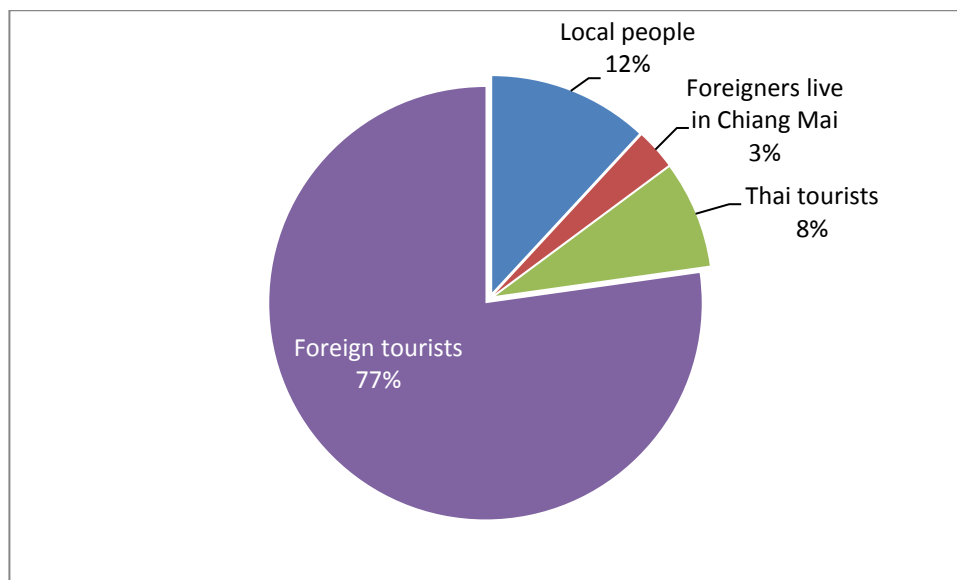


Figure 12: Groups of customers of bicycle shops

3.6.3 Opinion about the NMT campaign

The rental bike providers think that this campaign will give the benefits to them. They think the number of travelers around this area will increase due to this campaign. So, the travelers will rent the bikes from their shops.

On the other hand, some retailers think this campaign does not work. They think this campaign cannot attract the people to use the bike, and the bike lane cannot use in reality.

3.6.4 Suggestion about the NMT campaign

They gave some suggestions about the NMT campaign. The bike lane should keep on the left side of the road, and the municipality should manage the cars that park on the bike lane. The municipality should provide the bike parking area everywhere in the city.

3.7 Summary of survey

The results from the survey found that the tourists are interested on the NMT campaign. Many Thai and foreign tourists believe that this campaign will help to promote tourism in Chiang Mai. Thai tourists are willing to travel by cycling, if the city provides the good facility/safety for the cycling. Foreign tourists normally like to travel by non-motorized, so they are happy when they know about this campaign. However, many tourists concern about the facility and implementation because the Chiang Mai moat area has traffic congestion frequently. So applying the bike route to this area may have a problem.

In business sector, many operators think that this campaign will give the benefits to them. The campaign will increase the number of travelers around the area. That means the campaign help to increase the customers. On the other hand, some businesspersons concern about performance of the campaign. They think the road is too small to make bike lane and the traffic congestion is a big issue around this area. They also consider the safety of cyclist because the other vehicles will use the bike lane.

4 Opportunities for a job creation

This sector describes opportunities to create jobs from NMT in the Three Kings Monument area. Analysis from the survey finds that this area should be developed to be a green landmark of the city. This study presents the concept of the green landmark of the city and focuses on 12 possible employments as following bicycle rental shops, bicycle repair shops, bicycle sellers, food shop, beverage shop, souvenirs shop, local tourist guides, local gallery, and local institution and tricycle providers.

4.1 Green landmark of the city

The concept of the green landmark is that this area should be developed to be a public place. The government office, private sector, local people or artists can use this area to organize the event or festival, but the event or festival must be a green festival or zero carbon emission. Everything in this area should produce less or zero GHG emission. The energy that use in this area should be produced from renewable energy. Traveling around this area should be non-motorized transportation. The green landmark

should use less plastic, and produces less wastes and wastewater. The waste management should be done properly that can recycle the waste easily. This is a basic concept of the green landmark. If the municipality can develop this area to be the green landmark of the city, this area will attract not only the tourists, but also attract the local people to visit this place. Furthermore, this area will be a case study for other city or other place. And this place can provide the knowledge about a global warming, GHG emission, the options to reduce GHG emission and other information to the tourist, local people or students who visit this place.

4.2 Bicycle rental shops

Bicycle rental shops have an open opportunity to create a new job, because the number of hotel are closed to the Three Kings Monument area and connected to the bike lane. The hotels can able to promote bicycle rental shop to their tourist customers. So, the tourist can able to use bicycles closer to their hotel. For this reason, a new bicycle rental shop closer to the hotel can be created.

An advantage of the bicycle rental shops closed to the hotels is that they can make a contact with the hotels to service the bicycle for the tourists. This can guarantee the income of the bicycle rental shops, and the hotels can save the investment to provide the bicycle to the tourists.

4.3 Bicycle repair shops/ Bicycle repairman

A number of bicycle rental shops depend on the number of bicycles in the area. If the NMT campaign can increase the number of bicycles around this area, the bicycle repair shops will have an opportunity to create more jobs.

Another method to create the job from repairing bicycle is sending the bicycle repairman to on-site service. This method can provide a job for many people who have less investment to open the shop. The bicycle repairman who provides services on-site should use the bicycle. This job does not produce greenhouse gas emission and also help to promote NMT.

Furthermore, the bicycle repairman can work with the bicycle rental shops and the bicycle sellers. The bicycle rental shops can provide many nonfunctional bicycles to the bicycle repairman because the bicycle shops use many bicycles to service the customers, so the bicycles can be defective easily. The bicycle sellers can provide after sale service to the customer's bicycles. This also creates the job to the bicycle repairman.

4.4 Bicycle sellers

Normally, people who use bicycle for daily life stay long period in Chiang Mai. They might be tourist or local people. So the municipality should promote NMT area to be a green landmark of the city, where the

local people and the tourist can visit for the whole year. The green landmark concept will encourage the local people and the long stay tourists to use bicycle to visit this place frequently. If this area becomes the green landmark of the city, where the bicycle travelers only allow, the local people and the long stay tourists will have the reason to buy the bicycles. This will help to increase the demand of bicycle in Chiang Mai. When the demand increases, the new bicycle sellers can have opportunity to open the businesses. Moreover, the bicycle sellers can employ the people to work in their shops.

4.5 Vendors (Food/Drink/Souvenirs)

The opportunities to create a new vendor job depend on the success of creating the green landmark of the city in this area (shown in sector 4.1). If this area becomes the green landmark of the city, many people will visit this place frequently. So this is a good opportunity to create the new vendors to sell the food, drink or souvenirs. The important thing for all vendors who do the business in this area should sell green products. Some examples of green products are explained as below.

- **Food vendors**

The ingredients should come from the organic farm or zero carbon farm. This concept can create more jobs for produce organic food or organic farm. The food should be varieties that can satisfy the visitors and create more food vendors. A food container should come from a friendly environment material.

- **Drink vendors**

The drink sold in this place should be juice produced from local fruits. The fruits used to make the juice should come from organic farm that produce zero or less greenhouse gas. A soft drink and an alcoholic drink should not be sold here, because the soft drink produces a lot of greenhouse gas emissions during the production process. The alcoholic drinks are not suitable in this place because this is a public place where the children can visit this place.

- **Souvenir vendors**

The souvenir vendors should use the same concept that all souvenirs should be green products or made from recycled materials. It also helps to reduce the waste and provide the job for the people who can make the souvenirs from the recycled materials.

4.6 Local tour guides

A Tour guide is interesting job, when NMT campaign applies to this area. The tour guide can help the travelers to visit the important places around the area by using bicycle. The tour guides who work around NMT area should know about the green tourism concept. So, they can give the information about green tourism to the tourists, and encourage them to support local environment when they travels. The tour guide can corporate with the hotels to provide the trip for the tourist customers. This will have more opportunity to get the job, and the hotels also get the benefit by providing the addition service to their customers. The trips that tour guide provide must be the green trip and should include NMT area as one destination. This will help to promote the green travel in Chiang Mai. Furthermore, the tour guides can help to create another job such as tricycle providers. The tour guides can promote the trip to their traveler by using tricycle. This will be good for the tourist who cannot ride the bicycle and good for the tricycle providers to get the job.

4.7 Tricycle providers

Tricycle providers can get the benefit from NMT campaign. The travelers, who want to travel around this area, but do not want to ride the bicycle or walk, can visit this area by using tricycle. This will increase the income for tricycle providers, and make attraction to the local people to do this job. One method to create more jobs for tricycle providers is the hotels provide the service to tricycle providers to travel their tourist customers around the city area. When the tourists use tricycle to travel around NMT area or around the city, it also helps to promote the green traveling in the city.

Tricycle providers can get the job not only transport passenger, it also can get job by transporting the goods and materials. This will help the companies in the city to reduce GHG emission due to good transporting, and save the fuel cost.

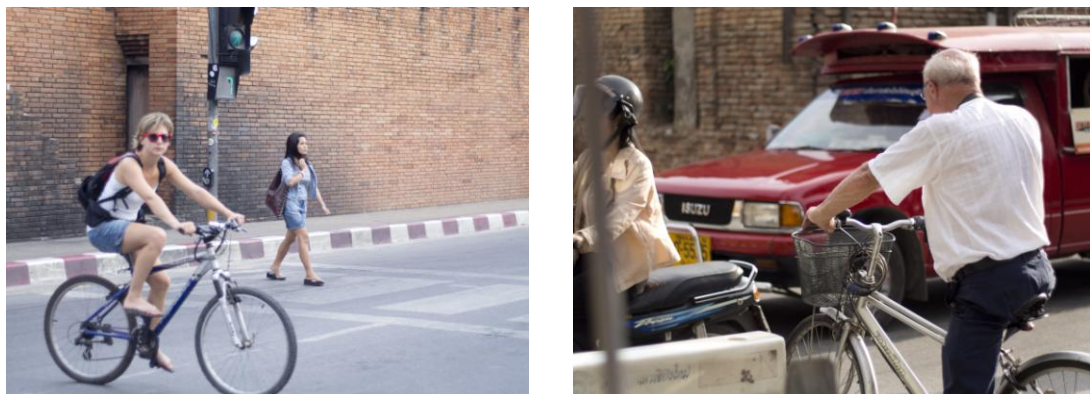


Figure 13: Foreign tourists are using bicycle to travel the city

5 Recommendation

5.1 The role of women

Currently, women in Chiang Mai can access job as same as the men. Many women in Chiang Mai work outside their home like the men. However, there are some women who stay at home to care the children. So, The NMT area can help to improve the role of women by increasing the job for women. The women, who care the children and stay in their home, can produce the green souvenirs in their home, or makes a small green farm in their area to provide a green ingredient for the food to sell in NMT area.

The NMT area not only improves the role of women who stay at home, but it can increase the job opportunity for the women. The food vendors are a good job opportunity for the women who can prepare the delicious food. This helps the women to get the place to do a business.

The tour guide is an open opportunity for women. The female guides have soft image compared to the male guide. So the women have the advantage to get the job.

The NMT campaign can help to reduce the GHG emission in tourism sector, and also help to improve the role of women in Chiang Mai.

5.2 Policy recommendation

5.2.1 Car and bike parking area

The car parking area is the important facilities to promote the NMT in the city. The car parking area should be near to the bike lane that people can park their cars in the parking area and use the bicycle to travel. If the municipality provides enough space for car parking, it will encourage the people to use bicycle to travel around city.

In addition, the proper bike parking spaces should be developed in the city area. It makes people feel comfortable to ride the bicycle and park safely anyplace in the city. This practice will certainly help to increase the number of bicycle riders in the city.

5.2.2 Infrastructure for non-motorized transport

The development of bike lane networks and other transport infrastructures are important to facilitate cycling and other NMT modes. The roads that will be constructed in the future should have the bike lane. The bike lanes can encourage the people to use bicycle to travel around the city.

A sidewalk should be improved for facility and safety of people who would like to travel by walking. The NMT area should have the nice sidewalk which can attract the visitors and local people to walk around the area.



Figure 14: Foreign tourists are using NMT in Chiang Mai



Figure 15: Foreign tourists are walking in Chiang Mai



Figure 16: Tree plantation close to main road, provide shading to cycle riders

APPENDIX

Appendix: Questionnaire survey for NMT in Chiang Mai municipality, Thailand

1. **Key informant interviews (to tourism operators/companies and government officers; tourism authority of Thailand, hotel/guest house managers) in Chiang Mai municipality**
 - a. What do you think of the idea of designating NMT/ bicycle route connecting three kings' monument, tourist attraction and guest houses?
 - b. What was your experience during UNDP project (when they developed bicycle lanes)? How do you assess that? What was the problem about that project? How can it be improved?
 - c. How do you think bicycle routes should be designed? For example.....
 - i. designating a route and putting signs to show the route (not limit motorized vehicle, but select a route where there are few vehicles and easy to cycle, and advertise that);
 - ii. designating a day in a week on which the route will be off-limits to motorized vehicles;
 - iii. making the route off-limits to all motorized vehicles throughout the week)
 - iv. other ideas (specify)
 - d. What kind of jobs do you think can be newly created by setting a NMT route? Why? Do you think job creation effect will be large? Why/why not?
 - e. Who do you think will benefit from establishing such routes? Why?
 - f. Do you think introducing such NMT route will increase the number of tourists? Why/ why not? Which kind of tourist will increase?
 - g. Do you foresee any loss in jobs by introducing such schemes? Whose job will be affected?
 - h. Do you think that through introducing this scheme, it will reduce green house gas emission? Do you think tourists will use less motorized vehicles? Why/ why not?
 - i. What are some problems/obstacles that you foresee?

2. Semi-structured questionnaire for bicycle shops (retailer, repair, rental) in Chiang Mai municipality, Thailand

1. Name of respondent (if possible, telephone number and current address)
2. Sex of respondent
3. Age of respondent
4. Education level of respondent
5. Place of birth
6. Since when are you living in Chiang Mai?
7. Members of household
Who are you living with?

How many of them are below the age five? Above the age 70 (who would need care work)?
8. About the business
what is your business:
sell bicycle
rent bicycle
repair bicycle
Others (specify)

Since when are you doing this business?

Why did you decide to do this business?

Why did you select this location to do your business?

Who are involved in the business?
Family members: (list people who are involved)
Number of employee ____
9. Customer profile: Who are your customers?
Local Thais ____ %
Local foreigners ____ %
Thai tourist ____ %
Foreign tourists ____ %
Others (specify)

Which groups of customers are growing?
10. Current earnings (by day or by month)
11. How much percentage of your household income from your business?

12. Have your income increased in the last three years? Why/why not?
13. How do you think you can increase your business income?
Change location (specify)

Change the flow of people (how to get more people to come around to your place) (specify how)

Increase use of bicycle (specify how)
14. What are the problems that you face in your business?
15. What are the opportunities that you see in your business?
16. Do you think your business will benefit if a bicycle lane linking three kings' monument to other tourist destinations in the inner city is designated? How do you think your business will benefit from this/ why do you think this will not benefit your business?
17. Do you remember the UNDP project that designated the bicycle lane? What do you think about that? How do you think we can improve bicycle lanes in Chiang Mai inner cities?

3. Semi-structured questionnaire for vendors in Chiang Mai municipality, Thailand

1. Name of respondent (if possible, telephone number and current address)
2. Sex of respondent
3. Age of respondent
4. Education level of respondent
5. Place of birth
6. Since when are you living in Chiang Mai?
7. Members of household
 Who are you living with?
 How many of them are below the age five? Above the age 70 (who would need care work)?
8. Occupation of respondent
 What do you sell ?
 How do you sell – street, shop, market stall, etc.
 Since when are you doing this business?
 Why did you decide to do this business?
 Why did you select this location to do your business?
 Who is involved in your business?
 Family member (list who are involved)
 Number of employee ____
9. Customers profile: Who are your customers and how do they come to your shop?
 Among the total number of customers, around how many percentage are local Thais, Thai tourists, foreign tourists, others (specify)?
 Among each category of customers, around how many percentage of them come to shop on foot, by bicycle, by motorbike, by car, by other modes (specify)?
 (fill in the table below)

Mode of transportation	Profile of customers			
	Local neighboring Thais ___%	Thai tourists ___%	Foreign tourists ___%	Others (specify) ___%
On foot	___%	___%	___%	___%
Bicycle	___%	___%	___%	___%
Motorbike	___%	___%	___%	___%
Car	___%	___%	___%	___%
Others (specify)	___%	___%	___%	___%

10. Current earnings (by day or by month)
11. How much percentage of your household income come from your business?
12. Have your income increased in the last three years? Why/why not?

13. How do you think you can increase your business income?
Change location (specify)
Change the flow of people (how to get more people to come around to your place) (specify)
Others (specify)
14. What are the problems that you face in your business?
15. What are the opportunities that you see in your business?
16. Do you think your business will benefit if a bicycle lane linking three kings' monument to other tourist destinations in the inner city is designated? How do you think your business will benefit from this/ why do you think this will not benefit your business?
17. Do you remember the UNDP project that designated the bicycle lane? What do you think about that? How do you think we can improve bicycle lanes in Chiang Mai inner cities?

4. Semi-structured questionnaire for tourists in Chiang Mai municipality, Thailand

1. Nationality
2. Age of respondent
3. Sex of respondent
4. With whom are you travelling?
5. How many times have you come to Chiang Mai?
6. How long are you planning to stay in Chiang Mai?
7. Where have you visited / planning to visit in Chiang Mai? (list place of interest, multiple choices + others specify)
8. How do you go around the city? (rank by preference)
 - on foot
 - bicycle
 - motorbike
 - Song Theo
 - Taxi
 - Hired van
 - Others (specify)

Please give the reason for your ranking. (why did you select the particular mode of transportation for the first and second preference?)

9. Information source on tourist attraction of Chiang Mai (list source of information, multiple choices)
10. What do you think if there is a bicycle route designated in the inner city of Chiang Mai?
 - Would you be interested in using the route? Why/ why not?