



Sustainable Mekong Research Network *Policy Brief*

Towards A Green Pathway in Chiang Mai Municipality, Thailand

Key Findings:

- **The transportation sector in Chiang Mai Municipality (CMM) contributes to significant Greenhouse Gas (GHG) emissions.**
- **Non-Motorized Transport (NMT) is an option to not only reduce emissions from transport but also provide income opportunities for the poor.**
- **Developing NMT zones in the city center of CMM will offset around 230 to 570 tons of equivalent CO₂ per year in CMM.**

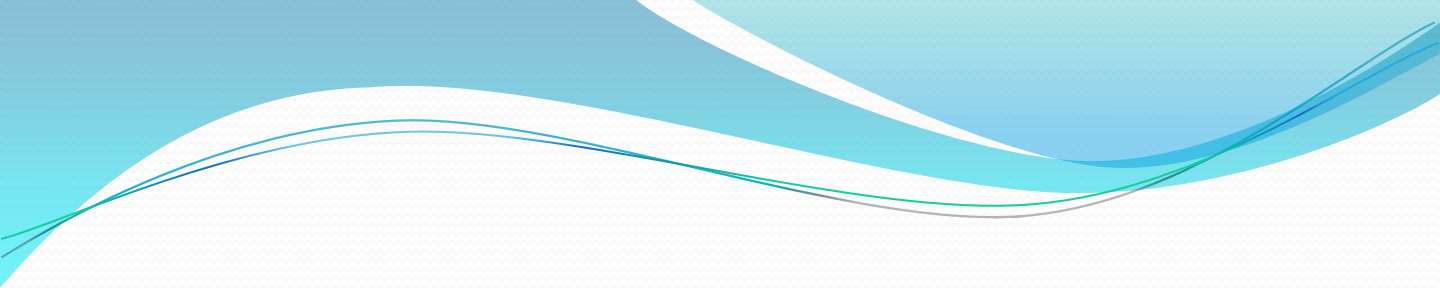
Introduction

A Greenhouse Gas (GHG) inventory study conducted by Chiang Mai Municipality (CMM) on tourism related activities showed that the transportation sector contributes to significant emissions. Stakeholders of the tourism sector related activities then identified Non-Motorized Transport (NMT) in CMM as one option that can not only reduce emissions from transport, but also provide income generating opportunities for the poor.

The policy brief is based on the research conducted for developing sustainable urban tourism through low carbon initiatives in Hue (Viet Nam) and in Chiang Mai (Thailand). This research aimed to explore strategies for reducing carbon emissions while simultaneously alleviating poverty in the urban tourism sector of these cities.

The tourism service providers were estimated to emit about 0.44 million tons of CO₂ equivalent in Chiang Mai in the year 2011. The recommended mitigation option to reduce GHG emission and to create clean and decent jobs to the local people included NMT in Chiang Mai.

The policy brief presents the background and issue related to the promotion of Non-Motorized Transport (NMT), and discusses how Chiang Mai Municipality (CMM) can promote low carbon tourism through introduction of NMT in the city.



Understanding the problem

Traditionally, NMT was one of the major modal shares in developing countries. For example, in Beijing and Delhi, walking and cycling together contribute to about 53 percent and 33 percent of the modal share respectively. However, with increasing motorization and decreasing inclination to use non-motorized methods, interest in designing measures and incentives for non-motorized traffic is given increased attention in small and medium cities.

NMT is mostly used for short-distance trips, with cycling particularly relevant up to 7.5 kms, and walking up to 2.5 kms. As up to 70 percent of cars trips cover less than 5 kms, NMT has a large potential to replace car travel. Facilitating NMT, particularly walking and cycling, will directly lead to the reduction of the CO₂ emissions.

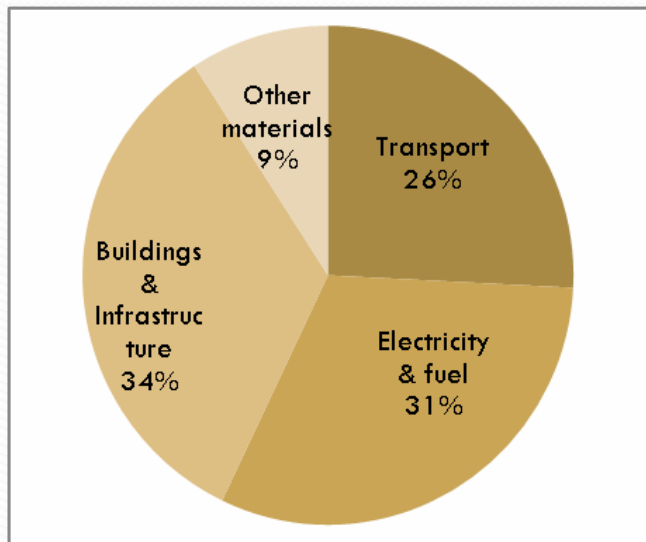
Cycling and walking are also access modes for public transport, and thus their promotion could lead to increased public transport use. Promotion of NMT also delivers important co-benefits, such as noise and pollution reduction, better health, and a greener environment.

Non-motorized transport for Chiang Mai municipality

Being important contributors of GHG emissions, cities also have an excellent opportunity to undertake emission reduction and reap important benefits. The small- to medium-scale cities like Chiang Mai could introduce NMT through the introduction of appropriate policies, and move towards a lower carbon development path.

Preliminary estimates of GHG inventory by the tourism sector in CMM showed that transportation was the major source of GHG emissions, equivalent to more than 4.2 million tons of CO₂ in 2014. Developing NMT zones in the city center of CMM will offset around 230 to 570 tons of equivalent CO₂ per year in CMM. NMT areas will not only help CMM to reduce its carbon emissions, but also provide wider economic and health benefits.

Being one of the most popular tourist destinations in Thailand, CMM could designate NMT in crucial tourist locations to both enhance recreational opportunities by reducing congestion and reduce emissions to overall benefit the local communities. The restricted motorized transport will provide opportunities for the tourists and others to purchase handicrafts and other goods from local vendors, thereby contributing to the local economy. It helps in the additional income generating opportunities for the tricycle drivers, bicycle shops, etc. Noise and dust pollution will also be minimized.



CO₂ emission of major tourism sub-sectors in Chiang Mai Municipality*

Non-motorized transport in Three Kings Square of Chiang Mai municipality

- The emission per visitor per day was around 3 kg of CO₂ equivalent during 2011 within the city.
- Promoting NMT in the Three Kings Square area and Chiang Mai Moat (close to the center of old city) covering an area up to approx. 6,000 meters square will offset around 230 to 570 tons of CO₂ equivalent to 13,300 tree seedlings grown for 10 years.
- Around 23 percent of Thai tourists and almost 93 percent of international tourists walk or cycle in around the Chiang Mai Moat area.
- Majority of the street vendors, traditional convenience stores, bicycle shops, tricycle providers agree that NMT will lead to increased economic activity and hence create additional income.

Existing policy landscape for non-motorized transport

- The current policy sets aside 4 percent of the total area in CMM for NMT, and this might be increased to 10 percent.

- The Cabinet approved a policy at provincial level on Sustainable Green Areas 2007 to stimulate development of urban green spaces through private sector participation, local capacity building and improvements in laws, regulations and instructions.
- Sectoral policies at national level such as transport and environment and broader socio-economic development strategies such as National Economic and Social Development plans, all emphasize the development of low carbon and green city by increasing green area and energy efficiency.
- NMT is also one of the transport modes supported for mitigation of climate change under the climate change initiatives.

Policy recommendations for promoting non-motorized transport in Chiang Mai Municipality

Prioritizing options for NMT will help CMM in not only ensuring sustainable urban transport but also in gaining social equity and improving its tourism potential. The following recommendations are therefore suggested for ensuring sustainable urban tourism through NMT.

- Detailed traffic modeling exercise prior to implementation will help in the identification of appropriate boundaries, traffic displacement issues and potential areas that would benefit from mitigation measures.
- NMT should be developed within the framework of total cost accounting including all external costs and considerations for the poor.
- CMM should incorporate NMT components in its transport master plan and be in line with the broader national and provincial transport policy with clearly set targets.
- 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.

The objectives of the municipal/provincial NMT policy/strategy plan may include:

- Integrated land use planning for NMT within state/regional transport and land use planning;
- Integrate NMT in other modes of urban transport; Promote NMT as an additional mode of urban transport;
- Prioritization of areas of NMT which provide facilities with international standard;
- Development of road safety programs; and
- Development of by-laws regarding non-motorized transport.

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