



**MARIKINA CITY**  
*The City in the **Pink** Of Health*

**CLIMATE CHANGE AND  
HEALTH IN CITIES  
(THE BICYCLE FRIENDLY CITY)**

**Good Practice Awards**

**Submitted by:**

**Marikina City, Philippines**

## **MARIKINA : The Bicycle Friendly City**

Marikina takes pride in being a bicycle-friendly city. With the 52 kilometers interconnected bicycle lanes in the city, a good number of Marikeños move around the city on bicycles. A culture of cycling and walking is now emerging in the City. In a choked metropolis, a bicycle network is not only an awe-inspiring landmark, but an impregnable testimony to an urban governance that get this done.



### **Background**

In the Philippines, bicycles have traditionally been mainly considered as generally a recreational vehicle. In recent years, however, increased awareness in the ill effects of greenhouse gases brought about by motor vehicles, as well as volatile fuel prices due to a lot of uncertainties in the global market, have made significant impacts in terms of the treatment of bicycles as a form of transport. Local authorities are increasingly becoming aware of the significance of non-motorized transport in the overall movement network and system. Marikina has taken the first concrete steps towards understanding the role of cycling and pedestrian facilities play in the overall transport system. Through a conscious vision by city leaders and planners, and equally importantly supported by the Global Environment Fund (GEF) of the World Bank (WB), Marikina has brought back much needed focus to the provision of non-motorized facilities in the urban setting.

#### **1. Traffic Situation in Marikina, 1980-2000**

The City of Marikina is a rapidly growing city and shows all the features of the urbanization trend wherein the economic prosperity has accelerated motorization and the demand for mobility, causing severe traffic congestion particularly at the city's entrance and exit roads and highways. Without effective action, these problems will worsen over time as the area continues to grow. *In 1995, residents rate traffic*

*congestion as the number one quality of life problem, and air pollution, ,mainly caused by motor vehicles, as problem number two.*

Marikina population increased from 1980 to 1995 faster pace than the Metro Manila average. Marikina's growth in population is associated with an increased demand for mobility ,both within its administrative borders and to central and other districts of Metro Manila. The number of passenger trips is expected to increase from the current average of 496,000 a day to about 1,200,000 a day. At the same time, changes in social composition influence the car ownership ratio.

Increased demand coupled with increased car ownership will boost greenhouse gas (GHG) emissions unless alternative measures to control these emissions are developed and successfully implemented at an early stage. Moreover, while more than 2 percent of all trips in the city of Marikina are now by bicycle, the anticipated increase in the traffic and population will likely cause the disappearance of this mode of transportation. This pattern is already experienced in inner Metro Manila (and in many other Asian cities), where bicycles have been crowded out.

## **2. The Development of the Marikina Bikeways Network**

As part of the river rehabilitation program, an initial 10 kilometers jogging and bikelanes were constructed within the Marikina river's 96-meter legal easement which were formerly occupied by illegal settlers. The recovered public space, having an approximate area of 220 hectares, were then developed into theme parks and playgrounds. People begun coming near the water in celebration of the city's success in saving the Marikina River. Majority of these people used bicycles.

In 1997, the Department of Public Works and Highways (DPWH) proposed a pilot project for the non-motorized component of the Metro Manila Urban Transport Integration Project (MMURTRIP) with the intention of providing alternative transport modes connecting communities to employment centers and LRT Stations. These proposal stemmed from the work of the DPWH URPO (Urban Roads Project Office) with the NGO Green Forum. The city of Marikina is an excellent site to establish the pilot project as the city's transport congestion has not yet reached intolerable levels. Based on the MMUTIS 1995 Study, about 10,500 daily trips ( 2.9% of all trips) are still made by bicycle in Marikina. In comparison, approximately 160,200 trips (1.7%) are made by bicycles in Metro Manila. However, under the baseline or "business-as-usual" scenario, increased motorized traffic in Marikina will reduce the bicycle travel and the use of bicycles to the lower level now experienced in the rest of Metro Manila.

Then Mayor Bayani Fernando subsequently endorsed the proposal and requested for Global Environment Facility funding from the World Bank while continuing to build more bikelanes on recovered public space using local funds.

Since political commitment is crucial for the success of such initiatives, the City of Marikina was chosen by the World Bank in 2001 for the USD 1.3 Million GEF funding to pilot the bikeways project in the Philippines.

### **Project Purpose and Rationale**

The Project aims to provide the facilities for low cost and environment friendly alternative means of transportation within the city. By establishing bikeways and ensuring the safety of bikers, biking as an alternative form of transportation in the city will be encouraged and more people are expected to benefit from this means of transportation.

The Project expects to cut down on travel time and cost for some segments of the populace (i.e., potential and present bikers) in commuting to their work and in doing their household chores of going to the market and malls. Biking is also seen as a healthy form of recreation. The Marikina River Park which had constructed jogging and bike lanes covering part of the riverside has encouraged biking as a form of a healthy recreation for children and adults in the city.

Provision of bikeways is also meant to anticipate and support the needs of bikers who are projected to increase in number in the future as traffic congestion of motorized vehicles worsens and the cost of transportation further increases. The local officials of Marikina City believe that biking is a good alternate form of sustainable transport and it hopes to contribute to minimizing air pollution, which is mainly caused by motor vehicles. They also expect the project to increase the use of bicycles by the commuting local residents of Marikina City. The use of bicycle is projected to increase by 1.85% in 2004; 2.75% in 2009 and 3.5% in 2014.

In brief, implementation of the bikeways project is projected to cause an increase in the use of bicycles for recreational and trips purposes. The trips that will most likely attract the use of bicycles are: short distance trips within the city such as shopping – and –bike to school trips.

### **Project Implementation ( The Marikina Bikeways Experience, 2000 to Present )**

The construction of the bikeways along existing roadways and recovered waterway easements is not an easy project to implement. *The bikeways is anchored on the discipline and order the city has relentlessly imposed on its public landscapes and residents.* From 2002 onward, the Marikina bikeways network was gradually implemented, adopting an “ experimental” approach wherein the city engineers learned what’s workable or not. The intent was to allow opportunities of evaluation and adjustment in the course of the bikeways construction. Currently, Marikina has constructed 52 kilometers of the bikeways network which connects the city’s residential areas, particularly the low income communities, to employment centers, markets, schools, government service providers and the LRT2 Santolan Station in Marcos Highway. A Bicycle Station was constructed to enable the cyclists to park their bicycle and take the

LRT train to Cubao and beyond. Of the existing 52-kilometers of bikeways, more than 18 kilometers were constructed on the city's river and creeks' legal easement. The Marikina bikeway experience was a combination of (1) the city's integration of the bikeways construction in its regular road improvement or widening ( wherever feasible) and sidewalk / drainage improvements projects complemented with (2) consistent implementation of traffic rules and regulation (3) bicycle safety education , information dissemination and advocacy campaigns and (4) continuing recovering of all public spaces to increase mobility and green spaces. The GEF grant financed 19 kilometers of the existing 52 kms bikeways network with a total funding of USD1.143 Million. Marikina's total investment in Marikina infrastructure alone was more than USD2.0 Million.

### **Program Impact**

The integration of the bicycle lanes in the city's transport network saw the emergence of Marikina as a Bicycle Friendly City and a Walkable City with the improvement of its sidewalks and roadways.

Infrastructure, 2007

Total Length of Road ( Including Access road)	358 kms
Drainage and Sidewalk Improvement	296 kms
Cleared Sidewalk	700 kms
Bikeways Constructed	52 kms
No. of Bridges	5

As of March 2006, the traffic volume share for bicycle was 10% compared to 1999 data of 4%. ( Appendix A). Although there is a decline for years 2007 to 2008 traffic data, the bicycle traffic share is still higher than the 3% projected increase in bicycle traffic due to bikeways development. This means that the prediction that the increase in traffic in Marikina will cause the level of bicycle use to decline did not happen because of the bikeways network development in the city. The prediction was based on the experience of other cities in Metro Manila ( 1995 Metro Manila Urban Transportation Integration Study ( MMUTIS). Based on the 2006 bicycle ownership survey, 1 in every 2 families in Marikina owns a bicycle, use bicycle daily and having the bike-to-work as the main trip purpose. This data implied that there are 50,000 bicycle users from among the 101,782 households in the city. Today, as Marikina continues to integrate the bikeways in its overall city transportation network, practical programs to remove the barriers to the city cycling are being implemented. These are:

1. The Marikina Bicycle ( Interest Free, 6 months to Pay ) Loan for city employees;

2. Government Bicycle Lending to Bantay Bayan volunteers for faster mobilization of peace keeping activities;
3. Holding of in-school bicycle safety education and Saturday Cycling Clinics participated by children and women learning to bike;
4. Continuing bicycle safety information dissemination.
5. Regular organizing and/or sponsorship of annual cycling competitions and bicycle advocacy events to promote public support on air quality protection.
6. Building more complementary bicycle facilities, such as better bicycle traffic and informative signage, innovative design on bicycle lanes pavement markings and more importantly, installing more bicycle parking and bicycle stations to enhance the overall bicycle trip experienced in the city.

The Marikina Bikeways program was cited by the Galing Pook Foundation as one of the Top Ten Outstanding Local Government Program in 2005 and the city continue to gain more recognition nationwide as having one of the best practice in promoting environmentally sustainable transport.



# PHOTO GALLERY

*Marikina - Bicycle Friendly City*



