

Country:	Thailand
Name of Local Government:	Muangklang
Type of Local Government:	Municipality
Best Practice:	Low Carbon City
Aspect of Governance:	Environment
Reported by:	Apiyut Siyapan

A. What are the innovations of the program?

- **Comprehensive waste management.** Muangklang town launched a complete solid waste management scheme with a capital of only 1,000 euros. Instead of constructing a complete building with a sophisticated incinerator, they used a simple outdoor conveyer belt. The waste materials are not burned; they are laid in the conveyor belt, from where the workers pick out recyclable trash. Separable organic wastes are also collected for producing compost.
- **Water quality improvement.** In the municipal market, discarded vegetable leaves are collected to feed animals, whose manure are also collected and sold; and to produce **E.M.** (Effective Micro organism) concentrate, which is used to improve water quality.

The municipality also introduced grease traps to households and shops along the river and in the city. Grease traps reduce the river's organic load, thus improving the overall water quality of the river. Collected grease is also transformed into fuel bars, which serve as supplementary fuel in the municipal slaughter house.

- **Natural gas vehicles.** Natural gas vehicles (NGV), or busses with conservative tram-like appearance, have encouraged people to use public buses instead of private cars.

The innovations introduced under this program have delivered the following benefits to the local government and the community:

- Solid waste management reduced waste as a result of recycling, and thus reduced the number of trips made by the garbage trucks to the landfill. It has saved the municipality a lot on petroleum expenses. It also means longer life for the municipal landfill.
- The compost is generating income for the town. The methane gas from the compost process also replaced firewood as fuel source in the municipal slaughter house. It meant lower fuel cost for the facility.
- The water quality of the river has improved. The E.M. concentrate is added to the municipal drainage at different points in town.

- Air quality has improved. Reducing private cars on the narrow streets of Muangklang means reduced traffic, reduced traveling time, and reduced volume of gas from exhaust pipes.
- Planting in abandoned areas has increased the municipality's green areas. The municipality also introduced urban agriculture.

➤ Profile of the local government unit

Located 269 kilometers from Bangkok by the eastern highway, Muangklang municipality has a population of 17,197 or 3,309 households. It has a total of 13 communities and covers 14.5 kilometer square.

B. Who and what are involved in this best practice model?

- The municipal mayor, Somchai Chariyacharoen, initiated the best practice model. His goal is to turn his town into a truly sustainable and livable city. Aside from this, the mayor has introduced other simple but effective programs to comprehensively tackle urban environmental problems. He makes sure to use existing resources and potential and cut bureaucratic friction. Ultimately, the mayor aims to change the consumerism way of life to a more productive and self-sufficient one for sustainability.
- Over time, Muangklang residents benefited from the improved quality of the river, improved means of public transport, the abundance of locally produced organic vegetable, fertilizer, and compost, and the increase of green areas in the municipality.

Local authorities from around Thailand have also visited Muangklang municipality to learn about the best practice model

- These activities have proven to be well-received in the communities. Seeing immediate benefits, the people have willingly assisted the municipal government in implementing the best practice model. Market vendors help in collecting discarded vegetable leaves. Schools have joined the waste management program. House owners have been using grease traps in their houses.
- After only several years, the mayor has grown to be more popular. His latest electoral victory proves that people want him to continue what he has been doing. The fresh term also allows him to introduce more projects and also improve the existing ones.

➤ Types of activities in the implementation of the model.

- *Solid waste management*--waste separation, conveyer belt, missing bins, school programs.
- *Water quality improvement*--E.M. production, grease trap promotion, annual feast on boat.

- *Air quality improvement*--NGV public bus, urban agriculture, green area promotion, traffic control.
- *Educational program*--school programs, volunteer trainers.
- *Quality of life promotion*--Restoration of traditional activities, new sports facility as a park, overall healthy environment.

C. How can this model be sustainable and replicable?

The following factors ensure the sustainability of the program:

- **Self-reliance.** The operation is small scale. The conveyor belt waste management team is under the close supervision of the mayor. By selling the by-products of the operations, such as compost, EM, recyclable material, and locally grown organic vegetable, the team is earning enough money to pay for operational costs and workers' incentives. They also earn from entrance fees to the municipal learning center.
- **Education for the new generation.** The recyclable waste program has been expanded to some local schools. Solid waste management is not only taught; students are encouraged to practice it in their daily lives. This way they see firsthand the positive results of decreased waste and the benefits of increased income. Volunteer trainers from the municipality go around schools to educate and encourage students to practice solid waste management.
- **Public relations.** The mayor has actively engaged the media to promote the best practice model. He talks about the model in the local FM radio. He makes sure it's highlighted in the municipal Web site. He even approaches residents for face-to-face talks, to make sure people hear about what has been done. Because of the mayor's efforts, people understand and appreciate the model better.

Other local government units will be encouraged to adopt this best practice model because they offer the following:

- **Incentive.** Waste reduction means cost reduction and income generation. The best practice model only needs a small team of 42 workers to operate. They save the municipality a lot of money. At the same time, they earn enough money to pay for their salaries and incentives. It's truly a win-win situation for the municipality of Muangklang.
- **Motivation.** It's better seen than heard. People can see improved situation, solved problems, and better way of living. Any town residents would gladly adopt the proven measures once they have heard about Muangklang's story.