



Discover the economic, environmental and social benefits of local activities

This year has seen the Kitakyushu Initiative promote integrated win-win approaches in urban environmental management and socio-economic livelihoods at the local level by focusing on the economic, environmental and social benefits of local activities.



Participants discussing the benefits of air quality management
Photo courtesy of UNESCAP

The Kitakyushu Initiative and Local Initiatives Addressing Transformation of Lifestyles to Achieve Sustainable Development 23 June 2006, Tokyo, Japan

This international workshop brought together representatives from local governments, NGOs, and international organisations from the Asia-Pacific region to share information and experiences on specific aspects of the development and implementation of local initiatives. Discussions focused on local government policies and grass-roots activities that address the transformation of lifestyles to improve environmental quality and stimulate the local economy.

The workshop, organised by UNESCAP, the Ministry of the Environment of Japan, and IGES, was held as a pre-event to the 14th Environment Congress for Asia and the Pacific (ECO ASIA 2006). Under the theme of "Towards Sustainable Societies," the Ministers at ECO ASIA 2006 held discussions about how residents, communities and the Asia-Pacific region can promote their activities at various levels.

Participants from Bangladesh, Indonesia, Iran, Japan, Nepal, the Philippines, Republic of Korea and Thailand delivered a message to ECO ASIA 2006 stating that local initiatives should progressively target multiple benefits, and address both poverty alleviation and environmental sustainability.

Kitakyushu Initiative Holds BAQ Pre-event on Local Initiatives Addressing Environment and Socio-economic Co-benefits 12 December 2006, Yogyakarta, Indonesia

This workshop was organised by UNESCAP in partnership with the Ministry of Environment of Indonesia through the Better Air Quality Secretariat. As a pre-event for the Better Air Quality Conference, an international event that highlights the most relevant issues, practices and groundbreaking activities on air quality management in the Asian region, its aim was to strengthen the capacity of local governments to integrate win-win approaches to urban environmental management and socio-economic development.

Representatives from Kitakyushu (Japan), Seoul (ROK), Weihai (China), Surabaya (Indonesia) and national environmental ministries and international organisations gathered to discuss the environmental and socio-economic co-benefits of local air quality management initiatives of cities in the Asia-Pacific region.

Local initiatives were presented which were focused on transport management, energy efficiency, global and local benefits of climate change mitigation, and sustainable urban development. Major socio-economic benefits were also identified which include income generation, creation of new employment, promotion of new business opportunities, energy savings, health savings, and road safety. More broadly, revitalisation of economic competitiveness of the city; development of human and technological expertise for new business opportunities; promotion of social equity, stakeholder participation and partnership; and bettering local governance and transparency in decision-making processes were stated as important socio-economic benefits.

The outcome of the workshop clearly reflects that cities in Asia and the Pacific are now moving towards the achievement of balanced and sustainable urban environmental management through harmonisation of economic development and environmental protection. Local initiatives are progressively targeting multiple benefits promoting economic vitality and stimulating improvement in urban living.

Article courtesy of UNESCAP



Environmental, social and economic benefits of household composting

Study tour in Surabaya, Indonesia, 5-9 February 2007

The Kitakyushu Initiative study tour programme facilitates the sharing of experiences and outcomes of select local initiatives, with an objective to transfer successful elements from one city to another. The first study tour was conducted in Nonthaburi, Thailand in December 2005 and investigated community activities to decrease waste generation in households and promote separation at source (Eco-News, No. 1, 2006).

The study tour programme provides cities with an opportunity to observe successful activities first-hand in the environment in which the activities were carried out. Visiting cities can see how partner cities have addressed similar issues and can then discuss these issues directly with representatives of the host city, including those who were involved in or affected by the implementation of the activities. Host cities have been selected based on the achievement level of their activities, as well as their potential to act as advisors to cities that participate in the programme.

The second study tour in this series was held in Surabaya, Indonesia to look into the environmental, social and economic benefits of household composting. The tour was conducted from 5-9 February 2007 and organised by IGES, in cooperation with UNESCAP, Kitakyushu International Techno-Cooperative Association (KITA), City of Surabaya, Indonesia, and PUSDAKOTA, Indonesia.



Testing the quality of compost

Composting Surabaya Style: The Takakura Method

The waste generated in developing countries in Asia contains a high percentage of organic matter, reaching up to 80% in some cities. During the 3R South Asia Expert Meeting held in Kathmandu, Nepal in 2006, it was agreed that priority should be given to organic waste management. Composting is an option that can provide social, economic, and environmental benefits by creating jobs, extending the life of landfills, preventing pollution, recycling nutrients, and reducing greenhouse emissions.

In order to ensure that activities are sustainable, it is critical that potential markets exist for compost produced from organic waste. The study tour



Embracing the future

demonstrated how “mini-businesses” were developed from composting activities and showcased composting-related activities from other areas in the region.

Composting & the 3Rs

As was demonstrated in the presentations by the participants, Asia has serious problems in managing waste. The region spends USD 25 billion on solid waste management and by 2025, that figure will increase to USD 50 billion. However, even with the amount of money being spent on solid waste management, most cities face issues with insufficient collection and inadequate final disposal. Composting can substantially reduce the volume of waste for disposal, extend the life of disposal sites, and prevent the generation of methane which can help fight global warming.

However, there are various challenges that cities face in carrying out composting, including the type of technology that should be used, separating waste at source or composting mixed waste, taking a centralised or decentralised approach, lending priority to the creation of jobs and poverty reduction, developing partnerships with the informal sector, and the sale and use of the produced compost.

Composting in Surabaya

Within the city's overall waste management system, Surabaya stresses the idea that community-based waste management is a strategy to reduce waste at the final disposal site. During the implementation of activities, the city faced problems including lack of awareness about the disposal of waste, lack of knowledge about the economic value of simple waste treatment technologies and lack of infrastructure.

As of January 2007, a total of 1,737 people have received Takakura baskets. As of 2006, the number of locations that already carry out independent waste management is 1,024. Thirty-one sub-districts and 163 districts are currently carrying out independent waste management and have reduced the amount of waste and obtained financial benefits from these activities.

The city plans to continue activities in the development and expansion of composting houses, extending the areas carrying out independent waste management, recruiting and training and establishing local regulations for waste separation.

About PUSDAKOTA

PUSDAKOTA supports different composting methods in the city, including:

(1) Household composting

A total of 1.5 tons of organic waste is separated and composted by households every day, utilising the Takakura Home Method containers sold by PUSDAKOTA.

(2) Composting at compost centre

In the area surrounding PUSDAKOTA, there are some households that do not have the containers required for the Takakura Home Method. PUSDAKOTA visits these households three times a week to collect waste.

Takakura Method

The composition of waste in Surabaya—paper (15.5%), plastic (14.2%), organic waste (55.6%), and others (14.7%) (Source: DKP 2002, in cooperation with Kitakyushu City)—has placed composting as an important aspect of solid waste management in the city, with particular focus on the Takakura Method.

The Takakura Method in Surabaya can be broken down into three different types: Open Windrow (improved version), Takakura Home Method, and Takakura Susun Method.

The **Takakura Home Method** is comprised of a commercially available plastic box, cardboard, rice chaffs to absorb excess moisture, locally-produced micro-organisms, recycled carpet pads, foot pedals and other items. In Indonesia, the Takakura Home Method is available at a cost of 75,000 rupiah from PUSDAKOTA, the NGO which has obtained a local patent from the Indonesian Government to market the product.

The Takakura Method allows its users to become accustomed to separating organic materials. Surplus compost can be used for kitchen gardens to save on purchasing commercially produced compost, mechanisms can be created to enable compost centres to buy surplus compost from households, and the frequency of waste collection has decreased as a result of composting and reduction of waste from households.

The **Takakura Susun Method** was designed to bring organic waste directly to a compost centre without primary processing at households. This method is characterised by simple technology and low-energy. The containers are portable at 46 litres



Making a commitment to a cleaner environment

and the sides allow air to pass through easily so that the compost does not have to be mixed, even when the containers are stacked one on top of another.

These methods have various benefits:

- Environmental benefits: Reduction of waste through composting of garbage, improved public awareness of recycling, waste separation, elimination of odour problems from composting facilities and living environments, improvement of environmental awareness
- Social benefits: Improvement of hygienic conditions in living environment, network of local residents involved in environmental improvement, networking with other cities
- Economic benefits: Improvement of profitability through effective composting, payment of interest to residents which can be used to invest in local businesses

Hands-On Experience

The study tour was attended by representatives from Bago (Philippines), Bangkok (Thailand), Denpasar (Indonesia), Kitakyushu (Japan), Semarang (Indonesia), Siem Reap (Cambodia), Sylhet (Bangladesh), and Weihai (China). It particularly highlighted the actions taken at the local level to foster an appreciation of the environmental, economic and social benefits of



Explaining community activities

household composting. The programme aimed to:

- (1) Share technical information regarding composting methods, as well as identify business and market opportunities through the sale and marketing of compost.
- (2) Discuss the formulation, implementation, evaluation and expansion of activities, and the relationship with the city's overall urban management objectives.
- (3) Identify potential partners for cities facing similar problems.
- (4) Determine which aspects of the activities have potential for transfer.

Participants were able to exchange practical information regarding the formulation and implementation of the Takakura Method. Visits to PUSDAKOTA, as well as low-, middle- and high-income communities that are currently practicing this form of composting, allowed the participants to communicate with those directly involved in the process.



Market compost center at Pasar Keputran

At the end of the study tour, participating cities were requested to elaborate on follow-up activities. Ideas included various innovative activities, including focusing not only on strict enforcement, but also on economic issues such as the creation of employment opportunities, carrying out activities in cooperation with NGOs to further enhance community participation, empowering NGOs with particular emphasis on women, focusing on environmental education and awareness and developing local skills and knowledge.

Through the study tour, participants were able to identify policies that are related to the promotion of resource recycling, appropriate treatment of waste and financial self-support through the sale of compost, establish informal partnerships, and determine what follow-up actions can be done.

Study Tour Programme

Date	Activities
6 February 2007	Session I: Discussions on composting and the 3Rs, introduction of solid waste management in Surabaya and Takakura Method Session II: Field visits to PUSDAKOTA and Wisma Kedung Asem Indah community
7 February 2007	Session III: Introduction of Takakura Method and utilisation of eco-money in communities Session IV: Field visits to market compost pilot project at Pasar Keputran and Jl. Tegal Mulyorejo Baru community
8 February 2007	Session V: Presentations by participating local governments on local activities and follow-up plans

INTERVIEW



Mayor
Surabaya City
Indonesia

Mr. Bambang Dwi Hartono

Since the signing of an MoU for environmental protection in 2002, Surabaya and Kitakyushu have organised training sessions for Surabaya City Government staff both in Kitakyushu and Surabaya, and waste experts from Kitakyushu have conducted research to produce recommendations for Surabaya, including a pilot project for the manufacturing of compost from household waste.

This project began with the involvement of KITA and City Community Empowerment Center of Surabaya University. The pilot project was developed by PUSDAKOTA and the University of Surabaya through assistance funds and establishment of facilities by the Surabaya City Government and KITA. The pilot project has produced results for manufacturing compost at the household (Takakura Home Method) and communal levels (Takakura Susun Method).

In February 2007, the Surabaya City Government, KITA and PUSDAKOTA cooperated together to arrange a study tour in Surabaya with assistance from IGES. The programme's objective was to provide information regarding the benefits of the Takakura Home Method and community-based waste management. Participants in the study tour observed manufacturing techniques, implementation and marketing, which is carried out by the government, Community Self-Support Organization, and Surabaya citizens in different communities, including Mulayosari, Kedung Asem, Rungkut Lor, PUSDAKOTA and LPA Keputran.

FOCUS ON...

Asia 3R Conference

The Asia 3R Conference, hosted by the Ministry of the Environment of Japan, was held in Tokyo, Japan from 30 October to 1 November 2006 with nineteen countries from the region participating. Participants discussed waste management issues, including partnership and international cooperation for the promotion of the 3Rs, medical waste management, municipal organic waste management, and e-waste management. Participants identified important factors in the promotion of the 3Rs in the region, including cleaner production processes and technologies; the necessity of environmentally sound, economically viable and socially acceptable technologies; financial and technical cooperation; and the need to establish clear protocols for handling wastes in the event of a disaster.

* From Asia 3R Conference Chair's Summary

WHAT'S NEW?

Independent study tours

Nonthaburi communities seize economic opportunities in waste management



Courtesy of Dhaka City Corporation, Bangladesh

The United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP), in collaboration with Nonthaburi Municipality, Dhaka City Corporation and the Institute for Global Environmental Strategies (IGES) Kitakyushu Office organised an independent study tour in Nonthaburi Municipality, Thailand from 22 to 25 August 2006. The study tour, in the form of city-to-city cooperation, sought to promote and exchange practical solid waste management practices and explore possible replication. It was attended by twelve representatives from Dhaka City Corporation (DCC), the governing body responsible for solid waste management in Bangladesh.

The tour highlighted the solid waste management initiatives adopted by Nonthaburi Municipality. Highly innovative, the municipality combined technological, economic and participatory measures to address the underlying impacts brought by the continuous proliferation of solid waste. The strategies they employed include a rigorous awareness campaign, community recycling activities and composting, the adoption of a Global Positioning System (GPS) for waste collection, and infectious and human waste management. Income generating activities have also flourished among local communities and institutions in the municipality through voluntary waste segregation, collection and recycling.

Thus, it has not only improved the environmental condition of the locality but has also contributed in supporting community development from the income generated by the communities through waste vending. Similarly, DCC have also shared their experiences with their current Ward Based Solid Waste Management in Dhaka City which focuses primarily on the promotion of community responsibility towards solid waste.

The study tour successfully demonstrated the significance of getting incentives right so that communities participate in the management of waste. Such practices have proven not only beneficial to the environment but also induce broad based socio-economic development.

Article courtesy of UNESCAP



Upcoming events

Date	Activities
25-26 June 2007	Fourth Meeting of the Kitakyushu Initiative Network Organised by UNESCAP, IGES and others

The Kitakyushu Initiative for a Clean Environment, a programme of the United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP), was adopted at the 4th Ministerial Conference on Environment and Development in Asia and the Pacific in 2000. The Kitakyushu Initiative has a mandate to achieve measurable progress in improvement of the environment in cities in the Asia-Pacific region and focuses on the sharing of experiences to improve the urban environment.



**Environment Section
Environment and Sustainable
Development Division, UNESCAP**

United Nations Building
Rajadamnern Nok Avenue, Bangkok
10200 THAILAND
TEL: (66-2) 288-1234 FAX: (66-2) 288-1025
Email: escap-esdd-evs@un.org



**Kitakyushu Initiative Network Secretariat
Institute for Global Environmental Strategies**

Kitakyushu Office
3-9-30 Asano, Kokurakita-ku, Kitakyushu
802-0001 JAPAN
TEL: (81-93) 513-3711 FAX: (81-93) 513-3712
URL: <http://www.iges.or.jp/kitakyushu/>
Email: kitakyushu-initiative@iges.or.jp

For more information, please visit : <http://www.iges.or.jp/kitakyushu/index.html>

◆ Copyright 2007 Ministry of the Environment, Government of Japan. All rights reserved. ◆ Printed in Japan / Printed on recycled paper. ◆ Published by the Institute for Global Environmental Strategies (March 2007)