

APPENDIX D

SUMMARY OF ENVIRONMENTAL COMMITMENTS OF LOCAL GOVERNMENTS

**1. Progress on Short- and Mid-term Environmental Commitments
 of Cities which have Participated in the 1st HLS ESC and the 5th Network Meeting
 of the Kitakyushu Initiative for a Clean Environment**

(1) Bago (Philippines)

| Targets/Goals | Progress made | Concrete actions taken between now and Feb/Mar 2010 |
|--|--|--|
| 1) Further decrease of waste generation by 30%, intensify campaign on waste segregation and expand source-level composting by 2012. | Additional Waste diversion of 20% which translates to 20% reduction of wastes brought to the dumpsite by February 2011 | <ul style="list-style-type: none"> • Bag-O Plastic was organized and made functional, recycling sando plastic bags to quality hand bags and purses, gaining local and international markets and providing extra income to women • Establishment of transfer station at City Eco-center for further sorting and segregation of wastes • Conduct of inter-barangay and inter-school clean and green project that further advocates recycling, re-use and reduction. • Publication of additional environmental notebooks and workbooks for students • Continuous conduct of symposia, fora and other IEC activities to stakeholders • Finished construction of its Sanitary Landfill and is presently due for inaugural operation • Passed City Environment Code of 2011, the environment charter of the City, this February 8, 2011 |
| 2) Establish better linkages with other LGUs in the country for technology sharing | Technology transfer to other LGUs and DENR resulting in the spreading of composting technology | <ul style="list-style-type: none"> • Introduction of Takakura Composting Method during regional and provincial conventions of SWM practitioners • Established linkage with DENR-EMB 6 to serve as techno- hub of Takakura Composting Technology in the region and is in the process of concluding agreement on the introduction of the Technology in LGUs within the Boracay Island |
| <p><u>Comments/Additional Information:</u> Bago City was adjudged 1st Runner-up in the Regional Search for Excellence in Local Governance (EXCELL) Award in Environmental Governance Category by the Department of Interior and Local Government Regional Office 6. Said award is in recognition to the activities programs and projects of Bago City towards environmental conservation, protection and regeneration. Further, we have recently closed an agreement with Coca Cola Bottlers, Philippines, Inc., for them to supply the needed plastics for the Bag-O Plastic Project of the City Government.</p> | | |

(2) Balikpapan (Indonesia)

Long Term Vision: Harmonious City in the Future

Long Term Target (Until 2030): Protecting at least 52% of Balikpapan as Green Area.

Short Term Target (2010-2012):

1. Reduce amount of solid waste to landfill by 10% within 3 years.

Targets:

- 4 units of composting centers will be built in traditional markets.
- 15 composting centers will be built in 5 districts (3 units for each district).
- 10 units in Islamic boarding school.
- 1377 aerobic composter will be distributed within Balikpapan city.
- Establishing 3 composting centers as pilot project.

Achievements:

- Composting centers were built at each four traditional markets.
- 15 units distributed to 5 districts.
- 3 units distributed to 3 Islamic boarding schools.
- 1377 units distributed to each neighborhood
- 3 pilot project sites were established.

2. Involve NGO and citizen groups in all environmental activities to contribute to local environmental budget by 10%.

Target: Fund support from NGOs and sharing each 10% of CSR budget/multi stake holders.

Achievements: Environmental budget from NGO is 5.6% of the total LG environmental budget.

3. Increase the number of schools which are covered by "Adiwiyata" Program up to 30%

Achievements:

- 2010: The Adiwiyata Program covered 6 schools.
- 2011: Adding 4 schools (66%)

4. Establishment of environmental education centre at sanitary landfill Manggar

Achievements: 2011: Under construction.

5. Improve the proportion of green area

Targets:

- Improve the proportion of green area by at least 15 ha in 3 years.

Achievements:

- 2010: 36.14 ha
- 2011: 3.3 ha

6. Increase household access to clean water up to 72% of the total water needs until 2012

Targets:

- Expand the housing connection to water pipes from 75,156 units (71%) to 81,600 units (72.5%).

Achievements: 2011: 78,384 units (72.2%)

7. Increase household access to wastewater treatment facility from 800 units to 1800 units until 2012

Targets: Increase housing connection to wastewater treatment facility by at least 1800 units.

Achievements: 2011: The number of housing connection to wastewater treatment: 2.183 housing connection.

8. Develop conservation plan for Balikpapan Bay Biodiversity protected area (20% of total area)

Targets: Conserved of world endangered species, especially animals at Balikpapan Bay.

Achievements: We have declared the Balikpapan bay area as sustainable tourism area in urban spatial planning (eco² cities).

9. Monitor air quality by installing additional air quality monitoring devices

Targets: Adding 2 units of air quality monitoring devices.

Achievements: 2012: Adding 2 units of air quality monitoring devices.

10. Sustainable Biodiversity Management Through Conservation of Wain and Manggar Protected Forest Balikpapan

Targets:

- Organize training and capacity building twice a year.
- Maintenance of screen burn by 10 km each year.
- Secure protected forest from illegal logging.
- Constructing Botanical Garden in Balikpapan with 5% of the total green area.

Achievements:

- Training and capacity building were conducted three times a year.
- Maintenance of screen burn is sustained with the length of 11 km each year.
- Construction progress of Botanical Garden (2010: 10 ha, 2011: 5 ha).

(3) Kitakyushu (Japan)

1. CO₂ Reductions in Kitakyushu and the Asian region

Targets

Citywide: 740,000 tons (2013), 4.7 million tons (2030), 8 million tons (2050)

Asian region: 1.35 million tons (2013), 11.7 million tons (2030), 23.4 million tons (2050)

<Citywide emissions (2005) = 15.6 million tons>

The "Kitakyushu Green Frontier Plan" was drawn up in April 2009 with the inclusion of 135 measures, including the following leading projects. To date, 132 measures have been implemented and 106 additional, new measures have been newly executed. The city has received support from the national government for 54 projects, totaling about 4.9 billion yen.

(1) Creation of a Kitakyushu Smart Community

Through the introduction of new energy, local energy use, promotion of ICT and the integration of these measures, Kitakyushu has created a smart grid, and is currently developing/implementing the Kitakyushu "Smart Community" in the Yahatahigashida area, which simultaneously minimizes greenhouse gas emissions and improves the convenience for the city's residents. Fifteen billion yen has been invested in this project, targeting a 50% reduction in CO₂ emissions for the region.

(2) Creation of a Leading Low-Carbon District

Kitakyushu has taken the lead in promoting comprehensive town planning through the introduction of various low-carbon mechanisms and systems in 20ha of the Jono district (Kokurakita Ward). These comprehensive measures include the installment of solar panels, energy-saving homes, improvement of public transport, carpooling, and protection of the natural environment, which are being implemented in order to create a long-lasting, highly energy-efficient, compact city.

(3) Promotion of the Murasaki Eco-River Concept

In order to allow residents to see and experience a low-carbon society, the Murasaki Eco-River concept is being carried out in the Kokura city center with the introduction of various next-generation systems, such as new energy and LED (solar power), as well as the spread of rooftop greening and use of electric cars.

(4) Improvement of Second-generation Energy Parks

In addition to acting as a base for energy supply to support today's lifestyles, the Hibikinada area of Wakamatsu Ward is the location of "next generation energy parks," in which a variety of energy-related facilities such as natural energy and biomass (i.e. solar and wind power, the hope of the next generation) are concentrated.

(5) Establishment of the Kitakyushu Asian Center for Low-Carbon Society

In order to greatly reduce CO₂ emissions in both the city and throughout the Asian region, Kitakyushu established the Asian Center for Low-Carbon Society in June 2010 to support technology transfer and other activities. Making use of networks developed with other cities in Asia as a result of Kitakyushu's international environmental cooperation activities, the city is promoting the creation of a low-carbon society through the consolidation of Japan's

low-carbon technologies and environmental business practices. To respond to the needs and demands from Asian countries, the green technologies of Japanese businesses and the know-how acquired by the local government in the development of social systems are being transferred through cooperation among the government, private businesses and civil society.

2. Number of Trainees Visiting Kitakyushu through International Cooperation

Target: 400 trainees annually; 2,000 trainees over a five-year period (2010)

| FY | 2006 | 2007 | 2008 | 2009 | Total |
|---------------|------|------|------|------|-------|
| No. of people | 321 | 494 | 434 | 439 | 1,688 |

3. Annual Waste Generation in Kitakyushu (unit: thousand tons)

Target: 436,000 tons (2013)

| FY | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|-----------------|------|------|------|------|------|------|------|
| Amount of waste | 514 | 494 | 435 | 417 | 385 | 364 | 350 |

4. Citywide Recycling Rates (Unit: %)

Targets: 25% (2013)

| FY | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|-----------------|------|------|------|------|------|------|------|
| Recycling rates | 15.0 | 15.8 | 18.9 | 23.1 | 30.0 | 30.6 | 30.4 |

5. Number of Households Installing Solar Power Generation Systems

Target: 20,000 households (2013)

| FY | 2007 | 2008 | 2009 |
|-----------------------------|-------|-------|-------|
| No. of cases (accumulation) | 2,165 | 2,420 | 3,320 |

6. Number of Eco-Action 21 Certifications

Target: 160 (2013)

| FY | 2007 | 2008 | 2009 | 2010 (end of Dec) |
|-----------------------------|------|------|------|-------------------|
| No. of cases (accumulation) | 50 | 58 | 74 | 103 |

7. World Capital of Sustainable Development Million Tree Planting Project

Target: 402,000 trees (2013)

| FY | 2008 | 2009 | 2010 (end of Dec) |
|--------------------------------|--------|---------|-------------------|
| No. of cases (accumulation) | 85,617 | 146,762 | 167,545 |

(4) Kathmandu (Nepal)

| Targets/goals | Progress Made | Concrete action taken between now and Feb/March 2010 |
|--|--|---|
| 1. Integrated Waste Management of waste of Kathmandu Valley | Preliminary MOU signed with selected company | High level committee was formed for the integrated waste management for the KMC Valley |
| | | Tender bids are invited from interested private companies for the integrated waste management |
| | | MOU has signed with selected company among the interested company |
| 2. Promotion of private sectors | Operation of small compost Chamber Source separation, more source collection center, 3R's of waste, waste reduction | Proposal was asked to submit to NEPSEMAK company |
| | | Proposal accepted |
| | | Signed of MOU |
| | | Waste reduction material distributed to the company |
| | | compost chamber constructed from KMC for the company Provide nine big containers of capacity of 14 cu.m |
| 3. Promotion of household composting | Waste generation has reduced at household level | 450 no of compost bin has distributed to the household since Feb/ March 2010 till Jan 2010 at municipality subsidy rate |
| 4. Waste collection system | 1.a. New 50 waste handling equipments has been operated 1.b.Collection of waste at garbage bins 2. 1500 Green Garbage bins has been installed since 2010 Oct. till now | 1. a. Replacement of old tractors by new EURO II and III waste handling vehicles b. Improve collection system 2. Installment of Green Garbage bins at the streets of Kathmandu City |
| <p>Comments/Additional Information</p> <p>Decision in integrated waste management of Kathmandu valley takes time, however it emerging in management of solid waste in Kathmandu metropolitan city. So, KMC has encouraged NGOs and CBOs in waste management. In this regard, KMC has supporting to Community Recycle Center, which is running for five years with better efficiency. And also KMC has the policy to establish in other wards also.</p> | | |

(5) Nagoya (Japan)

Long-Term Target/Vision

1. CO₂ emission reduction

Target (1990 base year)

Middle-term (2020): 25% reduction → long-term (2050) 80% reduction

Energy consumption: 45% reduction by 2050, increase the use of non-fossil fuel by 2.7 times by 2050.

Vision: Nagoya – a low-carbon and comfortable city

| Item | Indicator | Present | By 2050 |
|--|---|-------------------|-------------------|
| Living within walking distance of train/subway station | ○ Ratio of Population residing near train/subway stations ※within 800m radius of the train/subway station | 63% | 75% |
| Living close to nature-life in which everyone in the city can enjoy their immediate natural environment | ○ Ratio of the green coverage | 25% | 40% |
| | ○ Water circulation - Rainwater seepage and retention ratio - Rainwater evaporation ratio - Rainwater direct outflow ratio | 14% 24% 62% | 33% 31% 36% |
| Low-carbon lifestyle Comfortable, low-energy lifestyle utilizing nature's resources and super energy saving devices | Car use ratio ※The proportion of transits with cars as the means of transport | 42% | 25% |
| | ○ Energy consumption per person at home and work ○ Energy consumption ○ Non-fossil fuel consumption | 1 1 1 | 0.6 0.5 2.1 |

2. Biodiversity

A vision for 2050:

Towards sustainable urban development and prosperity supported by rich biological diversity and sound ecosystems.

Strategies:

1. Achieve healthy urban development supported by nature
2. Create lifestyles and businesses with low environmental impacts
3. Foster a culture that affirms the flourishing of nature

4. Develop mechanisms that protect, cultivate and make wise use of natural resources

3. Solid Waste Management and 3Rs

Target

(Unit: ten thousand/ton)

| Item | Base year (2006) (1%) | Target (2020) | | Current condition (2009) |
|--|--------------------------|---------------|--|--------------------------------|
| Total amount of solid waste generation | 108 (100%) | 104 (100%) | 4% reduction Curb the generation of garbage | 100 |
| Volume of separated waste resources | 38 (35%) | 50 (48%) | 30% increase Separation + recycle by private agencies | 36 36 |
| Amount of solid waste disposal | 70 (63%) | 54 (52%) | 20% reduction Reduction to 1/2 of the peak 100 | 63 63 |
| Amount of land reclamation | 10 (10%) | 2 (2%) | 80% reduction Reduction to 1/16 of the peak 32 | 7 7 |
| CO ₂ emission | 16 | 13-16 | Reduction to 1/2 of the peak 30 | 16 |

※ (): % of total emission

※ CO₂ emission: solid waste disposal + emission by landfill

Short-term vision

(Leading project of Nagoya City's Basic Environmental Plan)

Overall goal: Create "Environment Capital Nagoya" together

Individual target:

| Project | Benchmark | Targeted level (2010) | Activities to achieve the target |
|---|--|---------------------------|---|
| Human resource development and networking to support "Environment Capital Nagoya" | Percentage of people participating in lectures, seminars, and training on environmental problems | 20% Now 10% (2009) | <ul style="list-style-type: none"> • Promotion of Nagoya Environmental University • Enhancement of environmental learning centre • Promotion of environmental education for the children • Promotion of environmental education for the local people • Implementation of "Nagoya |

| | | | Environment Day” |
|---|--|---|--|
| Conservation of air quality and water resources | Percentage of achievement of Nagoya City's target level for the reduction in nitrogen dioxide emissions (NO ₂) | More than 50% Now 59% (2009) | <ul style="list-style-type: none"> • Regulation (laws and ordinances) and supervision of the operators of factories and businesses to limit NO₂ emissions • Strategic and comprehensive promotion of vehicle emissions reduction opportunities through a committee consisting of government and business representatives. |
| | Percentage of the achievement of Nagoya City's environmental targeted level regarding the Biochemical Oxygen Demand (BOD) | 100% Now 80% (2009) | <ul style="list-style-type: none"> • Regulation and guidelines to the operations of factories and businesses • Promotion of the usage of advanced treatment plant and improvement of the combined sewerage. |
| Promotion of minimal waste lifestyle | Total amount of solid waste generation | 1.07 million t Now 1.00 million t (2009) | <ul style="list-style-type: none"> • Reduce the use of plastic shopping bags • Reduce the containers and packaging • Promote the use of reused caps • Disseminate information and conduct educational activities |
| Promotion of “Nagoya's transport strategies” | The ratio between the use of public transport and private cars | 4:6 Now 37:64 (simple study in 2007) | <ul style="list-style-type: none"> • Develop a park and ride system • Attract the commercial and public facilities and residence, etc. • Promote public transport usage through the introduction to the eco-point IC-card • Dissemination of environmentally friendly lifestyle information (transport eco-life) |

| | | | |
|---|--|---|---|
| <p>Conservation and development of the spaces where citizens feel close to nature</p> | <p>Urban park area per citizen</p> | <p>10m² Now 9.4m² (2009)</p> | <ul style="list-style-type: none"> • Develop the public forests • Develop the major bases of the park • Develop the parks which local people can easily access • Promote green public spaces |
| <p>Promotion of energy saving, and the introduction and promotion of new energy</p> | <p>CO₂ emission reduction (1990 levels)</p> | <p>10% reduction Now: 2.9% increase (2007)</p> | <ul style="list-style-type: none"> • Grand strategy to encourage the 2.2 million citizens to reduce their CO₂ emissions through easy, cost effective and practical measures • Promote voluntary emission reduction activities in offices and the shops • Promote CO₂ emission reduction from cars • Promote the purchase of energy saving home electronics and replacement of inefficient old ones. |

(6) Minamata (Japan)

1. Promotion of waste separation and recycling

- a. Start of separation and collection of food waste oil from FY 2010 → Use as biodiesel fuel
- b. Planned start for separation and collection of small-household appliances from FY 2011 → Extraction and recycling of rare metals

(In addition, the separation and recycling of trees and plants, as well as used diapers are planned).

2. Promotion of the introduction of new, natural energies

- a. Installation of solar power system in four schools and facilities, as well as city hall
- b. Currently, demonstration projects for the smart grid which makes use of small-scale hydropower and wave power are being implemented.

(7) Sibiu (Malaysia)

| Targets/Goals | Progress Made | Concrete actions taken between now and Feb/Mar 2010 |
|---|--|---|
| <p>1. To decrease waste generation by 20-25% (based on 2009) by actively promoting Reduce, Reuse and Recycle practices throughout the municipality by the year 2015</p> | <p>Waste generation decreased by 1.66% as of December 2010</p> | <p>1. A recycling centre was established in November 2010</p> <p>2. Two (2) recycling days with the communities were organized in year 2010</p> <p>3. Six (6) talks and demonstrations on making garbage enzyme were carried out in 2010.</p> <p>4. Two (2) talks on recycling were given to two schools.</p> <p>5. JICA Partnership Program (JPP) "Community-Based Solid Waste Management Development System Development Project in Sibiu Municipality". For the programme, two (2) visits were carried out, in July and November 2010 and the coming one on 21-25 February 2011</p> <p>6. Monday and Saturday was declared as "Say No To Plastic Bag" days. In April 2011, every day will be declared as "No Plastic Day"</p> |
| <p>2. Promoting waste segregation at source</p> | <p>Proposal was approved in the recent Council Standing Committee Meeting</p> | <p>1. To launch the activity at two pilot areas (Pulau li Hua and Taman Seduan Residential areas) latest by April 2011 comprising of 1,765 residential households (Pulau Li Hua: 309; Taman Seduan Residential areas: 1,456)</p> |
| <p>3. Expanding Takakura Method of Composting throughout the municipality</p> | <p>338 number of Takakura Home Method Composting baskets were distributed.</p> | <p>1. Four (4) talks and demonstrations on the making of compost using Takakura Home Method Composting were carried out. During each talk and demonstration, baskets with seed compost were given to the participants.</p> |
| <p>Comments / Additional Information</p> <p>Even though the reduction of waste generation only decreased by only 1.66% last year, Council is enhancing its efforts to ensure the achievement of the target by year 2015 through active waste reduction research.</p> | | |

(8) Surabaya (Indonesia)

| | Targets/goals | Progress made | Concrete actions taken between now and Feb/Mar 2010 |
|---|---|---|--|
| 1 | To reduce waste sent into landfill by 2 % intensify campaign on waste segregation, illegal dumping (river), expand home composting, eco office program by 2012. | Waste sent into landfill decreased until 1% | <ul style="list-style-type: none"> the number reached 18.547 units divided composter (takakura basket and composter bin from 2006 -2010) from Cleaning and gardening Depart. The total number of environmental cadre is 27000 cadres (environmental cadres who have been constituted) and the facilitator is reached 402 facilitators. There are 1942 households that implements 3R in Surabaya City Two units were established in 2010. There are 15 unit composts centre. Cleaning waste on the river/channel more intensive. |
| 2 | To reduce pollutant loads of industrial waste water with the following parameter by 2012: a. BOD =64 % b. COD =60% c. TSS = 56 % | Percentage reduction in pollutant loads in 2010 in following parameters: a. BOD = 54,64 % b. COD = 55,67 % c. TSS = 47,66% | <ul style="list-style-type: none"> Waste Water quality monitoring through sample taking and testing from 40 location Monitoring for business that throws their waste water to Kalimas river through water patrol twice per month |
| 3 | To increase an optimum function of green open space percentage all over the city area by 30,40 % of all an exist green open space area in 2012 | Percentage of an optimum green open space in 2010 is 16,13 % | <ul style="list-style-type: none"> 1 man 1 tree program Green and clean initiative program that held annually Mangrove plantation program in eastern coast of Surabaya Urban farming in limited sites of the city Development of many green parks and green lines all over the city every years Roof garden policy for vertical building |
| Comments / Additional Information | | | |
| The above data are prepared based on the Medium-Term Program Plan for years 2011 – 2015 | | | |

ENVIRONMENTAL COMMITMENT

Vision

By the year 2025, City of Surabaya aims to:

- Become an international trades and services city with a strong local character that is smart, clean, humane and ecology based.

Targets

To achieve the visions above, City of Surabaya committed to the realization of short and mid term goals such as:

- Reducing waste sent into landfill by 2% in 2012 and 5% in 2015 through intensification of waste segregation campaign, reducing waste in river, expanding house composting, and eco office program.
- Reducing industrial waste water pollutant with the following parameter by 2015:
 - a. BOD (Bio Oxygen Demand) =76 %
 - b. COD (Chemical Oxygen Demand) =70 %
 - c. TSS (Total Suspend Solid) =72 %
- Increasing green open space optimum function to 30,40% from entire green open space in the city in 2012 and to 51,88% in 2015.
- Increasing clean water service coverage to 88,8% in 2015
- Increasing slum area receiving housing service improvement to 480 hectares in 2015.
- Increasing mass transport headway (time gap between each passing vehicle) to 20 minutes in 2015.

Specific Actions / Measures

Intensification of campaign and socialization of waster segregation, reducing waste in river, expanding house composting, and eco office program **through cooperation with NGOs.**

- Promoting organic/food waste treatment by constructing 3 compost house facility with the capacity of 4 – 6 M³ per day. Currently (2010) there are already 15 units of compost house in Surabaya.
- Expanding clean water service coverage from 81,58% in 2011 to 88,8% in 2015.
- Provision of housing through construction of 12 Twin Blocks (1 Twin Block = 96 units) of simple flats for people with low income in 2015.
- 20 minutes mass transport headway could be achieved by gradual improvement of mass transport initiated by improving existing mass transport system through mass transport feeder rerouting, organizational reform, improving service etc.

External Assistance and Training

- Training to devise transport master plan/optimalization of bus service logistic route.

2. Environmental Commitments of Cities which Participated in the 2nd HLS ESC

(1) Cagayan de Oro (Philippines)

Vision

By year 2015 the City of Cagayan de Oro aspires to become:

A well developed city with a clean and green sustainable environment.

Targets

To achieve the above, the City of Cagayan de Oro is committed to achieve the following short and medium-term targets:

- By 2015, there will be a 50% decrease of air pollution in the city.
- By 2015, 15% of residual waste is disposed in the landfill (85% of waste are utilized).
- By 2015, the population would have adopted the "Zero Open Burning" policy.
- By 2015, Cagayan de Oro River would have passed the Class "A" standard of rivers.
- By 2015, the city government shall be able to impose 100% regulation over extraction of groundwater.
- By 2015, the city government will have established a city forest.

Specific Actions / Measures

- Establish a sanitary landfill.
- Municipal Solid Waste Collection Services
- Development of Divisoria Park
- Golden Mile Project
- Septage Management
- Data collection on air quality and monitoring
- Integrated Coastal Management
- Ground Water Pricing
- Strengthen Community-Based Forest Management Program
 - Minahang Bayan
 - Establishment of nurseries and seedbanks in upland barangays
 - Agro-Forestry
- Undertake reforestation especially in watershed areas.
- Riverbank rehabilitation

External Assistance and Training

- Technical study on the establishment of a sanitary landfill.
- Technical assistance for an in-depth geo-environmental hazard assessment and mapping of Metro Cagayan.

(2) Iloilo (Philippines)

Vision

A city of clean air and blue skies with a citizenry committed to sustain a balanced environment.

Targets

- Switch incandescent / fluorescent lamps to high pressure sodium lamps - increase the number of retrofitted streetlights from 10,000 to 12,000 by 2015. Avoidance of greenhouse gas emission to increase by no less 2000 kg per year by 2015.
- Enlist the involvement of hotels and hospitals in energy conservation. Avoid greenhouse gas emission by no less 500,000 kg per year by 2015.
- Enact anti-smoke belching ordinance by 2012. Improve air quality of central business district from poor to fair by 2015.
- Complete Clean Air Plan by end of 2011.

Specific Action Measures

- Lamp Retrofitting
 - Maintain coordination with the City Engineers Office
- Energy Conservation
 - Conduct of Energy Audit Training, end of May 2011
 - Maintain collaboration and feedbacking with hotels and hospitals, 2011-2015
- Anti-smoke belching
 - Public hearing on the new ordinance by 3rd quarter, 2011
 - New anti-smoke belching by first quarter of 2012
- Clean Air Plan
 - Strategic land use and transport plan completed by 3rd quarter 2011
 - Health Impact Analysis completed by 2nd Quarter, 2011
 - Emission Inventory completed by 4th Quarter, 2011-03-11
 - Study on Alternative Engines for Jeepneys completed by 2nd Quarter 2011

(3) Luang Prabang (Lao PDR)

Vision

The city of Luang Prabang will strive to maintain and enrich its status of the World Heritage Site and a world pristine tourist destination, while ensuring the town's cleanliness, greenery, and safety combined with an attempt to transfer the town into a national center for international cooperation, human development and economic activities based on service and agro-processing sectors.

The City is committed to achieve the following short and mid-term targets by 2015:

- Reduce the proportion of the poor households to 1%;
- Increase the access to safe water supply by households to 95%;
- Increase the supply of sanitary toilets to households and schools to 100%;
- Ensure the forest coverage area of 49.4%, an increase of 2.4%, by tree planting in the land area of 630 hectares;
- Improve the waste collection and disposal system by:
 - waste segregation,
 - upgrading storing containers,
 - rearrangement of public area collection points; and
 - improving the operation and maintenance of landfill sites.
- Improve the town basic infrastructure through:
 - resurfacing 95% of collector and distributor roads by DBST (double bitumen surface treatment) or concrete.
 - upgrading the existing urban drainage system and improving the natural water ways.
- Develop the town periphery in order to relieve the tension in the city center;
- Limit the development of hotels, guest houses and other hospitality facilities in the protected areas in line with the world heritage requirements;
- Ensure sound and adequate public campaign on environmental protection and people participation in the heritage protection;
- Improving the quality and teaching standards of existing educational and training centers;
- Maintain an active collaboration and partnership with local and international counterparts.

(4) North Kuching (Malaysia)

Vision

By year 2020, the City of Kuching North aspires to:

- Become an Eco-Friendly City which facilitates Sustainable Development.

Targets

To achieve the above, the City of Kuching North is committed to achieve the following short- and mid-term targets by:

- Reduce waste generation to 0.3 kg per capita per day by 2020. **(current – 0.6 kg/cap/day)**
- Achieving 22% recycle rate by 2020 **(current 16.5%)**
- Effectively treating both sullage and sewage before discharging them into the waterways by 2020.
- Enhance city green lungs by planting 100% more trees by 2015.
- Convert at least 80% of the city's green waste into compost for the municipality and public landscape works and gardening use by 2015.
- Build and operate 2 public parks/ gardens for the benefit of public appreciation towards the environment, flora and fauna by 2020.
- Enhance private-public awareness and commitments towards sustainable development.

Specific Actions / Measures

- Adoption of user-pay principle in waste management services provision by 2012.
- Promoting kitchen waste composting as a normal practice in 50% of households by 2020.
- Facilitating the recycling industry through creation of business by promoting them to the general public.
- Development of a compost centre for composting of in-house and community green waste from landscaping works by 2015.
- Installation and operation of a centralized sewage system for the city by 2014.
- Build and operate a Tree Bank facility that will produce 2.6 mill tree seedlings by 2015 for planting in the whole state of Sarawak.
- Plant at least 100,000 trees by year 2020.
- Converting floating green waste collected from the Sarawak River for internal use by 2015.
- Develop a comprehensive geographical information system (G.I.S) on land-use by 2015.
- Plan and propose development of a Botanical Garden that will showcase 2,500 species of local flora by 2020.
- Establish a Bird Park that will house 18 species of Sarawak Hornbill birds by 2015.
- Conduct 1 healthy setting project, 3 LA21 project and 6 *Kejiranan Mesra* (Friendly Neighbourhood) per year till 2015.

External Assistance and Training

- Funding for the home compost EM Bokashi project (USD300,000.00)
- Exposure and job attachments for municipal personnel in other cities which has implemented the relevant measures successfully.
- Technical assistance on G.I.S. inventoring for effective land-use.

(5) Phnom Penh (Cambodia)

Vision

Poverty Alleviation and Clean City

Targets

1. **Clean Land:** Step to Step, the city commits to achieve reduce amount of waste to be disposed at Landfill for 15% by 2015.
2. **Clean Water:** By 2015, the city commits to provide the water supply (Drinking water) for 80% compare to the existing area.
3. **Clean Air:** (on going to be implemented with GTZ)

Measures

- Public Awareness Raising on proper waste disposal.
- Conducting Penalty program in waste littering.
- Collecting the wet waste (organic) for composting and biogas.

Assistance Needed

- Technical and Financial support from National / International is needed.

(6) Shimla (India)

Vision

By year 2020, Shimla City aspires to:

- Become a green, clean and livable city providing a high quality of life to all its residents.
- Where waste is seen as a resource, citizens' mobility and healthcare needs are taken care of by efficient and comprehensive systems.
- Economically developed, socially progressive and environmentally sustainable city.

Targets

To achieve the above, Shimla City is committed to achieve the following short and mid-term targets by:

- Accountable and integrated solid waste management system by 2012
- Decrease waste generation by 20% by 2015
- Decrease the total carbon emission of the city by 10% by 2015
- Round the clock water supply by 2015 (24x7)
- Sewerage disposal and implementation of city sanitation plan by 2015
- Point source pollution emission reduction by 20% by 2020
- Congestion free city with by 2020
- Increase in green cover by 20% by 2020

Specific Actions / Measures

- Encouraging PPP in the field of solid waste management, city mobilization, city decongestion and monetary establishments by 2011
- Source segregation and scientific disposal of solid waste by 2011
- Awareness generation programmes for community and specific training programmes for the service accountable human resource by 2012
- Management of water resources and introduction of rain water harvesting schemes by 2012
- Urban transport routing and loading initiatives for the congested areas within the city by 2012
- Formation of a transparent and accountable work culture in close co-ordination with the local partners by 2012
- Controlled urban expansion and land use management by 2015

External Assistance and Training

- Shimla is JNNURM (MoUD, GoI programme) and ICLEI South Asian City
- Technical assistance for the preparation of city sanitation plan & solid waste management by GIZ-ASEM
- Technical assistance for the preparation of DPR for engineered landfill by M/s Voyants Solution Pvt. Ltd. Gurgaon, India
- Technical assistance for preparation of city mobility plan by Urban Mass Transit Company, New Delhi, India
- Training for municipal personnel in respective fields by state, national and international organizations

(7) Yangon (Myanmar)

Yangon Development Committee is striving Yangon City to be more green, clean and healthy city by the year 2033 collaboration with relevant government organizations, public and private institutions.

Vision

- To become better indicators of clean air, clean land and clean water in accordance with ASEAN criteria of Environmentally Friendly Cities.

Target to implement environmental improvement

To achieve successfully the above vision of Yangon City of Myanmar is committed to implement the following:

- To increase the public awareness on Municipal Solid Waste and other waste sectors.
- To formulate the strengthened Environmental Law and by Laws in every establishment of industries in the city.
- To decrease 10% of total waste generation rate by the year 2015.
- To increase the 25% of water supply capacity within five years.
- To decrease 10% of the emission of automobile by the year 2010.
- To foster and upgrade the recycling activities of waste sectors.
- To widen 20% of the road-side green areas within five years.

Action / Activities to meet proposed target

- To introduce separated waste collection programme for municipal solid waste in 2015.
- To establish the organic/food waste treatment digesters in 2020.
- To expand the water supply areas from 60% to 75% of household by the year 2020.
- To form capacity building and facilities for measurements of ambient air quality and water pollution in 2015.

External assistance

- Technology and funding to upgrade the transporting vehicles and equipments (dozers, loaders) in 2015 and also to provide technical training to enhance W T E technology to mitigate the emission from municipal solid waste in 2012
- Technology support to implement the water purification plant of 45 million gal/day

(end)