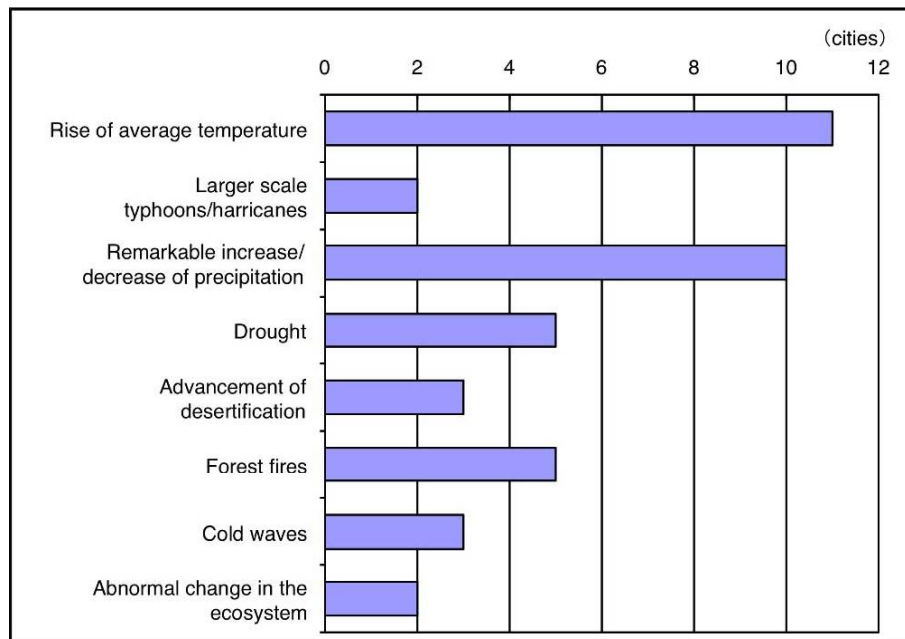


*(Multiple choices accepted)*

b. Understanding of abnormal climatic conditions

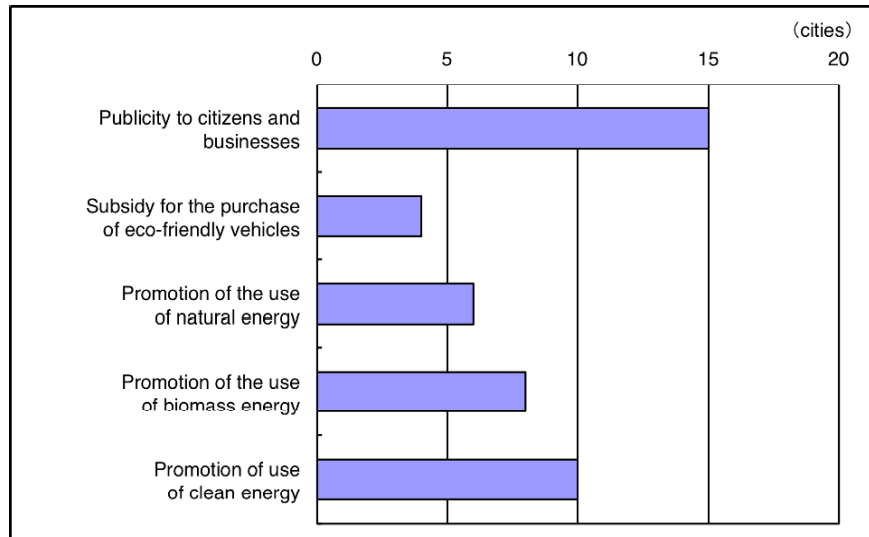
About ten cities chose “rise of average temperature” and “remarkable increase or decrease of precipitation” as indications that abnormal climatic conditions are occurring.



*(Multiple choices accepted)*

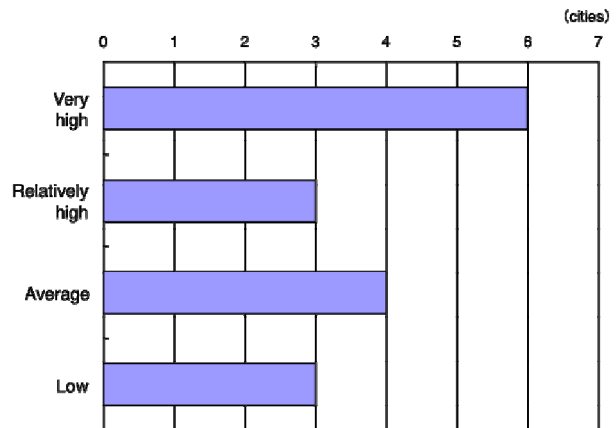
c. Projects to counteract global warming

Most member cities are educating residents about global warming, and more than half of the cities that responded to the questionnaire are promoting the use of clean energy and biomass.



d. Awareness of global warming among city dwellers

In some cities, an awareness of global warming issues among local residents is very high, and they cooperate with city initiatives. However, this is not the case in other cities, which struggle to obtain an understanding of issues and the cooperation of residents. Awareness and cooperation vary from city to city.



**Agenda 2. Future management of the Subcommittee**

The Subcommittee agreed to make “global-scale environmental issues” the theme of its study. Participants agreed with the plan that the first two years would be devoted to encouraging member cities to come to a “common understanding of environmental issues.” During this period the subcommittee will collect information about measures that member cities are utilizing to solve environmental issues and, in particular, the successful cases of cities with advanced environmental policies. Participants also agreed to create the web site of the Subcommittee for information dissemination.

## **Agenda 3. Reports from the member cities**

### **1. Nuuk: “Environmental Measures in Nuuk”**

#### **(1) Background**

Based on a variety of research, environmental issues have been identified, visions created, and action plans written. To make plans practical for the municipality, the city government asked Nuuk residents for their opinions, believing that by soliciting their opinions, the residents would pay more attention to and think about environmental concerns.

#### **(2) Environmental Measures**

The municipality of Nuuk hopes to be a leading environmental actor in Greenland, with the expectation that Nuuk’s efforts will benefit the inhabitants of the city as well as the global environment.

The city’s environmental policy is to reduce and eventually prevent environmental pollution within the scope of economic feasibility, to keep updated action plans for the environment, waste, and wastewater, and to reduce consumption of resources in the daily work of the municipality under the environmental management system.

Energy and water supplies are managed not by the city of Nuuk but by other organizations; however, the city understands the importance of resource management and plans to pursue further studies on this issue. To counteract concerns regarding wastewater in Nuuk, the construction of a new sewage system is underway.

### **2. Anchorage: “A Model City for Sound Environmental Practices”**

#### **(1) Global Warming and Its Impact**

Scientists have produced hard data that show the dramatic impact of global warming on Alaska. A large area of Alaska has melted since 1979, and as a result sea ice is 40 percent thinner and glaciers are rapidly receding. An impact on wildlife has also been reported.

In addition, reduced snowfall has changed the ecology here as well as the daily life of native people of Alaska.

#### **(2) Global Warming Countermeasures**

In June 2006, the mayors of Seattle and Anchorage met and agreed to join a national effort to reduce greenhouse gas emissions, which contribute to global warming.

One of the most visible initiatives to reduce energy consumption and become more environmentally friendly is the new convention center under construction in Anchorage. The center will be a state-of-the-art model of energy efficiency with innovative heating, ventilation, and air conditioning systems, and with computerized controls. Another initiative is the installation of a methane gas collection systems at the landfill, which is expected to help generate electricity. Anchorage is in the process of erecting wind turbines to generate electricity, and it is formulating a city ordinance that calls for energy efficiency in public buildings.

Anchorage also has a new initiative to encourage recycling among city employees. Each floor of the city hall contains recycling bins for white paper, newspapers, plastic bottles, and cans; the products are collected weekly and recycled.

### **3. Taebaek: “Environmental Issues in a Highland Resort Town”**

#### **(1) Environmental Measures**

Taebaek is in the process of transformation from a coal mining town to a center of tourism, leisure, and sports because of a decrease in coal production.

In the past there were serious issues such as air pollution caused by dust from the coal mines, and polluted water in contaminated streams. Waste treatment was also a big concern. At present, the city enjoys better environmental conditions because a large number of the mines have been closed; water quality has been improved with the installation of sewage treatment facilities; and a volume-rate waste treatment system has been established.

Because of increases in the price of oil, an increase in coal consumption has occurred along with a recognition of the need to conserve energy. Also, the city has been working toward promoting energy conservation by establishing three “daily mottos” and six “practical mottos.” In addition, the city has been developing wind farms to generate electricity as a renewable source of energy.

#### **(2) Challenges and Future Directions**

Taebaek’s environmental directions include a study on how to purify mine water, how to manage closed coal-mine facilities, how to utilize biomass fuel, and how to remove snow with care for the environment. Taebaek is keen to learn from the experiences of WWCAM member cities.

Taebaek hopes to build its highland as a leisure and sports hub in the future by introducing next-generation energy, by planning an environment-friendly garden city and an “atmosphere + water + ground” purification system, and by controlling development.

## **4. Second Subcommittee Meeting**

< July 26, 2007; Sapporo, Japan >

Participants: Prince George (Canada); Changchun, Harbin, Qiqihar and Shenyang (China); Maardu (Estonia); Nuuk (Greenland); Aomori and Sapporo (Japan); Taebaek (Korea); Tromsø (Norway); Anchorage (U.S.A.)

### **Agenda 1. In preparation for the interim report to be submitted at the 13th Conference**

The work schedule agreed to at the previous meeting was reconfirmed. The participants agreed that replies to the first and second questionnaires about environmental issues and countermeasures against global warming would be compiled for presentation at the 13th WWCAM Conference. Further cooperation of member cities was solicited for additional investigation.

### **Agenda 2. The results of the second questionnaire survey**

All the respondents to the second questionnaire survey have been conducting measures to curtail global warming, which indicates that the planning of countermeasures by local governments has been progressing. Most of the plans specify quantitative goals for reducing greenhouse gases such as carbon dioxide.

Some practical activities carried out by member cities are related to energy conservation and new energy (recyclable energy), as well as reduction of CO<sub>2</sub> from vehicles. Environmental education for residents and collaboration with private businesses were also mentioned in the questionnaire replies.

# (1) Planning of global warming countermeasures and quantitative goals

Planning of global warming countermeasures and goals at national and local government levels was investigated.

At the national level, Greenland, Norway and Japan have plans and targets for reducing greenhouse gas emissions.

Country	Greenhouse gas reduction target (2008 – 2012)	
Greenland	8% from 1990 levels	Bound by the Kyoto Protocol
Norway	10% from 1990 levels	
Japan	6% from 1990 levels	

At the local government level, six out of eight cities that responded to the questionnaire have plans for reducing greenhouse gas emissions, and goals have been set in most of the plans.

City	Plan	Reduction target to be achieved
Anchorage	Renewable Resource Program	7% from 1990 levels by 2012
Prince George	Energy and Greenhouse Gas Management Plan	2% from 2002 levels by 2020 Corporate operations (under municipal control): 10%
Nuuk	Environmental Plan	Larger combustion plant will be installed by 2012
Ulaanbaatar	Air Pollution Master Plan	
Aomori	Global Warming Countermeasures Action Plan	4.12% from 1999 levels by the period 2000 - 2004 (new plan being drawn)
Sapporo	Global Warming Countermeasures Promotion Plan	6% from 1990 levels by 2010 < 10% by 2017 >

# (2) Background of implementing global warming countermeasures

## Anchorage, U.S.A.

Within the last few years, the impact of climate change on south-central Alaska has been very serious.

- millions of acres of forest were lost
- insect infestation and rapidly retreating glaciers

#### Aomori, Japan

Further reduce environmental load and control greenhouse gas emissions.  
Realize a sustainable, resource-circulation-type of society, “city of environment,” making good use of green forest and blue sea – which provides a low environmental load now and in the future.

#### Nuuk, Greenland

Intend to improve waste disposal and combustion opportunities in the capital city  
Raise awareness among early settlers of the necessity of better waste disposal

#### Sapporo, Japan

Reduce CO<sub>2</sub> emissions while encouraging each individual citizen to act in an environmentally friendly way, with a goal of creating an “eco-city that citizens can show to the world with pride.”

#### Ulaanbaatar, Mongolia

Estimated national CO<sub>2</sub> emissions in 1995 was roughly 6.6 tons per capita.  
Mongolia may experience a three-fold increase in energy demand by the year 2020.  
Coal consumed for heating and 86,000 vehicles are causing air pollution.

#### Prince George, Canada

The city was invited to join Partners for Climate Protection Program, which supports local governments in their efforts to reduce greenhouse gas emissions.

### (3) Specific cases to counteract global warming

#### Anchorage, U.S.A.

A new system was introduced to put the municipal computer monitors “to sleep” when not in use, saving more than \$80,000 a year and reducing emissions by more than 1,200 tons.  
In 2006 the Renewable Resources Program created the Sustainable Buildings Working Group, which brought together architects, general contractors, interior designers, and energy experts to promote the development of sustainable or green buildings.  
The group will work to develop a municipal ordinance setting standards for sustainable building design.

#### Aomori, Japan

Promotion of use of low emission vehicles  
The city has designated the second and fourth Friday of every month as “no-my-car day.”  
On these days, city employees who usually commute by car or motorcycle are encouraged to use public transportation or bicycle or to walk to work.  
Introduction of new types of energy and energy-saving equipment and facilities promoted  
Aomori Global Warming Countermeasures Action Plan formulated (March 2001)  
Recycling used chopsticks

#### Sapporo, Japan

Systematic implementation of CO<sub>2</sub> reduction promotion plans  
Education regarding global warming promoted in schools  
Advisors sent to support pro-environmental actions of businesses  
Solar panels installed at elementary schools in the city  
Idling-stop campaign

#### Shenyang, China

Expansion of the city's greenery  
Promotion of energy-efficient housing  
Plans to transform crop stalks to fuel in the farmland  
Utilization of geothermal pumps – nation's pioneer plan

#### Prince George, Canada

Beneficial use of digester gas at the city's wastewater treatment center  
Reduction of vehicle fleet emissions through the two programs:

- Anti-idling campaign
- Switching to a bio-diesel blended fuel mix for official vehicles (5% mixture in winter, and 20% in summer)

Energy reduction and audit programs

- City streetlight dimming project
- Conversion of traffic and Christmas lights to LED technology

#### Tromsø, Norway

Methane catching from waste depots  
Reduction of private car use  
Use of bio-fuel and LNG for transport  
Waste incineration will be ready by 2010, and district heating established by 2015.

#### Ulaanbaatar, Mongolia

Improved household stove project (2001 – 2007)

- Improvement of household stoves with low-energy efficiency
- Designing and introduction of energy-efficient stoves to the local market and creation of market demand
- Goal of the project: reduction of coal and wood consumption and CO<sub>2</sub> emissions

(4) Education of residents and collaboration with private businesses and community groups

#### Anchorage, U.S.A.

As part of the Renewable Resources Program of Anchorage, the mayor and city employees have participated in many efforts.

- Created the City Hall Green Star program to bring municipal employees together to share and implement ideas
- Cosponsored the Anchorage Business Climate Roundtable (February 2007) to highlight business efforts to reduce emissions

- Organized a public forum (February 2007) on reasonable, concrete, individual, and business actions to reduce emissions
- Spoke to the Alaska Wilderness Recreation and Tourism Association annual meeting on the economic benefits of tackling global warming

#### Prince George, Canada

Increase community awareness of water conservation

- Distributing information pamphlets to residential areas
  - Visiting schools and hosting children's activities related to water conservation
- Public engagement in the context of the Integrated Community Sustainability Plan will be developed next.

The city has had an anti-idling campaign for two years, which some businesses have joined.

An Energy and Greenhouse Gas Management Plan was recently completed.

Public involvement in an Integrated Community Sustainability Plan is next.

Opportunities for individuals, neighborhoods, businesses, First Nations, not-for-profits, academic institutions, health agencies, and cultural organizations to participate in sustainability initiatives will be identified and promoted.

#### Tromsø, Norway

In cooperation with volunteer actors, the city carries out activities to educate its population to behave in a more environmentally friendly way.

- reduction of waste quantity
- reduction and recycling
- use of public transportation, and walking and biking

#### Ulaanbaatar, Mongolia

Enroll private businesses in an awareness-raising education campaign and involve citizens in the campaign's activities

Disseminate information on global warming to citizens in order to increase awareness

Contribute to the improvement of global warming situation with enhanced cooperation from the business sector

### Agenda 3. Reports from member cities

#### 1. Anchorage: "Tackling Global Warming at the Local Level"

##### (1) Impact of the Global Environment in Alaska

The impact of the global warming in Alaska has been much larger than in any other area in the world. One example is that glaciers are rapidly receding. Because of the frequency of storms, some villages are at risk of submersion. Wildlife is threatened, and the listing of the polar bear as an endangered species is under consideration. Cultural and traditional activities such as dog-sled racing are disrupted by the environmental changes.

##### (2) Initiatives by the city of Anchorage

Anchorage has been acting to reduce greenhouse gas emissions and focusing particularly on energy-related policies. An energy audit of the city hall is underway, which will result in a retrofit project estimated to save the city over \$100,000 a year. Installation of a methane gas



collection system at the city landfill is also underway, and when completed, the gas will provide enough electricity to power 2,500 homes for 40 years.

The recycling program has been intensified, and a promotion team consisting of city staff has been established. As a result, the city has been awarded a “Green Star.”

Without a statewide global warming policy, local leaders have been working to reduce greenhouse gas emissions. Thirty-five mayors in the U.S., including mayors in Alaska, have convened to share information on global warming and successful environmental policies.

## **2. Prince George: “Energy and Greenhouse Gas (GHG) Management Plan”**

### **(1) Management Plan**

Local governments in Canada have voluntarily committed to a GHG management plan, and 149 communities across Canada currently participate in the Partners for Climate Protection (PCP) program, which defines goals at the local level to achieve GHG reductions.

The municipality of Prince George will work together with communities to reduce energy consumption and GHG emissions. Co-benefits of GHG reductions include air quality improvement, energy efficiency, and reduced energy expenses.

If the current CO<sub>2</sub> emission level continues, the total amount of CO<sub>2</sub> will be 1.35 million tons by 2012. However, under the GHG management plan, the total amount of CO<sub>2</sub> will be 1.21 million tons.



### **(2) City Action Plan**

Under the Action Plan, the municipality created a Community Energy System that includes an energy reduction plan in civic facilities, the use of bio-based fuels, and the conversion of conventional traffic lights to LEDs. The effects of the pine beetle epidemic have prompted proactive measures. The City Council has engaged new partnerships to examine bio-energy, and city parks that have been affected by the mountain pine beetle are being replanted.

Water conservation is another challenge that the municipality is dealing with. However, as the city has an abundant water source, it is difficult to have citizens understand how water consumption is related to environmental measures.

## **3. Maardu: “Environmental Policies in Maardu”**

### **(1) Government-Level Plans to Curtail Global Warming**

In Estonia, there is a national program that has as its aim to curtail global warming. Plans to build a park of wind power generators and to renovate existing hydro power stations are already under way, for example. In addition, the large-scale introduction of new technologies has taken place in the energy-related industries; for example, related technology for burning combustible shale in a circulating fluidized bed (CFB) has been established at shale-oil thermal power plants.

### **(2) Initiatives by the Town of Maardu**

In the near future, Maardu plans to develop a program to counter global warming in

accordance with the requirements of the EU. At present, the Maardu municipal government plans, within the framework of “Maardu Agenda-21,” to determine existing emissions and to draw up a balance of emissions of CO<sub>2</sub>, other greenhouse gases, dust, and other contaminants in the town of Maardu that originate from a thermal power plant, a quarry, and sewage treatment plants.

The major issue concerning environmental protection in the town of Maardu is air pollution, and an integrated system of monitoring air pollution will have to be organized. Main sources of environmental risks in the region are the seaport, the railway, the flow of traffic on the highway, the thermal power plant, and the territories of the former industrial complex.

#### **4. Sapporo: “Countermeasures Against Threats to the Global Environment”**

##### **(1) Countermeasures Against Air Pollution**

Smoke and dust caused by the use of coal for heating was a serious issue in Sapporo in the 1960s. In the 1980s, studded tires were used to provide drivers with a grip on winter roads, and these tires ground up the road pavement and created a dust that polluted city air. However, problems with smoke and dust were solved thanks to the promotion of use of smokeless fuels and the enforcement of the “Sapporo Smoke and Dust Prevention Ordinance” and the “Ordinance on the Control of Use of Studded Tires.”

##### **(2) Countermeasures Against Global Warming**

The municipality has been taking diversified approaches, including energy conservation and vehicle-related measures, environmental protection, ISO 14001 certification, and promotion of environmental issues among residents and businesses. Since approximately 60 percent of the total CO<sub>2</sub> emission in Sapporo originates from households and offices, efforts among residents to curtail CO<sub>2</sub> emission are a very important contribution to protection of the environment.

“Eco-Life 100,000 Persons” promotion campaign was carried out from 2004 to 2007 with the purpose of encouraging residents to understand “eco-life” and commit to an eco-friendly lifestyle. At the end of March 2007 about 125,000 citizens had made commitments. Another initiative of the city against global warming includes the installation of 10kW-power solar panels at six elementary schools in the city.

#### **5. 13th World Winter Cities Conference for Mayors**

< January 18 – 20, 2008; Nuuk, Greenland >

Participants: Changchun, Harbin, Jiamusi, Jixi, Shenyang (China); Nuuk (Greenland); Sapporo (Japan); Taebaek (Korea); Kaunas (Lithuania); Tromsø (Norway); Anchorage (U.S.A.)

The Subcommittee on Winter Environmental Issues presented an interim report of the Subcommittee activities at the Mayors Conference. On the last day of the conference, the WWCAM approved the Nuuk Declaration, which includes a recognition of “the duty that winter cities where the impact of global warming is most visible have to take a leading role in global society.”



## **Nuuk Declaration 2008**

There is little dispute that global climate change is one of the most serious threats to the world's people. Scientists across the globe have documented that climate change is rapidly increasing, due largely to activities by industrialized society. According to a report published by the Intergovernmental Panel on Climate Change (IPCC) in November of 2007, if the amount of greenhouse gases emitted globally continues to increase over the next 20 to 30 years, one can predict as a result that warming in the 21st century will occur on a scale greater than that which occurred during the 20th century.

Communities of the North, especially those in the Arctic and Greenland, find themselves on "ground zero" of the effects of global climate change. The increase in temperatures during the winter season is having a significant impact on the daily life and traditional cultures of people of the North. As members of the World Winter Cities Association for Mayors and officials of the local governments created by and for these residents, we recognize our collective obligation to send a global message underscoring the severity of global warming.

Sharing the climatic characteristics of cold weather and heavy snowfalls, winter cities consume a great deal of energy for winter heating, snow removal, and snow disposal. Given our contribution to increasing CO<sub>2</sub> and other greenhouse gas emissions, we winter cities must recognize the inconsistency evident as we ourselves contribute to global warming. We participant cities recognize the duty that winter cities have to take a leading role in global society. Therefore, we hereby pledge to utilize the collective wisdom of the World Winter Cities Association for Mayors to make every effort to tackle the problem of global warming.

On the international level, considerations of a "post-Kyoto Protocol" framework for implementation starting in 2013 dominated discussions at the December 2007 session of the Conference of Parties to the United Nations Framework Convention on Climate Change (COP13), and the issues of climate change and the environment are planned as main themes for the 2008 G8 Hokkaido Toyako Summit. In our position as local government bodies, we pledge to maintain an active awareness of movements on the national level and make every effort to realize the following objectives as we strive to take a leading role in global society:

1. Work towards establishing a Member City framework for global warming countermeasures (goals for reduced CO<sub>2</sub> and other greenhouse gas emissions, etc.) based on the precedents set by advanced member cities.
2. Take the initiative as winter city governmental bodies to pursue measures for energy conservation and environmental conservation, and actively embrace our guiding role by urging and encouraging local residents in their actions and measures.
3. Lessen our reliance on fossil fuels by actively pursuing the use of such renewable energy sources as biomass and natural energy.
4. Work to expand the network of winter cities engaged in dealing with global environmental issues by having Member Cities share information regarding countermeasures for global warming with other cities in their region.
5. Monitor the advancements made with regard to the aforementioned points through the current Subcommittee on Winter Cities Environmental Issues and the Subcommittee planned for establishment based on the proposal made by the city of Anchorage.

## 6. Third Subcommittee Meeting

< August 21, 2008; Prince George, Canada >

Participants: Prince George (Canada); Changchun, Harbin, Shenyang (China); Maardu (Estonia); Nuuk (Greenland); Sapporo (Japan); Hwacheon and Taebaek (Korea); Ulanbaatar (Mongolia); Tromsø (Norway); and Anchorage (U.S.A.)

### **Agenda 1. Subcommittee Background and Its Activities**

The secretariat made a briefing on the background of founding the subcommittee and the activities it has carried out until this time.

### **Agenda 2. Presentation by the city of Sapporo based on the survey Sapporo: “Countermeasures Against Threats to the Global Environment”**

#### **(1) A Charter for Citizen Enlightenment Regarding Global Environmental Issues**

The city of Sapporo made a declaration in June 2008 which set a goal to make the city an “Eco-Capital.”

The Sapporo Eco-Capital Declaration consists of the Sapporo Global Environment Charter and the Sapporo Action to Protect the Earth. The Charter outlines ideals for civic action and city government in order to protect the global environment. The Sapporo Action to Protect the Earth, also known as the Sapporo Eco-Citizen 26 Pledges, describes specific action to be taken by citizens in relation to each article in the Charter, and aims to help foster citizen awareness of environmental issues and to encourage environmentally friendly living habits.

#### **(2) Citizen Education Programs**

The city hosted the Children’s World Summit for the Environment in Sapporo in June 2008 with the participation of schoolchildren from 11 countries, including the U.S. and Germany, as well as the host country, Japan. The young participants carefully considered current global environmental issues and exchanged ideas and opinions. As an outcome of their discussions, the children created a message for the world indicating their determination to act to mitigate global warming.

Sapporo also implemented a variety of educational programs such as the Sapporo Eco-Citizen Movement, in which Sapporo citizens can report their environmentally friendly actions by submitting an “Eco-Life Report” form, and the Sapporo Candle Night Campaign, in which buildings, offices, etc. are encouraged to turn off lighting on the day of the summer solstice.

#### **(3) Efforts and Measures to Reduce Air, Noise, and Water Pollution**

As measures to control air pollution, measurement and monitoring of gas concentrations (e.g., sulfur dioxide, nitrogen dioxide, etc.) are conducted in residential areas and spots along trunk roads within the city. The city conducts on-site inspections regularly, even if there are no abnormal values detected, and provides thorough instructions for air quality control.

Environmental standards for noise and vibration are set depending on zones (e.g., residential, commercial, etc.). Noise measurements are conducted to see if the values meet the standards.

To prevent soil and groundwater pollution, groundwater quality is monitored on a constant basis. Once soil/groundwater pollution is detected, the spread of pollutants is identified and guidance is given to groundwater users. In addition, monthly monitoring of water quality is conducted in major rivers in the city. As the result of pollution control efforts in cooperation with the citizens, water contamination in the Toyohira River, which runs through the center of Sapporo, has been greatly improved and salmon once again swim up the river.

### Agenda 3. Results of the Third Questionnaire Survey

Studies of global warming countermeasures have been a major concern of the Subcommittee on Winter Environmental Issues. However, survey results reveal that member cities have been active in implementing various initiatives for other environmental goals.

The member cities' use of clean energy and the reduction of exhaust fumes from vehicles are measures to counteract air pollution, and these measures are, of course, effective as global warming countermeasures as well. As a consequence, these activities and measures interrelatedly contribute to solving global warming.

#### (1) Standards for citizen enlightenment regarding global environmental issues

Information was collected regarding whether member cities have formulated standards and/or a charter or not.

Cities that have formulated	Changchun, Harbin, Shenyang, Novosibirsk, Nuuk, Sapporo, Tromsø
Cities that plan to formulate in the near future	Anchorage, Hwacheon, Maardu, Prince George
Cities with no plans to do so at the moment	Aomori, Taebaek

#### (2) Citizen education programs and collaboration with private businesses and citizens' groups

Information was collected regarding citizen education programs and collaboration with private businesses and citizens' groups.

##### Aomori (Japan)

“Plastic shopping bag reduction: ‘ECORU’ Agreement”

- Objectives: to reduce waste; to stop global warming; and to realize a resource-circulation-type sustainable society
- Activities carried out by businesses: to set goals for the number of shoppers bringing their own shopping bags
- Aomori Citizens Meeting on Waste Reduction encouraged citizens to reduce plastic shopping bags and bring their own.

- City government sent staff to give lectures and to provide certificates to the goal-achieving businesses.
- Businesses that signed the agreement: five (14 shops) as of June 2008

#### Anchorage (U.S.A.)

Created a new recycling program in the community, including recycling in schools, public education campaigns  
 Co-sponsored Alaska Youth for Environmental Action's "Plastics Awareness Week"  
 Pursued a 'demand reduction' program for utility customers to reduce their household electricity use.  
 Is working with electric utilities to combine generation facilities

#### Changchun (China)

Green School Program  
 - To improve awareness of environmental protection among school faculties and students

#### Harbin (China)

Green Decoration Assembly  
 - Exhibition and promotion of environmental activities  
 - More than 400 exhibitors

#### Hwacheon (Korea)

New Hwacheon City Planning: Environment Campaign  
 - Cleaning of the city by neighborhood groups (First Friday, each month)  
 - Public Service LOHAS Certification  
 Public service: LOHAS (Lifestyles Of Health And Sustainability)  
 - LOHAS certificate awarded to products and services  
 - Development of sustainable sightseeing spots  
 - Fostering environmentally friendly agriculture, etc.

#### Maardu (Estonia)

Estonian Labour Day (May 3)  
 - Cleaning territories of waste and pollution  
 - Theoretical education of citizens groups under the direction of highly trained specialists

#### Novosibirsk (Russia)

Educational campaigns to form young generations' ecological knowledge  
 - Earth Day, etc.  
 Programs arranged by public organizations and social councils  
 (participated in by more than 60,000 citizens)  
 - Contests, roundtables, workshops and conferences  
 - Long-term environmental education  
 Water-protective measures . . . Cleaning of landlocked bodies of water  
 Implementation of ecological activities  
 - 20 ecological units of 617 persons: city's ten districts

#### Prince George (Canada)

Air quality program  
Woodstove exchange; Anti-idling program; Bylaw updates  
Greenhouse Gas and Energy Management Plan – approved in August 2007  
Reduce city's, corporation's, community's GHG emissions  
Energy use reduction programs in partnership with BC Hydro  
- Energy Manager (Community & Civic Facility)  
- Turn-it-Off Campaigns  
Increased public transit programs  
*Smart Growth on the Ground* program  
(toward realizing a comfortable living environment in downtown)  
Beginning an Integrated Community Sustainability Planning process

#### Shenyang (China)

Forming a data base on energy saving and reduction of CO<sub>2</sub> emissions  
Monitoring of energy consumption in relation to civic life  
Conducting promotional and volunteering activities with citizen groups

#### Taebaek (Korea)

“Car-Free Roads”  
- Hands-on events and education on global warming  
“World Water Day”  
- Publicity to citizens about water shortages and importance of water in Korea

#### Tromsø (Norway)

“Eco-Lighthouse” program  
- Environmental behavior certification for public and private offices and institutes, minor industries, shops, schools, etc.

### (3) Efforts and measures to reduce air, noise, and water pollution

Besides global warming countermeasures, questions were asked about whether member cities conducted case studies regarding air, noise, and water pollution.

#### Anchorage (U.S.A.)

Upgrading Anchorage streetlights to higher-efficiency LED fixtures  
Replacing aging electricity generators with higher efficiency plants  
Establishing a sustainable building policy for public and private construction  
Calling for enhanced public transportation service

#### Changchun (China)

Measures to improve air pollution  
- The city issued eight municipal notices to control air pollution.  
- To reduce dust and smoke, 327 abandoned chimneys were clamped and 3,000 unqualified boilers banned in the past five years.  
- 24km<sup>2</sup> of integrated heating system installed

- 100 thousand households of new natural gas users developed
- Zero coal-burning zone designated
- National Environment Demonstration Award granted (2005)

Measures to reduce water pollution

- 4 wastewater treatment plants built (daily capacity: 20 to 390 thousand tons)
- On-site monitors equipped at 52 key pollution sources (2008)

Measures to reduce noise pollution

- Minimizing road noise, working with traffic policemen (partly to help students prepare for their academic tests)

#### Harbin (China)

Measures to improve air pollution

- Transition to clean energy; installation of dust-removing equipment; compilation of sulfur dioxide reduction plan (target: private enterprises); project to reduce CO<sub>2</sub> emission from vehicles

Measures to reduce water pollution

- Construction of wastewater treatment plants; strengthening control of sources of drinking water; improved control of sources of pollution

Measures to reduce noise pollution

- Minimizing traffic noise by means of building a subway system and introduction of low-noise vehicles, etc.
- Monitoring sources of annoying noises, and efforts for minimization

#### Hwacheon (Korea)

Establishment of environment monitoring network and its management

Establishment of environment monitoring partnership with citizen participation

Guidance to the businesses discharging pollutants and education of employees

Compensation system by self-assessment when violating waste-disposal-related regulations

Fostering of eco-friendly agriculture

Establishment of man-made isles of waterweed

Developing roads for automobiles

#### Novosibirsk (Russia)

Improvement of the quality of atmospheric environment

- Conversion to gas fuel, installation of gas service for private houses; Adoption of modern technologies; Installation of antipollution equipment; Urban greening and environmental amenities

Water conservation measures

- Circulating water supply system introduced at the industrial enterprises

Water-protective measures

- Installation of sewerage system for use at households and for disasters; clearing of reservoir beds and water conservation zones

#### Maardu (Estonia)

Installation of new filters for heating networks and energy units

Transition of heating electrical stations from crude oil to gas



Reduction of polluting emissions into the atmosphere  
Control over automobile exhaust gases by means of technical checkup for cars

#### Shenyang (China)

Measures to improve air pollution

- Implementation of project “from dispersion to concentration”

Installation of integrated heating system

- Installation of geothermal heating system

Project to develop and promote use of coal seam gas

Measures to reduce water pollution

- Construction of wastewater treatment plants

- Treatment of river sewage, tree planting and control of source of pollution

- Strengthening control of heavily polluting enterprises (closing or suspension)

Measures to reduce noise pollution

- Strengthened application based on the Shenyang Environment and Noise Pollution Prevention Ordinance (enacted in February 2007)

#### Taebaek (Korea)

Measures to improve water quality

- Water pollution prevention

Integrated monitoring room set up; precaution for air pollution and establishment of report system; patrol for prevention (17 water quality measurement locations); pollution prevention guidance to enterprises and inspection

- Management of sources of high risk pollution

On-site management of river construction (prevention of and recovery from flooding); guidance to and control of businesses with pollution risk

Measures to reduce air pollution

- Information dissemination, inspection and guidance to the businesses

#### Tromsø (Norway)

Measures to improve air quality

- Program for reducing use of spiked tires; development of low-polluted zones in the city centre

Measures to improve water quality

- Program for removing PCB, PAH, TBT and heavy metals

#### Prince George (Canada)

Improvement of asphalt plant regulations, working with provincial government

Improvement of gravel pit operations to reduce noise and pollution

Mayor’s Task Force on Air Quality

Prince George Air Improvement Roundtable Society

- Tasked with recommendations from Mayor’s Task Force report; Anti-idle campaign;

Woodstove exchange program

Groundwater Protection program

Storm Water Management Plan and in-line treatment systems

#### **Agenda 4. Future work plan**

During the first two years, the Subcommittee focused its efforts on collecting reports on experiences of member cities regarding the environmental issues in order to have common understanding and perspective among the member cities. To implement concrete action in the second two-year-period, the Secretariat proposed to conduct campaigns that all members would participate in, and this was unanimously agreed to by member cities.

#### **Agenda 5. Presentations by the member cities**

##### **Prince George: “Smart Growth on the Ground” and “Turn It Off Campaign”**

###### **(1) Smart Growth on the Ground**

Smart Growth is an international concept where communities share concerns about current development patterns that are dominated by so-called *sprawl*. We can leave a positive legacy for future generations by building our neighborhoods and cities according to the Smart Growth principles.

The city of Prince George joined the Smart Growth on the Ground program in the fall of 2007 and started implementing the program through community education.

###### **(2) Turn it Off Campaign**

The first step in energy conservation is to have people take notice. This takes advertising and community support. The “Turn It Off Campaign” coordinates the turning off of public facility lights non-essential purposes, coupled with a media campaign to raise public awareness on why the lights are turned off. The city of Prince George turns off the very significant and noticeable lights on the large trees in front of City Hall during the city’s involvement in these awareness campaigns.



*Third Subcommittee meeting*

### **7. Fourth Subcommittee Meeting**

< August 20, 2009; Tromsø, Norway >

Participants: Changchun, Harbin, Shenyang (China); Maardu (Estonia); Sapporo (Japan);  
Hwacheon and Taebaek (Korea); Tromsø (Norway); Anchorage (U.S.A.)

#### **Agenda 1. Report on the First Common Campaign**

Period: February 1 to 28, 2009

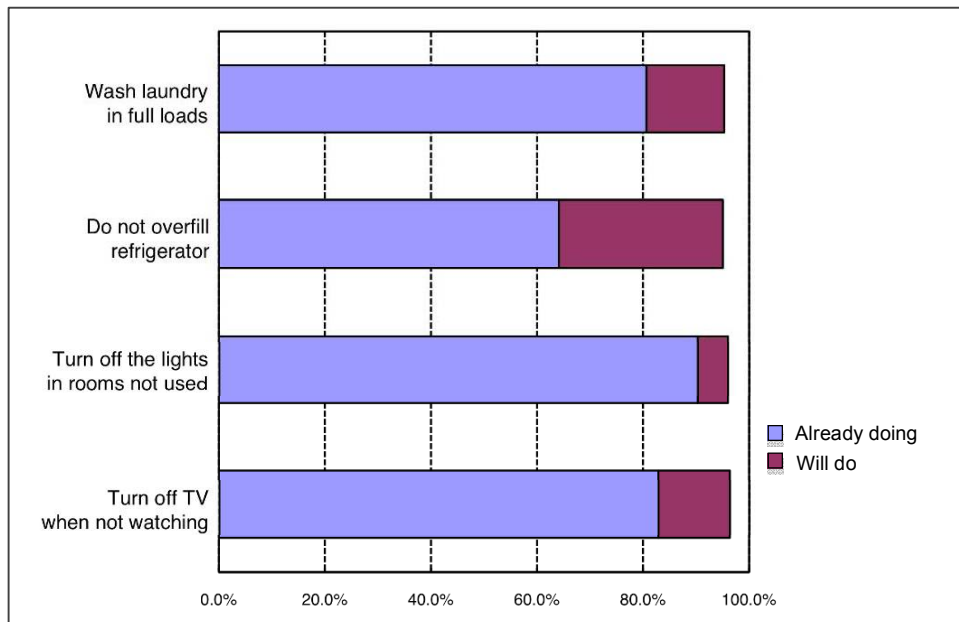
Participants: Seven cities (Nuuk, Maardu, Harbin, Qiqihar, Taebaek, Hwacheon, Sapporo)  
Two cities (Aomori & Prince George) donated gifts.

*Theme:* Let’s save the earth by saving electricity!

*Outline:* In each participating member city, publicity materials, posters, fliers and other material were used to encourage citizens to help the planet by saving electricity at homes, workplaces, and schools.

Also, on the back of the fliers was a survey about saving energy for citizens to fill out. From among the answered surveys, some were selected by lottery, and the winners won gifts from the member cities.

Harbin reported that it hung posters and handed out pamphlets in the City Hall and shopping malls. In Nuuk, their activities were mentioned in the local newspaper.



*Campaign activities in Hwacheon, Korea*



*Information distribution in Sapporo, Japan*



**世界冬の都市市長会共通キャンペーン**  
**節電で地球を救おう!!**  
 ～ 家庭・職場・学校で節電に取り組みましょう! ～

● 節電に関するアンケート  
 以下の4項目について、A.あなたが目標通り減っていること及びB.今後取り組みたいと思うことをチェックしてください。選んだ項目を一番下の提出用紙にも記入し、切り取って提出してください。

アンケート項目	CO2削減量 (1年間)	チェック欄	
		A. 既に減り 始めている	B. 今後取り 組みたい
① テレビを見ていないときは消している	15.3 kg		
② 使っていない部屋のあかりは消している	9.5 kg		
③ 冷蔵庫の中に食品を詰めすぎない(7割以内)	21.0 kg		
④ 洗濯はまとめて洗いをする	11.2 kg		

・アンケートを提出いただいた方から、抽選で海外の会員都市からのプレゼントを贈呈いたします。  
 ・アンケート控えは、プレゼント文書の額に使用いたしますので、大切に保管してください。

アンケート提出:札幌市役所本庁舎12階環境部総務課 札幌市環境プラザ(さきほろ環境エールプラザ2階)  
 アンケート締切:3月2日(月)  
 問い合わせ先:札幌市環境部総務課都市政策部総務課(札幌市役所本庁舎12階札幌市中央区北1条西2丁目)  
 TEL:011-211-2577 FAX:011-218-5108  
 当選発表発表:4月1日(水)以降下記にて公表  
 応募さっばる4月号  
 環境保全のページ [www.city.sapporo.jp/kankyo/event/campaign.html](http://www.city.sapporo.jp/kankyo/event/campaign.html)  
 世界冬の都市市長会のページ [www.sapporo.jp/somu/kokusai/worldwin/index.html](http://www.sapporo.jp/somu/kokusai/worldwin/index.html)

**提出用紙**  
 提出日 2009年 月 日

● 上の表で選んだ項目の番号に○をつけてください  
 A. 既に減っている B. 今後取り組みたい

1	2	3	4	1	2	3	4
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あなたの家庭で環境面で気を付けていることがありましたら、ご自由にご記入ください。

性別 ☐ 男 ☐ 女  
 年齢 10才未満・10代・20代・30代・40代・50代・60代・70代・80才以上 (必ず丸印で○)

*Fliers  
distributed  
in Sapporo*

## Agenda 2. Second Common Campaign

As a new campaign plan, the Secretariat proposed to produce and place posters in member cities to promote protection of the global environment, and the plan was unanimously agreed upon. The poster design was also presented and agreed to by participating member cities.

## Agenda 3. Future work schedule

The Secretariat proposed to investigate environment-related activities carried out by member cities after the 13th WWCAM conference. A proposal was made to draw up guidelines regarding citizen enlightenment to present at the WWCAM Conference in 2010, and agreed to by the participants.

## Agenda 4. Presentations by member cities

### 1. Sapporo: “Slim City Sapporo Plan”

The city of Sapporo inaugurated the “Slim City Sapporo Plan” in March 2008, setting a goal of creating a society with an environmentally sound resource cycle. This new plan was created from the need to promote further reduction of waste in order to solve a variety of problems: the amount of waste disposed of has not changed very much; no landfill sites will be available in the future; and the cost of waste management is very large.

In July 2009, a fee-based household waste disposal system and additional waste sorting categories were introduced. Sapporo steadily promotes efforts on waste reduction and recycling.

Although it will need about a year to appropriately evaluate the effect of the measures, the amount of burnable waste fell by approximately 40 percent compared with the previous year. Also, residents have definitely become more conscious about waste reduction and recycling.

## **2. Tromsø: Energy-Efficient Heating Systems in Municipality Buildings**

With the aim of reducing greenhouse gas emissions by 50 percent by 2020, the city of Tromsø introduced new heating systems a few years ago that use water as a heat carrier and heat pumps as the main energy source, and the city has worked to replace conventional heating systems with the new systems when rebuilding municipal buildings. Oil boilers are removed and replaced with gas boilers or heat pumps. The municipality saved 82,000 dollars of energy costs in a two-year period between 2005 and 2007.

## **3. Taebaek: “Taebaek City’s Environmental Changes”**

### **(1) Evidences of Global Warming in Korea**

In Korea, temperatures have been rising by 0.289°C (1.8°F) every 10 years over the last 50 years. The number of days of ice formation in the Han River, whose source is located in Taebaek, has decreased from 69 days in the 1940s to seven days in the 1990s.

Oranges and apples which used to be difficult to grow in Taebaek because of its cold climate are now cultivated in the city.

The winter season has become shorter by about a month compared to 80 years ago. This environmental change has seriously impacted Taebaek, which has developed its winter industries and itself as the best winter city in Korea.

### **(2) Countermeasures taken by Taebaek**

As preemptive countermeasures against such environmental changes, Taebaek focuses on the research and development of alternative crops that can accommodate climate change, the increase of long-term flood control capacity, and the successful transformation of major industries.



*Fourth Subcommittee meeting*

## 8. 14th World Winter Cities Conference for Mayors

< January 20 – 22, 2010; Maardu, Estonia >

The four-year activities of the Subcommittee will be reported at the WWCAM Conference, and a proposal will be made based on the outcome of the activities to conclude the Subcommittee's work.

(1) From the fourth questionnaire survey (October 2009)

The Nuuk Declaration adopted at the 13<sup>th</sup> World Winter Cities Conference of Mayors in January 2008 included four environment-related items that member cities should tackle on the municipal and national levels. The Association conducted a survey to investigate what activities each city has been carrying out.

Most of the respondents to the questionnaire replied that the four items outlined in the Nuuk Declaration were already carried out or are planned to be carried out, indicating the steady commitment of the cities.

Each member city has set its own goals and/or has been carrying out education and promotion activities.

Item 1. Work towards establishing a member city framework for global warming countermeasures (goals for reduced emission of CO<sub>2</sub> and other greenhouse gases, etc.) based on the precedents set by advanced member cities

Aomori	Doing	The Aomori Global Warming Countermeasure Action Plan was formulated in 2007. Reduction target: 16% less than in 2005. Eleven items with direct effect, such as reduction of oil use, and five items of indirect effect, such as reducing water use, are included in the Action Plan.
Ulaanbaatar	Planning	Future plans are: To increase utilities of fuels with lower smoke, to promote the utilities of techniques for saving power energy, to improve the filter gadget running the heat station's poisonous gas and cinder holding, and to formulate a master plan to decrease air pollution.
Sapporo	Doing	The Sapporo Global Warming Countermeasures Promotion Plan was formulated in 2001. Reduction target: 10% less from 1990. The Plan was revised with the reduction target renewed in FY2009.
Tromsø	Doing	The City Council of Tromsø aims for a 50% reduction of greenhouse gas emissions by 2020, by means of restricting private car traffic, converting to district heating based on climate neutral fuels, and by increasing the circulation rate of waste materials.
Novosibirsk	Doing	Plans include conversion of production and boiler equipment and a number of vehicles to use fuel gas; provision of natural gas supply to heat private homes; and improvement of road and transportation network.

Maardu	Planning	Environmental control over emissions is carried out by the Environmental State Department. Local government carries out plans in coordination with the state government.
Jiamusi	Doing	Jiamusi municipal government carries out carbon dioxide reduction plan under the control of the Chinese government. In order to save energy, an electric company carried out heat supply transformation, contributing to a reduction of coal fuel and greenhouse gas emissions.
Taebaek	Doing	Basic strategic plan was drawn in 2008 to counter climate change, and an environment preservation plan was formulated in 2009. Goal of reduction: 5% less from 2006 data.
Changchun	Doing	Under the National Economy and Social Development Plan, Changchun expects to decrease the use of coal by 22%, attributing the drop of CO <sub>2</sub> emissions by 500 tons each year. Use of biomass and natural energy is encouraged, and tree planting is planned annually.
Shenyang	Doing	The city implements plans to promote industries comparable to the advanced international level in terms of energy savings and environmental preservation, with a goal of establishing a ecological industry model city.

Item 2. Take the initiative as winter city governmental bodies to pursue measures for energy conservation and environmental preservation and to actively embrace our guiding role by urging and encouraging participation of local residents.

Aomori	Doing	The city shows an initiative in environmental preservation and improvement by the Environment Management System toward creating “Aomori with greenery, clean water, and blue sky’ surrounded by seas and mountains.”
Ulaanbaatar	Doing	System for encouraging tree planting is actualized to increase the city green area. NGO’s and local residents’ participation in environmental protection and conservation increased. Encouragement system to promote local residents’ participation to protect an environment has been initiated.
Sapporo	Doing	Under the “Sapporo Eco-Citizen Movement,” the city carries out various programs such as encouraging citizens to voice their commitment to an eco-friendly lifestyle, maintain environmental awareness, and continue ecological activities.
Tromsø	Doing	The municipality of Tromsø is propagating the Eco Lighthouse program among local residents.
Novosibirsk	Doing	The city adopted a municipal target program “Energy Saving in the City” in order to improve the efficiency of power resources usage, and the city is implementing the “program for improvement of environmental status” to stabilize and improve environmental quality and ecological safety.



Maardu	Doing	By thermal power preservation and insulation of houses, electrical power consumption is saved.
Jiamusi	Doing	Policy of national government subsidies to solar water heater is adopted, and the use of energy-saving and environment-friendly construction materials is enforced.
Taebaek	Doing	CO <sub>2</sub> point system was implemented, the traffic system improved, and education on energy-saving conducted, encouraging resident involvement in energy conservation activities. Public organizations including the city hall are obliged to purchase energy-saving products.
Changchun	Doing	The city government pushes and encourages its citizens and public facilities to use energy-saving lamps, which will save electric power in large volume, and a subsidy system is introduced to those units using energy-saving lamps.
Shenyang	Doing	Education on the environment is promoted at schools; awareness of needs of circulation-type society and eco-friendliness has been raised; and active participation in various environment-related activities is promoted. In addition, residents are encouraged to save energy and water to protect the environment.

Item 3. Lessen our reliance on fossil fuels by actively pursuing the use of such renewable energy sources as biomass and natural energy

Aomori	Planning	BDF Utilization Model Project was carried out to utilize biodiesel fuel for city vehicles (such as waste collection vehicles) by collecting and refining used cooking oil from households in 2009 to investigate possible future use.
Ulaanbaatar	Doing	The national program of renewable energy was formulated in 2005 to increase utilization of renewable energy. Currently, 85% of renewable energy is used in power production, and an increase of use is intended.
Sapporo	Doing	Increasing utilization of renewable energy such as solar power and wood biomass fuel is promoted by providing a subsidy. Use of snow for cooling is a unique way of energy saving in winter cities.
Tromsø	Planning	Concessions have been given for construction of district heating systems covering the central parts of Tromsø, obliging this system to be established by 2015. No fossil fuels will be used for heating in municipal buildings after 2012, with the exception of propane or natural gas as backup for heat pump systems.
Novosibirsk	Planning	The city is working on a general plan for cleanup of the city's territory, which makes provisions for usage of technologies for solid waste treatment and the resulting production of secondary power resources.
Maardu	Planning	The city is going to use renewable electrical power by burning waste at the thermal power station located in the city territory.



Jiamusi	Doing	Electric power production project using wind power and biomass has been actively promoted. Eleven wind power turbines have already been in operation, and five more will be built. In addition, one rice husk power station is in operation at present, and another one is under construction.
Taebaek	Doing	Electric power production using wind and solar power has been promoted. A study is being conducted toward formulating “Low CO <sub>2</sub> Green Model City Development Plan” in relation to future introduction of new and renewable energy.
Changchun	Doing	An electric power plant using straw has been put into operation. The city is developing R&D, and application of biomass energy.
Shenyang	Doing	Through the wind power generation project, the city has been promoting the use of renewable energy.

Item 4. Work to expand the network of winter cities engaged in dealing with global environmental issues by having member cities share information regarding countermeasures for global warming with other cities in the region.

Aomori	No plans	
Ulaanbaatar	Doing	Decrease the greenhouse gas; Increase the green area, plant trees and afforest; Decrease the carbon dioxide.
Sapporo	Doing	The city has been carrying out activities in collaboration with other local governments including the Hokkaido Prefectural Government.
Tromsø	Doing	Participation in the Norwegian Network Cities of the Future, involving 13 larger cities and 4 government offices and shall have a follow-up for other cities and communities in the northern part of Norway. Information sharing is established on governmental internet sites.
Novosibirsk	Doing	Activities are performed within the framework of the Association of Siberian and Far Eastern Cities. The city exchanges information with the cities of Omsk, Yuzhno-Sakhalinsk, Novokuznetsk, etc.
Maardu	Doing	There are many projects involving measures to counter global warming where Maardu city cooperates with the capital of Estonia, Tallinn, and with cities bordering Maardu.
Jiamusi	No plans	
Taebaek	Doing	As a result of our efforts to publicize WWCAM activities to neighboring cities, Hwacheon joined WWCAM in 2008.
Changchun	Planning	The city is willing to conduct research and study on the factors influencing the world climate and develop some countermeasures under the instruction and guidance of national policy. The city is also willing to participate and initiate any possible environment projects with other cities. Changchun plans to create and host a WWCAM environment subcommittee from 2010 to 2014.

Shenyang	Doing	Shenyang is promoting friendly relations with Kawasaki City, Japan, in the fields of government, business, and academics. For example, the city has been implementing a project to develop pollution-free model industries and a model industrial complex while introducing advanced technologies. Kawasaki and Shenyang are promoting collaborative work with UNIDO.
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Item 5. Other activities to protect the environment other than those outlined  
in the Nuuk Declaration

Aomori	No plans	
Ulanbaatar	Planning	No details
Sapporo	Doing	Vehicle-related programs, such as the promotion of use of CNG vehicles and other low pollutant vehicles as well as eco-drive, have been implemented.
Tromsø	Planning	Use of electric and hybrid cars is promoted. Cooperating with local energy suppliers, waste incineration and district heating will be built. The city will cooperate with 12 other larger cities in Norway in a national project coordinated by the Norwegian government.
Novosibirsk	Doing	Methodical work on the prevention of environmental hazards has been performed.
Maardu	Planning	No details
Jiamusi	Doing	Following measures are taken to reduce dust, emissions of sulfur dioxide and other exhaust gas: Drinking water source protection; Strict control on illegal polluters, such as small paper companies; Air pollution control strengthened; Reduction of emissions enhanced; Emissions trading conducted; Noise pollution control at building construction sites and KTV strengthened; Regulation of hazardous and medical wastes strengthened
Taebaek	Doing	Planning to encourage use of bicycles. Inventory-making of greenhouse gas. Comprehensive planning to counter climate change.
Changchun	Planning	Campaign is planned to protect environment, with a goal of building Changchun as one of the most liveable city in the region.
Shenyang	Doing	The city has been working on a project of establishing a waste collection and recycling system with a goal of developing the recycling industry to play an important role in Shenyang's economy. The city plans to create a "green government" by formulating local legal system regarding circulation economy and ecological construction.

## (2) Second Common Campaign

Period: November 1, 2009 until the day each member city designates

Participants: Six cities (Changchun, Harbin, Shenyang, Hwacheon, Aomori and Sapporo)

Theme: Let's protect our environment!

**Outline:** In order to build on the raised awareness from the first campaign by member cities and strengthen reciprocal ties among member cities, posters with a theme of “Let’s protect the environment” were placed in public spaces in each of the participating member cities.

Harbin, China reported that the posters were placed at 50 locations at the municipal offices, schools, and hotels and that the campaign was carried by Northeast News (internet media). In Sapporo, posters were placed at city-managed facilities including the city hall, subway station areas. In addition, at the school of Ms. Kiyo Nomura, who made the English haiku “Your breath makes me calm, your tears make me clean. Yes, you are my only earth,” posters were placed to raise an awareness of the environment among students.



Campaign posters  
(with texts  
and without)



Web site of Northeast News,  
Harbin, China



*City Hall of Aomori, Japan*



*Office in Changchun, China*



*Elementary school, Harbin, China*



*Downtown Hwacheon, Korea*



*Kiyo Nomura, English haiku writer*



*High school in Sapporo, Japan*



*Subway station, Sapporo, Japan*



*Library, Shenyang, China*

## 9. Outcome of the Subcommittee Activities

During the four years from 2006 through 2009, the Subcommittee conducted research based on the Changchun Declaration, which was a product of the twelfth World Winter Cities Conference for Mayors in Changchun, China, in 2006. The Subcommittee research comprised studies of environmental policies, issues, technology, and experiences of winter cities, and it has shared its findings with WWCAM members. In addition, the Subcommittee conducted common campaigns to combat global environmental problems as indicated in the Changchun Declaration.

During the first two years of its work, the Subcommittee aimed to achieve a common awareness of the importance of environmental issues. The Subcommittee surveyed WWCAM cities on environmental problems and on their efforts to overcome the problems. Each city's situation and efforts were analyzed, and examples of policies and cutting-edge technologies adopted by member cities were presented at the Subcommittee meeting.

In the second two-year period of its work, the Subcommittee implemented concrete action to combat threats to the global environment. The WWCAM's original campaign was simultaneously implemented by member cities twice to publicize environmental concerns to their residents. The Subcommittee believes that, as a result, an understanding of the necessity of active involvement in environmental issues by local government has been strengthened.

The Subcommittee recognizes, from its surveys, research, and educational campaigns, that it is necessary for winter cities to continuously make efforts to combat threats to the global environment. Based on its work, the Subcommittee will present guidelines for member cities to observe and implement, "Guidelines for Environmental Actions in Winter Cities," at the fourteenth World Winter Cities Conference for Mayors to be hosted by Maardu, Estonia in January 2010.

### **Guidelines for Environmental Actions in Winter Cities**

- We will protect and nurture the blessings of nature, such as water and greenery.
- We will not use resources wastefully, and we will reduce garbage.
- We will try to end dependence on fossil fuels and promote the use of renewable energy.
- We will promote the use of energy-saving devices.
- We will decrease personal car use and develop eco-friendly cities.
- We will increase citizen awareness of the environment through education and encourage citizens to take action.