



World Winter Cities Association for Mayors

## Subcommittee on Winter Environmental Issues - Third Meeting -

August 21<sup>st</sup>, 2008  
Prince George, Canada

1

## 1 . Background of the Subcommittee

**Discussion at the 12th World Winter City  
Conference for Mayors** (Changchun, China; 2006)



Theme: Winter Environmental Concerns

**Changchun Declaration**



Winter cities determined to endeavor  
to promote environmentally friendly activities

**Subcommittee on Winter Environmental Issues  
established**

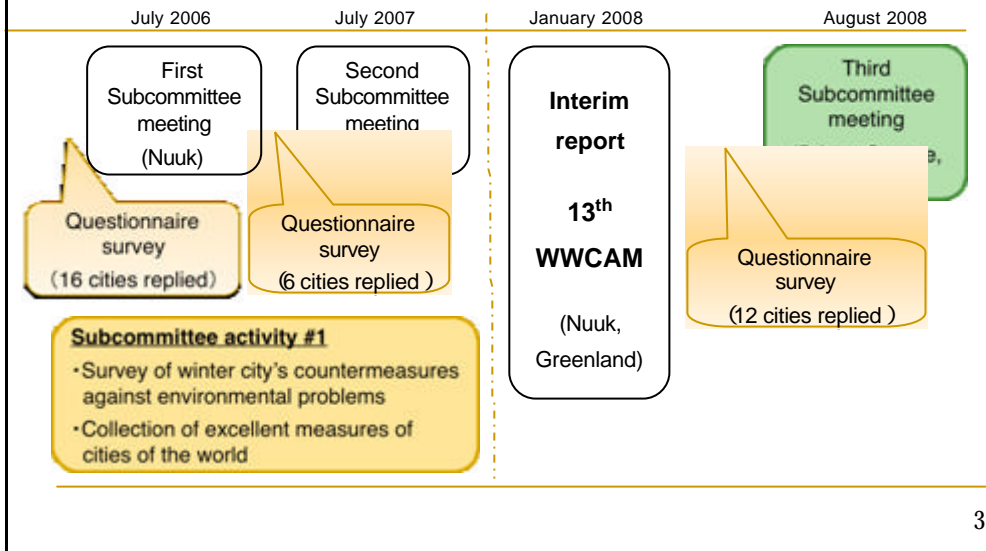
Objective: study of measures to counter  
threats to the environment in winter cities

2

## Subcommittee on Winter Environmental Issues - Work Schedule -



### Awareness of environmental issues



## Questionnaire Survey Topics for the 3<sup>rd</sup> Subcommittee Meeting



1. Standards for Citizen Enlightenment regarding Global Environmental Issues
2. Citizen Education Programs and Collaboration with Private Businesses and Citizens Groups
3. Feasibility and Desirability of an Educational Program Campaign to be Carried Out by Member Cities
4. Case Studies of Efforts and Measures to Reduce Air, Noise and Water Pollution

WWCAM member cities: 21 of 11 countries (as of August 2008)

Number of cities replied: 12 of nine countries



## Programs and Efforts by the City of Sapporo

5

## Standards for Citizen Enlightenment regarding Global Environmental Issues



- ☞ Sapporo Global Environment Charter  
enacted in June 2008, and accompanied  
by the Sapporo 'Eco-Capital' Declaration

6

# Sapporo 'Eco-Capital' Declaration



## 1. Background & Goals

### Background

- The effects of global environmental problems can be felt even in Sapporo, a city blessed with pristine natural surroundings.
- Environmental awareness promoted through such programs as the "Eco-Life" 100,000-Person Promotion Campaign

### Goals

- Promote Sapporo's efforts and advanced policies domestically and internationally
- Show the intention of citizens to work towards environmental preservation more than ever
- Utilize various channels to send a strong message to the world



7

# Sapporo 'Eco-Capital' Declaration



## 2. Overview

### Sapporo Global Environment Charter

- ✍️ Outlines ideals for civic action and city government in order to protect the global environment
- ✍️ Comprises seven articles representing various issues related to the environment.

### Sapporo Action to protect the earth

- ✍️ Based on the premise of each article, the Charter contains a total of 26 specific pledges for action to be undertaken by citizens.



8

## Sapporo 'Eco-Capital' Declaration

### 3. Consideration by Citizen Panels and Groups



- Starting in October of 2007, a working group including citizens gathered to consider details of the declaration and create a draft.
- With the theme of “working together with Sapporo’s 1.9 million citizens,” active consideration given to the voice of the public through symposium hosting, publishing of “Eco-Life” Report, public comment system, etc.



9

## Sapporo 'Eco-Capital' Declaration

### 4. Civic Ceremony



- June 25<sup>th</sup>, 2008
- Approximately 1,300 in attendance
- The Sapporo 'Eco-Capital' Declaration announced by Mayor Ueda
- “Sapporo Global Environment Charter” read by Sapporo schoolchildren



10

## Citizen Education Programs and Collaboration with Private Businesses and Citizens Groups



- ✦ Sapporo “Eco-Capital” Declaration
- ✦ Children’s World Summit for the Environment in Sapporo
- ✦ Sapporo Eco-Citizen Movement
- ✦ Sapporo Candle Night 2008
- ✦ “Future of the Environment” Cup
- ✦ Dissemination of Information (“Eco-poro” Newsletter, Sapporo “Eco-Life” 12)
- ✦ “Eco-Drive” Campaign

11

## Children’s World Summit for the Environment in Sapporo

### 1. Overview

Period: June 27<sup>th</sup>–29<sup>th</sup>, 2008  
Participants: 102 children from 11 countries (40 from abroad, 62 from Japan)  
Venue: Glass Pyramid, Moerenuma Park

#### Theme

What can we, the young generation, do for the earth?



#### Organizer

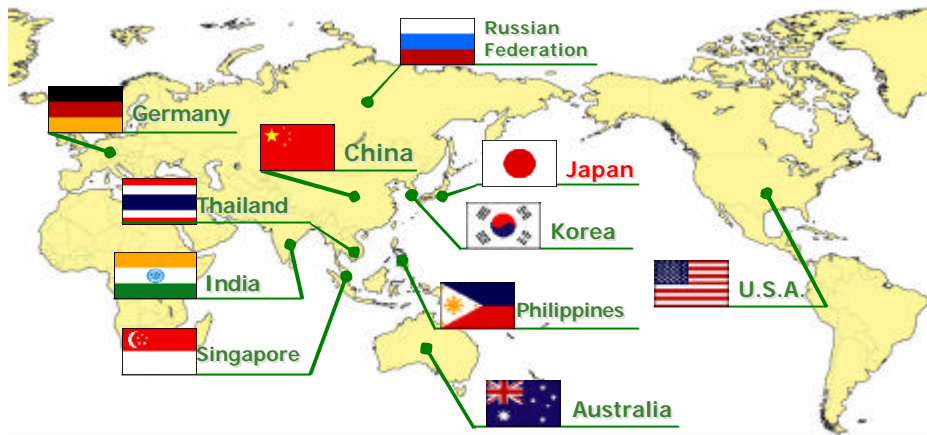
“Children’s World Summit for the Environment in Sapporo” Executive Committee



12

# Children's World Summit for the Environment in Sapporo

## 2. Participant Countries



# Children's World Summit for the Environment in Sapporo

## 3. Declaration



“What can we, the young generation, do for the earth?”

To stop global warming,  
we will practice environmentally-friendly living by:

- ☞ Reducing CO<sub>2</sub> Emissions
- ☞ Preserving Greenery
- ☞ Using Water Wisely
- ☞ Conserving Energy
- ☞ Reducing Waste



To the people of the world

To create a wonderful future of the earth, we hope that  
adults will think seriously together with us and practice eco-friendly living.

## Eco-Life 100,000-Person Promotion Campaign



- ✧ The “Eco-Life” campaign—encouraging citizens to voice their commitment to an eco-friendly lifestyle—started in February of 2005 and reached the goal of 100,000 people in October of 2006.

15

## Sapporo Eco-Citizen Movement



- ✧ “Eco-Life” Report  
Published quarterly; promotes environmentally-friendly living.
- ✧ “Eco-Life” Forest  
Afforestation project that, based on rough calculations of projected CO<sub>2</sub> emission levels, aims to plant sufficient trees to absorb and store an equivalent amount of CO<sub>2</sub> (goal: 100,000 trees by 2010).

16



## Sapporo Candle Night 2008



### Turn Off the Lights, Enjoy the Night

Restaurants turn off lights and related events are organized with:

- 62 restaurants
- 50 organizations
- 92 sponsor & supporting organizations

#### Period

June 14<sup>th</sup> – July 7<sup>th</sup>, 2008

#### Main Day

June 21<sup>st</sup> (Summer Solstice)

8:00 – 10:00 PM



17

## “Future of the Environment” Cup



A contest promoting awareness and activism for environmental preservation through sports and recreational Activities involving elementary school children in Sapporo



2007 “Future of the Environment” Cup game



18

## Dissemination of Information



### “Eco-poro” Newsletter

- Published monthly by the City of Sapporo
- Includes a schedule of lectures on environmental topics and information on environmental issues



### Sapporo ‘Eco-Life’ 12

- Calendar with monthly tip for environmentally-friendly living



19

## “Eco-Drive” Campaign to Promote Eco-friendly Driving Habits



Guidance to reduce automobile emissions and noise pollution!



“Idling Stop” Campaign to reduce emissions!



“Eco-Drive” Pamphlet



20



## Case Studies of Efforts & Measures to Reduce Air, Noise and Water Pollution in the City of Sapporo

21

### 1. Measures to Reduce Air Pollution in Sapporo



#### Monitoring the situation

- Constant monitoring : 16 locations, 365 days a year
  - ordinary environments: 11 locations
  - along trunk roads: 5 locations
- Asbestos survey: 6 locations, conducted annually
- Constant monitoring of dioxin and similar materials: 7 locations, conducted biannually
- Constant monitoring of hazardous pollutants: 5 locations, conducted 12 times annually



22

## 1. Measures to Reduce Air Pollution in Sapporo



### ✎ Measures against the sources of air pollution generation (Report & inspection, 2007)

- Number of facilities equipped with boilers: 6,366
- Number of low-pollutant vehicles newly purchased: 5,160
- Removal of asbestos: 196 locations
- Monitoring dioxin and similar materials: 16 businesses
- Monitoring hazardous pollutants: 5 businesses

23

## 2. Countermeasures against Noise and Vibration



### ✎ Situation survey

- Survey of noise in general environment: 10 locations for 24 hours
- Survey of transport-related noise along trunk roads:  
172 locations / five years
- Survey of noise in the vicinity of the airport: six locations for a week

### ✎ Countermeasures against sources of generation (Report & inspection, 2007)

- Business sites with ventilators and/or compressors: 2,631
- Construction sites using pile driving machines and drills: 774
- Discussions with road administration authorities

24

### 3. Countermeasures against Offensive Odors



#### Measures against sources of generation (Report & inspection)

- Business sites generating offensive odors: eight  
< Measurement of odor at one business site for five times over one year >

### 4. Soil and Groundwater Contamination

#### Survey of the situation (2007)

- Constant monitoring of groundwater: 113 wells  
45 out of 113 exceed the standard

#### Measures against sources of generation (Report & inspection, 2007)

- Business sites using hazardous materials: 85
- Locations that have to undergo soil examination: five

25

### 5. Measures against Water Contamination



#### Survey of the situation

- Constant monitoring of river water quality at 26 locations



Toyohira River  
(1950s)

Toyohira River  
(2008)



#### Countermeasures against source of generation (Report & inspection)

- Quality check of wastewater from factories/businesses
- Guidance for use of agrochemicals at golf courses
- Monitoring at temporarily or permanently closed mining sites

26

## 6. Measures against Land Subsidence

### ☞ Survey of the situation (2007)

- Survey of precise leveling: 44 locations  
(Survey done throughout the city for six years)
- Survey of groundwater pump capacity

### ☞ Countermeasures against sources of generation

- Report obligatory when drilling underground and drilling water well

27

## Questionnaire Survey Topics for the 3<sup>rd</sup> Subcommittee Meeting



1. Standards for Citizen Enlightenment regarding Global Environmental Issues
2. Citizen Education Programs and Collaboration with Private Businesses and Citizens Groups
3. Feasibility and Desirability of an Educational Program Campaign to be Carried Out by Member Cities
4. Case Studies of Efforts and Measures to Reduce Air, Noise and Water Pollution

WWCAM member cities: 21 from 11 countries (as of August 2008)

Number of cities replied: 12 from nine countries

28

## Q 1. Standards for Citizen Enlightenment regarding Global Environmental Issues



- a. Cities that have adopted a citizen charter or similar set of standards: 7 (Nuuk, Tromso, Novosibirsk, Harbin, Changchun, Shenyang and Sapporo)
- b. Cities that plan to adopt a set of standards: 4 (Prince George, Maardu, Anchorage and Hwacheon)
- c. Cities with no plans to do so at the moment: 2 (Taebaek and Aomori)

29

## Q 2. Citizen Education Programs and Collaboration with Private Businesses and Citizens Groups



### < Prince George >

- Air quality program
- Woodstove exchange    • Anti idle program    • Bylaw updates
- Greenhouse gas and energy management plan – approved August 2007
- Reduce City corporate / community GHG emissions
- Energy Use Reductions 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 comfortable living environment in downtown)
- Beginning of an Integrated Community Sustainability Planning process

30

## Q 2. Citizen Education Programs and Collaboration with Private Businesses and Citizens Groups



### < Novosibirsk >

Educational campaigns to form young generations' ecological knowledge

- Earth Day • Forest Story • Mysteries of Our Green World
- Clean Soul --- Clean Planet, etc.

Programs arranged by public organizations and social councils

- Contests, round tables, workshops and conferences
- Long-term environmental education

Water-protective measures

- Cleaning of landlocked bodies of water, etc.

Implementation of ecological activities

- 20 ecological units of 617 persons to carry out environmental actions in the city's ten districts.

31

## Q 2. Citizen Education Programs and Collaboration with Private Businesses and Citizens Groups



### < Maardu >

Estonian Labour Day (May 3)

- Cleaning territories of waste and pollution
- Theoretical education of citizens groups under the direction of highly trained specialists

### < Anchorage >

- Creating 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"
- Pursuing a 'demand reduction' program for utility customers to reduce their household electricity use
- Working with electric utilities to combine generation facilities

32



## Q 2. Citizen Education Programs and Collaboration with Private Businesses and Citizens Groups



### < Tromso >

"Eco-Lighthouse" program

- Environmental behavior certification for public and private offices and institutes, minor industries, shops, schools, etc.

### < Changchun >

Green School program

- Aims at establishing and improving awareness of environmental protection among school faculties and students

### < Harbin >

Green Decoration Assembly

- Exhibition and promotion of environmental activities

< More than 400 exhibitors >

33

## Q 2. Citizen Education Programs and Collaboration with Private Businesses and Citizens Groups



### < Shenyang >

Educational campaigns for citizens

- Forming a data base on energy saving and reduction of CO<sub>2</sub> emission
- Monitoring of energy consumption in relation to civic life
- Collaboration of citizens groups
- Public relations and implementation of volunteer activities

### < Taebaek >

"Roads with no vehicles"

- Hands-on experience and education regarding global warming

"World Water Day"

- Education of citizens regarding water shortages in Korea and the importance of water

34

## Q 2. Citizen Education Programs and Collaboration with Private Businesses and Citizens Groups



### < Hwacheon, Korea >

New Hwacheon City Planning: Environment campaign  
Cleaning of the city by neighborhood groups  
(First Friday, each month)

Public Service LOHAS Certification

- LOHAS (Life Styles of Health And Sustainability)
- LOHAS certificate awarded to products and services
- Development of sustainable sightseeing spots
- Fostering environmentally-friendly agriculture, etc.

35

## Q 2. Citizen Education Programs and Collaboration with Private Businesses and Citizens Groups



### < Aomori >

“Plastic shopping bag reduction: ‘ECORU’ Agreement”

#### 1. Objectives

- Waste reduction
- Stop of global warming
- Realization of resource-circulation-type sustainable society

#### 2. Activities to be carried out

##### a. by businesses

- Goal setting for the number of shoppers bringing their own shopping bags as of June 2001

##### b. by Aomori Citizens Meeting on Waste Reduction

- Encourage citizens to reduce plastic shopping bags and bring their own.

##### c. by the City of Aomori

- Visiting lectures and providing awards to the goal-achieving businesses

#### 3. Businesses signing the agreement: 5 (14 shops) as of June 2008

36

### Q 3. Feasibility and Desirability of an Educational Program Campaign to be Carried out by Member Cities



Candle Night	2	Aomori, Sapporo
No Car Day	7	Tromso, Prince George, Anchorage, Changchun, Taebaek, Sapporo, Shenyang
“Idling Stop” Campaign	4	Tromso, Prince George, Anchorage, Sapporo
Water Conservation Campaign	6	Novosibirsk, Prince George, Maardu, Changchun, Sapporo, Shenyang
Energy Conservation Campaign	8	Nuuk, Prince George, Anchorage, Aomori, Taebaek, Sapporo, Shenyang
“Dress Warm for Winter”	2	Anchorage, Sapporo
“Plant a Tree” Campaign	5	Prince George, Maardu, Changchun, Sapporo, Harbin
Other	1	Nuuk (Spring cleaning of the city with citizens)

### Q 4. Case Studies of Efforts and Measures to Reduce Air, Noise and Water Pollution



#### < Prince George >

- Improvement of asphalt plant, 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
- City is a member
- Tasked with recommendations from Mayor’s Task Force report
- Anti idle campaign                      • Woodstove exchange program
- Phase 2 Report – many areas of air quality improvement
- Groundwater Protection program
- Storm water Management Plan and in-line treatment systems

## Q 4. Case Studies of Efforts and Measures to Reduce Air, Noise and Water Pollution



### < Maardu >

- Installation of new filters for heating networks and energy units
- Transition of heating electrical stations work from black oil on gas
- Reduction of polluted emissions in the atmosphere
- Control over automobile exhaust gases by means of technical checkups

### < Anchorage >

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

39

## Q 4. Case Studies of Efforts and Measures to Reduce Air, Noise and Water Pollution



### < Novosibirsk >

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-protective measures  
Circulating water supply system introduced at the industrial enterprises  
Regular clearing of reservoir beds and water conservation zones

### < Tromso >

Measures against air pollution  
Program for reducing use of spike tires, to avoid asphalt dust  
Designation of low-polluted zones in the city centre

Measures against water pollution  
Program for removing PCB, PAH, TBT and heavy metals

40

## Q 4. Case Studies of Efforts and Measures to Reduce Air, Noise and Water Pollution



### < Changchun >

#### Measures to improve air pollution

- The City issued eight municipal notices to control air pollution.
- To reduce dust and smoke, 327 abandoned chimneys clamped and 3,000 unqualified boilers banned in the past five years.
- 2,400m<sup>2</sup> of integrated heating system installed.
- 100 thousand households of new natural gas users were developed.
- Zero coal burning zone designated.
- National Environment Demonstration Award granted (2005)

#### Measures to reduce water pollution

- 4 waste water 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 test)

41

## Q 4. Case Studies of Efforts and Measures to Reduce Air, Noise and Water Pollution



### < Harbin >

#### 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 source of pollution

#### Measures to reduce noise pollution

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

42

## Q 4. Case Studies of Efforts and Measures to Reduce Air, Noise and Water Pollution



### < Shenyang >

Measures to improve air pollution

1. Implementation of project "from dispersion to concentration"
  - Installation of integrated heating system
2. Installation of geothermal heating system
  - Project to develop and promote use of geothermal energy

Measures to reduce water pollution

1. Construction of wastewater treatment plants
2. Treatment of river sewage, tree planting, and control of source of pollution
3. Strengthening control of heavily polluting enterprises (closing or suspension)

Measures to reduce noise pollution

- Strengthened application based on the Shenyang Environmental Noise Pollution Control Ordinance (enacted in February 2007)

43

## Q 4. Case Studies of Efforts and Measures to Reduce Air, Noise and Water Pollution



### < Taebaek >

Measures to improve water quality

1. Prevention of water pollution
  - 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

2. Management of sources of high risk pollution

- On-site management of river construction (prevention of and recovery from flooding)
- Guidance to businesses with pollution risk
  - Businesses discharging wastewater; control of wastewater from dairy farmers, and from wastewater treatment plants

Measures to reduce air pollution

- Information dissemination, inspection and guidance to the businesses

44

## Q 4. Case Studies of Efforts and Measures to Reduce Air, Noise and Water Pollution



### < Hwacheon >

- 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 environmentally-friendly agriculture
- Establishing man-made isles of seaweeds for water purification
- Preparation of bicycle-only roads

45

## Future Direction of the Subcommittee on Winter Environmental Issues



- Conducting joint campaigns
- Formulating standards or charters for citizen enlightenment

46



## Feasibility of joint campaigns

Top three items selected as feasible campaigns

1. Energy-saving for a certain period of time
2. One-day “No Car” Day
3. Water-saving for a certain period of time

## Subcommittee on Winter Environmental Issues -Work Schedule-

