

Winter Cities 2002



Mohri Mamoru, left, and Colin Fudge, keynote speakers at Winter Cities 2002 Aomori.

Preparations for a successful Winter Cities 2002 are well underway in Aomori City in northern Japan. ?Fostering Vibrant Northern Living: Environment, Culture, and Lifestyle? is the theme of the conference, which will feature the tenth biennial International Conference of Mayors of Northern Cities, the Winter Cities Forum, the eighth International Winter Expo, and other related events.

Aomori

Mayors Conference

The first Mayors Conference of the twenty-first century will feature exchanges of ideas and policies for building sustainable winter cities based on regional features. These include natural winter environments and winter lifestyles, with examples from cities participating at the conference.

Because the Aomori conference is the tenth memorial session of the

Professor Fudge is pro vice-chancellor and dean, faculty of the Built Environment, University of the West of England and chair of the EU Urban Environment Expert Group. He conducts worldwide research in the field of sustainable development city policy.



Winter Cities 2002
Aomori

Mayors Conference Program

February 7

IAMNC Board of Directors Meeting;
IAMNC General Assembly;
luncheon; joint press conference with the Mayors Conference, Forum, and Expo; opening session; and opening reception and dinner banquet.

February 8

Sectional sessions; luncheon; subcommittee reports and discussions; technical visits; and IAMNC tenth anniversary banquet.

February 9

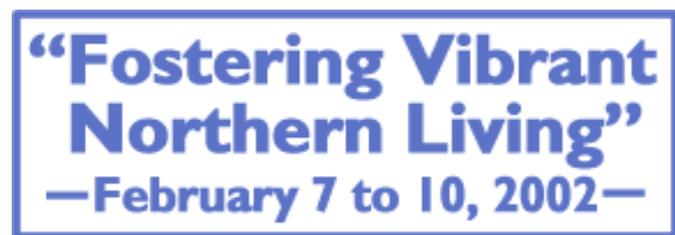
International Association of Mayors of Northern Cities, developing concrete measures for sustainable development has been made the overall theme of the conference. The achievements of the conference will be made public in a joint statement from the International Association of Mayors of Northern Cities (IAMNC) and the Winter Cities Forum.

Professor Colin Fudge will give the keynote speech at the opening session of the Mayors Conference. Professor Fudge will speak on "Implementing Sustainable Futures in Cities: Lessons from Policy and Practice," and he will provide examples of city planning in the European Community, as well as targets for which winter cities should aim.

Plenary session; presentations by candidate cities for hosting the twelfth Mayors Conference in 2006; board of directors meeting for the selection of the host city of the twelfth Winter Cities Conference in 2006 and luncheon; brief tour; participation in Health Promotion Forum; Noh drama appreciation; dinner party.

February 10

Round-Up Forum (in conjunction with the Winter Cities Forum); closing ceremony; press conference; luncheon; technical visits.



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Winter Cities Forum

The Winter Cities Forum comprises an Opening Forum and a Round-Up Forum and eleven other sessions within the main theme, "Seeking Sustainability." A variety of programs are being offered, including a City Planning and Lifestyle Forum (eight sessions), a Citizens Forum (two sessions), and a Health Forum for people from a variety of fields, including researchers, administrators, and citizenry—all meeting with the goal of learning from each other.



A Noh drama appreciation event is planned for Winter Cities 2002 participants.

Winter Cities Forum Program

February 7

- Opening Forum
- Possibility of Snow Culture Studies (Citizens)
- Advanced Snow Removal and Ice-Control Technology (Traffic)

February 8

- Energy for Living and Snow Countermeasure Energy in Winter Cities (Energy)
- Community Design with Citizen Involvement in Winter Cities (Community Design)
- Possibility of Snow and Ice Energy Use (Energy)
- Future of Winter Life in Winter Cities (Lifestyle)

February 9

- Urban Design in Winter Cities (Community Design)
- Ke-Ya-Gu: Ideal Relationship for Promotion of a Gender-Equal Society (Citizens)
- Pedestrian Mobility in Winter (Traffic)
- Future of the Living Environment in Winter Cities (Lifestyles)
- Health for All Winter Cities (Health)

February 10

- Round-Up Forum

Opening Forum

Mohri Mamoru, former astronaut and present director of the National Museum of Emerging Science and Innovation, will speak on the importance of the earth and the earth's current conditions through his perspective of having observed the earth from outer space.

Additionally, Mr. Mohri and Professor Colin Fudge will discuss the topic "Coexistence Between the Earth and Humanity: Examining Lifestyles of the Twenty-First Century."

City Planning and Lifestyle Forum

The City Planning and Lifestyle Forum will focus on measures for local community development based on circulation and harmonization with nature, and involving the latest research and technology. Emphasis will be on energy, traffic, community design, and lifestyles for the continued development of northern cities as sustainable winter communities.

Round-Up Forum

The Round-Up Forum will be held jointly with the Mayors Conference and will summarize the entire Winter Cities 2002 Aomori Conference, with information exchanges between the Mayors Conference and the Winter Cities Forum. A joint statement on the achievements of the Aomori conference will be issued at this time at the Round-Up Forum.

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8th International Winter

Expo

At the International Winter Expo, a wide variety of industries supporting winter life will be introduced. The theme for the exposition is ?Northern Lifestyles and the Industry and Life of Winter Cities.? The Winter Expo includes the following exhibits:

- *Winter Industry and Technology Corner*

Introduction and sales of technology and products supporting life in winter cities in a wide variety of fields, including environment, housing, and snow- and ice-related industries.

- *Snow and Ice Academic Studies Corner*

Introduction to research related to snow and ice.

- *Urban Cities Corner*

An introduction to city planning and tourism industries in northern cities.

- *Northern Livelihood Corner*

An introduction to measures and activities to deal with snow and winter involving citizens and private organizations.

Jointly Held Events

Winter Cities Art Exhibition

Have a relaxing time among works of art!

Northern Cities are treasures of art and culture in the concrete form of stored human wisdom, aesthetic sense, and a passion that comes from living with and sometimes conquering severe natural conditions. This International Exhibition highlights works of art



Snow-slide fun at the Aomori Winter Festival.

Opportunity to See the Aomori Winter Festival

Visitors to Aomori City for Winter Cities 2002 will also be able to observe the Aomori winter festival. This annual event features games and sports and activities that take place all over the city. The Aomori winter festival will be held from February 9 to 11.

For More Information

For more information about the above and additional events at Winter Cities 2002 Aomori and for an application form for the conference, please contact the Winter Cities 2002 Aomori organizing committee at the following internet site:

<www.city.aomori.aomori.jp/WCC2002>.

sent from northern cities.

Noh Play Appreciation

A traditional stage art, Japanese Noh drama enthusiasts are proud of the art's history, which goes back more than 600 years. The program will be offered with explanations and audio translation devices so that the audience can understand and appreciate the background of Noh drama.

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Aomori City

Making the best use of the environment in
creation of a comfortable city.

Aomori City promotes the development of a comfortable city with input from its citizens. The "Winter Cities Conference 2002 Aomori" will certainly be a meaningful opportunity for participants from Japan and the rest of the world as well as Aomori's citizens to consider city development together. Let's meet in Aomori in February 2002!!

Aomori City is situated in the center of Aomori Prefecture, which is the most northern point of Honshu, the main island of Japan. The city is surrounded by beautiful nature, including Mutsu Bay to the north and the Hakkoda Mountain Range to the south. Aomori City owes its development to its unique position as the transportation and distribution hub for northern Japan.

Aomori enjoys mild weather throughout the year regardless of the season. In winter the average temperature is approximately 2°C

Visions of the Future City—Blue Forest: Great People, a Great Place to Live (diagramed below) comprises basic approaches and five basic plan elements.

Snow Management

An important goal for Aomori City is to make life as convenient as possible, and in a city that receives an average of eight meters of snow each winter, snow management becomes very important. In addition to effective devices for snow removal, the city is creating snow discharging gullies that

and only rarely does it fall as low as -10°C. Aomori is known as the city with the heaviest snowfall among metropolitan areas with a population of three hundred thousand.

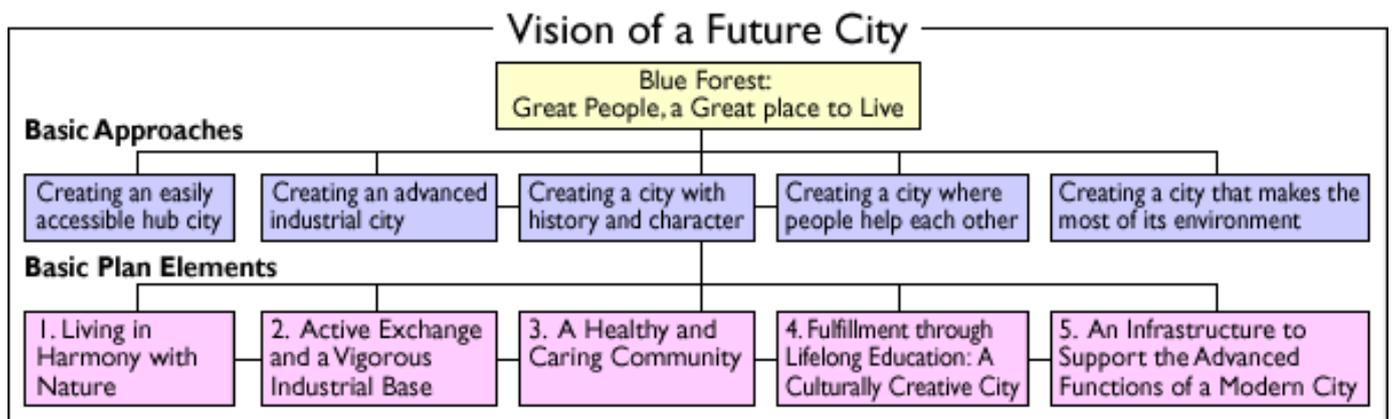
While coexisting with the snow and cold environment, Aomori City is promoting prosperous city development so that residents here may live comfortably.

use treated sewage water and river water. The city is also working on a snow melting system that utilizes natural energies, such as heat from seawater and geothermal heating to help pedestrian mobility in winter.

To prevent seawater pollution at snow dumping sites, Aomori is establishing a system in which snow is melted with treated waste water so that only clean snowmelt runs into the sea.

Vision of the Future City

Aomori City, along with its citizens, published in 1996 an overall city planning directive titled "Aomori—the Blue Forest: A Creative Plan for the 21st Century."



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Bringing People Back to the City

Aomori City believes that from the viewpoint of snow removal and energy efficiency, compact city development is an efficient approach in a winter city. Therefore, it is necessary to prevent the city from spreading into the suburbs, and to activate the center of the city.

In recent years, two facilities have been opened here in order to bring prosperity back to the city center that surrounds Aomori Station: the Aomori



Passage Promenade

Passage Promenade

Station Area Redevelopment Building and Passage Promenade.

AUGA, the Aomori Station Area Redevelopment Building

AUGA, which opened in January 2001, is a multipurpose facility that houses a fish market, restaurants, and various shops, as well as an audiovisual hall and a city library. Three months after its opening, AUGA had already been visited by over 1.3 million people, and AUGA may be one of the most significant factors for attracting many people back to downtown Aomori.



AUGA

In Passage Promenade, which opened in September 2000, there are nine shops including young people's clothing stores, miscellaneous imported goods stores, natural food take-aways, and restaurants, as well as a gallery and a terrace. These shops are provided with low rents for young people and people with a wish to start their own business. Many people visit the promenade and enjoy a walk around the car-free area. Residents enjoy spending their time at Passage Promenade and along with the shop keepers, they are bringing new life to the city.

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Jilin City is situated in the middle-eastern part of Jilin Province, which is in northeastern China. The city was founded in 1673, and was the center of politics, economy, and culture at the beginning of the nineteenth century. Before 1954, Jilin was the capital of Jilin Province. Today the city is known throughout China for its history and culture.

Jilin City is one of China's 30 largest cities. The city has jurisdiction over four districts, four county-grade cities, and one county, with a total area of 37,120 square kilometers, and a population of 4.35 million. The city's urban area is 1,755 square kilometers, and it has a population of more than 1.4 million.

Leading Industrial City

Jilin City is in a transitional geographic region between the Changbai Mountain Range and the Songliao Plain, and the Songhua River runs through the urban area in the shape of the letter 'S'. All sides of the city face mountains, and much of it is near the river. Forty-three and a half percent of Jilin is forested, and the annual rainfall here is about 700 mm. The city is rich in 27 kinds of mineral resources, including gold, silver, bronze, iron, tungsten, and others, and Jilin is rich in rice, beans, and corn. In addition, Jilin City is the main production region for the 'three treasures of northeastern China'—ginseng, marten, and pilose antler.

Jilin City has a complete category of industries; the four leading ones are chemical production, electric power, metallurgy, and automobile manufacturing. Paper-making, textiles, plastics, electronics, medicine, household appliances,



Jilin City and the Songhua River.

Scenic Jilin City

Because of the surrounding mountains, the Songhua River, and Songhua Lake, the urban area of Jilin City is very scenic and has become a popular tourist destination in northeastern China in both summer and winter.

In winter, the city is covered with snow, and near the urban area, there are world-class ski resorts—Beidahu Skiing Resort and Songhua Lake Ski Resort. Along stretches of the cold river, frosted trees known as Jilin rime are one of the four natural wonders of China. Other attractions in Jilin City include the exhibition of the largest meteorite in the world, Beishan Park, Longtan Mountain ancient city ruins, Longtan Mountain deer farm, and Aladi Korean nationality folk village. All of these unique tourism resources provide an excellent foundation for developing Jilin City into international tourist city.

An International City

Since the reformation and opening to the outside world, the infrastructure of Jilin City has continued to develop rapidly. Modern communication and

food processing, and construction materials industries are also major contributors to Jilin's industrial economy. In addition, with the approval of the State Council, Jilin City has constructed a High-Tech Development Zone in the city.

The tremendous base of industries and rich resources provide favorable conditions for building Jilin City into a modern industrial city.



Winter in Jilin City: Jilin rime along the Songhua River.

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Maardu

Maardu is situated 15 kilometers from Tallinn, the capital of the Estonian Republic. Two kilometers south of Maardu is the Tallinn-St. Petersburg highway, which offers good communication with the town of Narva on the border with Russia. The total area of Maardu is 22.7 square kilometers.

Maardu People

Maardu is seventh among cities in the Estonian Republic in terms of population with 15,300 residents. During the summer season the

transportation systems, including national airlines, railways, and highways provide a very favorable investment environment.

Jilin City has established sister-city and economic and trade affiliations and relations with cities in the United States, Canada, Russia, France, Germany, Ukraine, Japan, South Korea, and North Korea. The friendly cooperation and exchanges in the fields of economy, trade, science and culture between Jilin City and compatriots in Hong Kong, Macao, and Taiwan, and overseas Chinese, are increasing day after day.

Education, Culture, Leisure, Health

Maardu has four schools: three for Russian-speaking children and one for Estonian-speaking children. There are 2,766 pupils and 196 teachers at the schools.

The town has a sports complex with a 25-meter swimming pool and other athletic facilities. There is also a good stadium and a football club with four teams. The FC Levadia is the champion of Estonia and represents Estonian football in the Champions League.

There is also interest here in

population increases by nearly 50 percent due to the famous summerhouses in Muuga and Aedlinn, which are part of Maardu.

The population of Maardu comprises the following.

youth: 3,700 or 24.5 percent

able-bodied: 9,935 or 65.9 percent

retired: 1,445 or 9.6 percent

Estonians: 16.6 percent

Russians: 56.4 percent

Ukrainians: 6.6 percent

Byelorussians: 6.4 percent

Others: 14.0 percent

Economy

In the industrial development of Maardu, nearby phosphorus fields played a prominent role. Today the mines are no longer functioning because phosphorous mining is not considered economically viable. As a result, there remain in the area many industrial apartments and much available labor power, for which it is necessary to find a use.

The 2001 budget of the town of Maardu is 99 million kroons. The Estonian kroon is fixed to the German mark and since 1992 the exchange rate has remained at one German mark for eight Estonian kroons.

Muuga Port

In 1986 the modern Muuga Port was constructed in the northern part of Maardu. The port is a recipient of the Euromarket-93 Award and offers great possibilities for the development of trade.

Muuga Port is the site of the largest elevator in the Baltic countries (5 million tons) and a large oil terminal. The port has its own rail station and goods may be easily shipped to southeast and west European markets from here.

making a route for jogging and a light ski route on the territory of the former phosphorus quarry.

Maardu has a health center, which was built in 1962, and which employs sixteen physicians of different specialties. The facility has a capacity for 111 inpatients, and it can provide medical treatment ranging from care for common diseases to surgical operations by highly-educated physicians.

Tourism in the Maardu Area

Maardu is a very young town with limited historical sights. Fortunately, Tallinn, the capital of Estonia, is conveniently located nearby. Tallinn, which was founded in 1154, is easily accessible for Maardu visitors. Among the points of interest in Tallinn are thirty-one museums, nine theaters, twelve concert halls, twenty-four art galleries, and twenty hotels. Downtown Tallinn is included on UNESCO's list of the world's sights.

Lahernaa National Park, a wildlife reserve with rare ethnographic monuments is also near the city of Maardu. The park comprises an area of 490 square kilometers and has a 190-kilometer seaside.

Maardu is a young and emerging town. Owing to its good geographical position, it has great possibilities for development of industry, trade, and tourism.

For more information, please contact—

Maardu Linnavalitsus

Kallasmaa 1

74111 Maardu

EES TI Vabariik

tel: (372) 6060702

fax (372) 6060701

*Panorama of Maardu*

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Ulaanbaatar

Ulaanbaatar, the capital of Mongolia, has a recorded history of some three hundred and fifty years. The term "city" was an unfamiliar concept in Mongolia during most of this period, however, and the nomadic settlement moved some thirty times after its founding in 1639. Temporary locations were along the valleys of the Orkhon, Selenge, and Tuul Rivers in north-central Mongolia. The city finally settled in its current location in 1778, when the Tea Road, the overland trade route from Peking to St. Petersburg, made the city an important commercial center.

The name of the city has also changed a number of times. From 1639 to 1706 it was known as Orgoo, from the Mongolian word for palace. From 1706 to 1911 the name was Ikh Khuree, and from 1911 to 1924 it was Niisiel Khuree. For most of this time the West knew the city as Urga. Since October 29, 1924, the name has been Ulaanbaatar, which means Red Hero in the Mongolian language.

Today the city of Ulaanbaatar is the political, cultural, economic, and transportation center of Mongolia. Ulaanbaatar, with its international airport, is the junction point of the country's major roads and caravan routes and lies on the Trans-Siberian Railway, which, since 1955, links Russia with Beijing.



*The King Bird-Khangard:
Coat of Arms of Ulaanbaatar*

Population and Climate

Almost one-third of Mongolia's population now lives in Ulaanbaatar. While the city's population was only eighty-thousand in 1954, today almost eight hundred thousand persons make their home here, two-thirds of

Ulaanbaatar Today

Over the years since 1921, Ulaanbaatar has advanced from a small town to a modern city with developed industries, trade, infrastructure, education, culture, and science. In the area of manufacturing, industries include woolen textiles and related goods, leather and footwear, soap, paper, iron castings, cement, glassware, beer and spirits, and processed foods. Coal mined nearby Ulaanbaatar provides power.



Sukhbaatar Square in the heart of Ulaanbaatar is named after an independence hero.

whom are children and young people under the age of twenty-five.

At 1,350 meters above sea level, almost 5,000 feet, Ulaanbaatar sits in a basin surrounded by four mountains: Bogdh Khan, Songino Khairkhan, Chingeltel, and Bayanzurkh.

Ulaanbaatar's climate is sharply continental and the city experiences great extremes; temperatures fluctuate between 38°C in summer and -49°C in winter. The average annual precipitation is only 242.7 mm, and there are on average 283 sunny days in the year in Ulaanbaatar.

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Sapporo

International Association of Mayors of Northern Cities

In 1981 the late Itagaki Takeshi, then mayor of Sapporo, proposed a network of northern cities to exchange information and ideas for making winter cities more liveable. The first Mayors Conference was held in Sapporo in 1982. Sapporo mayor Katsura Nobuo now serves as chairman of the International Association of Mayors of Northern Cities, and the Secretariat of the organization is located in Sapporo City Hall.

Sapporo is located at 43° north latitude and 140° east longitude in the north of Japan. The city has a population of 1.83 million, which makes it the fifth largest city in

Sapporo's culinary specialties include grilled corn, which is sold at vending wagons in Odori Park, Genghis Khan—a lamb or mutton barbecue, and legendary Sapporo

Japan. In the year 2000, the annual mean temperature was 9.0°C, the highest temperature 36.0°C, and the lowest temperature -14.7°C. Sapporo enjoys four distinct seasons.

Tertiary industries such as wholesale and retail businesses, eating and drinking establishments, and other services are the most prosperous in Sapporo. Recently, IT-related businesses as well as technologies for cold and snowy climates are being promoted here.



Downtown Sapporo and Odori Park

beer, which originated in the city's pioneer days.

Parks and Nature

Odori Park, with its abundant flowers and greenery from spring to autumn, stretches from east to west through downtown Sapporo, offering a place for both residents and visitors to relax. Odori Park is the venue for Sapporo's Yosakoi Soran Festival, which was begun ten years ago, and which has become the largest summer festival in the city. Sapporo is also home to the world famous Sapporo Snow Festival, which annually draws over two million tourists from both home and abroad.

The southwest part of Sapporo is mountainous and green. Mt. Moiwa and Mt. Teine lie relatively close to the city center and both are popular among mountain hikers in summer and skiers in winter. In the suburbs of the city, Sapporo Art Park features outdoor sculptures, and nearby Moerenuma Park is an entire sculpture in itself.

World City

Sapporo has hosted many international events such as the Winter Olympic Games, the Winter Universiade, and the International Conference of Mayors of Northern Cities. The all-weather Sapporo Dome opened here in June and is the venue for three games of the Soccer World Cup in June 2002. In 2003, the Sapporo Convention Center opens here, and that will further increase the number of world-class conventions in Sapporo in coming years.

Demonstrating its vital characteristics in various fields, including sports, events, fashion, arts, culture, and tourism, Sapporo is looking forward to playing an even more active world role in the future.

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20th Anniversary the IAMNC Mayors Conference Marks 20 Years of Progress

The tenth biennial Northern Intercity Conference of Mayors in Aomori, Japan in February will mark more than twenty years of work toward goals set out by Itagaki Takeshi when, during his tenure as mayor, he founded the Northern Intercity Conference Committee (NICC) in 1981.

In an interview in 1989, Mr. Itagaki noted that "the purpose of the Mayors Conference is to provide a forum in which urban leaders can meet to share ideas and experiences concerning winter cities. We hope to deepen mutual understanding and develop friendly relations among winter urban areas, and create comfortable and attractive northern cities."

Mr. Itagaki said that he had always thought Sapporo should set a few trends and assume a leadership role by offering ideas...that would make winter life more pleasant for us, and that ...there is probably a lot that northern cities could learn from each other about winter city planning and winter lifestyles.

Since the first meeting of mayors of northern cities in Sapporo in 1982, cities participating in the Mayors Conferences have shared information about topics as varied as winter

?The purpose of the Mayors Conference is to provide a forum in which urban leaders can meet to share ideas and experiences concerning winter cities. ? —Itagaki Takeshi, founder of the NICC

IAMNC

In 1993 the NICC was reorganized and named the International Association of Mayors of Northern Cities (IAMNC). Prominent among the three objectives set out in the organization's new charter was the notion that, "Winter is a resource and an asset." The IAMNC also vowed to strive for the development of "functional, efficient northern cities," and to work toward "the development of an international society." The IAMNC works in this direction through continued biennial

playground equipment, winter housing and architecture, the effects of studded tires and artificial snow on the environment, alternatives to salt as a winter road deicer, winter tourism, and, more recently, countermeasures against natural disasters and snow management techniques.

After the first Mayors Conference in Sapporo, the following cities also hosted the event: Shenyang, China, 1985; Edmonton, Canada, 1988; Tromsø, Norway 1990; Montréal, Canada, 1992; Anchorage, U.S.A., 1994; Winnipeg, Canada, 1996; Harbin, China, 1998; and Luleå and Kiruna, Sweden in 2000. Aomori is host of the tenth conference in 2002; and in 2004 the city of Anchorage will host the event for the second time.

Mayors Conferences, establishment of research subcommittees, annual board of directors meetings, and the sponsorship of a winter cities forum and a winter trade fair that are held in conjunction with the Mayors Conferences.

Global warming was not among his goals when Mr. Itagaki founded the Mayors Conference, but the organization has generated warmth among northern cities as well as steps toward greater livability in winter cities.

For more information, please visit the IAMNC web site at www.iamnc.org.

Subcommittees Help IAMNC Meet Goals

In addition to its biennial Mayors Conference, the IAMNC also establishes, from time to time, specialized subcommittees that study issues related to IAMNC goals. The Winter Urban Environmental Research Subcommittee was established in 1990 at the fourth Mayors Conference in Tromsø, Norway, and since then, six additional subcommittees have been founded.

The Subcommittee for Countermeasures Against Natural Disasters and the Subcommittee for Snow Management are the most recent. Both were established at the ninth Mayors Conference in Luleå and Kiruna, Sweden in 2000. The two subcommittees are tentatively scheduled to submit progress reports about their activities at the tenth Mayors Conference in Aomori in February.



Members of the Subcommittee for Countermeasures Against Natural Disasters convene in Sapporo.

Subcommittee for Countermeasures Against Natural Disasters

The third meeting of the Subcommittee for Countermeasures Against Natural Disasters was held in Sapporo on November 2 and 3, 2001. Delegates heard a keynote report on the effects of the eruption of Mt. Usu in Hokkaido last year, and there were discussions on damage from thawing snow and flooding, issues that affect many winter cities. It was proposed at the meeting that not only natural disasters but also other disasters, including man-made and environmental disasters, be considered by the subcommittee.

The cities of Shenyang, Jiamusi in China, Ulaanbaatar, Mongolia, Maardu, Estonia, and Aomori and Sapporo in Japan were represented at the subcommittee meeting.

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PIARC January 28–31 Winter Road Conference in Sapporo



The Winter Road Association (PIARC) opens its International Winter Road Congress in Sapporo on January 28. The four-day conference will bring experts on winter road maintenance here from

Congress Program

The opening session of the International Winter Road Congress will feature a lecture on research on cold regions with heavy snowfalls and the global environment. Two keynote speeches will address subjects related to cold and snowy regions.

The technical sessions of the congress comprise the following six topics.

- Winter Road Policies and Strategies
- Snow and Ice Management and Its Costs

about 25 countries. The theme for the congress is "New Challenges for Winter Road Service," and the event will take place at the new Sapporo Dome.

Since its founding in 1909, PIARC has served as an international forum for issues related to road use, which includes promoting communities and social welfare. In addition to the Winter Congresses that PIARC hosts, the organization's technical committees conduct important research activities.

Members of the PIARC executive committee will preside over a special session for all congress participants in Sapporo, the theme of which will be "Sustainable Road Maintenance."

The 2002 Winter Road Congress will be the first held in Asia, and Hokkaido is an ideal venue because of the great snowfall here, because 98 percent of goods transported here move via the road system.

- Winter Road Issues and Traffic Safety in Urban Areas
- Environment and Energy
- Telecommunications Technology
- Development of Snow-Removal and Ice-Control Technology

Persons attending the congress will also have opportunities to observe efforts at making Sapporo a liveable winter city, including snow-melting devices, the Institute of Low Temperature Science and other related sites.

Exhibition

An exhibition at the new Sapporo Dome in conjunction with the Fuyu-Topia Fair is a part of the International Winter Road Congress. The exhibition will feature state-of-the-art snow removal machinery and snow removal machinery control systems; equipment that aids persons with impaired mobility; hybrid automobiles; pavement materials; traffic control devices; snow-melting devices; winter construction technologies; and much more.

Snow is Cool Cooling System Utilizes Snow

"Winter is a resource and an asset." This slogan of the International Association of Mayors of Northern Cities is being applied very literally in northern Japan, where snow is stored for use in summer months for air-conditioning. The cold, white precipitation that winter drivers consider a liability serves as an economically efficient coolant in summer.

In Hokkaido and in northern

Aomori and Sapporo

The city of Aomori, venue for Winter Cities 2002 and the tenth Northern Intercity Conference of Mayors, employs a snow-cooling system at the Aomori Contemporary Art Center, site of the Northern Art Exhibition and the Mayors Conference in February. In Hokkaido, the city of Sapporo plans

Honshu, both cold regions with great accumulations of snow, cooling systems utilizing snow are being adopted. Facilities for storing snow have been constructed at a variety of buildings, where snow is used in summer for both refrigeration and air-conditioning in condominiums, social welfare facilities for the aged, and in other sorts of buildings.

There are two basic ways in which snow is used as a coolant here. In one system, a fan is used to circulate air that has been chilled by the snow. In a second system, cold air is produced by circulating a liquid similar to antifreeze through pipes embedded in snow storage tanks.

to install snow cooling systems in park management facilities on the outskirts of the city. In downtown Sapporo, far from snow disposal sites, ways are being considered for using the city's existing underground snow-melting pools and snow-flow gutters as storage facilities for snow cooling systems.

Cool air that is generated by snow-cooling systems is naturally more economical than electrically-powered systems. Snow-cooling systems also provide a moderate humidity level and produce chilled air that is gentle on both people and on plantlife.

Environmentally Safe Coolant

At a time when environmental issues such as global warming are of increasing concern, snow-cooling systems are a step toward the reduction of our dependence on fossil fuels and the creation of alternative energy. Snow-cooling can be one of the cornerstones for an ecologically friendly northern city development that takes advantage of one of the most prominent natural resources of cold regions.

