Regional Economic Cooperation in Northeast Asia

Proceedings of the Eighth Meeting of the Northeast Asia Economic Forum

28-30 July 1998
Yonago, Tottori Prefecture, Japan

Northeast Asia Economic Forum

Co-sponsored by the East-West Center
Hosted by Tottori Prefecture, Japan

March 1999
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Preface

The Proceedings of the Eighth Meeting of the Northeast Asia Economic Forum represent the Forum’s latest effort to clarify and bring understanding to the issues that shape regional economic cooperation in Northeast Asia. The Forum has published an annual conference report since 1991. This volume provides not only an up-to-date assessment of progress and obstacles in regional cooperation, but detailed analyses of specific sectors: development financing, transportation, telecommunications, energy and environment. These analyses are the results of on-going research and collaboration by the experts that make up the Forum’s consultative working groups.

This report also highlights the Forum’s continuing and expanding partnership with local governments and international organizations. The Forum’s eighth meeting was organized and planned in cooperation with Tottori Prefecture, Japan, and the Tottori Research Center. A special session on crisis management for natural disasters, an area explored for the first time by the Forum, was organized through close cooperation with and generous support from Hyogo Prefecture, Japan. The session on the Tumen River area and Northeast Asian development (indeed the entire conference) benefited greatly from the participation and support of the UNDP’s Tumen River Area Development Program.

The Forum expresses its sincere appreciation to Tottori Prefecture, the Tottori Research Center, Hyogo Prefecture, and the United Nations Development Program. We also acknowledge the efforts of the Kanamori Committee in organizing the participation of Japanese representatives and in the preparatory work and follow-up activities for the conference. Thanks are due to the participants and all other organizations and institutions that contributed to the success of the conference and the publication of this report.

We strongly encourage business sectors, national and local governments, academics, and non-governmental organizations of this region to use this report as a basis for fruitful discussions as we seek to create a Northeast Asian community.

Lee-Jay Cho
Chairman
Northeast Asia Economic Forum
The Yonago Resolution

The Meeting recognizes the momentum created by the Northeast Asia Economic Forum's efforts which began in Niigata in 1988, and which have progressed chronologically through Changchun, Pyongyang, Vladivostok, Yongyeong, Niigata, Honolulu, Ulaanbaatar, and now Yonago. In this context, the Meeting recognizes the ability of local governments such as Tottori Prefecture, with its excellent conference facilities (the Big Ship) to play a leading role in the movement toward greater regional economic cooperation. The Meeting also recognizes the role of local government in implementing research activities and consultation meetings, and the importance of cooperation among the Forum, local governments, and international organizations.

The Meeting recognizes that the Forum is engaged in a functional approach toward closer regional economic cooperation which will form the foundation for regional institution-building. Recognizing the progress and potential of the Forum, the meeting considers it essential that its momentum and continuity be maintained, particularly in these difficult financial times.

The Meeting recognizes that mobilization of capital is one of the most important tasks facing the region, and thus was pleased to receive the results of the deliberations of the Consultative Working Group on the Northeast Asian Development Bank. The Meeting recommends that this Group continue its discussions with the financial community and relevant policymakers regarding the ways and means of realizing this concept.

In this context, the Meeting acknowledges that this is a long-term effort for the benefit of the region as a whole, and that a focused effort on a Tumen River Area Development facility as a first concrete step in this process could yield quicker results. Thus the Meeting requests the Forum to cooperate with the Tumen Secretariat to analyze the feasibility of such a facility and develop detailed scenarios for its establishment and implementation.

The Meeting also recognizes the critical roles of telecommunications in regional development, and is pleased to receive the report of the Consultative Working Group on Cooperation in Telecommunications Systems. It looks forward to learning the results of the next meeting of the Group in September in China.

The Meeting strongly recommends the establishment of a Consultative Working Group on Regional Transportation Planning. This Group, the Telecommunications Working Group, and the previously established Consultative Working Group on Electric Power Systems and on Energy and the Environment should report the results of their deliberations and activities to the
next Annual Meeting of the Forum. The Meeting recommends that the Forum also pay particular attention to fostering cooperation in the management of responses to natural disasters. The members of the Forum are encouraged to support the Forum’s efforts to generate the resources necessary to organize and implement these Consultative Working Groups, including a proposed small Secretariat for the Forum.

The Meeting warmly welcomes and accepts the offer of Tianjin to host the Forum’s 1999 annual meeting.

29 July 1998
Yonago, Japan
Opening Ceremonies
Opening Address

Yuji Nishio

It is a great pleasure for us to receive guests from so many countries including the People’s Republic of China, the Republic of Korea, the Democratic People’s Republic of Korea, the State of Mongolia, the Russian Federation, and the United States of America as well as local Japanese people to the Eighth Northeast Asia Economic Forum held here in Tottori Prefecture.

I would also like to express my heartfelt thanks to officials of the East-West Center, to Dr. Lee-Jay Cho, Chairman of the Northeast Asia Economic Forum, to the Mayors of Yonago City and Sakaiminato City, to various economic associations and bodies in Tottori Prefecture and to various persons both from overseas and the local area who so kindly assisted us in opening this Forum meeting.

First of all, let me briefly describe Tottori Prefecture. Tottori Prefecture is located along the Japan Sea in western Japan. As a result, Tottori Prefecture has had various exchanges with the many countries along the Japan Sea since long ago. Domestically Tottori is quite near to the Kansai economic region and therefore, it has had close relations with Osaka and Kobe, personal and material relations. In view of these geographical characteristics, Tottori Prefecture is now doing its best to develop various plans so that it can be “the western basis of exchange for the Japan Sea basin countries.”

In 1997 we had a Japan Exposition entitled San-in Yume Minato Hakurankai (“San-in Dream-Harbor Exposition”), with the theme: “Fly toward a new age of exchange.” About 1,930,000 people visited the Exposition. That is three times the population of Tottori Prefecture. People from overseas also visited. Some of them were from Kangwon-do of Korea; Jilin Province, Hebei Province and Dalian City of China; the central government of Mongolia; and Primorsky Krai of Russia. Thus, the Exposition was an opportunity for friendship with the people of Northeast Asia on the opposite side of the Japan Sea.

In August 1998, the fifth meeting of the “International Exchange and Cooperation Summit of the Local Governments of the Japan Sea Rim Region” will be held in Jilin Province, China. This summit is sponsored by four local governments, namely, Tottori Prefecture, Kangwon-do, Korea, Jilin Province, China, and Primorsky Krai of Russia. The purpose of the summit is to discuss and encourage academic, cultural and economic exchanges. Attendance by representatives of North Korea and Mongolia is also anticipated.
We have established transportation infrastructure around Yonago airport and Sakaiminato port. As Sakaiminato City was designated as an Import Promotion Area (FAZ: Free Access Zone), we are scheduled to open regular sailing lines from Sakaiminato port with the goal of making the city a base for a distribution network. We, the officials of Tottori Prefecture, are making our utmost effort to make Tottori Prefecture the “western basis of exchange for the Japan Sea-basin countries.” Through this Northeast Asia Economic Forum and other meetings, we would like to contribute to the realization of peace and prosperity in Northeast Asia.

Next, let me explain the importance of the Northeast Asia Economic Forum. About 300 million people live in Northeast Asia. The region has ample natural resources, labor, and engineering skills. This region is expected to grow and develop greatly in the 21st century. In this area, we eagerly await “multilateral cooperation” with the goal of eventual global cooperation. There have been many unfortunate events in the past, but if the people of this region view things positively and extend cooperation to each other, especially economically, they will make this region a peaceful and prosperous one. This is the reason that we chose “Promoting Peace and Prosperity by Multilateral Cooperation” as the theme of this meeting.

The Northeast Asia Economic Forum plays a very important role in promoting multilateral cooperation and providing a meeting place for people from many countries. This forum was first held in 1991. This is the eighth meeting. During this period, the development of the Tumen River Area was proposed and later taken up by the United Nations. Ideas for a natural gas pipeline and a Northeast Asian Development Bank have also drawn people’s attention. In this eighth meeting, these subjects will be discussed further with the goal of making these dreams come true.

I think that the role played by local governments, like Tottori Prefecture, is very important. In particular, when it comes to Northeast Asia, various local governments along the coast of the Japan Sea need to have strong relationships. They need to work together. While internationalization is advancing in many areas of the world, local governments must also speak up and take concrete actions.

Finally, please note that the Yonago Convention Center, the “Big Ship,” where this forum is being held, was newly constructed and completed in April 1998 by Tottori Prefecture as a venue for the exchange of opinions between countries around the Japan Sea basin. Please use this “Big Ship” for the next two days, as a “ship of exchange.” We hope that this meeting is a fruitful one and that all of us start rowing this ship toward the 21st century.
Opening Address

Lee-Jay Cho

Governor Yuji Nishio, distinguished keynote speakers, Mr. Nakayama, Professor Scalapino, distinguished participants and guests, and ladies and gentlemen, I would first of all like to extend Aloha Nui from Hawaii, in the middle of the Pacific Ocean, to every one of you in this great convention hall, nicknamed the “Big Ship.” Aloha means “welcome” as well as “goodbye,” but I don’t mean to say goodbye now, but later, after the successful completion of this Eighth Conference of the Northeast Asia Economic Forum, hosted by the Tottori Prefectural Government and Tottori Research Center, and co-sponsored by the Forum and the East-West Center.

A new chapter of history is about to begin in this convention hall—a turning point for entering a 21st century of peace, stability, and prosperity in Northeast Asia by exchanging views on economic cooperation with representatives from government, business, international organizations, and the private sector. We have a dream for this region—a vast territory extending through the Russian Far East, Mongolia and Northeast China, the Korean peninsula, Japan, and even reaching Alaska and the Pacific basin—for harmony, peace, and unity among diversity. For more than a century, this region has been afflicted by conflict, tension, and war. It has been unable to fulfill its great potential for economic cooperation and development, to tap rich endowments of natural and human resources, capital and technology spread across artificial national boundaries.

There are plentiful natural resources in the Russian Far East and Mongolia, including natural gas in Irkutsk that can be channeled through a pipeline grid through the Korean peninsula to Japan. Niigata, for example, has recently been designated as a terminus for natural gas piped from Sakhalin Island. There are also tremendous agricultural and human resources in Northeast China; the DPRK has a strategic geographic location, an especially beautiful coastline, and quality manpower; the ROK has industrial technology and capital; Japan has massive financial resources and advanced technology. In addition, the region has linkages to the advanced resources-based economies of Alaska and the rest of the North Pacific basin.

The forces of economic globalization will drive regional cooperation and integration in this region. The Northeast Asian region has greater potential due to national and provincial differences in the level of development. Differences and diversity, when properly harnessed, generate energy, like a flowing river generates electric power. The force of decentralization in the 21st century will
add to the increasing role of local governments and institutions in the dynamics of regional economic integration.

The nation’s economy can be considered like the life-cycle of an individual human being, including the process of aging, affected by illness, fitness, and spiritual energy. Unlike the longevity of a human being with a finite limit and ultimate death, the national economy can be rejuvenated and prolonged. All things age, and history teaches that the primacy of a national economy cannot be maintained for too long.

The Northeast Asian region has both aging and young economies. Through cooperation and integration, a new regional economic entity will emerge. Harmony among diversity—namely the experience and wisdom of the older economies and the vitality and energy of the younger ones—can be combined into the dynamic force of economic development. Aging economies can be rejuvenated, and younger economies can be stimulated to grow.

The 21st century will see the development of a land bridge extending from the Northeast Asian region to Europe, thus establishing linkages to both Pacific North America and Europe. This is the vision for the Northeast Asian region of open regionalism in a globalizing world. Communications and transportation for this region have made remarkable progress. New air flights between the major cities in the region have been established, for example, Vladivostok to Niigata, and Niigata to Harbin. The flight time from Seoul to Beijing has been reduced almost by half, by eliminating an institutional barrier in air traffic control. We will be discussing closer and more efficient transportation networks for the future in this meeting. We also dream of a day in the future when our children can take school excursions in the summer from Japan and the neighboring countries to the beautiful Diamond Mountain of the DPRK.

Within Japan, the prefectures facing the Sea of Japan or East Sea have yet to realize their potential in productive linkages with the Northeast Asian continent to the north, and the Pacific coast, for example, and the greater-Kansai economy on Japan’s southern coast.

For the economic potential of the Northeast Asian region to be realized, national, cultural, and institutional barriers must be overcome. Through cooperation, exchange, and promotion of understanding and better relations, a new Northeast Asian culture must be developed. Reducing these barriers requires changes in our institutions, values, norms, and behavior, and is thus the regional challenge of the coming century.

New culture and institutions befitting the new regional community need to be created and developed. We can then visualize the coming of natural economic and cultural territories (NECT) for the Northeast Asian region (NEAR).
During this Eighth Conference of the Forum, we will be discussing the financing of infrastructure development, transportation, energy and the environment, Tumen River Area development, and regional cooperation in response to natural disasters. The last-mentioned session is co-sponsored and supported by Hyogo Prefecture.

Since the beginning of the series of eight Forum conferences, we have seen impressive progress in promoting dialogue and exchange. We are also seeing an increasing number of ideas, policy initiatives, seminars, and conferences devoted to economic cooperation in this region. This Forum has met in all of the countries involved in this historic effort, starting with Changchun in China, Pyongyang, Vladivostok, Yongpyeong, Niigata, Honolulu, and Ulaanbaatar. We are now in Yonago, Japan, looking into the 21st century, and taking another step toward our dream for Northeast Asia.

All of us here in this great convention hall of the “Big Ship” will be shaping our dream for the 21st century into a vision of a dynamic and prosperous region, and all of us will work together to turn this vision into reality.

I would like to acknowledge the leadership and contributions of the geographically small but dynamic prefecture of Tottori in hosting the Eighth Conference of the Forum. I extend great appreciation to Governor Yuji Nishio, to the Mayors of Yonago and Sakai Minato, and to the Tottori Research Center for providing support for the conference. We are grateful to the representatives of each country represented here for organizing and providing support for participants. Among the many organizations providing support are the Kanamori Committee, the Institute of North Asian Studies, API Seoul, business corporations, and other institutions represented here today.
Energy and the Economy of the East Sea Region

Taro Nakayama

The countries and the people of the East Sea region must find a route toward a new society, a new paradigm for the coming 21st century. This forum will serve as a major cornerstone for the future of this region in the coming century. I have had the opportunity to be involved in the efforts for peace and stability by politicians, economists, and public leaders with a common interest in joint cooperation among all the countries and regions around the East Sea. It is important to stress that the responsibility should be assumed by all the people of this East Sea region.

I would like to remind you that the “global society” recently experienced the end of a long-standing paradigm. With this end, we expected to achieve global peace in the short term, but it was wishful thinking. The liberalism versus communism or communism versus democracy conflict was over. The society of the East was represented by the USSR, that of the West by the U.S. There was also a non-alliance group represented by Yugoslavia under Tito’s paradigm. Those were the three major contrasting principles of the global society for a long time. When this changed, former British Prime Minister, Margaret Thatcher, said that we were at risk “now that the ice has broken and melted.” In a sense, her remarks were prophetic. To put it another way, when an organizational paradigm falls apart, a period of transition follows during which a new paradigm is being created. Mrs. Thatcher suggested that it is this period of transition that presents the greatest risk. This is evident in events that unfolded: the Cambodian civil war, ethnic conflict in African countries, as well as the ethnic and religious conflicts in what was Yugoslavia. These events are testimony that we have not reached a stable stage in the global society.

On the other hand, the global economy is becoming more and more borderless. We concluded the last Uruguay round and established the WTO. We are in a time of globalization. Taking this into consideration, political, economic, and opinion leaders of the six countries and regions surrounding the East Sea region should assume greater responsibility. The global society is here, we see it in NAFTA which groups the U.S., Canada, and Mexico, and in the EU which will soon integrate further with the launching of the Euro. In Asia, ASEAN serves as a major regional economic group. Back in the 1980s, the U.S. experienced very difficult economic times, however, the U.S. has addressed its own issues and is taking a very active role in preparing for the 21st century. In
Europe, integration continues to move forward steadily. But in Asia, including the Northeast Asian region, the situation is somewhat different.

For the past decade Asia was referred to as one of the major active economic regions of the world. Since last year, however, the currencies of the region have been greatly deflated. As the LDP’s Chairman of the foreign investigative committee, I personally saw the Asian currency and economic risk turn into a crisis. Now the East Asian region is experiencing negative economic growth instead of the great positive economic growth of the past. In China’s case further liberalization and opening up of the economic system and the situation of the Chinese currency will have a major impact not only on Asia but also on the world.

Therefore, there is concern among U.S. political leaders over the Asian currency turmoil and its effect on the export capabilities of Asian countries, including Japan with a weaker yen. Once the U.S. economy is in “a good mood” then the excessive amount of exports from Asia including those from Japan can be assumed by the economy, but there is the continued possibility of friction. Moreover, owing to the devaluation of the Asian currency, the export capability of Latin American countries is deteriorating. If we look at the global picture we see how what happens on one side of the world affects the other.

I wish to look at the East Sea region in the context of an era of a new revolution and evolution. What are the common interests of the people of the region? Can we establish one major economic regional bloc that addresses the common interest in prosperity as a means to achieve peace and stability? These are the three major common principles (prosperity, peace, and stability) to be shared by the political leaders of the nations of the region. Based upon this, we first should acknowledge the issues involved. Though the experts will make specific comments item by item, let me say that from a regional perspective, we should reduce the region’s potential military risk. In contrast to Europe, military expenditures in the East Sea region continue to increase. To change this pattern, we need to alleviate military tensions. What is necessary for this? Namely, a “build-up” of mutual confidence. This confidence building is key. We should have exchanges of military experts as well as exchanges of military information.

Let me give you some good and positive examples. In the early 1990s the ROK normalized diplomatic and economic relations with the PRC and Russia. The only remaining diplomatic relations to be normalized are those between the DPRK and Japan and the DPRK and ROK. This lack of peaceful and normal diplomatic relations represents a major potential risk, it manifests itself in military tension, mutual mistrust and distrust. Building awareness of a shared common interest in creating peace through military mitigation should be an urgent item on our agenda.
Russia presents an interesting example. The Russian people appear to be learning a great deal about the issues of this region. Russia shares a long border with the PRC; it therefore devotes much attention to developments in the PRC. Russia and the PRC now hold regular dialogue. From the Russian perspective the NATO inclusion of Hungary, Poland, and Czechoslovakia is a cause for concern. Russia may now feel pressure from Europe, and in response it may want to pay greater attention to relations within the Asia-Pacific region, namely building close diplomatic relations with the PRC.

Seven million people live in the Russian Far East. Their income level is much lower compared with their counterparts in the Moscow area. The economic prosperity of the Russian Far East and Siberia is critical to improving the quality of life for the people of that area. In that context we should not forget Russia's desire to be a member of the Asia-Pacific region. Thus Japan strongly supports Russian membership in APEC. Mutual confidence between government leaders in Russia and Japan is improving. They are committed to concluding a peace treaty by the year 2000, and the environment for this is favorable. Just as the US-Russia relationship has improved, the Japan-Russia relationship is now improving. As for relations among other East Sea region nations, for example, we see that the ROK now has aid assistance programs for the PRC, and the PRC has a mutual military assistance program with the DPRK.

The major agenda issues for the East Sea region countries are population and energy. Indeed, these are major issues for most Asia-Pacific countries. The PRC will soon have a population of 1.5 billion. In contrast, in Japan from the year 2010 the ratio of the total labor supply to the total population will decrease. That is, there will be fewer and fewer children and an aging society to care for. Information, technologies, financing, etc. are now rapidly transferred from one country to another, thereby speeding up the process of industrialization. The result is an increase in the local income level and better standards of living. But what are the by-products of this rapid industrialization? Global trends show that as a society industrializes it moves from a diet of plant-based protein to one based on animal protein. This requires increases in agricultural output of feed grain. At the same time, industrialization reduces the agricultural farming area. This is an important issue requiring our immediate attention. We must also consider the issue of pollution as it is linked to industrialization. Environmental degradation—air, water, and soil pollution—is a by-product of industrialization. What are the effects of this on agriculture and on the quality of life of the region's people?

The issue of energy is critical to this region. As we know, China is an oil producer, however, it is also a net oil importer. Indonesia has long been an oil exporter, but in the very near future it will likely become a net importer. Japan
depends on the Middle East for 80% of its oil. Taiwan and the Philippines also need imports of oil or natural gas. The energy issue is important to the Russian Far East and the ROK as well. This is an issue that involves all countries in one way or another: countries that provide labor, resources, funding. This issue requires interdependence.

The development of gas fields in Siberia is one way to address the energy needs of the region. When this possibility is discussed in Japan, it is often referred to as a dream. However, we can see that it is a real option, gas from this area already benefits Europe. Gas from Siberia is transported to Europe across borders and through 8,000 km of pipelines. The U.S. and Canada also have a developed pipeline system of 4,000 km. What is the situation in Asia? In general, our pipeline grid system is undeveloped.

I went to the Middle East with Mr. Obuchi last year, I am aware of the difficulties and conflicts involved in creating a pipeline system in the Caspian Sea area. However, when I look at the East Sea region I see great opportunity. There are the gas fields of Siberia with confirmed reserves, prospects for development of oil and natural gas, and a general understanding of the need for development, the possibility, and the funding. The question, or the pressing issue at hand, is how to turn this understanding into agreement among the countries concerned. Unless we reach an agreement soon, the region will grow even more dependent on Middle East oil and gas supplies.

I see the pipeline from Siberian gas fields as a step toward peace in the region. My proposal has been well received in Russia by the Russian Parliament and the Minister of Energy. There have been positive discussions with representatives from Mongolia who are interested in a pipeline from Irkutsk in Russia through Mongolia to China. The revenues from the pipeline will contribute to the development of the Mongolian economy. We have also discussed the continuation of the pipeline under water from China to the ROK. The ROK already has plans to establish a nationwide pipeline in two years. In a visit to Seoul I had positive discussions on the possibility of a pipeline through the DPRK in addition to the underwater pipeline from China to the ROK. There was agreement that the DPRK should also benefit from this. Our negotiations continue with the parties concerned from these countries to reach an agreement on the basic principles. The Japanese government will soon incorporate the "energy community project" into diplomatic guidelines. We have also held discussions with the U.S. Department of State. It is important to secure U.S. support, as it is so vital to the general prosperity of this region.

But there are preconditions or requirements to establish the pipeline. These were delineated by the Vice Director of the Asian Development Bank. The eight preconditions are: 1) confirmation of sufficient reserves and the confirmation of
a large enough market; 2) political stability so that all the countries concerned can participate in this project; 3) credit guarantees from the various governments; 4) agreement on technology transfers; 5) general understanding that the price of oil may decrease but that this should not have a negative impact on the development of natural gas; 6) securing lower transportation costs for LNG; 7) securing investment for construction and operations; 8) establishing reasonable pricing for natural gas. These eight preconditions should be fully considered to promote this project and to secure the full support of the Asian Development Bank.

I would like to make a proposal. First, we should establish a liaison committee of parliamentary representatives or policy makers from different nations. This is important to address the issue of pipeline security and maintenance given that it will cross borders. Political leaders in any country pay close attention to security issues. During the Gulf War the pipeline through Turkey was closed. As you can see, the issue of pipeline security is real and needs to be dealt with. In Japan this is already being addressed with respect to the oil and gas development projects in the Russian Far East: Sakhalin 1 and Sakhalin 2. We will also need to consider the pipeline extension to the ROK, the plans for a natural gas plant in Vladivostok, pipeline transport, etc. Thus, pipeline plans require that political leaders consider the security and stability of the whole region. Our input and discussions aid in the process of reaching an agreement for the pipeline project. We help to promote understanding of the potential regional prosperity that the project can help create. The understanding of policy makers needs nurturing to facilitate the process of reaching an agreement.

I agree that the establishment of a Northeast Asian Development Bank may be important to secure financing for this kind of big project. I attended the signing ceremony for the establishment of the EBRD for the development of Eastern Europe. Our region too needs a development bank. We also need a regional system of communication and information sharing: that is, a satellite broadcasting system. We should link Mongolia, the Russian Far East and Siberia, China, the Korean Peninsula, and Japan through communication satellites. In this way we will be able to reach the people of the region through television, through common broadcasting. This will help overcome differences in ideology, culture, and languages. ASEAN is already trying to establish joint production of theater for children. That effort is being led by NHK. Hong Kong already has Star TV which is broadcast in 53 different languages. Cooperation with NHK, Star TV, CNN, and the BBC is a real possibility for sharing information among the people of the East Sea region.
Challenges and Potentials for Northeast Asia in the Twenty-First Century

Robert A. Scalapino

At present, the economic clouds hanging over Asia preoccupy the attention of both leaders and citizens. After decades of rapid growth, a number of East Asian nations confront serious challenges: a weak financial-banking structure, with massive unredeemable loans outstanding; unhealthy currency depreciation amidst declining consumer confidence, at home and abroad; an absence of transparency in the economic arena, government-corporate collusion and extensive corruption.

In earlier times, the economic strategy pioneered by Japan and borrowed by others was highly effective: governmental sponsorship of key economic sectors to induce rapid growth; an intertwined corporatism, epitomized by the *keiretsu* system that protected the domestic market; and strong emphasis on export orientation. Perhaps the most significant lesson of today is that no economic strategy, however successful at certain stages in a society's development, can be permanently pursued with effectiveness. Economic strategies must change as a nation's development advances, with weaknesses detected promptly and corrected.

Optimists see the present as a time when the very seriousness of the economic situation in many states will induce fundamental reforms, leading to the emergence of a healthier, more rational economic order. This will require more effective regulatory measures; loans carefully advanced, based on creditworthiness; greater transparency; and strict measures taken to curb corruption. Further, it will necessitate more open markets, with a reduction of both tariff and non-tariff barriers, enabling true competitiveness and access to high technology, albeit, with proper safeguards for intellectual property.

To be sure, the rapid advance of interdependence has posed new issues, including the greatly increased vulnerability of the domestic economy to international currents. Indeed, the current crisis is an illustration of the challenges as well as the opportunities posed by globalization.

Meanwhile, pessimists fear that the period of economic pain will be protracted, inducing political and social instability. With rising bankruptcies and growing unemployment, protests will mount, they aver, and governments will be weakened. Indonesia and the Republic of Korea are being closely watched in these respects. Moreover, pessimists argue that political leaders, divided with...
respect to the proper course to take, will be immobilized. Japan is a case in point, as the recent elections illustrate.

One fact is clear. The political factor is vitally important. This is a time when the correct course of action must be discerned, and then leaders must have the courage to pursue that course, seeking to persuade their citizens to accept a difficult path in order to reach a more promising system.

One advantage lies in the fact that certain economic fundamentals in key Northeast Asian societies are sound: an educated population, motivated to seek further development; high savings rates and current account balances; a commitment to advanced technology; and experience with the international marketplace. Thus, the chances are good that at some point in the not distant future, this region will resume its economic advances, although growth rates will probably be lower. The role of the more advanced economies, such as the United States, Japan, and the European Union, will be of great importance, along with that of such international agencies as the World Trade Organization and APEC. The policies of these bodies must be constantly reviewed, with such corrections as are required undertaken promptly. To a greater extent than at any time in history, we are one world, with a nation’s domestic policies having a direct impact on others.

This latter fact has profound political implications. The sovereignty of the nation-state is widely declared to be inviolate, to be upheld at all costs. Indeed, nationalism is rising in many parts of the world, including the Asia-Pacific region, with the insistence that there should be no interference in a state’s internal affairs. Yet with internationalism also steadily growing, and the fate of nations being increasingly intertwined, how can nations pursue policies that damage others without repercussions? All nations are now parties to an ever expanding number of regional and global associations, and also to a rapidly growing series of treaties, agreements and accords. How is compliance to be ensured? No issue will be of greater significance in the decades ahead.

We have now moved further into the political realm. As noted previously, the rise of nationalism is to be found throughout Asia, and in the United States as well. In some instances, nationalism is a substitute for ideology, given the decline of Marxism-Leninism everywhere. Leaders seek to bolster loyalty by appealing to the patriotic sentiments of their citizens. Thus, in China, references are now frequent to that nation’s five thousand years of history; Confucius has been revived; and Sun Yat-sen is quoted along with Mao and Deng. In North Korea, nationalism long ago triumphed over socialist internationalism, and it is rising in Vietnam today. But this phenomenon is by no means confined to the socialist states. One finds it potent in South Korea, sometimes expressed in anti-
foreign sentiments. In Japan, resentment against foreign criticism has also been voiced recently, with the assertion that Japan will follow its own path.

And in the United States, nationalism on occasion takes a neo-isolationist direction, with the argument that the U.S. has borne heavy and inequitable burdens on behalf of international stability and prosperity for too long, or that the American worker should be protected against low-wage imports and excessive migration.

It remains to be seen whether in the future, nationalism will take benign and constructive forms in the international arena, or a militant, non-cooperative direction. It should be remembered that each of the major Asia-Pacific nations has a “lost empire.” In coming decades, how will China act not only toward Taiwan and the South China Sea atolls, but also Mongolia and even the Russian Far East, once parts of the greater Chinese domain? How will Russia, confronted with an enlarged NATO, interact with the newly independent states on its western borders and also Central Asia?

Japan, having built a vital economic relationship with East Asia—a central goal throughout the 20th century—is faced with the issue of whether and how to add political and strategic commitments to its current position in Asia. For the United States, the “lost empire” is of a different nature. Today, the U.S. witnesses the transformation of patron-client relations to demands for greater partnership on the part of its aligned states. How will it react to this major change?

Before suggesting the probabilities with respect to these challenges, let us examine the future power configuration in Asia-Pacific in coming decades, with special emphasis on Northeast Asia. First, the United States will remain the sole global power, whether power is measured in economic or strategic terms. Moreover, U.S. domestic stability will probably remain strong, although the American scene will not be without its problems. For the average American, problems of daily life in a post-modern society—housing, congestion, pollution, crime, and education for one’s children—generally take precedence over foreign policy.

The one East Asian nation very likely to emerge as a major power in the near term is China. Its economic growth will continue, and despite some downsizing of forces, it will pursue a program of military modernization, thereby increasing its reach in the air and on the sea. To be sure, China will be a major power with major problems. It can never be easy to modernize 1.3 billion people, with the population reaching at least 1.6 billion at some point. The economic issues confronting China today, including fragile financial-banking institutions, widespread unemployment, a major west-east gap, the inadequacies of the state-owned enterprises, and massive corruption, cannot be resolved quickly or easily.
Yet under an authoritarian pluralist system, China will avoid chaos, and emerge as a key player in the region.

Meanwhile, at some point in the years ahead, Russia will reemerge as a major power. It has an educated people, vast resources, and a strategically significant geographic position astride the Eurasian continent. Already, even while it wrestles with serious economic and political problems, Russia is reasserting its right to be acknowledged as a global power, playing a more active role in the Middle East as well as in East Asia. When the economic turmoil has lessened and its political order has demonstrated the capacity to make a successful transition to the post-Yeltsin period, Russia will return to a prominent role on the international stage.

Japan is already a global economic power despite its current difficulties. Its probable future course has been sketched in the recent economic and political measures relating to East Asia where it has demonstrated leadership: the proposal for an Asian Monetary Fund and the peace plan brokered for Cambodia. Not all proposals will receive universal approval or prove successful, but Japan’s path as leader lies in the economic and political realm, not as a high-posture military power.

Meanwhile, in addition to the triumph of a market-oriented strategy over socialism, another emerging economic phenomenon deserves attention and support. Recent decades have witnessed the emergence of natural economic territories (NETs). These are economic entities that cut across political boundaries, combining resources, manpower, capital, technology and managerial skills, taking advantage of the reciprocal capacities of adjoining territories. Such NETs as those encompassing South Korea and Shandong Province or Johore, Singapore, and Indonesia’s Riau islands, have affected the lives of millions of citizens, and many more are in the offing including the Sea of Japan (East Sea) rim.

This is a development of great significance for western Japan. The Sea of Japan rim includes regions with assets and needs that underwrite the benefits of complementarity. The vast natural gas and oil resources of the Russian Far East can be made available to the region via pipelines already in the planning stage. Other resources exist on the Asian continent and in the surrounding seas. Capital, advanced technology, and managerial experience can be harnessed to the abundant labor supplies available in China. In addition, a vast consumer market awaits cultivation.

What is necessary to realize the potentials of greater Northeast Asian economic integration? First, the political barriers must continue to be lowered, and such tensions as that between North and South Korea must be reduced through a peaceful resolution of the issues. Equally important, the domestic
Challenges and Potentials for Northeast Asia in the Twenty-First Century

Economic problems afflicting all of the economies of the region must be resolved so that internal growth and external investment can be resumed.

In this latter respect, the role of Japan as the giant economy of the region is especially vital. The recovery of the Japanese economy is essential if Northeast Asia is to flourish. Thus, it is to be hoped that the leaders now taking office will pursue the far-reaching reforms that are necessary to Japan’s recovery with determination and consistency.

Further, the role of regional and local governments is vital. With respect to the Sea of Japan (East Sea), for example, the policies of the Japanese prefectures fronting that sea and in contact with the Korean peninsula, Northeast China, and the Russian Far East can make major contributions to closer economic interaction. Western Japan, with governments and the private sector cooperating, can provide the stimulus for an economic surge throughout the region, in the process beginning to match Japan’s long dominant eastern coast.

Meanwhile, ideological differences in East Asia will continue to decline. As noted earlier, Leninism and the hard authoritarianism that it spawned is fading out. However, that does not mean that this vast region will have a uniform political system. For the foreseeable future, two broad political orders will coexist: authoritarian pluralism and democracy. Authoritarian pluralism can be defined as follows: Despite greater flexibility than under Leninism and the likelihood of continuous fluidity, the political order is characterized by various restraints on freedom, and single party or group rule. When it threatens that rule, the opposition is curbed by one means or another. At the same time, a civil society apart from the state emerges, with a variety of interest groups possessing some autonomy. And the economy is mixed, with the market playing a vital role.

By its very nature, this system will contain elements of instability, and from time to time, crises will emerge. Yet in the name of combining stability and development, various political elites will hold strongly to this order, defining it variously as “people’s democracy” or “the Asian way.”

At the same time, as we have seen, democracy has greatly expanded, especially in Northeast Asia, in recent decades, with such nations as South Korea and Taiwan, formerly authoritarian pluralist states, moving into the democratic column. Democracy, to be valid, must have three essentials: genuine, regularized political choice for the citizenry through open, free elections; the requisite freedoms to make that choice meaningful, including freedoms of speech, press, association and assemblage; and the rule of law. No system is perfect, but to be a genuine democracy, a nation must approximate these conditions.

Today, political realities within Asian democracies are more complex than is often realized. A substantial difference frequently exists between formal and informal politics. Political institutions are democratic, but the personal relations
that govern politics are often marked by tight hierarchical bonds, being leader-follower groups, with a strong element of authoritarianism and limited public access. Only recently, in certain democratic societies has the role of media and other sources of potential openness been significant.

Perhaps this signifies the different heritage of the West and of Asia. Although there have been numerous transgressions, for a considerable period, politics in the West has been based upon legalism. Despite moves in that direction, politics in Asia remains heavily influenced by reciprocity. “You do this for me, I'll do that for you” is a powerful sentiment undergirding Asian politics.

The view that any political system, including democracy, is destined to be a universal and permanent feature should be challenged. Whatever the system, the political order must meet the challenges of the times, including the needs of its people. Like other systems, democracy faces crucial tests. Can political immobilism be avoided—the inability to act decisively and with effective policies? Can meaningful political values be implanted in the citizenry, with the government living up to those values? Can able leaders be encouraged to devote themselves to public life? In sum, every political system faces multiple challenges today in this era of global revolution, and that fact must be acknowledged and met.

The great opportunity on the horizon is for nations to continue to move rapidly in the direction of expanded, regularized dialogue on a wide range of issues, both through official and unofficial organizations. Foremost among the challenges of the 21st century will be the issues of population, resources, and environment. No region will be more affected by these issues than Northeast Asia. For most countries of the region, population increases will continue, at least until mid-century. This trend, together with rising living standards, will cause resource needs to explode. Both major funds and frontier technology will be required, and scientists along with technicians must be brought into policy-making circles on a far more extensive scale. At some point in the future, we may be able to draw on the resources of other parts of our solar system, but for the foreseeable future, we shall be dependent upon this earth. It is essential that we slow the process of profligate use of resources and environmental degradation, using every technique available. Thus far, talk has far outweighed action, and the advanced nations are at least as responsible for this situation as developing countries.

Other countries, notably Japan and the United States, are facing population aging, with its attendant problems. Social security, health care and related issues have already become major concerns, as noted earlier. Thus, leaders must
constantly strive to meet expectations on these fronts if the commitment to
internationalism is to remain strong.

Meanwhile, each nation will mix bilateralism and multilateralism in
fashioning its foreign relations, with the occasional employment of unilateralism
when perceived national interests present themselves powerfully. The bilateral
relations of the four major Asia-Pacific nations will be especially crucial in the
years ahead. What are the prospects?

Relations between the United States and China are recognized by both
parties to be of vital importance to Asia as a whole. Relations that are on balance
positive will support regional peace and stability. If relations are tension-
dominated, a dark cloud will exist over the region. Both Beijing and Washington
recognize that fact today, and efforts are being made to improve ties. Summit
visits, steadily growing economic ties, agreements on curbing certain strategic
weapon sales, and some relaxation in China with respect to political dissidents
have softened the relationship. Yet there remain important issues: the rising trade
imbalance; the transfer of strategically related technologies; continued PRC
restraints on human rights; and above all, Taiwan.

The Taiwan issue could be the most troublesome threat to peace in East Asia
in the long run. With China pursuing a moderate policy at present, soliciting
support from various groups in Taiwan and expanding economic and cultural
intercourse, the problem is not immediate. Indeed, the prospects for resumed
ARATS-SEZ talks (a semi-official dialogue) seem good. Moreover, China is in
no position to use force effectively today, at least in terms of an invasion of
Taiwan, although it could create economic difficulties by interfering with Strait
activities.

The difficulty lies in the fact that in de facto terms, Taiwan is independent,
with a totally separate government and political system. Moreover, in recent
times, the Kuomintang and the leading opposition party, the Democratic
Progressive Party, have come closer together in defining Taiwan as a "separate
political entity," sovereign in nature, and entitled to equal treatment in any
negotiations with the PRC. Further, China’s formula of "One Country, Two
Systems" has very limited support among Taiwanese. If the PRC were to
advance a new concept such as confederation, with the issue of sovereignty set
aside for the present, some interest might be engendered. The political costs of
such an approach, however, might be too great for Beijing leaders to accept, at
least for the present.

In this setting, U.S. policy is wholly satisfactory to neither the PRC nor
Taiwan. It rests on somewhat different documents, namely, the three
communiqués and the Taiwan Relations Act. The former avers the principle of
One China. The latter insists upon a peaceful resolution of the problem, and until
that is accomplished, pledges the sale of defensive military equipment to Taiwan. Nor will the United States specifically state what it would do in the event that force is used, not wishing to aid any given side, or deeply divide the American people.

One must hope that both China and Taiwan will be prepared to live with the status quo for the foreseeable future while a natural evolution takes place in each society, enabling a peaceful outcome at some point far distant from the present. It is troublesome, however, that both sides are attempting to alter the status quo by various means, thereby heightening tension from time to time.

Despite the Taiwan issue, however, the broad prospects for U.S.-China relations are reasonably good for reasons set forth earlier. Yet it must be acknowledged that this relationship evokes serious domestic divisions in both societies, especially in the United States. Like other bilateral relations, moreover, this one will be a combination of cooperation and difference, with mechanisms for regularized negotiations on matters of disagreement essential. For its part, the United States will employ a mixture of incentives and deterrents in an effort to induce China’s ever greater and more constructive involvement in the region and world. The operating premise will be that the combination of domestic challenges and rising interdependence will steadily advance the odds in favor of harmonious interactions with others. Yet a hedge will be maintained in the form of strategic ties with others, in case that premise proves incorrect.

Future U.S-Russia relations are also vitally important. Russia remains the second greatest military power, despite serious morale problems in its armed forces. Moreover, it is a major supplier of military equipment to others, along with the United States. It has been difficult to advance the denuclearization program, with START II still not ratified by the Russian Duma, and negotiations relating to START III not yet commenced. Moreover, resentment in Russia over what was perceived to be undue interference in its internal economic affairs, together with strong opposition to NATO expansion, continue to create sharp divisions within Russia over relations with the U.S.

On the American side, uncertainties about Russia’s political future have grown with the mercurial activities of President Boris Yeltsin. The political future seems highly unpredictable at present despite the impossibility of a return to Stalinism. The United States wants a Russia that is democratic and developing economically with reliance on the market system. It does not fear an alliance between Russia and any other power, but it will watch Moscow’s treatment of smaller neighbors, many of them once incorporated into the Russian empire, with alertness. Increasingly, as internal conditions stabilize, Russia will be accepted by the U.S. as an equal party in all international dialogues and issues.
And hopefully, the long-standing divisions within Europe—west and east—will be softened if not eliminated.

Meanwhile, the relationship between the United States and Japan will remain of critical importance not only to the two nations directly involved, but to the entire Asian region. The worry in some quarters about "Japan passing," namely, a transfer of U.S. primary allegiance to the relationship with China, is unwarranted. Whether the measure be economic, political, or security, the United States and Japan have common interests unequaled by any other two major societies.

As noted earlier, economic differences, some of them difficult to resolve, will remain, and it will be essential to strengthen the bilateral negotiatory mechanisms, official and unofficial. Further, periodic adjustments in strategic relations may be required, depending upon the issues at hand and trends in military technology. For the present, however, it is essential that the security treaty remain intact, with a small contingent of American forces in Japan, symbol of the commitment—to Japan and to others. The revised security guidelines, while causing apprehension in certain countries, were necessary to provide greater balance in security commitments.

At the same time, it is essential that we expand our ties beyond officialdom and the business community, reaching out to diverse elements of our populations, and especially the younger generations. Despite the advent of TV and internet, contacts are too limited and too sporadic. Our two nations, working together, can and must play a major role in the future of Asia, but first, we must understand each other more fully.

Another crucial relationship of the future will be that between Japan and China. At present, economic ties are strengthening. Strategic relations are also being formed, with the visits of military personnel and security experts taking place. Yet there remains a negative historical legacy. Hence, China continues to voice concern about the rise of "Japanese militarism." Fear of U.S.-Japan joint strategic involvement in Taiwan has led to continuous protests. On the Japanese side, harsh Chinese criticism—and the rise of China as a growing power—evokes some concern. However, while the Sino-Japanese relationship is likely to be a delicate one for the foreseeable future, a recognition by both nations of the importance of positive relations should strengthen the resolve to handle differences amicably.

Meanwhile, Russian relations with Japan seem to be en route at last to improvement, with the pledge to seek a peace treaty by the year 2000, and the prospect of increased economic interaction, including the ultimate inclusion of the Russian Far East into a Sea of Japan (East Sea) natural economic territory.
Sino-Russian relations have also taken a turn toward improvement, with high-level visits, an accord pledging “strategic partnership,” the resolution of most border disputes, and an agreement upon military reductions in border areas. Economic relations, especially border trade, are important, albeit, productive of certain problems. However, there is no reason for others to be concerned about the restoration of a Sino-Russian alliance. The ideological glue is gone. The population differences, especially between the Russian Far East and Northeast China, are huge and conducive to some anxiety on the Russian part. In any case, two vast neighboring powers form an alliance only when they perceive a common threat. Despite occasional complaints of “American hegemonism,” no genuine threat exists or is conceivable.

In sum, despite continuing issues, the prospects for bilateral relations between the major Asia-Pacific nations are generally more hopeful than at any time since World War II.

One situation in Northeast Asia posing some risks remains unresolved, as noted earlier. On the Korean peninsula, the cold war lingers on, with North-South relations still frozen despite some hopes of a thaw in the near future. South Korea, currently in the throes of an economic recession and with a new government seeking to advance constructive policies, is making overtures to the North, epitomized by President Kim Dae-Jung’s “Sunshine Policy.” These overtures as yet have evoked a cautious response from the North and recent espionage activities have not been of assistance.

The most realistic route to improved South-North relations is that of enhanced economic relations in the initial phase, coupled with growing contacts, such as a resumption of divided family visits and other interactions. At the same time, progress toward a peace treaty involving all parties to the Korean War, and the beginnings of military reductions, so important to the North’s economy, should commence in phased stages.

Meanwhile, the United States will continue to make clear its security commitment to the ROK, and work with others in an effort to provide an evolutionary path for the DPRK whereby it can gradually become a meaningful economic participant in the region of which it is a part. No one can guarantee the success of this effort, but it is vastly more beneficial to all concerned than DPRK collapse or war. And it is the one route that has the support of all of the major powers.

When one surveys the future of international relations in Northeast Asia, it seems virtually certain that the region will be characterized by a combination of concert of powers and balance of powers. Contrary to the views of some, these are not mutually incompatible structures. On a wide range of issues, from specific political problems like that of Korea to general issues of well-being and
survival, relating to resources, environment and population planning, the nations of the region, and especially the major powers, can cooperate, pooling ideas, resources, and policies. At the same time, given the many unresolved problems, the heightened nationalism, and the drive toward military modernization by all states, a balance of power remains necessary if the temptations to resort to conflict and the apprehensions about a dominant force are to be contained.

The prospects for a peaceful, constructive East Asia in the coming decades, on balance, seem good. There will be violence, but it is likely to be within certain states rather than between and among them. Some states may fail, and the upheaval ensuing could pose difficult problems for neighbors, as the Cambodian situation has illustrated. Ethnic strife in certain societies is also a real possibility, especially in this period of economic malaise, and with the economic power of the resident Chinese so great in Southeast Asia. Yet the risks of a major power war are at their lowest level in this century, and we must all strive to strengthen the conditions that support Asia-Pacific peace and development.
Financing Infrastructure Development
The Northeast Asia Economic Forum (NEAEF) has noted the important role infrastructure has played in Asia’s economic growth and development, specifically in setting the stage for private sector investments in mining, manufacturing, banking and other growth-supporting industries and services. Northeast Asia’s development will similarly depend on the region’s ability to attract private investment. As other developing regions have found, private investment will increase when investors perceive, among other things, that their investments will be supported by adequate infrastructure: i.e., highway, railway, pipeline and air transportation systems, ports and harbors, modern telecommunications, reliable energy supplies, and sound environmental programs.

Adequate infrastructure is, in brief, an important prerequisite for attracting private investment that, in turn, is needed to promote economic growth and development. In light of these considerations, the Northeast Asia Economic Forum has assigned high priority to means of improving and expanding Northeast Asia’s now-inadequate infrastructure base.

Upgrading Northeast Asia’s infrastructure to standards that will permit the region to compete successfully with other capital-short areas for limited private sector funding will involve investments in infrastructure far beyond the region’s capacity. The East-West Center has estimated that during the coming decades the amount of external capital this region would require, and could beneficially deploy, could reach $7.5 billion a year. To achieve a level of infrastructure investments anywhere near that magnitude will require substantial transfers of external financial resources to the region. As in the case of other developing nations and regions, a large share of these external resource transfers will presumably be channeled to the region by means of long-term loans from the World Bank and the Asian Development Bank. Additional resource transfers can be expected as well from bilateral official assistance and from private sources of capital.

Recent East-West Center studies indicate, however, that under even the most optimistic assumptions, the total amount of financing for infrastructure projects that could be expected from existing multilateral financial institutions, bilateral
government assistance programs and private sector investments will fall far short of meeting the region's projected need for external capital. These studies suggest that the total amount of financing that might be forthcoming from these sources would be some $2.5 billion a year, leaving an annual infrastructure investment deficit of some $5.0 billion.¹

This projected gap would delay and undermine economic development in Northeast Asia. NEAEF members have examined alternative means of meeting this shortfall. They have increasingly turned to the creation of a new sub-regional development financing institution—a Northeast Asian Development Bank (NEADB)—as the most feasible and effective means. The main purpose of a new NEADB would be to supplement the capital intermediation activities of the ADB, the World Bank and private and official sources, thereby helping to ensure a larger, more adequate flow of capital resources to Northeast Asia for infrastructure investments.

To develop and advance this proposal further, the NEAEF meeting in Ulaanbaatar, Mongolia, issued the Ulaanbaatar Resolution of 21 August 1997, which states (in part):

Recognizing that mobilization of capital is one of the most important tasks facing the region, the Meeting strongly recommends the formation of a Consultative Working Group on the Northeast Asian Development Bank, to examine ways and means of realizing this concept....

Pursuant to the Ulaanbaatar Resolution, a Consultative Working Group on the Northeast Asian Development Bank was convened and met in Tottori, Japan on 24 March 1998. The Consultative Working Group identified and discussed a number of policy and procedural issues concerning the ways and means of realizing the concept of a Northeast Asian Development Bank. The Consultative Working Group's views on these matters have been summarized below and are submitted to the Eighth Northeast Asia Economic Forum Meeting at Yonago, Tottori, Japan, on 28–30 July 1998, for further consideration and guidance.

OVERVIEW

The Importance of Northeast Asia
Northeast Asia is a "natural economic territory" with unique, unrivaled potential for market-based economic development. The economic benefits to be realized derive from the region's vast size—some 9.3 million km²; its large, multi-cultural population—over 320 million people; and its economic diversity—which in more developed parts of the region includes skilled workers, modern technology, and surplus capital resources that are needed and can be effectively deployed to develop the vast stores of natural resources—including gold, copper,
tin, lead, diamonds, coal, oil and gas, water and forest resources—that are to be found in the northern, less-developed areas of the region.

The economic development and integration of this region would contribute importantly to the realization of a number of economic, political, and social objectives, not the least of which are enhanced regional stability and security, the restoration of economic, cultural, and political links within the region, improvements in the standard of living for the region’s inhabitants, and the strengthening of Asia’s role in an increasingly integrated world economy.

**Historically Limited Development**

This region has for centuries been the arena of internecine conflicts that preempted the natural development of inter-regional trade, commerce and industry. In more recent times, the Chinese Revolution and the Korean War thrust the region into the center of the cold war, one unfortunate product of which was the division of the Korean Peninsula at the 38th Parallel. As a result, economic and commercial exchange between the northern and southern parts of this “natural economic territory” virtually ceased. While the Japanese and South Korean economies grew and prospered during the post-WWII period, the pace of economic progress in the rest of the region was less than satisfactory.

The Northeast Asian region now stands on the threshold of an era that holds great promise for economic cooperation and progress, peaceful relations, and increased stability. Long-standing conflicts and ideological differences that for so long fractured the region are now giving way to a more pragmatic view of the need for, and benefits of, the development of the region as a whole.

**Attributes of the Proposed NEADB**

**Purpose of the Northeast Asian Development Bank**

The basic purpose of the NEADB, as proposed by the Forum and by others, would be to help finance the expansion and improvement of Northeast Asia’s infrastructure. It would pursue this purpose primarily by mobilizing capital, technology, and expertise abroad and transferring these resources mainly by means of long-term loans to important infrastructure projects within the region. The Bank would undertake these financial and technology intermediation activities in close coordination with the other multilateral banks, including the World Bank and the Asian Development Bank, with non-governmental organizations, and with other national and international organizations such as the UNDP concerned with the region’s economic development.

The proposed Bank would neither displace nor compete with the World Bank or the Asian Development Bank. Rather, it would supplement those Banks’
capital intermediation activities and would work in cooperation with them. The new Bank would employ many of the same (or similar) funding and lending policies, programs and techniques that are used by the IBRD and ADB. Its focus, however, would be considerably narrower than these existing Banks, in particular in terms of: (1) its restricted geographic coverage, and (2) its infrastructure-specific financing mandate.

The new and significant role the proposed Bank would play is as a new institutional channel into foreign capital markets that could mobilize capital in those markets and transfer the resources to Northeast Asia in the form of long-term loans for priority infrastructure projects. The NEADB would thereby serve to increase the amount of long-term funds available for the region’s infrastructure investments, in this way helping to support and advance the region’s development.

Principal Beneficiaries
The main recipients and beneficiaries of the Bank’s infrastructure loans would be Mongolia; the DPRK; Liaoning, Jilin, and Heilongjiang Provinces of the PRC; and the Maritime (Primorsky) Territory, Amur Oblast, Khabarosk Krai, Sakhalin Oblast, Yakutia ASSR, Magadan Oblast, and Kamchatka Oblast of the Russian Far East. Special consideration and arrangements could be made to ensure that projects in the Tumen River Development Area received appropriate financing from the Bank.

Participation by Central and Regional Governments
A question raised by the Consultative Working Group is whether central governments would contribute resources to set up a new financial institution that was intended to provide financial assistance only to a limited territorial area within the country. This question would obviously be most relevant for central government authorities in Russia and China.

The following points were noted in connection with this issue.

- A country’s initial investment in the proposed NEADB would be “seed capital” and would amount to a small fraction of the total amount of financial resources the Bank would ultimately bring to the region of the country. The multiplier can be expected to reach double or triple digits and would justify central government investments in a regional financing institution such as the proposed NEADB.
- The benefits of development in one region are not limited to that region. As the experience of Hong Kong and Southern China demonstrates, the development of one region spills over to, and stimulates development in,
adjacent areas. An investment that helps to develop a capital-short area of a country can therefore benefit the country as a whole.

- Since the aggregate amount of external capital existing institutions (such as the ADB and the IBRD) can loan to one country is limited, financing from a new regional institution can increase the total inflow of capital into the country while at the same time freeing resources from existing sources for use elsewhere within the country.

OTHER POSSIBLE SOURCES OF INFRASTRUCTURE FINANCING

Commercial Bank Financing for Infrastructure
A suggestion examined by the Consultative Working Group is that commercial banks from within and outside Northeast Asia could finance the region's infrastructure investment needs. While this is an interesting theoretical possibility, conventional commercial banking policies and practices make it largely unworkable, now and for the foreseeable future. It was noted that infrastructure project costs and associated financing requirements are typically beyond commercial bank lending parameters; returns on such investments are riskier and lower, and requisite loan maturities and grace periods are longer, than commercial banks can typically offer; and the economic, technical, and financial analysis and documentation required to support financing for infrastructure projects are usually beyond commercial banks' capabilities.

Furthermore, commercial banks typically lack the specialized knowledge, skills and deep pockets required to tap the long-term capital markets of, e.g., Tokyo, London, New York or Frankfort and to intermediate funds borrowed in those markets to capital-short developing countries. These are, however, the stock-in-trade of the major international investment houses and the multilateral development banks that have in fact been the main suppliers of long-term capital to capital-short countries for the past four decades. For these reasons, commercial banks cannot be expected to finance more than a small part of the long-term capital needs of Northeast Asia.

Bilateral and Multilateral Financing for Infrastructure
In addition to the large volume of financing provided by the World Bank and the Asian Development Bank, traditional sources of long-term capital transfers to developing countries have included private foreign investors and bilateral official development assistance. Bilateral official assistance has been declining in recent years and is expected to be of less importance in the future. The outlook for private sector investments in infrastructure projects remains at best uncertain. And, even if total financing by these sources were to increase, the
amounts would likely cover no more than one-third of the region's prospective needs and absorptive capacity.

**Private Sector Financing for Infrastructure**

Private foreign direct investment, trade-related credits, commercial bank loans, and in the case of a few fiscally stronger countries, direct borrowing in overseas capital markets, also constitute potential sources of long-term capital. These forms of private financing can be expected to fund part of the total capital required to develop Northeast Asia's infrastructure. Private sector direct financing could take a variety of forms, including straight equity, retained profits, loans from parent firms, technology transfers, supply of equipment, public-private joint ventures arising from privatization programs, and bond (debt) purchases.

However, most infrastructure investments carry high repayment risks and involve long and uncertain returns, and they are therefore not attractive to most private investors. In recent years, most private direct investment has in fact involved transfers within or between international firms, has been directed to manufacturing and processing rather than to infrastructure, and has been between and among firms of the industrialized countries. In 1995, for example, only $100 billion—about one-third of total cross-border private investment flows—went to developing countries. Asia accounted for $65 billion of that amount, with China's share amounting to some $38 billion. Most private direct investment went into production and processing plant and equipment and only a relatively small amount was made available for infrastructure.

Notwithstanding these inescapable facts, the newest "fad" in the development field is to assume that private investors can take over the infrastructure financing needs of developing countries and that, therefore, the multilateral development banks and bilateral aid programs can simply terminate this type of development assistance. This is not only a faulty reading of the facts, but is also a recipe for financial problems in the not-too-distant future.

First, it is useful to rehearse the fact that U.N. data show unequivocally that past private investment for infrastructure has been minuscule; and East-West Center projections indicate equally unequivocally that even under the most favorable assumptions, private investment in infrastructure in Northeast Asia would be only a drop in the bucket compared with the region's prospective requirements.

Even if the amounts were much larger, it would be a policy of folly for the affected countries to turn over decisions about where and what kind of infrastructure would be provided to even the best-intentioned private investors. The results could be a waste of the country's resources and a very lop-sided
development effort. To illustrate, for some types of infrastructure, such as telecommunications, equipment and systems can be supplied virtually “off the shelf” and most exporters of such equipment can expect to receive exporter credits from domestic banks to finance such facilities. So private “investment” in telecommunications can be quick and easy.

On the other hand, few if any private investors would be interested in investing in irrigation systems or secondary farm-to-market roads. So in an extreme case, the country could find itself with a cellular telephone for every farmer but no way for him to get water to his crops or to get his crops to the market. The point is simply that while private investment is good and should be encouraged, it should be made in the context of a balanced infrastructure development program for the country or region and not simply on the basis of what private investors might find interesting and rewarding.

A further point is that the benefits of infrastructure are usually considered long-term; that is, returning the investment in the form of surpluses over a period of perhaps thirty or forty years. Private investors, however, typically expect to recover their investments in a considerably shorter period—five to seven years. To do so, they would have to impose user charges—tolls on highways, long distance telephone charges, etc.—much higher than the real economics of the project warrant. The likely result is that the people of the country who are supposed to be the beneficiaries of the infrastructure investments can’t afford to use them.

A final point is that in most countries, the United States and Japan included, infrastructure is seen as yielding a “social return”—that is, the benefits of the investment accrue to the country, or the region, as a whole. But if the infrastructure investment is “owned” by private investors, the social return is converted into private profits. So instead of the economic surplus produced by the investment going toward improving living conditions or increasing domestic savings and investments, it ends up in the hands of a private individual or group; and it often ends up leaving the country in the form of private remittances of profits—an unrequited drain on the country’s foreign exchange resources.

**Organization and Operations**

As in the case of the other multilateral development banks, the NEADB’s Charter would require the Bank to be organized and operate as a quasi-commercial entity, with ownership vested in sovereign nations and evidenced by shares in the Bank’s capital. While it would be a “not-for-profit” institution, the Bank’s operations would be conducted according to sound banking principles and practices. The Bank would, for example, prepare quarterly and annual
 audited financial reports for its shareholders; it would price its loans so that operating costs were covered by earnings; and it would be expected (in due course) to earn a reasonable return that could be used for reserves against possible future losses and for re-lending. The Bank would be authorized to make loans only for infrastructure projects determined to be viable on the basis of expert appraisals of technical, economic, and financial soundness and feasibility. The Bank would be authorized to extend and to participate in loans for infrastructure projects required to advance the economic development of Northeast Asia. The Bank might also provide technical assistance to help design and implement such projects as well as for broader sector-wide design and planning purposes.

Concessionary (Soft Window) Financing
The tenor of financing most appropriate for infrastructure projects involves long maturities and grace periods and low interest rates. In addition, it is possible that some borrowers may find it necessary to restrict the amount of their new borrowing because of limited capacity to service additional conventional-term debts in convertible currencies. These considerations point to the possibility of providing the Bank with special “concessionary” (soft window) funds that could be blended with loans from the Bank’s “ordinary” capital resource. The blending of conventional-and concessional funds would permit the Bank to lengthen loan maturities and grace periods and to lower interest costs in selected cases. This concessionary, soft-loan window would be similar to facilities that have been established in the ADB and the World Bank and would enlarge the Bank’s capacity to finance necessary projects.

Funds have been contributed (and replenished periodically) to the soft loan facilities of the World Bank and the ADB by more developed member countries. In the case of the NEADB, countries and areas that might contribute to a soft window could include China, South Korea, Japan, Taiwan, Australia, New Zealand, Singapore, the U.S., the U.K., E.U. countries and others both from within or outside the Asia-Pacific region.

“SPECIAL FUND” ALTERNATIVE TO A NORTHEAST ASIAN DEVELOPMENT BANK
It has also been suggested that in lieu of a new development bank it might be more feasible to create an earmarked “Infrastructure Fund for Northeast Asia” in the IBRD or ADB. Such a special fund while a theoretical possibility, is not a realistic alternative for a variety of reasons. It has become increasingly difficult (and in some cases virtually impossible) for the existing multilateral banks to
secure commitments of resources from their respective shareholder governments either for additional capital or for special funds. It is highly unlikely that these governments would be willing to provide capital resources to a new special fund in amounts that would approximate the resources that a new, capitalized subregional Bank could mobilize in foreign capital markets.

Other factors that militate against this proposal include the following: (1) the existing multilateral development banks’ commitments to their current list of client-countries even now falls short of the latter’s needs, and since resources are fungible, new resources would most likely find their way first to established borrowers; (2) already considerable exposure by these banks in Russia and China would limit their scope for new lending into these countries; (3) disparate membership, staff and administrative constraints, and differences in policies and methods would make it difficult to implement a new facility in the existing banks; and, most importantly, (4) the evident unwillingness of their major shareholders to increase their commitments and contributions to, or to expand the scope of, the existing banks.

The prospective major regional shareholders in the new Bank would not be the same ones that have found it necessary to constrain the funding and scope of the existing multilateral banks. On the contrary, the new Bank’s major shareholders would be from the Asian regions and would therefore be expected to have a greater interest in the region’s development and would presumably be more willing to extend their positive support for a new financial institution that would further that objective. For these reasons, the Consultative Working Group’s view is that: (1) establishing a special fund for Northeast Asia in an existing Bank would not be a satisfactory or feasible option; (2) even if it were to be established, lending by a special fund would be limited to the amounts of direct, budgetary contributions by participating governments which are likely to be modest at best; and (3) a special fund could not generate the resource-transfer multiplier that a newly capitalized Bank could achieve by the sale of its own securities in foreign capital markets.

SHAREHOLDERS ALLOCATION OF SHARES

Member Country Shareholders
Following the precedent of the existing multilateral development banks, the members of the proposed NEADB would be the sovereign governments of participating countries. These countries’ shares in the Bank’s capital would be nominally held by their Ministers of Finance or other appropriate central government officials. Majority shares and voting power could be held by the six founding Asian members—Japan, South Korea, China, Russia, North Korea, and
Mongolia—with the balance allocated to other regional and non-regional members, the latter including the U.S., Canada, Australia, New Zealand, the U.K., Germany, France, Italy, the Nordic Countries, and others. As in the case of the other multilateral banks, regional countries’ shares in the NEADB would be allocated on the basis of national GDP, adjusted to ensure adequate representation for smaller and lesser-developed member nations.

A question was raised concerning the possibility of a member country’s redistributing some of its shares to provincial entities, perhaps as a means of increasing the capital initially available to the Bank and of ensuring that regional development interests are reflected in the Bank’s activities. The Bank’s ability to borrow funds in foreign capital markets will, however, ultimately require and depend on its bonds being backed by the full faith and credit of its sovereign government members, and in particular those nations whose currencies are fully convertible. It is not clear that provincial governments, although able to borrow in international capital markets in their own names, would be seen as providing sufficient security to prospective foreign purchasers of the Bank’s securities.

Capitalization, Subscriptions, and Payments
The initial subscription and purchase of shares in the Bank would constitute the Bank’s initial capital base. This first step would involve a number of procedural and substantive decisions by founding members concerning the Bank’s basic funding and financial structure. These would include the total amount of the Bank’s initial capitalization; the number and denomination of shares to be issued within that total; the currency in which the Bank’s shares would be denominated, subscribed, and paid for; the respective proportions of each country subscription that would be “paid in” and “callable,” and the percentage of the paid-in portion that would be paid for in convertible currencies and/or by non-interest-bearing convertible-currency notes; and such other subscription parameters as a minimum number of shares per country (to protect the interests of smaller countries) and the proportion of regional-to-non-regional shareholding and voting (to ensure the region’s majority position).

As previously suggested by Dr. Nam Duck-Woo, Dr. Burnham Campbell, and Professor Hiroshi Kakazu, the Bank’s total authorized capital might be $20 billion. This amount according to Prof. Kakazu’s earlier calculations represented about 0.5% of the region’s national income in 1992 and would approximate the total amount of the ADB’s capitalization (of about $23 billion) from 1966 to 1994. The amount of $20 billion could be divided into 2 million shares, each with a par value of $10,000. A block of these shares could be earmarked for subscription by regional countries. This block of shares might represent 60% of
the Bank’s authorized total shares. The 40% balance would be available for subscription by non-regional countries.

One part of each country's subscription could be paid for in “cash” over an agreed-upon period, e.g., of five years. It has been suggested that 50% of each subscription would be paid in this form. The remaining, non-paid-in balance of each country’s subscription would take the form of “callable” shares which, as in the case of the other multilateral banks, would represent a commitment by the subscribing country to pay for these shares in cash should the Bank ever issue a call for such payment. (Callable shares are in effect a “safety net” for the banks which is never expected to be needed or used.) All or an agreed-upon portion of each paid-in share would be paid for in convertible currencies or non-interest bearing notes. In the latter case, the balance of the paid-in share might be paid for in the country’s own currency in which case it would be necessary to establish procedures for maintaining the value of that part of each country's subscription paid for in non-convertible currencies.

The callable portions of subscriptions in convertible currencies are used by the existing multilateral banks as a form of collateral against their borrowings by bond issues in foreign capital markets. These borrowed funds are the principal source of the funds used for disbursements of bank loans. Since these Banks’ bonds are backed by the full faith and credit of sovereign states, in particular those whose national currencies are fully convertible, these banks are in general able to obtain funds with maturities and interest costs significantly better than the terms on which borrowing countries could secure funds on their own. It is assumed that the proposed NEADB would employ a similar capital intermediation approach.

Member Country Arrangements and Voting
The Bank’s Northeast Asian founding members (expected, as noted, to include Japan, South Korea, the PRC, the Russian Federation, Mongolia, and the DPRK) might wish to ensure that the majority of Bank shares and commensurate voting power resided collectively with countries from within the region. For that purpose, these six nations might be considered a hypothetical “first tier” of founding shareholders. Additional countries from the Asia-Pacific region who joined the Bank later on might be considered a “second tier.” A “third tier” might be made up of countries from North America, Europe, and other regions.

The financial costs associated with creating a new Bank would of course be lessened by broadening the definition of Asian majority shareholders to include both “first” and “second” tier countries. While this two-tier approach would dilute the initial six founding countries’ voting strength, it might be considered appropriate for budgetary and funding reasons. Also to be considered with regard
to majority shareholding by Asian nations is the proportion of total shares to be allocated to regional countries. It has been suggested that 60% of total shares allocated to Asian nations would ensure their preeminent position in the Bank. Also to be decided is the relative number of shares to be made available for subscription by individual countries within the total block of shares. A hypothetical and illustrative allocation of shares is set out in Table 1.

In this regard, it was suggested that membership for Taiwan, perhaps on a similar basis as in the ADB, may be considered. Taiwan’s membership would presumably bring an important contribution to the Bank’s capital resources and add to the shares held within the region. Taiwan might also be encouraged to make a contribution to a “soft window” fund. The issue of membership for Hong Kong and for Singapore (as in the ADB) might also be considered in terms of the Bank’s capitalization and prospective shareholding and voting rights.

MANAGEMENT

President
Day-to-day management of the Bank would be the responsibility of a Bank President who would be appointed by the Bank’s shareholders for a term of, e.g., five years. The President would be assisted by three or more Vice Presidents responsible for specific functions (e.g., programs, operations, and administration) or, alternatively, for specific borrowing countries or regions.

Governors and Directors
Policy guidance would be provided by a Board of Governors comprising the Finance Ministers or other senior policy level officials of each shareholding member country. The Board of Governors would meet annually. Bank operations and policies would be reviewed on a continuing basis by a smaller (8 or 10 person) Board of Directors whose members and alternates would be drawn from senior levels of member governments. Each Board member and alternate (except for the largest shareholders) would represent a cluster of member countries. The NEADB’s Board of Directors need not be a resident board but could convene at the Bank’s headquarters quarterly, or more frequently if necessary, to review performance and to advise Bank management with respect to operational policies and practices.

LOCATION OF HEADQUARTERS AND SELECTION OF PRESIDENT

Headquarters
The location of the Bank’s headquarters might best be decided on the basis of a number of practical operational considerations. These would include: the
adequacy of travel facilities and services, especially air travel, to and from the prospective headquarters site; the availability of qualified supporting staff (clerical, secretarial, printers, etc.) able to work effectively in the Bank’s official language(s); the availability of adequate and reasonably priced housing for staff; the provision of primary and secondary educational facilities for staff members’ children; employment opportunities for accompanying spouses; safety and security; health and sanitation standards; clean air and water; etc.

**Selection of President**

The country origin of the President of the Bank might be considered in conjunction with the issue of the location of the Bank’s headquarters. In some prior cases, these decisions have involved “trade-offs” among shareholders. For example, one or more of the larger shareholders might wish to have the president selected from their country’s candidates. Founding member countries might also consider whether the President might come from one of the Bank’s prospective borrowing countries.

**Timing and Next Steps**

The proposal to establish a new Northeast Asian Development Bank must take into account the financial difficulties several important Asian nations are now experiencing. It would therefore be premature and perhaps counter-productive to formally advance this proposal to the authorities of these prospective member countries at the present time.

In the meantime, however, and until the environment for advancing a proposal to establish a new development bank for Northeast Asia is more favorable, work should continue on developing the concept more fully. Issues to be explored further might include the Bank’s membership and capitalization, regional and non-regional shareholding, and local and central government relations. Accordingly, the Forum may wish to instruct the Consultative Working Group to continue its work in developing and elaborating the policy and programmatic framework for the proposal for a new Northeast Asian Development Bank along the lines indicated in this report.
Table 1. Hypothetical Allocation of Shares in the New Northeast Asian Development Bank (based on 1995 GDP per capita, with adjustments for "externalities")

<table>
<thead>
<tr>
<th>Annual Payment by Members</th>
<th>Shares</th>
<th>Total Amount Subscribed</th>
<th>Total Paid-in Amount</th>
<th>Annual Payment (5 years)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(number)</td>
<td>(% of total)</td>
<td>(US$ billion)</td>
<td>(US$ billion)</td>
</tr>
<tr>
<td>&quot;First Tier&quot; of founding members</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Japan</td>
<td>300,000</td>
<td>15</td>
<td>3.0</td>
<td>1.5</td>
</tr>
<tr>
<td>Russia</td>
<td>140,000</td>
<td>7</td>
<td>1.4</td>
<td>0.7</td>
</tr>
<tr>
<td>Republic of Korea</td>
<td>100,000</td>
<td>5</td>
<td>1.0</td>
<td>0.5</td>
</tr>
<tr>
<td>People’s Republic of China</td>
<td>200,000</td>
<td>10</td>
<td>2.0</td>
<td>1.0</td>
</tr>
<tr>
<td>Mongolia</td>
<td>20,000</td>
<td>1</td>
<td>0.2</td>
<td>0.1</td>
</tr>
<tr>
<td>Democratic People’s Republic of Korea</td>
<td>40,000</td>
<td>2</td>
<td>0.4</td>
<td>0.2</td>
</tr>
<tr>
<td><strong>Total First Tier</strong></td>
<td>800,000</td>
<td>40</td>
<td>8.0</td>
<td>4.0</td>
</tr>
<tr>
<td>&quot;Second Tier&quot; and other Asian members</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hong Kong</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Taipei, China</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Other Asia</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Total Second Tier</strong></td>
<td>400,000</td>
<td>20</td>
<td>4.0</td>
<td>2.0</td>
</tr>
<tr>
<td>Total all Asian members</td>
<td>1,200,000</td>
<td>60</td>
<td>12.0</td>
<td>6.0</td>
</tr>
<tr>
<td>Non-Asian members</td>
<td>800,000</td>
<td>40</td>
<td>8.0</td>
<td>4.0</td>
</tr>
<tr>
<td>Grand totals</td>
<td>2,000,000</td>
<td>100</td>
<td>20.0</td>
<td>10.0</td>
</tr>
</tbody>
</table>

*Note: Dashes (−) indicate amounts to be determined at a later date.*

*Assumptions:*
1. Capitalization of $20 billion evidenced by 2 million shares valued at $10,000 per share.
2. Sixty percent of shares to be allocated to Asian nations.
3. Japan would subscribe to the same approximate portion of the total as in the Asian Development Bank.
4. Paid-in portion of shares of 50%; payment of paid-in portion over five years.
5. Non-Asian members’ 40% of shares would include the United States, European Union, Canada, Australia, New Zealand, and others.
Table 2. Financing for Northeast Asian Infrastructure Investments: Indicative Requirements, Possible Sources and Amounts (annual amounts in US$ million)

<table>
<thead>
<tr>
<th>Item</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total estimated requirements</td>
<td>7,500</td>
</tr>
<tr>
<td>Private investments and credits</td>
<td>500</td>
</tr>
<tr>
<td>Bilateral sources (United States, Japan, and others)</td>
<td>500</td>
</tr>
<tr>
<td>Multilateral development banks</td>
<td></td>
</tr>
<tr>
<td>IBRD (6 loans per year)</td>
<td>750</td>
</tr>
<tr>
<td>ADB (5 loans per year)</td>
<td>650</td>
</tr>
<tr>
<td>EBRD (2 loans per year)</td>
<td>100</td>
</tr>
<tr>
<td>Subtotal multilateral development banks</td>
<td>1,500</td>
</tr>
<tr>
<td>Total prospective financing</td>
<td>2,500</td>
</tr>
<tr>
<td>Estimated financing shortfall</td>
<td>5,000</td>
</tr>
</tbody>
</table>

NOTES

1. A detailed assessment and discussion of Northeast Asia’s infrastructure financing requirements and potential sources of financing for such investment can be found in “Financing Northeast Asia’s Infrastructure Requirements: Is a New Development Bank Needed? A Quantitative Assessment,” prepared by the East-West Center and discussed at the Seventh Northeast Asia Economic Forum in Ulaanbaatar, Mongolia during 19–21 August 1997. A summary of the paper’s key findings is presented in Table 2.

2. In the case of the ADB, contributors to the Asian Development Fund include: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Hong Kong, Indonesia, Italy, Japan, Korea, Nauru, Netherlands, New Zealand, Norway, Spain, Sweden, Switzerland, Taipei, China, Turkey, the United Kingdom, and the United States. Contributions of concessional funds for the proposed NEADB soft window could be expected from many of these countries as well.

4. Capitalization of $20 billion would be approximately 0.03% of the region’s estimated GDP in 1995.

5. In the case of the EBRD, the paid in share was 30% (see the following footnote).

6. The capital structure of the European Bank (EBRD), which is the most recently-established regional bank, provides a model for possible funding arrangements for the NEADB. The EBRD’s original authorized capital (when it was created in 1990) was 10 billion ECUs (about US$12.5 billion) which was divided into 1 million shares each having a par value of 10,000 ECU. The original authorized capital was divided into “paid-in” shares, equal to 30% of the total, and “callable” shares, equal to 70% of the total. Countries subscribed to their allocated shares according to this paid-in to callable ratio of 3:7. Payment for the 30% paid-in portion of each subscription was to be made in five equal annual installments. One-half of the amount payable on each of these installments could be paid for in non-negotiable, non-interest-bearing demand notes or other hard currency instruments issued by the subscribing country. The EBRD can draw on these “paid-in” notes as required to cover its own operational and loan disbursement requirements.
Financing Infrastructure Development

David Edwards

There has been a global shift towards the private provision of infrastructure in the last decade. Asia has been no exception and, indeed, in some respects has been at the forefront of this trend. The private provision of infrastructure in Asia began to gather momentum in the late 1980s. Asian countries have accounted for a considerable share of global private investment in infrastructure. In several countries, most notably the Philippines, Malaysia, Thailand, and Indonesia, the private provision of infrastructure has become increasingly important in sectors such as electric power, telecommunications, and roads, as well as in urban water supply and mass transit. This trend has encompassed corporatization and privatization of state-owned utilities, as well as discrete private-sector investment based on supply contracts with public entities.

Nevertheless, the recent financial turmoil in much of Asia has shown this development to be other than plain sailing. This experience has revealed salutary lessons for both public and private participants. Among these are the nature of the regulatory and institutional framework and institutions through which such investments are governed. Equally, the structure and terms of financing have a bearing on the success or otherwise of these ventures into mobilizing private capital. Here, the depth and the sophistication of the domestic financial market takes on an important role.

In this context, the notion of public-private partnership has become an important concept. There continues to be an important, and perhaps growing, role for the private financing of infrastructure development. However, its success will depend on the implementation of an appropriate policy environment. It is here that the multilateral development banks have an increasingly important role. These institutions can no longer simply be project financiers of public sector infrastructure. Their task is to engage with governments in the establishment of appropriate policy environment and institutions as well as to act as a catalyst for private investment. In fulfilling such a mandate, the Asian Development Bank has, accordingly, increasingly emphasized the importance of transforming its role from that of project financier to that of a broad-based development institution.
China’s Economy and Financial Reforms

Wang Yusheng

In examining the proposed Northeast Asian Development Bank in relation to future economic growth in China, it would be appropriate to make a few remarks on the economic situation in China and the reforms that are in progress. The Chinese economy is continuing to grow, even in the midst of the financial crisis in the rest of Asia. Agricultural production in China is generally good, despite flooding this year. The industrial growth rate in the first half of 1998 was 8%, the manufacturing sector is growing, and export growth is at 8.6%. China has, moreover, USS140 billion in foreign currency reserves. However, in spite of these favorable indicators, it is difficult for China to continue to maintain its growth rates while growth rates in neighboring countries are flat.

China is not only maintaining steady growth, it is also carrying out reforms in its financial institutions, health care system, corporate industry, and so forth, leading toward a socialistic market economy. The current goal is to sustain a GNP growth rate of 8% while also maintaining the stability of the national currency. To achieve this, the central government should coordinate its policies closely with both industry and local governments.

China’s financial reforms are based on regulating the commercial banks and national monetary policies. There is a need to reform the auditing system and to restrict the monetary system. The current goal is to reform the market system, the financial system, and the currency system within the next three years. The People’s Bank will try to expand demand as well as export credit. The central bank will carry out loan buy-back operations and support investment in the country’s infrastructure.

The government will try to maintain harmony among the currency systems. The Chinese government is fulfilling its responsibilities by not devaluing its currency against the U.S. dollar and hopes that other countries will adopt suitable policies to enable their currencies to recover.

In 1979, Japan established a development bank in China, and others have followed. China will continue to attract foreign banks and other financial institutions to operate in China under the open-door policy.

The proposed Northeast Asian Development Bank is a proactive and productive option for sustaining these trends in the economy. The Northeast Asian region needs such institutions to accelerate economic development that will be beneficial for all countries of the region.
Economic Development in Northeast Asia: Outlook and Issues

Akira Nambara

In July 1997, Japanese Prime Minister Ryutaro Hashimoto announced that Japan will actively develop a Eurasian diplomacy, and he proposed three diplomatic principles toward Russia: "trust," "mutual benefit," and a "long-term perspective." Following this announcement, Russia and Japan held bilateral summit talks in November 1997 in Krasnoyarsk, Russia, and again in April 1998 in Kawana, Japan. In those meetings, both countries agreed on the importance of a steady development of bilateral economic relations, and we can say that Russo-Japanese relations have entered a new age of cooperation. Advancement in this bilateral relationship will be a positive factor in promoting cooperative ties in the international community and in developing the Northeast Asian region.

In order to promote economic development in Northeast Asia, it is indispensable to enhance the physical infrastructure. At the same time, if the region is to gain economic independence in a true sense, the ultimate goal should be to increase the inflow of private funds through direct investment and securities investment. It will be necessary to (1) improve the legal system and implement simple, transparent, quick, and fair administrative services, (2) provide tax incentives, (3) improve the banking system and capital market, (4) enhance training and education to secure quality labor forces, and (5) maintain a stable currency system and a low inflation rate through implementation of macroeconomic stability measures. These measures will help develop the business environment and encourage an inflow of private funds. Although the country receiving the funds is ultimately responsible for the development of the business environment, it is also necessary to back up these countries as part of an international support system. International institutions and various governments should extend support such as structural adjustment loans and technical assistance.

The plan for a Northeast Asian Development Bank is in line with the needs of the Northeast Asian region. But there are many issues to be resolved. First of all is the issue of procuring funds. Is it possible to procure capital from various governments to meet the large demand for funds? And how will we raise low-interest funds on a long-term basis from the international market? Second is the issue of coordinating areas of work with other international organizations. Since many countries are already members of more than one international organization, we need to decide whether establishing the Northeast Asian Development Bank
is the only choice. And the third issue is the organizational structure of the Northeast Asian Development Bank. Even if the Bank aims to become a semi-commercial bank like other international financial institutions, it will still be obliged to generate a steady and appropriate profit level in order to maintain the organization and expand its business operations. Therefore, the Bank may need to support shorter-term profitable projects in addition to long-term infrastructure investment with low profitability.

It may be worthwhile and realistic to review the possibility of utilizing existing international organizations and economic cooperation among countries. How effective will these measures be in developing the infrastructure in Northeast Asia? And if there are limits, what are they?

Regarding “development and financing in Northeast Asia,” the development of abundant energy resources in the Northeast Asian region is especially important in terms of stabilizing the energy supply to the region. Since we can expect demand for clean energy, particularly natural gas, to increase in the long term, an important issue for future investigation is how to finance the development of natural gas fields in the Northeast Asian region, and how to build and maintain a pipeline that will transport the gas.

There is great diversity among the countries that make up Northeast Asia. In some cases, such as with Russia and China, only a part of the country may belong to the Northeast Asian region. Therefore, Northeast Asia may find it difficult to come together as an economic bloc, but at the same time, this may prevent the region from becoming a protective economic bloc that closes its doors to non-regional countries. We need to consider how we can develop a Northeast Asian economic bloc which is open to the rest of the world, and how we can build a closer relationship with APEC, which is a broader regional economic cooperation forum.
Implications of Long-Term Systemic Growth Trends for a Future Northeast Asian Development Bank

Steven Rosefielde

Stanley Katz has proposed the creation of a Northeast Asian Development Bank (NEADB) to finance infrastructural modernization in the Tumen River Economic Development Area (TREDA) and the region more broadly for the first two decades of the 21st century, following the model of the Asian Development Bank, and other multinational institutions like The World Bank, the International Bank for Reconstruction and Development and the European Bank for Reconstruction and Development. He argues masterfully based on multinational institutional trends and loan application attrition rates that the effective demand for Northeast Asian infrastructural loans in the next twenty years should be in the neighborhood of 7.5 to 10 billion dollars annually, but that loanable funds offered will only be about 1.5 billion dollars annually, an amount that could be supplemented by a billion dollars from private investment and credit, and from bilateral sources (the United States, Japan, and others). This implies a shortfall of 5 to 7.5 billion dollars annually; hence the need for a Northeast Asian Development Bank concerned solely with the region’s needs.

In this regard Katz asserts that the NEADB must be appropriately funded, organized, and managed to neutralize many of the institutional impediments restricting TREDA’s access to funds. He recommends that majority shares and voting power be vested in the founding Asian members (including Russia) so that regional interests are paramount. This implies that Japan, Korea, China, and Russia will shoulder most of the capitalization burden, and that their harmonious, shared interests in regional development will be paramount.

The data on which he relies makes both these conditions seem plausible. But alternative estimates based on long-term per capita growth trends, supplemented by economic theory stressing the dominant influence of systemic effects over development strategies reported by the author in “Changing of the Guard in the Asia Pacific? Economic Determinants of Superpower in the 21st Century,” presented at the National Bureau of Asian Research Conference on East Asia in Crisis, Seattle, June 10, 1998, suggests that the NEADB will have to be organized and run in a more challenging environment. The deceleration in global economic growth apparent since the sixties is forecast to persist, causing a strong divergence and reconfiguration of Asian wealth and power. Specifically, China is projected to dramatically outpace Japan and Russia if it doesn’t succumb to the “Russian disease:” resource demobilizing rent-seeking and asset-grabbing
accompanying privatization. Russia’s economic future is expected to be especially grim because it has undergone the wrong kind of marketization, entrenching anti-productive forces that won’t be soon dislodged. As a consequence, economic clout within the NEADB will rest primarily, but uneasily with Japan and China (no forecasts have been made for South Korea), while Russia, North Korea (assuming reunification doesn’t occur) and Mongolia wrestle with the trials of post-communist transition, or in North Korea’s case communist economic reform.

There is no reason why the NEADB cannot work in this less favorable environment, but insofar as the author’s projections are correct, it might be wise to consider modifying Katz’s proposal for structuring the NEABD by inviting the United States to play a larger, stabilizing role. If the founders feel as Katz does that decision-making power should rest ultimately in their hands, this could be accomplished in phases by initially granting America a policy-making role which gradually diminishes as the primary members increase their contribution. One way to accomplish this goal would be for America to lend less developed countries like Russia the money needed to purchase U.S. equity shares in the NEADB.

But does America really want to participate at all in the endeavor? There is no way to know yet because Katz’s proposal has not been formally adopted. But there are good reasons to believe that U.S. policy makers will be favorably disposed if properly informed about the bank’s virtues. The NEADB provides a tool for building mutual confidence and deterring the emergence of an adversarial paradigm in Northeast Asia during the stressful years forecast ahead. It offers an alternative to general economic assistance through the IMF, World Bank, and Asian Development Bank which only affect the security dimension obliquely, allowing America an opportunity to constructively influence China, Russia, Japan, and the Koreas in ways otherwise beyond its grasp.

This lofty goal will require careful project selection emphasizing regional cooperation and interdependence rather than undertakings which primarily benefit one member or another. The criterion shouldn’t pose any difficulty because this is the avowed purpose of the founders, and the more faithfully it is implemented the better for all concerned.
A Western Commercial Bank’s Relationship with Northeast Asia

Keith Chiddy

This paper provides a few observations about ING Barings’ involvement in Northeast Asia and, more specifically, the role that commercial banks can play in the region. ING Barings is not only able to provide significant funding—be it through the money and capital markets—but also able to transfer a broad range of skills, knowledge, and systems to banks, financial institutions in the widest sense, governments, and corporations.

In recent years, ING Barings’ advisory services have been directed at countries in the so-called “emerging markets” and at “transition countries,” that is, former communist states seeking to restructure their economies and financial sectors. The Asian crisis has brought home to the general public the need for financial-sector restructuring throughout Asia, including the OECD member countries: Japan and South Korea.

ING Barings, as part of a financial conglomerate, is well placed to assist (1) individual financial institutions in meeting the challenges they face as a result of growing liberalization and more effective regulation, and (2) governments in their efforts to restructure the region’s financial systems, whether the financial institutions or governments are located in emerging markets, transition economies, NIEs, or OECD member countries.

I would like to introduce ING Barings and ING Group in the context of its activities in Northeast Asia and to indicate the specific areas of activity in which ING Barings is able to add value within the region. ING Barings is the international banking and securities arm, which is a small part of ING Group. ING Group is not a bank but a financial conglomerate, generating half of its net revenues from insurance (predominantly life insurance) activities. In addition, on the ING Bank side is Postbank, the post office bank of the Netherlands, which merged with the Bank in the last decade (see Table 1).

ING GROUP FACTS

The ING Group is active in 60 countries and has over 80,000 employees providing a full range of integrated financial services to personal, corporate, and institutional clients through a variety of distribution channels. As of the end of May 1998, the market value of the Group was almost US$65 billion, giving it the second highest value on the Amsterdam stock exchange after Royal Dutch Shell.
Table 1. ING Group Structure

<table>
<thead>
<tr>
<th>ING Insurance N.V.</th>
<th>ING Group N.V.</th>
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<tbody>
<tr>
<td>Main subsidiaries:</td>
<td>Main subsidiaries:</td>
</tr>
<tr>
<td>Domestic insurance companies</td>
<td>Postbank (the Post Office bank)</td>
</tr>
<tr>
<td>Foreign insurance companies</td>
<td>ING Barings Securities</td>
</tr>
<tr>
<td>Non-life insurance</td>
<td>Barings Asset Management</td>
</tr>
<tr>
<td>Re-insurance</td>
<td>Barings Brothers (a merchant bank)</td>
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<td></td>
<td>ING Lease</td>
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<tr>
<td></td>
<td>ING Trust</td>
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<tr>
<td></td>
<td>NMB-Heller (factoring)</td>
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<tr>
<td></td>
<td>Banque Brussels Lambert (a major Belgian bank)</td>
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<tr>
<td></td>
<td>ING Real Estate</td>
</tr>
<tr>
<td></td>
<td>Domestic financial subsidiaries</td>
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<tr>
<td></td>
<td>Overseas branches and subsidiaries</td>
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</table>

Over half of the ING Group's shares are held by shareholders outside the Netherlands. The ING Group is involved in life insurance, international banking securities, real estate development, and asset management in Japan (see Table 2). What makes ING Group and ING Barings different or “unique” is the presence of ING banks in Vladivostok and Pyongyang.

Table 2. ING Barings’ Geographical Presence and Activities in Northeast Asia

<table>
<thead>
<tr>
<th>Geographical Area</th>
<th>Activities</th>
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<tbody>
<tr>
<td>Japan</td>
<td>Securities company</td>
</tr>
<tr>
<td></td>
<td>Commercial bank</td>
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<tr>
<td></td>
<td>Life insurance company</td>
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<tr>
<td></td>
<td>Asset management company</td>
</tr>
<tr>
<td>Republic of Korea</td>
<td>Securities company</td>
</tr>
<tr>
<td></td>
<td>Commercial bank</td>
</tr>
<tr>
<td></td>
<td>Life insurance company</td>
</tr>
<tr>
<td>Northeast China</td>
<td>Commercial bank</td>
</tr>
<tr>
<td></td>
<td>Real estate company</td>
</tr>
<tr>
<td>Democratic People’s Republic of Korea</td>
<td>Commercial bank (joint venture)</td>
</tr>
<tr>
<td>Primorsky Krai (Vladivostok)</td>
<td>Representative office of commercial bank</td>
</tr>
<tr>
<td></td>
<td>Bank twinning program</td>
</tr>
</tbody>
</table>

For a western commercial bank to handle relatively uncomplicated international banking transactions in Vladivostok and Pyongyang, where the main trading partners are Japan and China, may be considered strange by some people. That ING Barings should be allowed to continue its activities without
competition for almost three years says a lot about the conditions and problems facing banks in Japan and China and about the nature of political relationships in the region.

More specifically, in the case of the subsidiary which I run in Pyongyang, the product range is even more limited. Its activities include inward and outward transfers (for the private sector, foreign entities, and aid bodies); foreign exchange; trade finance; trade promotion; advisory services (to foreign investors); and corporate lending (to foreign investors). Its potential activities include foreign debt advisory/debt-for-equity conversions; investment promotion; and medium-term project lending (subject to co-financing with international financial institutions).

The Bank is nonetheless profitable and has successfully built up a good client base which includes most of the aid agencies currently active in the DPRK. In addition, we have the accounts of many trading companies affiliated with overseas Koreans and even multinational corporate clients.

This leads to the question: why did ING Barings decide to put flags on the map in Vladivostok and Pyongyang? As the Bank already had a strong presence in Tokyo, Seoul, and Moscow, and was actively building up a presence in the People’s Republic of China, it made sense to identify the gaps in the branch network and where there were immediate banking needs which ING Barings could satisfy with a relatively small investment and which could link in with the rest of the Bank’s network in Asia.

Whilst short-run profit considerations were initially important in the decision to develop a presence, the long-term potential for a commercial bank in these locations could be excellent, once immediate macroeconomic problems have been overcome and solutions are identified to long-term political animosities in the region.

A bank like ING Barings does not seek to handle huge amounts of small commercial remittances in Tokyo or Seoul, Beijing or Moscow and, thus, ING Northeast Asia Bank’s product range will develop away from such basic products with the growing sophistication of domestic banks in the DPRK. In the coming year I expect to have good opportunities to make commercial loans in support of foreign investments in the DPRK.

In Vladivostok, ING Barings has gone one step further by committing itself to provide the manpower for a World Bank-funded twinning program for a local bank: the Far Eastern Fisheries Bank or Dalrybbank. Within the framework of this twinning program, ING Barings, through an in-house subsidiary, is providing hands-on assistance to Dalrybbank for some 1,600 working days over a period of two years. The training, advice, and assistance with the active implementation of the advice covers ten modules and will affect every aspect of
Dalrybbank’s activities: (1) strategy, (2) organization, (3) credit management, (4) financial management/accounting, creation of the Asset and Liability Management Committee, (5) marketing, (6) international banking, (7) investment banking and securities, (8) accounting and internal audit, (9) human resources management, and (10) information technology. ING Barings has joined forces with auditors Price Waterhouse, which is handling the financial accounting modules.

ING Barings is not so much a Dutch bank but a multinational financial conglomerate. This is reflected in the seven nationalities of the seventeen consultants working with Dalrybbank in the framework of the twinning program.

For ING Barings this type of advisory activity started ten years ago, that is, the provision of hands-on assistance to financial institutions, be they commercial or development banks, savings banks or post office banks, in the private sector or otherwise. In Russia, ING Barings was instrumental in the creation of the Project Finance Bank on behalf of the European Bank for Reconstruction and Development and has experience in transition economies as well as other emerging markets.

Significant demand is expected throughout the Northeast Asian region, including those countries which are OECD members, for hands-on assistance in the implementation of change in financial institutions, be they nationwide commercial banks, regional banks, life insurance companies, pension-fund administrators, or real estate financiers. ING Barings potential contributions to financial-sector restructuring in Northeast Asia are outlined in Table 3.

**REAL ESTATE DEVELOPMENT AND MANAGEMENT EXPERTISE**

It is worth noting that ING Barings has specialist units involved in real estate development and management as well as a real estate fund management arm, trades-securitized real estate in the United States, and concrete and recent experience in doing business in Japan with respect to asset securitization and real estate trading.

The foundations for real-estate-related activity come from the fact that ING Real Estate is the largest real estate development company in the Netherlands and has built up a large portfolio of investments in OECD countries as well as emerging markets in Eastern Europe and even China. The real estate asset trading activity stems from over a decade of experience in the trading of emerging-markets debt, with particular experience in New York, where the Bank handles real estate investments arising from the securitization of failed savings and loan banks (S&Ls).
Table 3. ING Barings’ Potential Contributions to Financial Sector Restructuring in Northeast Asia, Including OECD Member Countries

<table>
<thead>
<tr>
<th>Target clients</th>
<th>ING Barings’ strengths</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commercial and regional banks</td>
<td>Commercial and international banking</td>
</tr>
<tr>
<td>Regional development or specialist banks</td>
<td>SME development banking</td>
</tr>
<tr>
<td>Savings banks and post office banks</td>
<td>Project advisory and finance/creation of Russian Project Finance Bank</td>
</tr>
<tr>
<td>Life insurance companies</td>
<td>Government advisory roles</td>
</tr>
<tr>
<td>Corporate pension funds</td>
<td>Financial sector restructuring</td>
</tr>
<tr>
<td>Real estate financiers</td>
<td>Foreign debt management</td>
</tr>
<tr>
<td>Institutions involved in mergers</td>
<td>Private finance initiative (PFI)</td>
</tr>
</tbody>
</table>

Specific experience
- Merger with Postbank
- Merger with Netherlands’s top life insurer/institutional investor—pioneer in bancassurance purchase of Barings Securities

Experience in handling
- Mergers/organic growth
- Deregulation/liberalization of markets
- Compliance and control issues in changing regulatory environments
- Growth in international branch and subsidiary network

Special strengths
- Consultancy delivery made possible by hands-on approach:
  - Consensus-building for organizational change
  - In-depth training
  - Involvement in change implementation process
  - Commitment of trained specialists for up to several years
  - Non-competitive approach/Chinese walls—delivery through in-house subsidiary

INTEGRATION OF THE DUTCH POST OFFICE BANK

In terms of the privatization of a post office bank, ING Barings is well placed to give the most pertinent advice, because it has successfully merged with a post office bank which accounts for 80% of the population of the Netherlands.

SPECIFIC STRENGTHS AS A CONSULTANT

As the ING Group is itself a successful financial conglomerate with proven skills in all product and organizational areas, ING Barings may well be a more acceptable partner than a pure consultancy firm, in terms of assisting financial institutions in Northeast Asia to manage change.

In Northeast Asia, particularly in Japan and South Korea, it could be vital for a financial institution to have hands-on assistance in the consensus-building
process, the training process, and the implementation of extensive organization change over a period of several years.

Change is a difficult process and it is therefore important to choose a partner which has itself undergone numerous metamorphoses and is operating in many different environments, including those of Northeast Asia, many of which have been liberalized but have also become more strictly regulated. A West European financial institution which does not represent a competitive challenge to the client is also likely to be preferred as a partner rather than a bank from the same country or even from a country which has a long and very close political and economic relationship with either Japan or South Korea.

ING Barings is active as an adviser or consultant in the following broad range of specific areas. ING Barings' current and potential contributions to emerging markets in Northeast Asia include advisory functions:

- **to central banks/monetary authorities**
  - foreign debt/domestic debt (management/restructuring)*
  - privatization/military conversion/project advisory*
  - sourcing private sector finance for public sector/infrastructure investments (PFI)*
  - financial sector restructuring

- **to individual banks**
  - made-to-measure twinning programs (up to three years)

- **to foreign investors**
  - individual project feasibility and financing arrangements*
  - country risk assessments/scenario planning

- **to domestic corporations**
  - restructuring of activities*
  - identification of foreign partners (offtakers/investors)*
  - privatization/bringing to stock market*

- **to international financial institutions**
  - country risk assessments
  - undertaking specific bank twinning/sector restructuring projects with IFI support
  - potential joint targets for co-finance*

Items marked with an asterisk (*) could be the object of commercial bank financing provided or arranged by ING Barings.

It is important for any consultant to ensure that the advice it gives is not purely theoretical but structured in accordance with market realities. The practical difficulties of raising long-term debt and new equity for projects, borrowers, or governments, which ING Barings can help in arranging and
sometimes provide itself, can be addressed only by an investor or lender which is putting its own funds at risk.

ING Barings' commitment to emerging markets is perhaps best demonstrated by the fact that the Bank currently has "loan outstandings" and "loan commitments" of US$1 billion on its books in the framework of co-financings with multinational financial institutions on a worldwide basis. ING Barings is the "number 1" provider of co-financing to private-sector projects with the World Bank subsidiary, IFC, and is a co-financier with all multinational and many bilateral development institutions.

By the end of 1997, ING Barings' project finance teams in Singapore, Amsterdam, New York, and London had arranged nearly US$5 billion globally in project finance and underwritten more than US$3 billion, thus earning the Bank tenth place in the league table of global lead arrangers for project finance.

In addition, the Bank has a team which specializes in advising on private sector finance for infrastructure development, so-called private finance initiative, and which has a solid track record in telecom, power, toll roads, mass transit, water works, and port development.

Specific assistance can also be given in such areas as privatization of state-owned commercial entities, not only financial institutions. New areas in which the Bank can offer advisory services to financial institutions are currently under consideration and will be announced in due course.

In terms of its commitment to Northeast Asia, the ING Group has (1) commercial banking and securities activities in 17 Asian countries, (2) asset management activities in 11 of those countries, and (3) ING insurance active in 9 Asian countries. This presence underlines ING Group's commitment to Asia and the countries of Northeast Asia in particular.

In summary, the purpose of this paper is to indicate the types and depth of assistance that a commercial bank is able and willing to provide to the countries and regions of Northeast Asia, but commercial banks cannot work alone in tackling major long-term development issues.

**ROLE OF MULTINATIONAL FINANCIAL INSTITUTIONS**

In order for a commercial bank to be able to carry out its vital role as a provider of long-term finance for resource development projects and infrastructure projects in emerging markets, multinational financial institutions need to be willing to support the transition process by allocating loan and equity resources and project specialists to the region, and to assist governments and local businesses in understanding the pre-conditions which must be satisfied in order for a project to be feasible. Multinationals also need to be willing to extend their
lending umbrellas to commercial and infrastructure projects thus enabling commercial banks to share the project, credit, and currency risks, but also ensuring that commercial lenders avoid the need to raise country risk loan loss provisions.

The first stage of multinational financial institution involvement in the emerging markets of Northeast Asia must be that of improving the regulatory environment in each of the respective regions to enable private sector finance to play a role in bringing to fruition resource development and infrastructure projects.

**ROLE OF REGIONAL GOVERNMENTS**

The governments of the region must also make a commitment to creating a business climate which will stimulate sustainable growth and equip the region to capture a growing share of foreign investment in the lesser-developed areas of the region. This implies that individual countries must embrace regional development strategies which lead to (1) the removal of obstacles to the movement of people and goods, (2) the harmonizing of customs rules and procedures to promote transit trade, and (3) the defusing of political animosities and the building up of mutual trust.
The Proposed Northeast Asian Development Bank

Hiroshi Kakazu

Despite enormous politico-economic difficulties surrounding the Northeast Asian region, considerable progress has been made in regional economic cooperation in recent years. Having achieved at least a shared consensus among the regional governments of the Tumen River Area, the TRADP has entered the implementation stage (Phase II). At this stage, the most important agenda is how to finance the planned and prioritized development projects, including infrastructure, industry, human resources development, and working capital, which must be supplied mostly from outside the region. As Dr. Katz has spelled out, various estimates have been made for capital requirements for the region, based on various assumptions. What is important, however, is that the private-sector funding sources (such as debt security and equity issues in world financial markets and FDI) are insufficient to meet the resource needs of the region, owing to the region’s high risk and low returns. The IRR is much lower in this region than elsewhere in East Asia. Except for a few resource-based projects such as oil and gas, it is also doubtful whether any BOT, BOO, or vested private initiative schemes can be effectively applied in the region, given the current uncertain political and financial climate. Furthermore, in view of the region’s politico-economic conditions, ODA funding sources, which have been reduced in recent years, can work only where the long-run opportunity costs of such funds are clearly understood and where regional governments have clear long-term goals and are administratively efficient.

Given the above assessments, the establishment of a Northeast Asian Development Bank (NEADB) can be well justified on the grounds that the region’s institutional as well as economic risks can be enormously reduced by having such a multilateral financial institution. The NEADB’s major role is not merely to finance the region’s infrastructural projects, but more importantly to attract private capital by creating attractive conditions for FDI and traders. In view of long-standing political and economic inefficiency in the region, the initiative in establishing the NEADB may be taken by a summit meeting including the countries of the region and the United States, as was the case for the EBRD, which was established by the E.U. summit after the collapse of the Soviet Union in 1990. The summit can be initiated by a possible host country of the NEADB or by an international organization such as the UNDP. There are of course various issues to be cleared before the summit is held. An international study team needs to be organized for further progress.
Meeting the Development Financing Needs of Northeast Asia

Koichiro Fukui

The Japan Development Bank (JDB), with which I am affiliated, has been noted as the most successful development bank. This is why we have strong ties to the World Bank, the Asian Development Bank, and the African Development Bank. The JDB actively cooperates with these multilateral banks in human infrastructure development projects.

At the Eighth Northeast Asia Economic Forum in Yonago many constructive ideas have been put forward. I am in complete agreement with the idea of developing this region as a whole through complementarity, while also taking into consideration geographical, historical, and economic conditions. If the region’s development is fragmented, it will become only a loose gathering of remote areas of various countries. The Russian Far East, for example, is far from Moscow, and Northeast China is far from Beijing.

When the central governments of these countries consider development priorities, the constraints in the conventional paradigm for providing development funds to remote regions become evident. These remote regions will not receive sufficient funds for their development, given that they are not a priority for central government. However, if a special bank for Northeast Asia is established, the local governments will become the main players in the region’s development. This trend will be stronger in Northeast Asia than in other regions of the world. Therefore, an important issue to address is how to involve the relevant local governments in financing schemes. I am not suggesting that this issue cannot be resolved. In fact, it is often said that local governments are better able to respond to local needs through projects. This controversial issue of how to provide financing and funding for projects under the control of local governments was raised at the general conference of the World Bank in Hong Kong. I believe that in discussions related to the establishment of a Northeast Asian Development Bank, we should from the start consider how to involve local governments in financing.

Another important issue is whether or not the U.S. will be involved. The establishment of a new multilateral bank should be the result of Northeast Asian initiatives. However, success in this endeavor depends on the involvement of the United States. I was surprised and happy to hear from Prof. Rosefielde that he also believes the U.S. should be involved, and that it would likely be interested in being involved.
International Transportation Network
The Future of Civil Aviation in Northeast Asia

Sumner J. La Croix

INTRODUCTION

The end of the cold war has presented Northeast Asia with unprecedented opportunities for economic growth and regional integration. In particular, the countries surrounding the Sea of Japan (China, Japan, Mongolia, North Korea, Russia, and South Korea) possess complementary resource endowments that could fuel income growth for several decades. For this growth to materialize, it is critical that the six countries take bold steps to facilitate regional integration. A central focus of regional integration efforts should be to establish regional communication and transportation networks that reduce the cost of direct and indirect international meetings across countries within the region.

This paper considers the current status of Northeast Asia’s civil aviation industries and focuses on how separate national aviation networks might be integrated into a regional aviation network. Regional integration of transportation networks is particularly important, as it has the potential to serve as a catalyst for regional integration in other service industries and, most importantly, to stimulate long-run regional growth.

Until recently, national governments in the Northeast Asian region tightly regulated their civil aviation industries and restricted overseas travel by their citizens. Governments typically prohibited new entry on both international and national routes, controlled cargo and passenger prices, and determined the size and configuration of the domestic air network. In addition, until the mid-1980s almost all national and international airlines in the region were public enterprises. Government ownership of these national “flag” carriers often skewed policy decisions in their favor. From the 1950s to the 1970s, virtually all nations in the region enforced highly restrictive travel policies limiting tourism to foreign countries in order to save foreign exchange and to exercise control over their citizens’ activities. Producer interests regularly triumphed over consumer interests in the formulation of aviation policy, particularly as expressed in high fares for passengers on domestic and international flights. Finally, national governments limited foreign gateways, i.e., airports with facilities and personnel to process flights to and from foreign countries, to just a few major cities.

Government restrictions on the aviation industry were probably sensible when air travel was a luxury. countries in the region were struggling to catch up
with more developed western countries, and the cold war was raging. By 1980, the restrictions served little purpose, particularly for the two richest countries in the region, Japan and South Korea. Both countries have removed virtually all travel restrictions on their citizens and have taken major steps to reform their international and domestic aviation policies. The reforms have, however, done little to integrate the transportation markets of these two trading countries. Regional integration of Japan’s and South Korea’s economies has lagged, perhaps because of lingering resentment of Japan’s earlier colonial presence in Korea and a mercantilist attitude in both countries toward their home industries. While there are major political and economic obstacles to concluding a regional aviation (or more comprehensive transportation) agreement deregulating prices, entry, and service patterns between the two countries, a free-trade transportation area in Northeast Asia could be a major stimulus to economic growth throughout the region. A well designed “open” agreement would allow other countries in Northeast Asia to join the free-trade transportation area when they have fulfilled several critical requirements and when they judge themselves to be ready to join.

Our analysis begins by reviewing new developments in the international organization of civil aviation in Northeast Asia. The next section reviews and evaluates the efforts being made by APEC (Asia Pacific Economic Cooperation) to coordinate the aviation industry in the Asia-Pacific region. The paper then considers the potential for a regional aviation agreement and for a subset of countries to conclude a regional agreement. It also considers some of the supporting measures that each country in the region could take to facilitate industry growth. The final section provides concluding remarks noting the necessity for transportation deregulation to be coupled with telecommunications deregulation. Transportation and communication are usually complements. Deregulation and integration of the transportation and telecommunications industries throughout Northeast Asia could help to re-start growth in the region in the wake of the recent Asian Financial Crisis. Finally, a comprehensive free-trade area in Northeast Asia should also be considered despite the obvious political challenges facing such an arrangement.

**NORTHEAST ASIAN DOMESTIC AND INTERNATIONAL AVIATION MARKETS**

Northeast Asia currently contains six loosely linked national aviation markets. We briefly review recent growth and predicted future growth in the region’s aviation markets, consider in some depth how national markets are currently
linked, and then briefly discuss new developments in Russia and North Korea that could affect the entire region.

**Past and Future Growth in Northeast Asian Aviation Markets**

Airline markets in Northeast Asia have been some of the fastest growing in the world over the last decade. Between 1990 and 1995, airline traffic in the Asia-Pacific region increased at an annual rate of 10.8%, much higher than the 5% growth rate of the U.S. and slightly higher than Europe’s 9% growth rate (Boeing, 1998). Prior to the onset of the Asian financial crisis, the International Air Transport Association (IATA) had forecast that passenger traffic in the Asia-Pacific region between 1995 and 2010 would increase by 7.4% annually compared with 3.4% for the rest of the world (IATA, 1997). Large declines in passenger traffic in the second half of 1997 and the first half of 1998 shocked IATA’s confidence in its forecasts. Early in 1998 IATA revised its forecast for 1997-2001 growth downwards to just 4.4% for passenger miles (IATA, 1998). Peter Harbison, Director of the Center for Asia-Pacific Aviation, has predicted that the Asian aviation industry will not regain its January 1997 levels until the year 2000. Forecasts beyond 2001 are too speculative to report given the uncertainty over the duration and depth of the current crisis.

Despite its lower forecasts for the entire Asia-Pacific region, IATA (1998) still expects substantial growth in Northeast Asian air traffic. It forecasts that scheduled traffic on international flights will grow from 91 million passengers in 1996 to over 135 million passengers in 2001. Taiwan, South Korea, and Japan were all expected to register moderate increases in traffic, while China’s growth was expected to continue at high levels, allowing China to become the largest Asia-Pacific country for domestic and international scheduled passengers by 2010. Implicit in IATA’s most recent forecasts is that Northeast Asian economies will resume their earlier patterns of strong income growth relatively quickly. If, however, Japan and South Korea take several years to resume sustainable growth rates (5-6% for Korea and 3% for Japan), then regional growth in passenger miles could be substantially less than IATA’s predictions.

**Organization of International Aviation in Northeast Asia**

Every country in Northeast Asia reserves domestic air service within its borders to its own private and public airlines. Until very recently, international aviation in Asia was tightly regulated by international agreements negotiated for each route between two countries. The two governments would specify which city pairs in the two countries would be served, the frequency of flights on each route, the type of aircraft used on each route, and the air fares charged for all classes of service. Some countries allow “fifth freedom” service—a foreign
airline is allowed to fly to the home country and to pick up passengers in the home country in the process of supplying ongoing service to and from a third country.³

The intellectual basis for regulation was three-fold. First, some transportation economists argued that most international air routes were natural monopolies or natural oligopolies. Without entry regulations, the market for international air service would be subject to excess entry and economies of scale would not be fully achieved, thereby unnecessarily raising costs. Second, economists argued that fledgling public airlines required infant industry protection until they had learned how to operate as efficiently as their foreign competitors. Third, since government-imposed entry barriers on air routes provided airlines with market power, pricing regulation was necessary to prevent the small number of airlines serving each route from engaging in predatory competition or reaping monopoly rents.

The intellectual underpinnings for instituting price-entry regulations in aviation had respectable theoretical foundations. Unfortunately, the regulatory regimes that were actually implemented by Northeast Asian countries were not designed to maximize social welfare but rather to organize a de facto cartel designed to maximize the profits of the small number of public airlines flying between the two countries.⁴ Since the airlines serving the market were public airlines whose enhanced profits would accrue to their respective governments, regulatory agencies in each country had strong incentives to enforce the cartel. Dresner and Tretheway (1992) provided evidence for the cartel-like effects of international air treaties in Asia. They found that trans-Pacific air routes had significantly higher ticket prices than trans-Atlantic routes, even when controlling for differences in the characteristics of the routes, such as density and route length.⁵

Higher trans-Pacific fares were combined with lower costs for many Asia-Pacific airlines, in particular for Singapore Airlines, Korean Air, Thai International, and Cathay Pacific. Oum and Yu (1997) show that the unit cost differentials are typically due to lower input costs, in particular lower wages. In fact, controlling for the effects of lower input costs, Oum and Yu show that most Asian airlines are slightly less productive than U.S. airlines, i.e., for a given package of inputs, less output is produced by Asian carriers than U.S. carriers (Table 1). Many industry observers believe that U.S. carriers have become more productive as a result of the competition unleashed by U.S. aviation deregulation. Most of the productivity gains accrued from the reorganization of U.S. air service into hub-and-spoke networks and the development of new marketing and pricing techniques (Caves, Christensen, Tretheway, Windle, 1987). Oum (1998) argues that over the next decade, as Asian countries continue
to grow and Asian wage rates rapidly rise, Asian airlines will lose their unit cost advantages over U.S. airlines unless they take measures to improve their productivity.

Table 1. Airline Competitiveness: U.S. versus Asian Airlines

<table>
<thead>
<tr>
<th>Airline</th>
<th>Unit Cost Input Prices</th>
<th>Efficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td>American</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>United</td>
<td>-1.7</td>
<td>3.7</td>
</tr>
<tr>
<td>Northwest</td>
<td>-3.7</td>
<td>4.6</td>
</tr>
<tr>
<td>Korean</td>
<td>-25.2</td>
<td>-23.8</td>
</tr>
<tr>
<td>JAL</td>
<td>50.1</td>
<td>38.4</td>
</tr>
<tr>
<td>All Nippon</td>
<td>114.8</td>
<td>40.4</td>
</tr>
<tr>
<td>Qantas</td>
<td>-24.6</td>
<td>-8.9</td>
</tr>
</tbody>
</table>


Note: Percentage above and below American Airlines' unit costs and efficiency.

The combination of cartel prices and lower costs allowed many Northeast Asian airlines to reap above-normal profits during the 1980s. (Clearly, this analysis does not apply to Japan's airlines; they had much higher input costs, in particular wage rates, than other Asian carriers.) The above-normal profits may also help explain why U.S. carriers were so eager to expand their market share in Asia, as they had been operating since the 1960s under a "price umbrella" extended by the aviation regulation of Asian governments (Oum, 1998). The price umbrella cannot, of course, survive expansion of existing carriers and entry of new carriers. As more carriers enter the Asian market and prices fall toward competitive levels, the above normal profits are also sure to disappear.

This analysis does not take into account the effects of the Asian financial crisis, which has led to a steep decline in demand for almost all airlines operating in Asia. The 1997-1998 depreciations of the Japanese yen, the Korean won, and the Russian ruble have, at least temporarily, provided some Asian airlines with favorable changes in their terms-of-trade. On the other hand, the Asian financial crisis has also produced a large decline in demand for air travel in Asia during 1997-1998, and many Asian airlines have been struggling to reduce operating costs in order to continue flying. New aviation agreements between the United States and several Northeast Asian countries (see discussion below) are also likely to put new competitive pressure on Northeast Asian airlines.

While the short-term outlook for Northeast Asian aviation remains negative, the medium-term outlook is much more positive. Consider the case of South
Korea. The large 1997 decline (and moderate 1998 rebound) in the value of the Korean won during the Asian financial crisis will, in the absence of other shocks to the South Korean economy, promote South Korean exports and expenditures by foreign tourists and business travelers on trips to South Korea. These two effects will stimulate increased demand by foreigners for air passenger and cargo transportation to and from South Korea. At the same time, the depreciation of South Korea’s currency has also reduced the operating costs (in dollars) of South Korea’s airlines. The long-term outlook for South Korean aviation is, of course, dependent upon recovery in the South Korean economy. Economic recovery is likely to lead to a renewed demand for overseas travel by South Korean residents as well as an appreciation of the won. When recovery occurs, there may be a pent-up demand by Korean residents for international travel. Strong economic growth in Korea would also be accompanied by strong import growth and higher demand for air cargo services.

Open Skies Agreements: Joining the Cartel or Ending the Party?
Vigorous efforts by the U.S. government to gain a larger share of the Asia-Pacific aviation market for U.S. airlines have shaken the region’s national aviation industries to their foundations. Since the early 1990s the U.S. government has relentlessly pushed “open skies” agreements, first in Europe, next in Central and North America, and most recently in Asia. Open skies agreements typically allow for deregulation of pricing and route capacity, expanded route flexibility, extensive fifth freedom operations, a double-disapproval fare structure (which allows for a fare to be offered unless both governments veto it) or complete pricing freedom (subject to antitrust monitoring), code-sharing opportunities, and enhanced access to computerized reservation systems. Since larger countries, including France, Germany, and Great Britain, were initially opposed to the idea of open skies agreements, the United States pursued a strategy of negotiating them with smaller countries.

The U.S. government negotiated its first open skies agreement with the Netherlands in September 1992, and it was followed by agreements in 1995 with 10 more small European countries: Austria, Belgium, Denmark, Finland, Iceland, Norway, Sweden, the Czech Republic, Switzerland, and Luxembourg. Encircled by small countries with open skies agreements that had the potential to divert air traffic from its major airport gateways, Germany reluctantly signed an open skies agreement with the United States in 1996. France followed in April 1998 by signing an agreement that slowly phases in open skies provisions over a 5-year period. Despite the U.S. success in its European initiative, some large European countries (Spain, Italy, and Great Britain) continue to maintain restrictive bilateral aviation agreements with the United States.6
Delighted with its success in Europe, the U.S. government announced in mid-1996 that it would pursue a similar strategy in Asia. Several important countries in the region, including Japan, Thailand, and China were severely opposed to the U.S. initiative. Again, the United States pursued a strategy of signing open skies agreements with smaller countries in order to place pressure on the larger countries. An open skies agreement with Singapore in January 1997 was quickly followed by agreements with Brunei, New Zealand, and Malaysia. The Singapore open skies agreement is particularly notable, as it allows airlines from each country to set up cargo hubs in the other country, thereby facilitating transshipment of freight throughout the region.

The first major open skies agreement in Northeast Asia was negotiated in 1997 between Taiwan and the United States. The new pact was followed by an alliance between American Airlines and China Airlines, who entered into a code-sharing agreement and partially merged their frequent flyer programs. Discussion concerning whether other countries would follow Taiwan’s lead was ended by the conclusion of the particularly liberal open skies agreement negotiated by the United States and South Korea in April 1998.

The U.S.-South Korea agreement provides all U.S. airlines and all South Korean airlines with unlimited service rights from any city in the two countries, unlimited fifth freedom rights, and the rights to determine flight capacity, service frequency, and fares on these routes. In addition, unlimited “change-of-gauge” rights were granted to U.S. airlines. This allows them to fly small planes on intra-Asian routes and then collect passengers onto larger planes for longer flights to North America, Europe, Southeast Asia, or the South Pacific. Previously, U.S. fifth freedom rights in Asia required the use of the same plane or the same size plane on the continuing flight segment. The award of change-of-gauge rights is a particularly important development for Northeast Asian aviation, as it provides U.S. airlines with the tools to develop an efficient, classic hub-and-spoke operation from Seoul. It is important to note that South Korea has not granted similar rights to airlines from other Northeast Asian countries.

The U.S.-South Korea open skies agreement is particularly important in light of the new Inchon International Airport being built to serve Seoul. With the completion of the first of four phases of the new airport in the year 2000, it will be able to handle 27 million passengers annually. When the last phase is completed in 2020, Inchon will have four runways and passenger facilities capable of handling 100 million passengers, 6 million tons of cargo, and more than 700,000 flights annually. The goal of the South Korean government is for Inchon to be positioned as the major civil aviation hub in the Northeast Asian region. While the Asian financial crisis has induced negative growth in South Korea during the first half of 1998, a resumption of high growth (5-6%) in South
Korea is expected by many economists within the next 2-4 years. Once high growth resumes, the government’s goals for the new airport are clearly capable of being realized, as it will be one of the few airports in the region with sufficient capacity to serve as a hub for several large international airlines.

The open skies agreements with South Korea and Taiwan were accompanied by a breakthrough in long-running aviation negotiations between Japan and the United States, with a new agreement being announced on January 30, 1998. It represents a huge advance over the 1952 cold-war era agreement. The old agreement gave three U.S. carriers (United, Northwest, and Federal Express—the “incumbents”) extensive privileges to conduct fifth freedom service from Japan to other points in Asia. Consistent with practices of the time, both governments had to approve the number of flights between the two countries, the number of seats, and the ticket prices. While Japanese demand for international travel increased as the country became rich in the 1970s and 1980s, seat capacity did not expand commensurately. Not surprisingly, the combination of restricted supply and expanded demand produced higher ticket prices for flights to and from Japan. Major U.S. cities (such as Boston and Dallas) that were home to the U.S. headquarters or production facilities of numerous Japanese corporations were not linked by direct air routes with any Japanese cities. Both U.S. and Japanese airlines operating on the limited routes between the two countries earned significant economic rents during the 1970s and 1980s.

The 1998 aviation agreement between Japan and the United States fixes many of the problems with the earlier agreement. For the three “incumbent” U.S. airlines, all restrictions on flying to Japan and to points beyond Japan are lifted. Five “nonincumbent” U.S. airlines—American, Delta, Continental, Hawaiian, and TWA—will be allowed to operate 106 new weekly flights, phased in over four years. Two nonincumbent all-cargo carriers, UPS and Polar Air, will be allowed to ship cargo to Asian destinations beyond Japan.

Major changes were also in store for Japanese airlines. Under the old agreement, JAL was the only “incumbent” Japanese airline. Under the new agreement, ANA and Nippon Cargo Airlines have been granted “incumbency” status and unrestricted access to all cities in the United States. As might be expected, ANA is pleased with the new pact, while JAL’s president has called it a “great disappointment.”

Code-sharing, a practice whereby airlines coordinate their flight schedules and offer jointly operated international and domestic flights, is allowed under the new pact, and several U.S. and Japanese airlines jumped to initiate these cooperative ventures. In October 1998, ANA and United Airlines implemented a broad ranging alliance which includes extensive code-sharing. Charter flights
between the two countries will be permitted to increase from the current 400 annual flights to 600 flights in two years, thereafter increasing to 800 flights.

The increased seat capacity across the Pacific may not generate lower fares immediately because the Japanese government must still approve fares. Nonetheless, the additional seat capacity in the market is likely to generate substantial medium-term pressure on air fares. (Fares between Japan and the United States have dropped significantly during 1998.) Adding seat capacity at Tokyo’s congested Narita Airport will, however, be virtually impossible until the airport’s second runway is completed. As a substitute, U.S. airlines are moving quickly to schedule additional flights to Japanese airports with excess capacity, such as Osaka, Nagoya, and Fukuoka.

The new agreement is sure to place additional competitive pressure on Japanese airlines which currently have the highest cost structure in the Asia-Pacific region (Oum and Yu, 1997). JAL has unit passenger costs that are more than 35% greater than those of U.S. airlines. As U.S. airlines expand service to-and-from Japan and fares fall in the medium term, both JAL and ANA are likely to face declining market shares unless they can take actions to reduce costs and to improve productivity.

The poor competitive positions of Japan’s two major international airlines helps to explain why U.S. airlines prefer Japan over South Korea or Taiwan as a center for their Asian operations. Japan provides twice the combined population of Taiwan and South Korea, and each Japanese traveler’s per capita income is more than twice as high as a South Korean or Taiwanese traveler. Japan’s excellent market demographics are also bundled with struggling domestic airlines. By contrast, major airlines in South Korea and Taiwan have unit costs lower than those of some U.S. airlines.

The United States has not been successful in convincing Russia or China to sign an open skies agreement. Current aviation agreements between the United States, China, and Russia have traditional features in which the two governments determine the cities to be serviced, the frequency of flights, the size of planes, and the fares. Non-stop flights between China and the United States began in 1996, and additional service has recently been added to accommodate higher demand for travel. American Airlines and China Eastern Airlines began code-sharing selected flights in September 1998.\textsuperscript{10}

**North Korea: Increasing Air Links with other Northeast Asian Countries?**

North Korea’s air links with the Northeast Asian region are currently very limited. The national airline, Air Koryo, operates out of a single international airport (Sunnan Airport) in the North Korean capital, Pyongyang. Two new international airports are currently being planned. An international airport in the
Rajin-Sonbong free economic and trade zone (part of the Tumen River Project) is already under construction. A second international airport will result when Hamhung Airport (which serves Hamhung port on the Sea of Japan) is upgraded from domestic to international status.

Scheduled service is very limited, connecting Pyongyang with Berlin, Moscow, Sofia, Beijing, Bangkok, and Macau. Chartered services operate to other destinations in Asia, Africa, and Europe. Air Koryo offices in the Russian city of Khabarovsk have been closed and moved to Vladivostok, where Air Koryo will run weekly service carrying 15-20 passengers per flight. Both the building of the new international airport in the Tumen River free trade area as well as the Vladivostok initiative show that North Korea is concentrating its new international initiatives around the Tumen River Project.

Most significantly, North Korea agreed in October 1997 to open its airspace to international air traffic from all states, including South Korea. Both Koreas have pledged to provide the necessary facilities and services to support these international operations. The agreement went into effect on February 28, 1998, and flights have since commenced through the North Korean airspace.11

Despite these recent international initiatives, North Korea’s opening to international aviation is likely to be confined to business travel associated with its free trade established for the Tumen River Project. Scheduled service to other Northeast Asian destinations, including Tokyo, Osaka, Vladivostok, and Seoul would represent a major political and economic development for the region.

The New Russian Far East Presence
The aviation sector in Russia is growing rapidly despite Russia’s recent economic turbulence. Prior to the breakup of the Soviet Union, Russia was served by one airline, Aeroflot. The Russian government has since broken up Aeroflot into regional government-run carriers that have been partially privatized, with the government retaining majority ownership. Most international Russian flights in the Far East are handled by Aeroflot-Russian International Airlines. A new airline, Orient Avia, has begun international flights in the Asia-Pacific region, with a weekly Vladivostok-Honolulu flight and a Vladivostok-San Francisco flight. A code-sharing agreement has been negotiated with Continental Airlines. Numerous small private airlines, e.g. Siberia Airlines, have entered relatively dense routes to compete with the government carriers throughout the Russia Far East. Linkages between the Russian Far East and other Northeast Asian destinations have improved dramatically since the end of the cold war, with scheduled service to Tokyo, Seoul, Osaka, Beijing, and other destinations in Northeast China. Alaska Airlines now operates services from
Anchorage and the U.S. West Coast (via Seattle) to Petropavlovsk-Kamchatskiy, Magadan, Khabarovsk, Vladivostok, and Yuzhno-Sakhalinsk.

General aviation is likely to be a growth sector in the Russian Far East for a number of reasons. Siberia’s geographic expanse, its sub-arctic climate, its potential for resource-based growth, and the low share of the Siberian population that currently flies are all likely to contribute to strong growth in the Russian aviation industry. Economic linkages with the region are somewhat impaired by the ongoing dispute between Japan and Russia over the Kuril Islands. If air links between the two countries were liberalized, there would most likely be strong competition between Sapporo and Vladivostok to become regional hubs for the Russian Far East. Given the superior facilities currently in place at Sapporo’s airport, such liberalization is unlikely in the near term.

The Impact of Open Skies on Northeast Asia
The increased U.S. presence in Northeast Asian aviation markets will place additional pressure on Asian countries to conclude a regional or subregional aviation agreement. While U.S. airlines are now free to set up a regional hub in Seoul, Northeast Asian countries are still hamstrung by traditional restrictive agreements among themselves that limit service, flight frequency, and fares. For example, virtually all aspects of flights between Korea and Japan, Korea and Taiwan, and Japan and China are regulated by the two respective governments. In contrast, U.S. flights to, from, and between Japan, Korea, and Taiwan are limited only by the availability of airport landing slots.

The impact of open skies on Northeast Asian aviation is clear: unless the Northeast Asian countries liberalize their international service agreements, U.S. airlines are sure to gain market share on international routes throughout the region. In the next two sections, we examine various ways in which liberalization in Northeast Asia aviation can occur.

APEC and Aviation Liberalization in Northeast Asia
The Asia Pacific Economic Cooperation (APEC) process has emerged in the 1990s as a stable mechanism within which Asia-Pacific governments can discuss coordination of national economic policies and increased economic integration (Aggarwal and Morrison, 1998). APEC could provide a suitable forum for the formulation and discussion of a menu of new policies for international cooperation in aviation throughout the Asia-Pacific region. Its mission of economic integration was solidified at the 1994 Bogor, Indonesia summit, where leaders agreed to a far-ranging agenda of trade and investment liberalization,
facilitation, and cooperation. Trade liberalization in the aviation industry has, to date, not been on the negotiating table.\textsuperscript{14}

APEC has an active Working Group on Transportation which has been charged with studying and recommending ways to improve infrastructure, facilitate movement of passengers and freight, collect and exchange data, and enhance safety and security. The Working Group has been relatively successful, making important strides in harmonizing technical standards and stimulating discussion of regional problems. It has recently issued a major report on airline safety in the region that has been effective in stimulating cooperative efforts to improve safety. During 1998 the Working Group has been studying international air service in the Asia-Pacific region and has developed an "Options Paper" presenting eight recommendations to improve competition and performance.

The Working Group should focus its attention on measuring the gains from multilateral liberalization in Asia-Pacific aviation industries and on developing a feasible institutional framework for implementing multilateral liberalization. This task is consistent with one of APEC's central goals: to facilitate economic growth in the Asia-Pacific region by reducing tariff and non-tariff barriers to trade. It is important to recognize that transportation costs constitute a trade barrier, in the sense that higher transportation costs reduce trade flows and the welfare of both importing and exporting countries. Unlike tariffs, transportation costs cannot be reduced to zero. Governments can, however, take actions to ensure that the costs of transporting goods and people across borders are not artificially high owing to protective government policies. Reducing transportation costs integrates the markets in two trading countries more closely, a process that will produce overall gains from trade to both countries. Of course, within each country certain interest groups will lose—consumers in the exporting country and producers in the importing country. If APEC's Working Group on Transportation produced a careful report evaluating the costs and the benefits of multilateral liberalization, it could serve to inform regional policy makers about the potential gains from aviation cooperation and liberalization.

Ultimately, APEC could also provide a forum for negotiation of a regional aviation agreement. Because the organization currently lacks the institutional infrastructure for monitoring and enforcing a regional agreement, aviation negotiators would need to create new mechanisms for monitoring and enforcing an air agreement or structure it to be self-enforcing. Member economies have not yet been able to agree, however, on the future direction of APEC.\textsuperscript{15} In the short run, therefore, the organization is unlikely to have sufficiently developed institutional infrastructure to be the vehicle for such a fundamental reform.

Separate aviation negotiations within the framework of APEC are unlikely to succeed for another reason: there is no mechanism in single industry negotiations
to compensate losing interest groups. If aviation markets were liberalized, high-cost airlines and their employees would either have to give back market share or go out of business entirely. Airlines from China and Japan would be the most likely losers, and this would spur opposition to liberalization by these two large important countries. Providing compensation to losing countries could best be achieved by linking air service negotiations with other trade negotiations (Aggarwal, 1998). Countries with airlines that would lose market share under a liberalized air-service regime could then be provided with concessions on other trade issues that would benefit other exporting industries in these countries. Linked negotiations could take place under the auspices of APEC or the World Trade Organization (WTO).

A NORTHEAST ASIAN AVIATION AREA (NAAA)?

An alternative to aviation liberalization within the APEC framework is for a subset of countries within the Northeast Asia region to negotiate their own air services agreement. Could a Northeast Asian Aviation Area (NAAA) be the result of negotiations between the six economies in the region?

There are several factors favoring such an agreement. First, since the Northeast Asia region has a smaller number of economies (6) than APEC (21), the transaction costs associated with reaching an aviation agreement are likely to be smaller. Second, the region faces extensive competitive pressure on intraregional flights from U.S. airlines that have been awarded flexible and extensive fifth freedom rights within the region. Unless regional airlines have the ability to respond to the new competitive challenge, U.S. airlines could take an increasing share of the intraregional market. Third, the region is undertaking several projects, most notably the UNDP’s Tumen River Area Development Project, to facilitate economic integration. A liberal regional aviation agreement could reduce transportation costs within the region, thereby promoting the success of these projects and facilitating the growth of intraregional trade and investment.

There are also several obstacles to concluding an NAAA among Northeast Asian countries. First, the two largest and most influential countries in the region, Japan and China, both have high-cost airline industries that would be opposed to further liberalization within the region. Japan’s three major airlines (ANA, JAL, and JAS) are already making adjustments to changing regulations governing entry and pricing in the Japanese domestic airline industry; increased international competition with U.S. airlines under the new aviation agreement; and price discounts ranging from 15 to 40 percent in anticipation of domestic deregulation. In 1998, both Standard and Poor’s and Moody’s have downgraded
the ratings on the unsecured debt of all three airlines. Given these difficulties, new international competition from regional airlines in Northeast Asia is not likely to be well regarded by the three incumbent Japanese airlines. China has shown little interest in liberalizing its international air agreements until its international airlines become more competitive with other airlines operating in the region. The prospect of competing with Korean Airlines, one of the world’s most efficient airlines would probably not be a welcome one for either Japanese or Chinese airlines.

Second, political problems within the region could make several nations reluctant to enter into a regional aviation agreements. North Korea is unlikely to join, as it has tight restrictions on the international travel of its citizens. Japan has held back on establishing tighter economic ties with Russia in order to hold some bargaining chips in negotiations over the Kuril Islands.

Third, and most critical, liberalization of the region’s aviation industry can succeed only when the major airlines in the region have been privatized. Competition among publicly owned firms that are receiving subsidies from their governments is unlikely to generate a stable equilibrium. The multilateral aviation arrangement that has evolved in Western Europe in tandem with the growth of the European Union has been plagued by just this difficulty. Measures to liberalize E.U. aviation were phased in between 1987 and 1997. Currently, any E.U.-based airline is allowed to serve any two cities in the European Union and to set fares unilaterally, regardless of the airline’s home country. Many airlines in the European Union are, however, still publicly owned. Enhanced competition has led to losses at numerous European airlines, including state-owned carriers in France and Greece. In a competitive market, the response would be to cut costs, possibly by laying off workers or cutting wages. However, rather than rationalize their airlines’ operations, many European governments have responded to losses by providing multi-billion-dollar subsidies to their airlines. Under these conditions, the competitive process will not necessarily improve welfare, as inefficient firms neither lose market share nor leave the market. The European example is particularly applicable to Northeast Asia, as most major airlines in China, Mongolia, North Korea, and Russia are state-owned firms. Until these airlines are privatized, national governments are likely to have too large a stake in their success to allow for regional liberalization of air services.

Finally, some countries in the region would be unlikely to enter into the NAAA because of poor airport facilities that would be uncompetitive as regional hubs. This is particularly problematic when there are nearby airports in other countries that could serve as substitute hubs. For example, the new Kansai
airport serving Osaka, Kobe, and Kyoto and the not-yet-completed Inchon airport serving Seoul are obvious competitors for regional international traffic.  
In sum, Northeast Asian countries, as a group, could gain substantial overall benefits from the formation of the NAAA. Negotiations are, however, unlikely to be successful because of the strong competitive position of Korean Airlines and the poor competitive position of Chinese, Japanese, and Russian airlines. While the losers could potentially be compensated, this is virtually impossible to accomplish in single-industry trade negotiations.

Prelude to a Northeast Asian Aviation Area (NAAA)?
A second, and perhaps more feasible, alternative is for the region’s two richest countries, Japan and South Korea, to negotiate a bilateral agreement deregulating air service between and within the two countries. The two countries would essentially agree to form a single aviation market. Airlines would be free to totally restructure their services to realize economies from multiple hubs in the two countries and a more efficient hub-and-spoke network. The Korea-Japan agreement could be phased in over a 10-year period, much as the European Union aviation liberalization was phased in over a 10-year period, 1987-1997 (Graham, 1997). Cabotage, i.e., service between two cities in the same country, would not be allowed until the end of the phase-in period. The agreement would be structured to allow China, Mongolia, North Korea, and Russia to join unilaterally if they were able to meet one critical criterion—private control of their major airlines.

The likely course of this deregulation would be the same as in the United States and Europe: a total restructuring of the aviation network away from government dictates and toward efficiency (Winston, 1993 and 1998). While the resulting hub-and-spoke systems often increase the number of stops and decrease the number of direct flights, they also have produced surprising results in both countries. In the United States, service frequency between many destinations has actually risen with the development of the hub-and-spoke system despite airline competition under regulation to offer excessive numbers of flights (Winston, 1998). In Europe, the deregulation of aviation has produced unprecedented cooperation and code-sharing among national airlines as well as the formation of small regional hubs serving relatively small cities across the entire Western European region. Graham (1997, 810) finds that:

[one of the most notable initiatives [stemming from the European aviation liberalization] has been by the French carrier, Regional Airlines, in connecting Bordeaux, Nantes, and several lesser western French cities to a variety of destinations across Clermont-Ferrand, which acts as a mini-hub where passengers change aircraft. The thin flows from several
cities can thus be consolidated sufficiently to justify, for example, onward service to Basel, Geneva, Turin, or Milan.

This emulation of the major carrier hubs, albeit at the micro-level, could be a major stimulus to growth for the cities surrounding the Sea of Japan. Many small Japanese cities, such as Tottori and Yonago in Japan, could serve as micro-hubs, collecting passengers from other small cities on the Sea of Japan for onward service to larger cities in both Korea and Japan.

The benefits from such arrangements can be large. Consider the costs, primarily in time, for a businessperson in Yonago or other small cities in the Kansai region to travel to Seoul. She must first take a train to Osaka, connections to Kansai Airport, and then a flight to Seoul.18 This often means a full day devoted to travel. A micro-hub would allow the businessperson to take a short commuter flight to Yonago Airport or Tottori Airport and then take a flight to Seoul. A full day of travel could be reduced to a few hours. Similar micro-hubs could form in Korea.

The benefits to smaller Japanese and Korean cities facing the Sea of Japan could be quite large. Lower transportation costs are complementary to foreign direct investment, to resource shipments, and to trade. Mini-hubs and airline deregulation would not, of course, go unopposed. There would be some losers from mini-hubs, particularly airlines serving Kansai International Airport, and railroads bringing travelers from small cities to Osaka. Japanese airlines would surely be opposed, as they would most likely lose market share to the more competitive Korean airlines. Nonetheless, unless Northeast Asian countries are willing to take some bold action to deregulate their airline markets, they risk losing substantial market share to American airlines with their new-found privileges in the region.

Since Japanese airlines would probably lose market share in a Japan-Korea aviation area, the institution is probably not politically viable unless it is combined with other trade initiatives. Joh suggests, in the conclusions to the next paper in this volume, that the Northeast Asian region consider forming a regional shipping area in which free trade in shipping is allowed. He argues that “total regional benefit can be maximized for the region as a whole when a common shipping policy is pursued. As Europe’s common transport policy has expedited the creation of the European Union (EU), a Northeast Asian common shipping market could enhance cooperation and interaction within the region.” Joh’s proposal and my proposal could be combined: a Northeast Asian Transportation Area (NATA) allowing free trade in air and shipping services, with participation restricted initially to Japan and Korea. While this proposal would increase the total welfare gains to be shared by the two countries, it does not remedy the fundamental problem of the NAAA, as Joh argues that Korean ports would gain
at the expense of Japanese and Chinese ports. Opposition from Japanese producers would only increase. A more feasible proposal might be constructed by bundling the NATA proposal with regional trade liberalization in a few important industries in which Japanese exporters would gain. Such bundling would dilute opposition by Japanese producers (by creating a group of producers who would lobby for the legislation) and would increase the overall benefits to be reaped by both parties from the trade pact. The key to this proposal would lie in the judicious selection of industries to be bundled with the shipping and air transportation industries in such a trade agreement.

CONCLUSION

International aviation was, until recently, one of the world’s most protected industries (La Croix, 1995). Liberalization is likely to proceed faster if a group of countries can agree to liberalize together and to compensate losing nations by liberalizing other sectors of their economies. The WTO is ideally suited for this type of “linkage” bargaining, but international aviation is not one of the services under the WTO’s jurisdiction.

What types of goods could be linked with transportation to facilitate formation of NATA? Gaspar and Glaeser (1998) argue persuasively that increased “indirect” contacts via electronic mail, telephone, or tele-conferencing lead to a greater demand for “direct” contacts where participants meet face-to-face. They note the explosion of business travel that has accompanied the development of new communications technologies in the 1980s and 1990s. Thus, deregulation in both the telecommunications and transportation industries may jointly stimulate growth by reducing the transaction costs associated with both “direct” and “indirect” meetings. If Japanese producers of telecommunications services would be net exporters to Korea, then perhaps telecommunications could serve as the “linkage” in a Japan-Korea trade pact establishing a NATA. Such an arrangement could constitute the foundation of a more integrated and more prosperous Northeast Asian free trade area.

NOTES

1 The requirement of the U.S. government that South Korean citizens obtain an entry visa to visit the United States is currently more of an obstacle to overseas travel by South Koreans than any travel restrictions imposed by the South Korean government.

2 See Morrison (1998) for a full discussion of open regionalism in the Asia-Pacific region.
Japan and Korea recently extended unlimited fifth freedom rights to U.S. carriers, while North Korea, Russia, and China heavily restrict such service. In practice, the fifth freedom rights granted by Korea and Japan are often restricted by airport capacity at one end of the proposed service. Prior to the 1990s, fifth freedom service in Northeast Asia was highly restricted, with the exception being the limited fifth freedom rights granted to U.S. airlines by the occupation-era U.S.-Japan aviation agreement.

Until the end of the cold war in the late 1980s, many countries in Northeast Asia had either no regularly scheduled passenger service or very limited service with other Northeast Asian countries. With the exception of scheduled service to North Korea, regularly scheduled passenger routes between Northeast Asian countries expanded dramatically during the 1990s.

The substantial depreciation of the Japanese, South Korean, and Russian currencies during 1997 and 1998 wiped out and, in some cases, reversed these fare differentials.

British opposition has become more muted with the announcement of the alliance between British Airways and American Airlines. The U.S. Department of Transportation has indicated that it will not approve this alliance unless Britain agrees to a more liberal air treaty. Negotiations between the two countries have, however, not produced a new aviation agreement as of November 1998.

After concluding the open skies agreements with European countries, the U.S. government also concluded agreements with Panama, El Salvador, Honduras, Costa Rica, Nicaragua, Guatemala, Aruba, and the Netherlands Antilles.

La Croix (1995) noted that the Asian Initiative was not likely to be as successful as the European initiative because airport gateways in Asia were less substitutable for consumers than airport gateways in Europe. For many tourists visiting Europe, it would not matter if they flew to Amsterdam or Paris given the fast rail links between these destinations and the multi-city nature of many tourists' trips. American tourists visiting Asia were less likely to consider arriving in Seoul as a good substitute for arriving in Tokyo.

These rights are often known as "seventh freedom" rights. The open skies agreement with New Zealand has similar provisions. In the next round of aviation talks with Asian countries, the United States is likely to press for seventh freedom rights to be included in the aviation agreement.

The U.S.-China aviation agreement is distinguished from other restrictive agreements by its approval of code-sharing, a practice that the United States government has typically only approved when a liberal aviation pact is in place.
International air service in Northeast Asia, and Asia generally, has been hampered by China’s reluctance (with a few recent exceptions) to grant overfly rights over its territory. Most countries routinely grant these rights. Russia allows overfly rights, but many Asian and European airlines complain that Russian charges to overfly its territory are excessive. In response, airlines often use a longer less economical route.

This has not stopped Korean Airlines from dominating the 2.86 million passenger Korea-Japan market. In 1995, over 67% of the market went to Korean carriers, 22% to Japanese carriers, and 11% to foreign carriers.

Landing slots are hard to obtain at international airports in Seoul, Osaka, Tokyo, and, to a lesser extent, Taipei.

See La Croix (1995) for an analysis arguing that government restrictions on flight destinations and frequency are equivalent to traditional quotas.

Until the Asian financial crisis eases, it will be difficult to obtain APEC member consent for new regional integration initiatives.

Given APEC’s lack of institutional infrastructure for monitoring and enforcement.

Kansai may not have the long-run capacity unless it adds a second runway.

An alternative would be to fly to Haneda Airport, take a bus to Narita International Airport, and then fly to Seoul.

REFERENCES


An Approach to a Common Shipping Market
and Hub Port Development in Northeast Asia

Jung Jay Joh

OVERVIEW

Northeast Asia’s shipping market has become the largest in the world, surpassing Europe’s share of global shipping by a wide margin. Furthermore, the Northeast Asian market is expected to grow and to retain this leading position, in spite of recent economic difficulties. Shipping in Northeast Asia, however, is still far from free and efficient. A few of the region’s countries still use strict regulations and intervention to protect the ships that fly their national flags. Foreign ships are often prohibited from serving certain routes, and their access to local cargoes may be blocked, to protect the interests of domestic shippers.

In most cases, the shipping routes within Northeast Asia are operated by mutual agreements between the countries involved, creating subdivided and therefore inefficient, small markets. Existing shipping issues and restrictions could be resolved more efficiently by means of multinational cooperation, with a view toward creating a common shipping market within the region. Structural changes in the region’s shipping market, together with appropriate distribution of national-flag vessels across the market, could pave the way to the adoption of a common shipping policy.

If a common shipping policy is pursued, the total benefits for the region as a whole can be maximized. Just as Europe’s common transport policy has expedited the creation of the European Union, a common shipping market in Northeast Asia could enhance cooperation and interaction in this region.

The free-market system will have substantial impacts on the existing port system of the region. Economic mechanisms will produce a good combination of ports, mega ports, and mega-hub ports in the long run. Many analysts have confirmed that there are two important elements in determining whether a port can become a hub port. Basic economics indicates (other things being equal) that the first element, centrality, can be measured in terms of the total distance of a main trunk line, such as Dalian to Rotterdam. The second element, intermediacy, is measured in terms of the feeder services between ports within the region. In choosing between ports, the length of the feeder-route is usually more important than the length of the total route.

Given the narrow geographical definition of Northeast Asia, the Port of Pusan offers advantages over Kobe and Shanghai with respect to both of these
elements. For the total Dalian-Rotterdam route, Shanghai has a competitive edge of 300 miles over Pusan. However, the feeder-route from Dalian is slightly shorter to Pusan than to Shanghai. Therefore, in this case, Pusan is at least equal to Shanghai and may offer a slight advantage over Shanghai.

In addition, it is cheaper to transport cargo from western Japan to Pusan than to transport the same cargo to Tokyo or Kobe, regardless of the means of transport. The restoration of the Trans-Korean Railway, which would then be linked to the Russian and Chinese railway systems, would place Pusan in an even stronger position as a potential hub port for the region.

BACKGROUND

The shipping market in Northeast Asia has become the largest one in the world. The region’s market, however, is subdivided and protected by each of the region’s countries, and the port system is not yet well developed.

In the near future, the Northeast Asian economy will resume its growth momentum, in spite of recent economic difficulties, and this growth will be gradually expedited through close cooperation and interactions within the region. Interactions and transport within the region can be promoted through more efficient maritime services, in striking contrast with Europe, where the inland transportation network has played a more important role by facilitating the common transport market in western Europe. Therefore, if a common shipping policy is pursued in Northeast Asia, economic mechanisms are expected to create an efficient hub and feeder system, based on a common shipping market.

A REGIONAL APPROACH TO A
COMMON SHIPPING MARKET IN NORTHEAST ASIA

The shipping market of Northeast Asia comprising of Japan, Korea, China, Hong Kong, and Taiwan, amounts to 40.3 million TEU, and has expanded into the world’s biggest market. In 1995 it accounted for 29.9 percent of the world’s total, surpassing Europe’s 21.1 percent share by a wide margin (see Table 1). Furthermore, the shipping market is expected to grow and remain the world’s largest, in spite of recent economic difficulties.

The size differential of national-flag vessels by countries in Northeast Asia has narrowed remarkably in the 1990s. Japanese vessels in the 1980s predominated in the ownership distribution of container vessels among Asian countries. However, by the mid-1990s Japan’s share of the total fell below the shares of China, Taiwan, and Korea (see Table 2).
Table 1. Container Movements of Liner Market Zone (million TEU)

<table>
<thead>
<tr>
<th>Region</th>
<th>Number</th>
<th>Share (%)</th>
<th>Number</th>
<th>Share (%)</th>
<th>Number</th>
<th>Share (%)</th>
<th>Annual Growth Rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northeast</td>
<td>40.3</td>
<td>29.9</td>
<td>56.5</td>
<td>31.3</td>
<td>101.2</td>
<td>34.3</td>
<td>7.0 6.0</td>
</tr>
<tr>
<td>Asia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Europe</td>
<td>29.1</td>
<td>21.6</td>
<td>38.1</td>
<td>21.1</td>
<td>62.1</td>
<td>21.1</td>
<td>5.5 5.0</td>
</tr>
<tr>
<td>North America</td>
<td>21.6</td>
<td>16.0</td>
<td>29.0</td>
<td>16.1</td>
<td>47.2</td>
<td>16.0</td>
<td>6.0 5.0</td>
</tr>
<tr>
<td>World</td>
<td>135.0</td>
<td>100.0</td>
<td>180.6</td>
<td>100.0</td>
<td>295.0</td>
<td>100.0</td>
<td>6.0 5.0</td>
</tr>
</tbody>
</table>

Source: KM1.

Table 2. Distribution of National-Flag Vessels of Northeast Asia

<table>
<thead>
<tr>
<th>Flag</th>
<th>1980</th>
<th>1990</th>
<th>1993</th>
<th>1996</th>
<th>Annual Growth Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>G/T</td>
<td>%</td>
<td>G/T</td>
<td>%</td>
<td>G/T</td>
</tr>
<tr>
<td>China</td>
<td>4</td>
<td>-</td>
<td>846</td>
<td>3.5</td>
<td>977</td>
</tr>
<tr>
<td>Hong Kong</td>
<td>260</td>
<td>2.3</td>
<td>559</td>
<td>2.3</td>
<td>603</td>
</tr>
<tr>
<td>Taiwan</td>
<td>190</td>
<td>1.7</td>
<td>2,060</td>
<td>8.6</td>
<td>2,377</td>
</tr>
<tr>
<td>Korea</td>
<td>277</td>
<td>2.5</td>
<td>668</td>
<td>2.8</td>
<td>1,163</td>
</tr>
<tr>
<td>Japan</td>
<td>1,571</td>
<td>13.9</td>
<td>1,250</td>
<td>5.3</td>
<td>1,428</td>
</tr>
<tr>
<td>Sub-total</td>
<td>2,302</td>
<td>20.4</td>
<td>5,383</td>
<td>22.5</td>
<td>6,548</td>
</tr>
<tr>
<td>World Total</td>
<td>11,274</td>
<td>100.0</td>
<td>23,900</td>
<td>100.0</td>
<td>31,662</td>
</tr>
</tbody>
</table>

Container vessels in general have become larger and faster. Most of the container ships operated on the main trunk routes are larger than 4,000 TEU and even mega carriers (over 5,000 TEU) are quite popular. Container ships serving the intraregional Northeast Asian market have grown in size and speed, through a significant transfer into the region of relatively smaller container ships that were once used for worldwide main trunk route services. The introduction of the so-called techno-super-liner (over 1,000 TEU and sailing at a speed of 50 knots) has had a significant impact on the restructuring of the intraregional shipping market.

The shipping markets in Northeast Asia are still far from being free and efficient. A few countries of the region still protect their national carriers by means of strict regulations and intervention. Foreign ships are often prohibited from entering certain routes, and their access to local cargoes is still blocked in favor of domestic shipping interests.
Regional routes within Northeast Asia are being operated in most cases by mutual agreements between the countries concerned, which creates subdivided and therefore inefficient, small markets. The issues and restrictions can be more efficiently tackled by multinational cooperation to establish a common shipping market. Structural change in the regional shipping market and the somewhat identical distribution of ship ownership by the region's countries will have to pave the way to the adoption of a common shipping policy.

Major common policies to be pursued are: free entry to local routes, easier access to local shippers, free investment on shipping business and mergers and acquisitions (M&As), standardization of maritime services and equipment, environmental criteria, qualifications, etc. An efficient common shipping policy will lead to an eventual common market for the shipping business, as evidenced by the experience of the European Union.

INTERPORT COMPETITION AND HUB FUNCTIONS IN NORTHEAST ASIA

Centrality and Intermediacy
Yehuda Hayuth and Douglas K. Fleming (1994) carried out an in-depth study of the twenty largest container ports in the world, which confirms that centrality and intermediacy are the key elements that determine which ports will become hub ports. Other factors such as port charges, transport costs, and service quality are also important in port selection, but are gradually equalized by the timely development of a port and enhancement of related services.

In recent years, the economies of Northeast Asia, including China's, have been striding forward. China's development center extends from the southern part of the country to the Shanghai area and thus to the Yellow Sea rim. Japan is also giving more attention to the more balanced growth of its western coastal areas. Russia is now planning to develop its Far East region, including the Tumen River area. However, thus far, no hub port represents Northeast Asia in its narrowly defined sense.

As is usually the case, the proportion of transshipment cargo is used as a measurement of port centrality. Using this measurement, Hong Kong, Singapore, and Kaohsiung (whose ratios are in the range of 40 percent to 70 percent) are considered as hub ports in the southeastern region of Asia. In Northeast Asia, the port of Kobe once came near to this figure, but it lost a large portion of its capacity after the 1995 earthquake.

Although the transshipment ratio of Pusan rose from 5.1 percent in 1991 to 18.5 percent in 1995, by dint of increased transshipment cargo (mainly from North China), Pusan gives no indications of becoming a hub port for this region as yet.
Economic fundamentals tell us (other things being equal) that port centrality and intermediacy can be measured by the total route distance of a main trunk route and its feeder services. Table 3 reveals that Pusan port in general is superior to the ports of Kobe and Shanghai, with respect to centrality and intermediacy for Northeast Asia. Shanghai has the competitive edge of being 300 miles shorter than Pusan for the total route distance between Dalian and Rotterdam. However, in terms of the feeder distances from Dalian, Pusan is closer (by a small margin of 8 miles) than Shanghai. Considering that the feeder-route distance is more important than the total distance when choosing a port, Pusan has a slight advantage over Shanghai, or is at least equal to Shanghai. In addition, it is 55-60 percent cheaper for Western Japan to ship cargo to Pusan than to either Tokyo or Kobe, regardless of the choice of transport mode (see Table 4). The restoration of the Trans-Korean Railroad (TRK) and its onward connections to Russia’s Trans-Siberian Railway and/or to China (TCR) could strengthen Pusan’s potential to become a hub for the region.

Pusan/Kwangyang port, if developed in due time according to schedule, has the potential to grow into a mega hub port, considering its advantageous geo-economic location, including good centrality and intermediacy for Northeast Asia. Other ports such as Kobe/Yokohama and Shanghai, on the other hand, will be able to expand their capacities within the same type of port, but retaining the characteristics of regional mega ports.

Table 3. Route Distances in Northeast Asia (nautical miles)

<table>
<thead>
<tr>
<th>Route</th>
<th>Total</th>
<th>MTR</th>
<th>Feeder</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Westbound</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dalian - Pusan - Rotterdam</td>
<td>11,360</td>
<td>10,817</td>
<td>543</td>
</tr>
<tr>
<td>Dalian - Kobe - Rotterdam</td>
<td>11,899</td>
<td>11,039</td>
<td>860</td>
</tr>
<tr>
<td>Dalian - Shanghai - Rotterdam</td>
<td>11,060</td>
<td>10,509</td>
<td>551</td>
</tr>
<tr>
<td>Vladivostok - Pusan - Rotterdam</td>
<td>11,326</td>
<td>10,817</td>
<td>509</td>
</tr>
<tr>
<td>Vladivostok - Kobe - Rotterdam</td>
<td>11,848</td>
<td>11,039</td>
<td>809</td>
</tr>
<tr>
<td>Vladivostok - Shanghai - Rotterdam</td>
<td>11,500</td>
<td>10,509</td>
<td>991</td>
</tr>
<tr>
<td><strong>Eastbound</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dalian - Pusan - Los Angeles</td>
<td>5,773</td>
<td>5,230</td>
<td>543</td>
</tr>
<tr>
<td>Dalian - Kobe - Los Angeles</td>
<td>5,997</td>
<td>5,137</td>
<td>860</td>
</tr>
<tr>
<td>Dalian - Shanghai - Los Angeles</td>
<td>6,259</td>
<td>5,708</td>
<td>551</td>
</tr>
<tr>
<td>Vladivostok - Pusan - Los Angeles</td>
<td>5,739</td>
<td>5,230</td>
<td>509</td>
</tr>
<tr>
<td>Vladivostok - Kobe - Los Angeles</td>
<td>5,946</td>
<td>5,137</td>
<td>809</td>
</tr>
<tr>
<td>Vladivostok-Shanghai-Los Angeles</td>
<td>6,699</td>
<td>5,708</td>
<td>991</td>
</tr>
</tbody>
</table>

*Source:* Woo, 1996.
Table 4. Port Competitiveness for Western Japan (20F per US$)

<table>
<thead>
<tr>
<th>Route and services</th>
<th>Cost</th>
<th>Route and services</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Niigata to Pusan</td>
<td></td>
<td>Niigata to Tokyo</td>
<td></td>
</tr>
<tr>
<td>Port charges</td>
<td>125</td>
<td>Trucking cost</td>
<td>1,154</td>
</tr>
<tr>
<td>Shipping cost</td>
<td>606</td>
<td>Port charges</td>
<td>157</td>
</tr>
<tr>
<td>Transshipment</td>
<td>50</td>
<td>Total</td>
<td>781</td>
</tr>
<tr>
<td>Total</td>
<td>781</td>
<td>Total</td>
<td>1,311</td>
</tr>
</tbody>
</table>

Kyushu region (Moji, Imabari, etc.)

To Pusan
| Port charges       | 120  |
| Shipping cost      | 433  |
| Transshipment      | 50   |
| Total              | 603  |
To Kobe
| Port charges       |      |
| Shipping cost      |      |
| Transshipment      |      |
| Total              |      |

Table 5. Deviation from Main Trunk Route from Northern Chinese Ports

<table>
<thead>
<tr>
<th>Port</th>
<th>Port Development Condition</th>
<th>Deviation from Main Trunk Route</th>
<th>Distance (miles)</th>
<th>Additional Time (hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shanghai</td>
<td>poor</td>
<td>186</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>Tianjin</td>
<td>poor</td>
<td>1,044</td>
<td>45</td>
<td></td>
</tr>
<tr>
<td>Dalian</td>
<td>good</td>
<td>679</td>
<td>32</td>
<td></td>
</tr>
</tbody>
</table>

The port of Shanghai is located close to main trunk routes and has a huge hinterland to serve, which will generate much demand for cargo handling. Shanghai has a slight advantage on westbound routes to Europe in terms of total mileage, among its competitor ports, as indicated in Table 5. Shanghai, however, is handicapped in terms of transforming itself into a large-scale mega hub port, because of the limitations of its shallow waters. It nonetheless promises to be developed into a large-scale regional mega port, thereby expediting direct calls to take care of its abundant cargoes. Direct calls to other ports such as Qingdao and Tianjin also can be expedited for better handling of their cargoes produced within their respective hinterlands.

Development Type of Ports in Northeast Asia

Ports in general can be classified by combining the volumes of container throughput and the transshipment ratios into types such as a regional port, a regional hub port, a regional mega port, and a mega hub port (Figure 1). Major mega ports in Northeast Asia, such as Shanghai, Pusan, and Kobe/Yokohama, can be classified as regional mega ports, considering that their cargoes amount to
more than 2 million TEU each and their transshipment ratios are less than 35 percent. Other ports with less than 2 million TEU belong to the category of regional ports.

![Figure 1. Ports classified by development type](image)

**Implications for Korea**

**Lack of Port Capacity and Limited Hub Function in Korea**

Under the classification by development type, Pusan belongs to the “regional mega port” category. Although it is the fifth-largest container port in the world, the share of its transshipment cargo has remained less than 20 percent of total container throughput in recent years. Transshipment movements in Korea are outlined in Table 6.

Pusan’s entry to the “mega hub port” category is impeded solely by insufficient transshipment movement through the port, which is further ascribed to the lack of port capacity. Although Korea has experienced a drastic increase in container traffic, the demand cannot be met because of the lack of port capacity. This has led to annoying and severe congestion in Korea’s ports and a long queue of container vessels. For this reason, Pusan’s container terminals have, until recently, been reluctant to absorb the transshipment cargoes from western Japan and the Yellow Sea rim of northern China.
Table 6. Transshipment Movements in Korea, 1990-97

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<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Total Throughput (TEU)</td>
<td>2,544</td>
<td>2,707</td>
<td>2,876</td>
<td>3,323</td>
<td>4,035</td>
<td>4,802</td>
<td>5,202</td>
<td>5,883</td>
</tr>
<tr>
<td>% increase</td>
<td>3.8</td>
<td>6.8</td>
<td>6.1</td>
<td>15.5</td>
<td>21.4</td>
<td>19.0</td>
<td>8.3</td>
<td>13.1</td>
</tr>
<tr>
<td>Import and Export (TEU)</td>
<td>2,393</td>
<td>2,567</td>
<td>2,720</td>
<td>2,941</td>
<td>3,441</td>
<td>3,942</td>
<td>4,258</td>
<td>4,711</td>
</tr>
<tr>
<td>Transshipment (TEU)</td>
<td>150</td>
<td>140</td>
<td>155</td>
<td>382</td>
<td>594</td>
<td>860</td>
<td>944</td>
<td>1,172</td>
</tr>
<tr>
<td>% of total throughput</td>
<td>5.9</td>
<td>5.2</td>
<td>5.4</td>
<td>11.5</td>
<td>14.7</td>
<td>17.9</td>
<td>18.1</td>
<td>19.9</td>
</tr>
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Recent Port Conditions and Plans for Hub Ports in Korea

Korea has recently entered a new era in which, for the first time in the country’s history, the ports have reached a near-congestion-free stage. This has been achieved in large part by port privatization and the construction of new container terminals in major ports. A recent transformation of Korea’s port system—from ownership and operation by the government to the privatization of operations—has led to an improvement of about 30 percent in port operations. These improvements have the same effect as an equivalent expansion of port capacity would have. In addition, Pusan has constructed a new container terminal with seven berths, and the first stage of the container terminal in Kwangyang Bay (with four berths of modern scale) opened in early 1998. Korea’s trade stagnation, due to recent economic difficulties, is another factor that has reduced port congestion.

To speed up the transshipment of cargo through the ports, Korea has recently announced a system of large-scale, region-wide, bonded areas. The first of these will begin operation 1 January 1999, encompassing Kwangyang container terminal and its hinterland.

Korea has already begun to build the so-called “two hub” port system of Pusan and Kwangyang, to take advantage of their geo-economic advantages of centrality and intermediacy for Northeast Asia. There are plans to build an additional six-berth container terminal at Kwangyang by 2006, and a further 20 berths will be added by 2011. However, even with this development plan, Pusan’s and Kwangyang’s facilities would be insufficient to meet future demand, which in turn would prevent them from becoming local centers for Northeast Asia.

For this reason, therefore, the government decided to build a 24-berth container terminal at Kodok Island, adjacent to Pusan. The total cost for this new terminal is estimated at US$4 billion, which is several times greater than the government’s annual budget for port construction. All that can be said with
A Common Shipping Market and Hub Port Development in Northeast Asia

certainty is that the project may be delayed if it is financed solely by the government. Timing is the most important factor for this project. If Korea fails to open this terminal in time, a competing country will make a bid to become the hub port for Northeast Asia. These factors support the view that the new terminal should be financed, developed, and operated by the private sector.

The scale of Korea’s hub port system has been projected on the basis of the rather pessimistic and conservative assumption that transshipment cargoes from other countries will account for only 25 percent, at most, of Korea’s total container-throughputs. However, once a common shipping market begins to operate in Northeast Asia, Korea’s ports (particularly Pusan-Kodok and Kwangyang) offer more advantages than any of the competing ports in the region. They should therefore be able to attract sufficient transshipment cargoes to make up 30 to 40 percent of their container movements.

A Common Shipping Policy:
The First Step to a Common Transport Market in Northeast Asia

Discussion has begun recently, mainly within the private sector, about a free trade and investment scheme between Korea and Japan. The opposite view—that a completely open system between Korea and Japan is premature and hasty—stems for the most part from non-economic reasons and a deep-rooted lack of confidence between the Korean and Japanese people.

In this regard, the two countries could introduce a free-shipping and common-market arrangement between them, as the first stage, and expand the arrangement subsequently to an open-skies agreement, and finally to a common-transport market arrangement, including inland transport. In the first stage, it will be easy to reach agreements on shipping, since the Korean and Japanese shipping business is already open between the two countries, except for coastal liners and third-party shipping lines.

Korean carriers enjoy very good access to numerous profitable routes to and from Japan. Given that the Korean carriers can make the best use of an enormous traffic advantage in bilateral relations, Korea needs to take a sincere approach in negotiating with Japan.

Once the common shipping policy and the open-skies agreement are successfully accepted by Korea and Japan, this scheme could then be examined further and broadened to allow China and Russia to join. Thus, the final objective would be a common transport market in Northeast Asia.
CONCLUSION

Total regional benefits can be maximized for the region as a whole when a common shipping policy is pursued. As Europe’s common transport policy has expedited the creation of the European Union (EU), a Northeast Asian common shipping market could enhance cooperation and interaction within the region.

The free-market system will have substantial impacts on the existing port system of the region. Economic mechanisms will work out a good combination of regional ports, regional mega ports, and mega hub ports in the long run. The port of Pusan in general is superior to the ports of Kobe and Shanghai with respect to centrality and intermediacy for Northeast Asia. It therefore has the potential to grow into a world-scale mega hub ports.

REFERENCES


Regional Transportation Planning for Northeast Asia: An Introduction

Mark J. Valencia

INTRODUCTION

Transportation and communication infrastructure in developing Northeast Asia is far inferior to that of its developed neighbors. The existing transportation network and its spatial structure were introduced during the pre-WWII era of colonial and territorial expansion. Although piecemeal improvements have been made to meet immediate national needs and to complete some missing links, this system still dictates the basic nature of transportation in developing Northeast Asia.¹

For example, railways were developed mainly to link port cities to inland resource frontiers or to radiate from a few local points which were historical and strategic centers for colonial development. Very few railroads run coast-to-coast. In Korea and Northeast China, transport networks were also characterized by the dominance of north-south lines. Because of different colonial rulers, different track gauges are common, reducing operational efficiency and impeding an integrated railway system. Linkages between production and consumption centers are circuitous and incomplete, and feeder routes to main lines are underdeveloped. Airports in the region link with central cities but often not across nearby borders. International airports are not conveniently located. The transportation infrastructure that does exist is often in poor repair or out-of-date, especially highways. Except for Nakhodka and Vostochny, developing Northeast Asia also lacks adequate container and other cargo handling and storage facilities.

Without proper infrastructure in place, it will be difficult to attract investors.² If it is in place in one locale and not in others, one part of the region will be favored for investment over the others. This is not likely to reflect regional long-run comparative advantages and will tend to undermine the mutual confidence and good will needed for successful intra-regional trade expansion. Issues include differing regional visions, competition to be the regional transportation hub, how to integrate existing infrastructure, what new infrastructure to try to finance, how to finance it, and how to avoid the competitive or redundant development of infrastructure.

A major question is whether to put the cart or the horse first. Many observers hold that it will be difficult to develop the region without a minimally
satisfactory regional transportation and communication infrastructure, now missing or overused in most of developing Northeast Asia. The argument is that adequate infrastructure—at least physical infrastructure—and financial services must be in place for much to happen. Another view is that only once existing infrastructure is fully utilized, and participant countries have shown that they can cooperate in the management and use of existing infrastructure, will there be a need and justification for large new, cooperative investments. In this view it is better to let infrastructure development follow, rather than lead demand. A better understanding of the potential for cross-border interchange without major infrastructure projects is necessary to resolve this issue of supply led or demand pull development. All of these issues can best be addressed on a regional basis in a regional forum.

**THE BIG PICTURE**

In the early stage of broader regional economic cooperation, special economic zones will be an effective mechanism. In addition to those already established in Hunchun, Rajin/Sonbong, and Nakhodka, Dandong and Shunuiju are logical possibilities. Neighboring border towns at border crossings, e.g., Suifenhe-Grodekovo and Heihe-Blagoveschensk, would be candidates for joint special economic zones. Cross-border railway and road connections and perhaps jointly used power plants could be supported by foreign direct investment. Port expansion at Rajin/Sonbong and Zarubino is already in progress. Dandong and Shunuiju require port expansion, which could be of interest to South Korean and Japanese companies.

In this growth point strategy of regional development, joint ventures would be limited to labor-intensive export activities and sectors using local resources. But as countries and businesses gain experience, industrial cooperation could be expanded to larger scale projects with heavier investment requirements. Household electronics, metal fabrication, and machinery using medium technology are all obvious candidates for joint ventures in developing Northeast Asia. This expanded industrial cooperation, however, will inevitably require an industrial base as well as improved transportation linkages between consumers and producers.

At this stage, the growth point process will transform into a growth line process. These growth lines can accommodate industries of regional importance, especially resource-based manufacturing such as wood products, iron and steel, metal products, and non-electrical machinery. Heihe-Blagoveschensk can be easily connected with Beian, and Suifenhe-Grodekovo can be expanded to link Mudanjiang and Ussuriisk. New lines of growth can be set up, for example,
between Khabarovsk and Fuyuan, between Yanji and Chongjin, and between Fengcheng and Chongju. Infrastructure development should not only enhance linkages between major cities along the growth lines but also upgrade production efficiency in the cities themselves. To accommodate the increased international traffic in inputs and commodities, selected regional ports should be expanded and/or renovated and their linkages with the growth lines constructed.

In the next stage when the major growth axes are about to form, international land connections will be needed. Candidates are Harbin-Dalian, Shenyang-Pyongyang, Harbin-Valdivostok, and Khabarovsk-Vladivostok. The Harbin-Dalian growth line will probably form first. If Dalian is connected with Yantai by an undersea tunnel, the Harbin-Dalian axis will be the major growth axis in Northeast Asia. The other growth lines will be connected to the Harbin-Dalian axis. By that time, international highways and high-speed railways will connect Pusan/Seoul with Shenyang/Beijing, and Kwangyang/Seoul (via Chongjin and Vladivostok) with Khabarovsk. Industries such as machinery, iron and steel, and transport equipment will be located along the major growth axis and subsidiary axes, reaping the benefits of comparative advantage. In the final stage of regional development, growth lines and axes will join to become a growth network. Gas pipelines supplying the necessary energy for industrial production in continental Northeast Asia, South Korea, and Japan will fuel this growth network.

**LANDBRIDGES: POSSIBILITIES** (Figure 1)

There are several potentially competing landbridge options: China’s existing Tianjin-Beijing-Ulaanbaatar-Ulan Ude routes; Russia’s existing Trans-Siberian Railway (TSR); and Russia’s Baikal-Amur Mainline (BAM). Proposed new routes include Trans-China Railway (TCR); and the China Eastern Railway (CER) connecting Hunchun, Jilin, Changchun, Yirshi and projected to connect Tamsagbulag, Choybalsan, and Borzya on the TSR.

China’s planners have proposed construction of a new system that begins at Lianyungang and connects by railroad lines to Zhengzhou and Urumqi. The TCR system would then extend across the Russian border at Alashan Pass and on to Moscow and other parts of Europe. When this new system is completed, containers from South Korea, Japan, Taiwan, and Hong Kong could be unloaded at Lianyungang and then shipped through China and Russia to destinations in Europe and the Middle East. This new system would have major advantages over the Trans-Siberian Railway (TSR)—cost reduction through shortened distance and year-round uninterrupted service.

The CER links a proposed port complex in the Tumen delta area and a planned inland hub marshaling yard via the CER to Manzhouli/Zabaikalsk at the
entry to the TSR. The Mongolian Eastern Railway would be connected to this
trunk line near the Russian city of Borzya. The Heilongjiang northern
passageway would thus connect to the TSR and reduce pressure on import and
export transport at Suifenhe and Manzhouli. Also, more ports will be opened
along the Heilongjiang River for distribution of goods.

Another option would be the direct connection of the Mongolian railway to
the CER reducing the number of border crossings and shortening the distance to
the Tumen area ports. However, this would require major upgrading,
construction of a second track, a change from steam to diesel power, and
coordinated price systems, business procedures, and of railroad track gauges.

There is another more futuristic alternative—the Trans-Korean Railway
(TKR). If the railway between North and South Korea were connected, a TKR
would start from the southern coastal port cities of Pusan or Kwangyang and
pass through the TKR and join the CER or TSR. This route might have a
competitive edge as a new intermodal transportation system to Europe. An
extension of this idea is to connect the Korean peninsula and the Japanese
archipelago across the Korean Strait by an undersea tunnel. If realized, a person
or cargo could go from Tokyo to London by rail.

Another dream that is being discussed by the Japanese and Russian
government is the construction of a pipeline from Yakutia in Russia, through the
Russian Far East and North Korea, to South Korea and further to Japan across
the Korean Strait (Figure 2). The total length would be about 5,300 km, which
would make it the longest man-made artifact.

TRANSPORTATION HUBS

A regional transportation hub could play a pivotal role in connecting trade and
services between Northeast Asia on one hand and Europe and North America on
the other. It would stimulate economic and social activities throughout the region
it served. There is competition to be this hub.

The strategic position of the Korean Peninsula and South Korea’s
sophisticated transportation and telecommunications infrastructure offer it the
opportunity to be a hub for the movement of people, cargo, and information.
Korea is preparing for that role. Indeed, the New Seoul Metropolitan Airport
(NSMA) is part of the government’s Third Comprehensive National
Development Plan for the construction of a “New Korea” by the year 2001. The
plan calls for huge investments in slow-speed transport networks such as
container ports, and in high-speed networks such as a high-speed railway. These
projects are all designed to position Korea to become the transportation hub of
the region.
But the potential for the NSMA as well as the Kwangyang Port to become gateways for Northeast Asia depends on the establishment of an integrated transport network on the Korean Peninsula. In February 1992, the two Koreas signed agreements on South-North exchanges and cooperation that provide for the two nations to reconnect their railways and roads and to open South-North sea and air transport routes. If implemented, the agreements permit the direct exchange of people and cargo and the opening of sea routes between the ports of Pusan, Inchon, and Pohang in the South and the ports of Nampo, Wonsan, and Chongjin in the North.

With improved relations, the two Koreas are likely to eventually reconnect their roads and railways. Upon completion of the rail lines, the new Korean land bridge would start in Kwangyang-Pusan, connect with transcontinental railways, and continue on to Europe or even Middle Eastern countries. An examination of the comparative distance, time, and cost from Kwangyang-Pusan to Rotterdam in Europe reveals that the TKR would be competitive with the new TCR and would be superior to the TSR. Transport distances would be shorter and the service would be more reliable.

If South Korea is not able to exploit the potential for through traffic on North Korean railways, it will have to move its containers by sea either to Vostochny in the RFE or to Lianyungang in China. In addition, Korean ports will lose regional transshipment traffic that would have been diverted from various ports to capitalize on the TKR’s advantages for trading with the Far East and Europe. Therefore, the realization of the TKR service would have a significant impact on the patterns of ports and transportation involved in the European and Far Eastern trade.

The development of a high-speed rail between Seoul and Pusan is also expected to play a decisive role in establishing an integrated transport system in Northeast Asia by connecting Japan with China and the RFE. A proposal frequently advanced in Japan is to build a railway tunnel under the Korea Strait that would connect Pusan to Shimonoseki with a rail link through Pyongyang to Vladivostok and Shenyang and on to London. These concepts suggest the potential of the Korean Peninsula as the bridge from Japan to Northern China.

**Regional Air Hubs**

In Northeast Asia, there are 27 international airports and 95 scheduled international direct air routes among the operating airports. But international air routes are highly concentrated between 14 Japanese and 3 South Korean cities (Figure 3). But the airports in the region often link central cities and not adjacent countries. New routes have been opened recently between Japan and such
Chinese cities as Beijing and Shanghai, and many more are waiting to be opened. Air-route distances and the area to be served are expanding rapidly between Russian cities (e.g., Khabarovsk and Irkutsk) and between South Korean and Japanese cities (e.g., Seoul, Nagoya, and Niigata). Indeed, scheduled international air traffic in Asia and the Pacific, already one-fourth of the world’s total, is expected to double within 15 years.

Because of this volume of air travel and the region’s strategic location, Northeast Asia is expected to emerge as the most important airline market in the world! Already United Airlines is using Tokyo as a mini-hub to various Asia-Pacific destinations and Seoul as a transfer point in Asia. Northwest Airlines also uses Tokyo and Seoul as its Pacific gateway hubs.

But many of the region’s airports and air-traffic systems are unprepared to cope with the growing demand. Thus the region’s nations are planning, expanding, and building airports to relieve overburdened facilities and to meet the demand created by the region’s expected 10 percent annual rate of growth in air-passenger traffic. Korea’s New Seoul Metropolitan Airport is an important part of this picture.

Ideological and political conflicts among neighboring countries in the region are still a hindrance to the development of efficient air transportation. Many lines have recently started operations between Japan and China, and between South Korea and China. And direct air routes crossing North Korea, which are vital to connect South Korea, Northeast China, the Russian Far East, and Mongolia, have just been opened. The growth of direct air routes over the central zone—North Korea and Northeast China—and therefore connecting Northeast Asian cities by ideal direct routes will greatly contribute to the promotion of the air-transportation industry in the region.

It will sooner or later become crucial to establish an air-transport network between South Korea and North Korea. Initial efforts could focus on establishing an indirect air-transport network. The airline companies of the two Koreas could then cooperate by establishing interline traffic services extending to joint operations. Establishing air routes via commercial agreement between airline companies, together with the formation of an air-traffic control organization under the auspices of the International Civil Aviation Organization, could eventually lead to the establishment of a complete network of direct air transport in the region.

**NATIONAL DEVELOPMENT PLANS WITH REGIONAL IMPACT**

*Japan* plans to construct seven radiating and four encircling new main lines of communication and expressways to prevent Tokyo from becoming too large and
too densely-populated. Included in this scheme are Sendai, Niigata, Kanazawa, and Nagoya. (Toetsu new main railway and Kantsu expressway-Niigata [business center, airport, ports and harbors]-Golden Delta-Eurasia). Niigata will thus become the third domestic axis after Tokyo-Fukuoka and Tokyo-Sapporo (Figure 4).

South Korea, in the mid-1980s, identified the west coast of the country as a priority area for investment and development. This strategy was formulated to achieve a more balanced regional development within Korea and enhance political and economic relations between Korea and the rest of Northeast Asia. The South Korean government is planning a new container port in Kwangyang which is expected to add an additional capacity of 1.8 million TEUs by the year 2000 (Figure 5). Among the projects planned for the west coast are four new industrial areas and improvement schemes for major transportation networks including expressways, railways, ports, and airports. All of these major investment and construction projects will help facilitate the Yellow Sea region’s development. A new international trading port at Pohang is also under consideration as the Korean focal point for Sea of Japan development.

In China, the middle transport corridor through Northeast China and eastern Inner Mongolia consists of railway, high-grade highway, petroleum pipeline and airline. An electric railway will be completed by the year 2000. Eventually this corridor will stretch north to link all ports opened to Russia along the Heilongjiang River, forming a modern and comprehensive transport gateway to southern Northeast China from Heihe to Harbin and to Dalian with Dongdong, Yingkou, and Jinzhou as its wings. This would relieve pressure at Manzhouli and Suifenhe. Goods from the western parts of the former Soviet Union can then be transported into China without passing through Suifenhe, thus cutting more than 1,600 km off the journey. The establishment of a new cross-border rail link between Hunchun-Kraskino with a composite gauge track will enhance regional trade and will permit direct access to ocean ports for Chinese rolling stock without intermediate transloading. China has also completed a highway between Tumen and Hunchun, with two tunnels and several structures protecting it against landslides.7

For China’s Northeast to become an integral part of the bigger picture several specific steps must be taken. The hinterland must be used to accelerate economic development in the Tumen River area. Hong Kong could not have become prosperous without the natural and socio-economic resources in the surrounding Pearl River Delta. The transport and communications sectors and resource-oriented processing industries should be developed first. Commerce, trade, and tertiary industries will naturally follow. A newly emerging growth point should develop leading basic industries which form broader and more
extended linkages, creating more jobs and extending urban functions to the hinterland.

A Jilin-Mongolia railway link should be completed as soon as possible. This railway will link the Rajin-Sonbong area to Mongolia, traversing the richest resources in that country including deposits of coal, oil, copper, gold, iron, tungsten, aluminum, and fluorite, as well as abundant livestock. This railway may eventually be connected to European ports to create a new Asia-Europe Continental Bridge which will transform the Tumen River area into a regional entrepôt.

Heilongjiang has rich natural resources including oil and coal, large-scale state-run industries, and vast cultivated land. The agricultural sector, in particular, has great potential for development. Heilongjiang has one of the world’s three largest black soil plains, with the largest average cultivated area per capita in China, and there is still undeveloped land that could be utilized. In particular, the Sanjiang Plains, the hinterland of the Suifenhe Route, has great potential for new agricultural development.

A Suifenhe-Vostochny route should be built connecting Heilongjiang to the Tumen River area. The Suifenhe Route could reduce the cost of transportation by 10 percent and cut transport time by approximately one week. As the volume of export/import cargoes increases, costs should be further reduced. Since 1995, interest in the Suifenhe Route has gradually increased due to (1) serious food shortages in China, (2) an increase in the transportation capacity of the Chinese portion of the Suifenhe Route, and (3) a more favorable attitude by Russia towards handling transit cargoes from China.

An increase in food production in Northeast China is an important goal of China’s Ninth Five Year Plan which began in 1996. The focus is on Heilongjiang because of its undeveloped arable land. Several development projects are already planned using foreign capital from Overseas Economic Cooperative Fund (OE:CF) loans, World Bank loans, and some private investment. The produce is to be transported by way of the Sea of Japan to other regions of China. A middle-grade road between Harbin and Suifenhe has been completed, the double track line between Harbin and Suifenhe is under construction, and Suifenhe station is under renovation. Moreover, current economic troubles in Russia have led to a recession in the Russian transportation sector and facilities are operating at less than half of their capacity. Thus the desire for foreign cargoes has greatly increased. The start-up of the Suifenhe Route will not require large investments because Heilongjiang is already linked by rail and road to major Russian ports. By using existing facilities, 2–2.5 million tons of cargo per year can be transported to the Sea of Japan.
To implement this plan, a joint venture company for international transportation could be established by Heilongjiang Province and Suifenhe City. Initially, the focus of development in Northeast China should be on services for transportation, storage, and trading in Suifenhe City, including container shipments. At the same time, goods should be marketed for export using the Suifenhe Route instead of the Dalian Route.

In the next stage, an export development scheme should be established to increase production of agricultural goods and coal for the international market. In the latter stage when the routes are fully established, export processing zones in both Suifenhe and Mudanjiang will attract more foreign capital. Eventually, the bulk of the cargoes exported will be manufactured goods.

The establishment of the Suifenhe Route to the Sea of Japan has already moved from concept to implementation. However, in constructing a system of international transportation from Northeast China's landlocked provinces by way of the Sea of Japan, two routes should be considered simultaneously: the Tumen River Route from Changchun-Hunchun through Zarubino and Rajin, and the Suifenhe Route from Harbin-Suifenhe through Vostochny. Forty million people live along the two routes, and there is ample development potential in agriculture, industry, and natural resources. The Suifenhe Route should not detract from the Tumen River Route, where there are a number of projects both under development and in the planning stages. In order to promote regional development in Northeast Asia, both routes are necessary and should be developed in parallel.

In Russia, in addition to the existing ports of Vostochny and Nakhodka, Vladivostok has opened as an international trading port. It is only 1,000 km from Seoul and Tokyo, and lies at the end of the TSR, allowing freight to be shipped to the western part of the FSU and other countries in Europe. Vladivostok and Nakhodka will become entry ports for exports to and from Asia. New routes connecting Vladivostok to Niigata and Yuzhno-Sakhalinsk to Hakodate are being opened.

The importance of the TSR to the economic growth and well-being of the Russian Far East (RFE) cannot be overemphasized. The only limitation is the capacity of the rail lines that connect the RFE ports of Vostochny-Nakhodka to the mainline TSR. This is no more than 30 million tons annually, thus limiting the throughput capacity of the RFE ports. However, as these ports combined currently handle less than 20 million tons per year, the limitations of the rail connections are not likely to restrict their growth over the near term. The principal problem is that the TSR is unable to offer a cheaper, faster or reliable alternative to competing all-water services.
A second east-west railway, the Baikal-Amur Mainline (BAM), north of the TSR is slowly in progress. Also under construction is a direct rail link from Posyet port across the border to the Chinese city of Hunchun. This will cut out a lengthy rail loop through North Korea’s Rajin port and will have many positive implications for the development of the Tumen River region.

North Korea expects there to be a growing demand for transport facilities from Northeast China toward the east to Japan, Korea, and the Pacific. The route via Rajin or Sonbong is the shortest and most economical. North Korea’s initial plan is to utilize its existing rail and port facilities and then gradually expand transportation facilities as demand increases. But North Korea must decide which coast it wishes to favor in its initial development.

In Mongolia dispersed population throughout vast territory, the nomadic style of life and long distances between cities and rural communities mean transportation costs greatly affect transport services to the population. Cargo is transported mainly by trucks because the volume is relatively small in quantity, has a seasonal character and one-way destination, and Mongolia is a landlocked country with a harsh continental climate.

Mongolia has joined the Asian highway network project. Incorporation of the Ulaanbaatar-Beijing highway into the Asian highway network and its linkage with the Siberian international highway would greatly contribute to the development of foreign trade and tourism and aid development of the country’s economy. Moreover, a linkage of China’s Urumchi with Hovd as part of the Asian highway network project as well as a future connection with the Ulaanbaatar-Hangai highway would give an important impetus to the development of Mongolia’s western region and strengthen the open-door economic policy and the establishment of independent border trade and economic relations between the local governments and their neighbors.

In Mongolia, there are two unconnected railway lines, both one-track unelectrified with a capacity of about 12 pairs of trains daily. The total length of the railway network is about 1,800 km. The main industrial centers are connected by rail. On 8 July 1992, an agreement was signed between Mongolia and China for the use by Mongolia of the port of Tianjin, 993 km from Zamyun-Uud. However, the Chinese railway line and the port of Tianjin are always overloaded and transshipment operations at the Mongolian/Chinese border are complicated by different gauges, absence of mechanization, lack of labor, and difficult climatic conditions, resulting in serious delays. Nevertheless, transit from this port to Europe and in the opposite direction is 1,100 km shorter than via the Mandzur-South Baikal railway.

There are already two connections with the Russian railway system at Sukhbaatar and at Ereentsav and one connection with the Chinese system at
Zamyun-Uud. One of the Chinese domestic railway lines reaches Mongolia's eastern border. Planned development of a railway network across the border will enhance bilateral cooperation with neighboring countries and aid development of natural resources, e.g., oil in the southern regions, coking coal in Tavan Tolgoi, zinc in Salkhit, and silver and polymetals in Ulaan and Tsav.

**Uncertainties**

The future of transport systems development in Northeast Asia greatly depends on many uncertain factors which can be both promising and discouraging. They include the issue of reunification of the two Koreas, with a pivotal location for the design of a transportation system in the region, the demand for natural resources and their pricing relative to the world market, the degree of formation of a regional economic bloc, and technical innovations which may bring a new mode of transportation.

Despite these optimistic scenarios, major institutional changes are required to simplify the complicated array of laws and regulations governing transport operations. Transportation is critical to the formulation of closer economic ties among Northeast Asian nations because it contributes to the flexible movement of goods, people, and information. But to realize this flexibility, the nations of Northeast Asia need to work together to develop an intraregional infrastructure network that will effectively link the region to other economic growth poles. Moreover, they need to remove physical, technical, institutional, and legal barriers that constrain cross-border movements of goods, people, and information.

A critical regional issue is how to build an integrated multi-modal transportation system to link sea-borne and inland transportation networks. The region has a sufficient railway network for current and near future traffic. However, almost all railways in the region urgently need general upgrading. The highest priority is the urgent overhaul of the permanent way and the structures—bridges, tunnels, pipes, drainage and networks. Changing of rails, sleepers, cleaning and addition of ballast is also badly needed. The poor condition of the permanent way is the main factor limiting an increase in train speed and axle-loads and thus upgrading the general capacity of the railway networks. The upgrading of existing rolling stock is another priority which, together with the change from steam power in China and certain sections of North Korea, would permit increased train weight and speed. Introduction of block automation and electric interlocking with central traffic control systems would prevent bottlenecks in the transport network. Border crossings are also bottlenecks which prevent further development of trade in the region. A handicap caused by the
difference in the track gauge of the Russian railways and standard railways may be overcome by laying composite track in certain stretches as exists now between Khasan and Chongjin. Such track consists of four rails permitting the movement of boggies of both gauge specifications.

Although Russia’s ports are important to realizing the “big picture,” they face enormous problems and are significantly underutilized. Each has a potential throughput capacity of over 30 million tons per annum, but less than 50 percent is being utilized. And raw capacity notwithstanding, Russian port operations are terribly inefficient. Ships wait for days at anchorage for a berth at a port, loading and discharging rates are very slow, and containers get lost or delayed for weeks. Ports throughput capacity and productivity are limited by poor operating practices, inadequate equipment, and landside bottlenecks. Second, berths are under utilized as aging, obsolete equipment sits idle awaiting spares and maintenance. Third, port capacity and productivity are limited by the landside bottlenecks—the railway and the access roads. And fourth, poor planning has resulted in a counterproductive mix and layout of incompatible cargo operations.

**NEXT STEPS**

The long term goal in the regional transportation sector is the formation of a unified transportation system, and the objective is the coordination of planning and development toward that goal. For the creation of a unified transport system, foremost attention must focus on transforming the current bilateral arrangements in the transportation and telecommunication sectors into multilateral arrangements.

At present North Korea is not involved in many bilateral maritime and air links. Thus the initial step toward the formation of a single transport network is to establish bilateral connections between North Korea and Japan and between North Korea and South Korea. The next step will be to create two separate multinational transport patterns from the current bilateral transport pattern—i.e., the Yellow Sea transportation network linking South Korea, Japan, China, and North Korea and the Sea of Japan transport network connecting South Korea, Japan, the Russian Far East, and North Korea. But prior to North Korea's becoming a full participant in the multinational transportation pattern, three-nation transportation networks excluding North Korea may be formed in both the Yellow Sea circle and Japan Sea circle. The next step would be to integrate the Yellow Sea circle and the Sea of Japan circle, thus linking the five countries in the region. A united Korean Peninsula would provide that link.
Another critical step toward the formation of a unified, single transportation system or market in Northeast Asia is the establishment of a consultative committee to promote cooperation and coordination in this sector. This committee should be given responsibility for coordinating the development of detailed implementation schedules and the method for establishing a fully coordinated program of investment and implementation. This committee could have subcommittees for specific fields such as shipping, air, road, and rail transport.

As the center of gravity of the world’s economy shifts to the Asia-Pacific Rim and strengthened economic ties among nations in Northeast Asia remove barriers that have inhibited the realization of the opportunities, important structural changes are expected in the existing flows of people, cargo, and information. These changes will have a direct impact on transport patterns. The restructuring of Northeast Asia’s transportation systems will offer opportunities for its seaports and airports to emerge as a hub for the world’s traffic. New transportation linkages will completely change the existing pattern of national and regional infrastructure.

Now is the time for a holistic vision. Improvements in transportation and telecommunication systems will contribute to a more even distribution of human settlements and industries in Northeast Asia. The anticipated dispersion of economic activities will cause current, concentrated patterns of regional development to be replaced by local systems, thus enhancing the internationalization of medium-sized and small cities.

The expansion of the region’s basic transportation infrastructure depends on economic cooperation, because the countries concerned have insufficient resources to develop it on their own. Cooperation in the development of transport facilities will not only reduce costs and attract foreign assistance and investment, but also facilitate the formation of a Northeast Asian Economic Circle and in turn the Circle’s ability to link inland transportation networks similar to those in the European Community.

Thus, we must break out of old thinking habits, which confine a country’s planning to its national boundaries. We should try to tackle problems from the wider perspective of a Northeast Asian Community and think about reaching out to the other two economic poles of the world economy. This is possible because the means of transportation have undergone accelerated development, and their availability at cheaper costs have brought a revolution in the exchange of people, cargo, and information, making the world truly smaller. In particular, transportation planning should abandon the short-term, narrow-sighted emphasis on individual countries’ interests and instead favor strategic planning that takes into account the needs and resources of the region as a whole.
Transport and communication investment in Northeast Asia will play a more prominent role than in any other region in the world. And more investment in transport is required here to achieve a given development goal than elsewhere. The magnitude of the changes taking place in Northeast Asia already extends beyond national control. To respond appropriately, it is important for the countries of the region to establish investment priorities for transportation systems from a regional perspective. For the transportation sector, this is the agenda for the 21st century. Indeed, more attention needs to be given to the role of transportation within the context of the emerging East Asia Development Corridor beyond the Northeast Asian region. In the closing years of the 20th century and the dawn of a new one, a new regional integration appears to be in the making in Pacific Asia and integrated transportation systems are necessary to realize this dream.

NOTES

This paper is an updated and expanded version of Mark J. Valencia’s “Regional Transportation and Communication in Northeast Asia: A Summary.” Paper presented to the Fifth Meeting of the Northeast Asia Economic Forum, Yongpyeong, ROK.

4 Romin Ribao, 10 May 1990.
5 Ibid.
7 Tumen River Area Report, supra n. 1.
9 Tumen River Area Report, supra n. 1.
10 Tumen River Area Report, supra n. 1.
Figure 1. Northeast Asia: interregional railroads
Figure 2. Northeast Asia: proposed natural gas pipeline network
Figure 3. International scheduled airlines in Northeast Asia
Figure 4. Asia-Eurasia axis concept
Figure 5. Korean arteries

- Existing railways
- Planned TGV rail link
- Extra lines to be added to existing track
- Planned inland container depot
- New port
- New airport
Promoting International Cargo Transportation in Northeast Asia

Ikuo Mitsuhashi

For the Northeast Asian region to be prosperous, the most fundamental condition is the maintenance of peace throughout the region, which will allow regional interchanges and cooperation. Moreover, we can establish mutually beneficial relationships in the region through an international division of labor and factories, which will establish peace more firmly. It is necessary for the region to pursue such a course. We have international tensions, but happily no wars in the region at present. It is the right time to promote international cooperation that will lead to prosperity. In our current society, boundaries have all but disappeared, owing to technological interchange, which spreads not only into countries but also into districts, firms, and to individuals. This phenomenon is common in the world, and it is impossible for the region to resist the flow. As the relationship develops, it is transformed from one of mutual assistance to one of mutual dependence and, ultimately, to living together. We can see the formation of the E.U. as a good example. Similar movements can be seen even in the Northeast Asian region, especially in the field of international cargo transportation.

In recent years, the Japanese prefectures facing the Japan Sea have succeeded in speedy internationalization, meaning direct connection with foreign countries rather than via Tokyo or Osaka. This has been accomplished by foreign East Asian shipping corporations, mainly Korean ones. Although Japanese shipping firms should have been in the same position, they could not join, owing to less competitiveness caused by the appreciation of the yen. As a result, Japanese industrial goods are exported through transshipment at a Korean port, Pusan, and carried mainly by Korean container vessels overseas. This is said to be a mutually dependent relationship. This international interchange can be observed in most of the coastal prefectures facing the Japan Sea. We can regard it as a symbol of peace. In order to keep peace and promote prosperity in the region, we need to build mutually dependent relationships not only with Korea but also with Russia, China, and North Korea. I propose two ideas to achieve this.

The first is to strengthen the mutually dependent relationships in the region, that is, use and development of the Siberian Landbridge (SLB) permits Japanese companies to provide reliable transport of cargoes, not only to Russia but also to Central Asia and even Europe. In addition, we may look forward to reducing
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transport costs and strengthening the competitiveness of goods made in Japan. On the other hand, increasing the cargo volume handled by the SLB means earning a lot of foreign currency for Russia, because the SLB still remains at the occupancy level of 35%. Therefore, Japan and Russia have a common interest in a mutually dependent relationship. However, we have a large problem because, up to the present, Japanese firms have made little use of the SLB system. It is important to disseminate information on the SLB and its potential to the international community by means of the Internet and to create contacts with Japanese consignors by sending sales missions to Japan.

Another idea is to build a new relationship of mutual dependence by establishing a new regular maritime route that provides international ferry services for motor vehicles. This route would connect the metropolitan areas of Japan and the Russian Far East via the port of Niigata. Japan is an island country, its capital, Tokyo, has a huge population density, and the country’s culture is based on Confucian morals. In contrast, the Russian Far East is a continental area, with a Christian cultural heritage. It has huge open fields and rich natural resources such as forests and minerals. If we can build a “bridge” in the form of maritime transportation, thereby facilitating international interchanges between the two countries, we can expect complementarity in cultures and increased business opportunities. Eventually new wealth will be created on both sides. Consequently, a relationship of mutual dependence will come into existence. The bridge can be formed by establishing an international car ferry. According to my survey on the present cargo transport situation between the above-mentioned hinterlands, a ferry service two times per week is recommendable.
Basic Transportation Facilities in Northeast Asia

Liu Hong

Having an efficient transportation infrastructure is a necessary condition for economic cooperation in Northeast Asia. For us to study the means to connect transportation networks in the region and improve their management is therefore conducive to promoting regional economic integration. My basic argument here is that new transportation networks should be constructed through inter-governmental cooperation. Transportation projects can serve as start-up projects for economic cooperation, inject vitality into economic activities in the region, and lay a basic foundation for long-term regional economic integration.

There are two sets of transportation networks in Northeast Asia, namely, the Sea of Japan maritime transportation networks and ground transportation networks in continental Northeast Asia. A key question for future endeavors is how to effectively connect these two sets of networks so that they can better serve the needs of economies in the region.

**SEA OF JAPAN MARITIME TRANSPORTATION NETWORK**

Geographically speaking, the Sea of Japan is relatively closed. But it allows direct access to Japan, Russia, South Korea, and North Korea. It is further connected with Pacific Ocean countries and other parts of the world by several straits. Through the Korean Strait, the Sea of Japan reaches coastal areas of China.

From ancient times China has been a Sea of Japan nation. Although China lost its access to the Sea of Japan, from the perspective of economics, China’s Northeast Asian region is still part of the Japan Sea rim.

The Sea of Japan has great potential for developing maritime transportation. Ports on the Sea of Japan rim already have relatively complete infrastructure. But they are, generally speaking, under-utilized. The main reason for the current state of affairs is the limited level of economic cooperation among the neighboring countries, which keeps the volume of maritime trade low. Currently, ports on the South Korean side of the Sea of Japan are the busiest in the region. In contrast, trade flows between South Korean and Russian ports and between Russian and Japanese ports are low. Passenger liners are not very busy either. Although China now has access to the Sea of Japan through the Tumen River system, liner routes have yet to be established.
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From the perspective of development, there is a trend in all Asian countries to divert economic projects to their respective coastal areas. This creates a greater demand for increased maritime trade. Meanwhile, as regional economic cooperation increases, ports on the Japanese side of the Sea of Japan rim will play an increasingly significant role. Russian and South Korean ports are also equipped to accommodate the needs of increased maritime transportation in the future.

In short, when we look at the maritime transportation network along the Sea of Japan rim, the challenge is not in developing new infrastructure. Rather, the challenge is in creating the necessary connections between maritime transportation and ground transportation in the Northeast Asian region.

**GROUND TRANSPORTATION NETWORKS**

Ground transportation networks play an important role in economic cooperation in the Northeast Asian region. They can contribute to economic linkages and trade relations between neighboring countries, speed up the exploration of natural resources in interior areas, and improve the environment for investment and trade in the region. Historically speaking, China, Russia, Mongolia, and North Korea are traditional trading partners. In the postwar period, in order to facilitate barter trade among the four socialist economies, key transportation routes have already been constructed. In other words, a ground transportation network is already in place. What needs to be done now is to improve the ground transportation network and, as mentioned before, make it better connected to maritime trade routes along the Sea of Japan.

From a long-term point of view, ground transportation networks in Northeast Asia are insufficient for the development of regional economic cooperation. The main problems with these networks can be summarized as follows:

1. Insufficient coordination in the construction of a region-wide ground transportation network. Roads often end before they reach a country’s border. This inhibits the utilization and capacity of ground transportation.

2. Lack of connections between different modes of transportation. In each country, transportation capabilities are very low. In addition, supporting facilities are insufficient.

3. Low technology level in fixed infrastructure and mobile facilities in transportation networks. Improvement and reinforcement are both needed.

4. Gaps in the management of transportation facilities. Among the four countries, there is inadequate coordination, insufficient multilateral and bilateral agreements. As a result, it is difficult to link systems across borders.
As such, transportation networks in the Northeast Asian region need improvement and perfecting, taking advantage of the existing facilities. Among other possibilities, the following measures should be considered:

1. Construction of cross-country transportation corridors among China, Russia, Mongolia, and North Korea. Links among local economic centers of the four countries should be strengthened. Currently cooperation among the four countries in the area of transportation is too loose given the compatible nature of economic activities among them. Better use of transportation networks will help restructure the regional industrial structure and streamline a geographical division of labor in production.

2. Construction of major connection lines linking ground transportation and maritime transportation in the Sea of Japan. This should begin with building connection lines between the interior areas and seaports in the border regions of Russia, North Korea, and Japan. It would result in a system that utilizes different modes of transportation. Connection lines are necessary to accommodate increased cargo and passenger flows in the region. They are critical in terms of providing efficient and economical access to the sea for agricultural products, raw materials, and finished products from Mongolia and China’s northeastern provinces.

3. Improvement of basic transportation infrastructure in the border regions. Cross-country economic activities and their growth take place in border regions. Here the emphasis must be on connecting roads that should be but are not linked. Along major highways in each of the four countries, side roads should be built as to spur more economic activities in areas along them. Furthermore, border-crossing points for passengers, and loading and unloading areas for goods should also be increased.

4. Improved coordination in the planning and management of transportation systems in different countries. Discriminatory standards and practices in fee-collection should be removed. Bureaucracy should be simplified. Cross-border transportation should be given duty-free and inspection-free treatment. Furthermore, due to the special nature and high risk of cross-border transportation, joint-ventures of transportation should be established.

5. Establishment of transportation routes. In the initial stage, such routes may suffer from low volume (and therefore low profits). The central and local governments of countries concerned should subsidize the operation of such routes.
CONCLUSION

In my view, the existing transportation network of the Northeast Asian region is sufficient to meet the basic needs of economic cooperation in the region. What is needed is coordinated management of transportation facilities by the countries concerned. In this connection, I’d like to mention a recent report published by the Port and Airport Bureau of the Niigata Prefectural Government, Japan (“Report on Border-Crossing Transportation Conditions between China and Russia”). Among other things, the report offers many meaningful suggestions, for example, reduction of taxes and fees, simplification of custom procedures, abolishing multi-layer inspections. I encourage our friends from Russia and North Korea to study the report as well. If we join efforts and improve the environment for transportation—connect ground transportation systems with maritime transportation in the Sea of Japan—we can make an important contribution to fostering further economic cooperation in the Northeast Asian region.
Regional Cooperation in the International Transportation Network

Tsuneo Akaha

There is no question that the development of regional cooperation for both political peace and economic prosperity in Northeast Asia requires substantially improved transportation networks in the region, in terms of both infrastructure and domestic and international coordination. However, the current financial crisis throughout East Asia will likely delay the region’s ability to meet its longer-term transportation needs.

When the regional economies will begin to bounce back depends on the success or failure of, in a descending order of importance, Tokyo’s administrative and financial reforms, Seoul’s efforts in industrial and financial liberalization, Beijing’s sustained promotion of economic development in northeast China, Moscow’s market development efforts in the Russian Far East, Ulaanbaatar’s similar efforts in Mongolia, and Seoul’s attempt at rapprochement with Pyongyang. The probability of each of these necessary developments is anyone’s guess at this point.

The uncertainty aside, however, Japan’s fifth national comprehensive development plan (gozenso), with its proposed decentralization effects on its economy, does offer a promising future for the improvement of transportation infrastructure in the prefectures facing the Sea of Japan (the East Sea). If Japan is to lead the economic recovery in East Asia and facilitate regional cooperation in Northeast Asia, Tokyo must move forward in its reforms. The House of Councilors’ elections in Japan, which will have taken place before this conference, should indicate whether Japan will be able to move toward accomplishing this task.
The Traffic Network Connecting Japan and Northeast Asia in the Twenty-First Century

Isao Takeuchi

For the sake of the economic development of Northeast Asia, it is necessary to make rapid progress in land, sea, and air traffic networks. When we consider how traffic networks connecting various places of Japan and Northeast Asia should be, we should take notice of two new issues in Japan. That is, the reform of national land structure and the relationship between the center and districts.

The Japanese government announced the new Grand Design of National Land in March 1998, and it made clear that the government would strive for the formation of a national land structure open to the world in the 21st century. Also, the government has established the Decentralization Promotion Plan that aims to foster self-supporting economies and independence for local self-governing bodies.

Those new governmental policies support the efforts to date by the metropolis and districts of Japan in the development of regional economies and international exchange. Japan is shifting from a centralized country to a united country of local self-governing bodies.

Japan has many local airports with runways of more than 2,000 meters and harbors that can accommodate vessels of more than 100,000 tons (Tottori Prefecture has two such airports and two harbors). However, a traffic network that makes the most of those facilities is not yet formed.

The Tottori Prefectural Government strove to open regular air service between Yonago Airport and Seoul Kimpo Airport from fiscal 1995 to 1998, but the effort was fruitless. Nonetheless, we view a traffic network in the 21st century as one which will connect the rural cities of Japan with those of Northeast Asia. In the future, the local self-governing bodies of Japan will make efforts to develop the economies of various districts of Northeast Asia in cooperation with the government and the private sector. Northeast Asia has seen an active exchange of people and goods for centuries. By making the best use of the existing facilities, we will forge ahead with the formation of a network.
Energy and Environment
The unprecedented growth of East Asian economies in recent decades has stimulated swift increases in their demand for energy. In general (excluding the FSU and Eastern Europe), crude runs increased at an average rate of 2.6% per year during 1987–1997. During the same time, the most rapid growth in crude runs occurred in Asia—nearly 6% per year. But the real problem for the Asia-Pacific Region is that its oil reserves amount to only 6.2 billion tons, accounting for only 4.5% of world reserves. At the early 1990s rate of production, the reserve life of oil is only about twenty years. (According to a later forecast, the reserves to production ratio for the region is only 18 years, compared with the world average of 46 years and the Middle East average of 104 years).

The irony of fate is that the oil and gas "have-nots" (Japan, South Korea, Taiwan) are the most economically developed in the region and hence the most dependent on oil and gas imports. The situation is further complicated by the fact that the production ability of the "haves" (China, Indonesia, etc.) is predicted to decline. As far back as 1993 Chinese oil imports exceeded exports and not long ago China became a net importer of oil. It is forecast that a similar situation may emerge at the beginning of the new century in Indonesia. As for the demand of the region for energy, by 2010 it will grow by 46% as compared to 1996. Under such conditions, it is no wonder that despite long-standing efforts by Japan to diversify sources of oil imports, the result was just the reverse of what had been intended. Now only one region, the Middle East, accounts for 80% of Japanese oil imports. According to one forecast, the share of Asia-Pacific intraregional sources of crude imports will diminish from 17.23% in 1995 to 2.25% in 2010. As for the share of the Middle East in Asia-Pacific crude imports, it will increase from 76.2% in 1995 to 93% in 2010. Thus, potentially, Russia in the 21st century will remain practically the sole exporter of oil within the Asia-Pacific region.

THE IMPACT OF THE CRISIS

As Tom Manning has put it in the Oil and Gas Journal: "the consensus outlook for continued strong oil demand growth in Asia has been rocked by recent events." As a result of the financial crisis in Asia, subsequent growth will be sluggish, and it is expected to remain so for the rest of the decade. Many specialists suggest that this may have a depressant effect on energy demand in
the region, but some are more optimistic. As Leo Drollas, chief economist at London’s Center for Global Energy studies (CGES), has said, “despite Asia’s economic problems now, there is still lots of oil demand to come, and this has huge investment implications for the oil industry. It is nonsense to talk about slowing oil demand in Asia.” CGES forecasts that, as Asia recovers from financial turmoil, its oil consumption will grow at a rate of 3.1–5.1% per year from now to the year 2010. A representative of Shell, Moody-Stuart, was as optimistic in early May 1998. He emphasized that Shell recognizes Asia’s current problems but takes the long view and will continue to invest to help meet the region’s growing energy needs. Moody-Stuart said that Shell’s longer term scenarios suggest that by 2020 Asia-Pacific oil consumption could more than double and that gas demand could rise nearly fourfold. The U.S. Energy Information Administration (EIA) predicts worldwide energy consumption will grow 75% during the 1995–2020 period. EIA’s latest international energy outlook concluded that Asia will enjoy robust long-term growth, despite the region’s currency crisis. The economic recession will not be protracted, and the outlook for long-term energy use is virtually the same as projected in last year’s report.

However, to assess the possible impact of the crisis on the economic situation and energy demand of the Asia-Pacific region it may be more fruitful first to examine the real nature of the crisis itself. The crisis did not emerge because the “East Asian” model of development followed by the Asia-Pacific countries turned out to be unsuccessful and faulty, as many critics in the West claim. This model was quite appropriate for a “catching up” kind of development within the framework of an industrial paradigm. This model was successful for decades (in contrast to dozens of developing countries where the West managed, in one way or another, to impose its alternative model). It performed its historical mission and a vanguard group of certain countries joined the ranks of industrially developed economies. But as this mission was being performed, society was becoming more democratic, the living standards were rising, and correspondingly one of the most important factors of success, relatively cheap labor, simply vanished. Naturally, this model was eventually exhausted and there came a crisis in all socio-economic structures. The current crisis is aggravated by a number of external factors.

The point is that while Asia was catching up (and is catching up) with the West, the latter was not standing still. For decades, in highly developed capitalism, there has been an evolution in the technical and technological, as well as in elements for a new structure—the new post-industrial productive forces of the future: the “information society.” As a result the East Asian countries that have “caught up” with the West in an industrial sense are again in
the position of “catching up,” although on a different and higher level. Such a situation requires a new model of socio-economic development.

Secondly, the crisis of social structures caught the countries of East and Southeast Asia at a very complex historical moment from the point of view of the peculiarity of the international situation. The success of the former “East Asian” model was, in no small measure, determined by the bipolar confrontation of the “two systems.” The West (the US in particular), interested in winning over allies against communism, displayed tolerance for the “economic body-building” of those countries, as well as for their anti-liberal “games” and authoritarian manners. Now everything has changed. As a consequence there has been a break-down of the bipolar structure of the world. Certain countries have lost the importance they had for the West as military-political allies. Concurrently, their growing competitiveness and attempts to penetrate Western markets has given rise to a Western counter-offensive. That is why the West has increasingly demanded deregulation, liberalization, non-violation of human rights, etc. This pressure is exerted both on a bilateral basis and through such channels as the WTO, the IMF, and the World Bank. The West wants those countries to play according to its rules of the game, since its TNCs and transnational banks will gain the most benefit from such a state of affairs. Thus it demands absolute transparency in economies, total liberalization, total deregulation from them, whereas “its own” states (both in national and collective or regional forms) have already worked through more elaborate and more efficient and sophisticated mechanisms of rather strict regulations on the economy both at national and international levels.

Under these conditions the concept of a multipolar world, along with prospects for development of large-scale cooperation with Russia, could offer Asian countries of the Asia-Pacific region new opportunities for overcoming the crisis, alleviating difficulties in meeting the challenges of globalization processes and the technological revolution. Such cooperation would be mutually advantageous as it could help Russia to step up the process of overcoming its grave socio-economic crisis, gradually overcoming the backwardness of Eastern Siberia and the Far East, and integrating on the basis of equality into the Asia-Pacific region within two or three decades of the 21st century.

However, it seems that the bulk of scholarly publications on the energy balance issue and on economic cooperation in the Asia-Pacific region in general, directly or indirectly ignores the potential importance of Russia’s role in the region. From all points of view (economic, political, geopolitical etc.) this is a mistake, which—if continued—will definitely have grave consequences. Therefore, an examination of the of various approaches to the solution of the existing and growing energy imbalance in the Asia-Pacific region is important.
PESSIMISTS VS. OPTIMISTS

There are different viewpoints on what will be the outcome of the rising energy demand in the Asia-Pacific region. Some are pessimistic, others more pragmatic and optimistic. The views of Kent Calder belong to the first group. He insists that competition for energy supplies will aggravate rivalries between East Asian countries and that they will have to fight for potentially tight regional and global markets. He is not convinced that the efficient provision of a stable supply and stable prices of energy can be assumed, and this could increase great power tensions in Northeast Asia. Calder also argues that energy demand can create new international economic realities, such as deepened Asia-Middle East relations, that have their own potentially unsettling security consequences. In the conclusion of his recent paper, Calder also mentions an alternative solution to the problem: cross-national cooperation, which is especially logical in Northeast Asia, given the contrasting resource endowments of several large energy importers (Japan, Korea, and Taiwan) and potentially major exporters, especially Russia and China. According to Calder, multilateral energy cooperation in Northeast Asia could also be important because of its political benefits, separate from its considerable economic merits. It could be a uniquely constructive confidence-building measure among nations long estranged, helping to defuse old tensions. Unfortunately, Calder does not elaborate further on this theme. However, this is understandable, because he actually dismisses the very possibility of such cooperation, pointing to a myriad of economic and political complications in possible massive projects of oil and gas supplies from Russia to Northeast Asia.

The views of Fereidun Fesharaki represent a different, optimistic approach to the energy security problem. He believes that potential global rivalry between the consumers in Asia and the Western economies, as well as the dangerous consequences of the increasing importance of the Middle East in the global energy arena is unlikely to happen. Fesharaki argues that in the near future there is no danger that oil and other energy sources will run out. Breakthroughs in technology have cut the cost of exploring and developing oil significantly, and international energy markets will respond to the increased demand for fuel by stimulating the production of more oil and gas. Therefore, the competition simply might be channeled efficiently through international energy markets, with little impact on political or military relations. However, pessimists and optimists agree on one point: they don’t believe that (in the foreseeable future) the energy resources of Russia and the CIS will contribute substantially to resolving Northeast Asia’s demand-supply imbalance. They are very skeptical about all kinds of multilateral projects and proposals for
large-scale overland pipelines from Siberia or Central Asia to China, Korea, and Japan. Calder argues that in the absence of major policy shifts in the various nations concerned, a grand pipeline scheme seems unlikely, leaving Asia largely dependent on sea-borne LNG and oil. Fesharaki in his paper also mentions many pipeline proposals to carry gas from Central Asia and Russia to East Asia, but he supposes that many of them are not economical, and that heavy discussions over these pipelines originated from interested companies wishing to drum up new business for themselves rather than from “economic logic.” For Fesharaki, the immediate future involves LNG, not pipelines, and the new sources of LNG are all in the Persian Gulf. So, the “pipe dreams” must wait another 10–20 years. It seems to me that the companies mentioned are inclined to suicide if they are so eager to engage in such an uneconomical business.

Calder and Fesharaki are not alone in ignoring or belittling the potential importance of the CIS’s energy resources for Northeast Asia. Wu Kang also finds the solution for the energy-supply problem in international cooperation, but only in the framework of securing a stable supply of oil from the Middle East. It is interesting to note that in their detailed observations of nearly all existing major multilateral cooperation projects, Mark J. Valencia and James P. Dorian are finally coming to the conclusion that there are more problems than possibilities. They suppose that these project proposals all face formidable political, economic, technical, and environmental obstacles that must be overcome if any are to be implemented. They are convinced that competing national goals for energy projects may actually increase tensions rather than enhance cooperation, and given all these and many other problems, relatively smaller projects involving energy and minerals exploitation may be more suitable for regional cooperation activities than the multi-billion dollar mega-projects described in their paper.

To sum up what has been said, all propositions and proposals are aimed at maintaining the status quo, i.e. keeping Asia dependent on Middle East oil and gas, and on maintaining the importance (actually raising the importance) of sea lanes for energy supply (which means the preservation of the dominant military-geopolitical position of the United States as the guarantor of safety for shipping lanes in this region).

However, such a status quo is not precisely what Asian countries are striving for. What they really need is a break-through in the diversification of sources of energy supply. In the same way that the United States was able to diversify. (In January 1998, U.S. petroleum imports, nearly 9.9 million b/d, came from: Canada-1.679, Venezuela-1.6, Saudi Arabia-1.5, Mexico-1.467, Africa-0.919, the North Sea-0.449, etc. The bulk of its imports came from non-Middle East countries.) That is why the governments of Northeast Asian countries (not only
“ambitious” corporations) are doing their best to overcome difficulties and solve real problems, trying to find compromise solutions to realize bilateral and multilateral energy projects with Russian and CIS participation.

It seems to me that a position that demands that first all preconditions are met and all obstacles removed (political, military, legal, infrastructural, etc.) before starting an energy project, is completely unproductive. The more so given that the solution to energy problems (as recognized by some authors mentioned above) in itself may be an important precondition for solving other security problems in the region. I am in full agreement with the opinions expressed by Akira Nambara of the Export-Import Bank of Japan, in his keynote address to The Northeast Asia Economic Conference in Niigata (17–19 February, 1998): “collaboration in the development of energy resources is particularly important not only to contribute to a stable energy supply in this region, but also to promote regional economic cooperation and interdependence, which can lead to regional political stability.”

Indeed, there are already many important objective and subjective preconditions (not only military, political, but even psychological) for mutually beneficial energy cooperation in the Asia-Pacific region, including:

1. As noted in Valencia and Dorian's paper, there are complementary conditions among the principal countries of the Northeast Asia region. Japan, South Korea, and Taiwan have markets, capital, and technology to develop energy resources. And both Russia and Central Asia have enormous untapped oil and natural gas deposits.

2. As a result of the end of a forbidding cold war ideological divide there is an increasingly positive political climate in the region. The revitalization of Russian-Chinese ties since the second half of the 1980s, the establishment of diplomatic relations between Russia and the ROK, the recent warming up of Russo-Japanese relations—these are real manifestations of a new political climate. And it can be said with confidence that after Russia joined APEC on 26 November 1997, the formal international barriers to its integration into the Asia-Pacific region have been eliminated. This event and the previous efforts within the framework of bilateral relations have complemented each other nicely and provided political prerequisites for such integration.

3. The new political climate resulted in turn in enhancing general economic cooperation between Russia and other countries of the region. In this respect, Russian-Chinese and Russian-Japanese summits were of great value. Particularly significant were the innovative efforts of Japan during the second half of the 1990s to remove an outdated course of “linking economics with politics,” and of articulating three principles of trust, mutual interest, and a long-term viewpoint in Eurasian diplomacy as proclaimed by Prime Minister Hashimoto in a meeting
of corporate executives on 24 July 1997. A real breakthrough, however, came in November 1997 during an informal summit between President Yeltsin and Premier Hashimoto in which both leaders said that they did not rule out the possibility of concluding a peace treaty between Russia and Japan by the year 2000. A preliminary agreement was reached on a rather broad list of joint economic projects. The readiness of Japan to invest in the economy of Russia under the guarantees of large Russian commercial banks (rather than only under government guarantees as was previously done, which had seriously impeded the implementation of the agreements) was viewed by experts as another breakthrough in economic relations between the two countries.

**NEW TRENDS IN RUSSIA-APR ENERGY COOPERATION**

In spite of the predicted intensification of competition and even rivalry we are witnessing today a growing cooperation. Of fundamental importance will be the agreement (May 1996) on laying a gas pipeline from Kovykta gas field (Irkutsk) to China. The Chinese side is ready to invest 20 billion yuan (approximately 2.5 billion dollars) in the project. This project goes beyond the scope of a bilateral agreement, as Japan and Korea will participate as well. In my opinion, the main point here is that the implementation of the project will signal that part of Russian big business, traditionally oriented to the West, is turning toward the Asia-Pacific region. Noteworthy is the prompt reaction of all the interested parties. On 25 December 1997 (at the Ministry of Fuel and Power Engineering) a regular round of multilateral talks among the participants of the project (representatives of oil and gas corporations from Japan, South Korea, China, Russia, and Mongolia) concluded with the signing of a memorandum on the preparation of a feasibility study for the project. The reserves of Kovykta gas field are estimated at 1500 billion m³. The gas pipeline is about 4,000 kilometers long. It is expected that in 2004 the pipeline will be extended to South Korea and Japan and the 10 billion dollar project may become the largest ever carried out in Northeast Asia.

Another subject under consideration is cooperation between a Yakut gas field (near the Irkutsk Region) and Kovykta gas field for the purpose of carrying out the project of exporting Yakut gas to China and other East Asian countries. These plans seem feasible after British Petroleum (BP) and the Russian company Sidanko established a joint venture for the development of Kovykta gas field. The shares are divided between BP (45%) and Sidanko (55%), but Sidanko invested the 60% share it holds in Russian Petroleum, the corporation which has a license to explore and develop Kovykta gas field. Other shareholders of this corporation are: the administration of Irkutsk region-16.6%, Irkutskenergo
Co.-12.7%, South Korean East Asian Gas Co.-7.5%, and other foreign companies. BP has promised to invest 172 million dollars. Moreover, during Yeltsin’s visit to Beijing there was discussion concerning the possibility of RAO Gasprom’s participation in the transportation of energy raw materials from western Siberia (Urengoy) to China.

In the short run the export of electric power may be one of the most important ways of cooperation for Russia, China, and Japan. A prerequisite for this is already available—hydro-electric and thermal power stations of Siberia produce electric power in abundance. Today the annual excessive capacity of Irkutskenergo amounts to 20 billion kilowatts/hour and after the start up of Boguchansk hydro-electric station and Beryozovo state district power station, the excessive capacity will increase to 30-45 billion kilowatts an hour. The cost of the Russian-Chinese project (approved during Yeltsin’s visit to China) and a similar Russian-Japanese project is estimated at approximately 3 billion dollars each. China expressed a willingness to invest over 1.5 billion dollars in this project and is now negotiating its participation in the completion of the construction of Boguchansk hydro-electric station.

A major step toward development of Russian-Chinese economic cooperation was made at the end of 1997. After five long years of difficult talks on the construction of a nuclear power station, and after the construction site was moved southwards from Liaoning to Jiangsu, which necessitated a new cycle of geological, ecological and other studies, a contract on the delivery of 3 billion dollars worth of two reactors and two 1,000 megawatt turbines (by enterprises of the Ministry of Nuclear Power Industry of Russia) was eventually signed at the end of December 1997. The nuclear power station will be constructed within eight years from the date of signing the contract. In the future it is planned to build another four power generating units, but Russia will have to withstand fierce competition from American firms that have recently penetrated the Chinese market for nuclear power equipment.

Regarding cooperation with Japan, until the mid-1990s the launching of agreed upon projects was impeded by inertia and an inadequate response from the Russian government to concrete business proposals made by Japan. The situation changed for the better only in April 1997 when an agreement was reached on a 500 million dollar credit to Russia from the Export-Import Bank of Japan, and more significantly, when an agreement was reached on a list of projects to invest this money in. It is important to mention how promptly the implementation of the agreements has been. For instance, as a follow-up to the summit in Krasnoyarsk, Japan initiated a proposal to carry out 39 joint projects with a total cost of 2.2 billion dollars.
These proposals were studied thoroughly at a meeting of the Russian-Japanese Committee that was held in Moscow in November with the participation of Russian companies such as RAO EPS, Gasprom, Sidanko, Onako, Transneft, and others. Counter offers were also made. Three projects have already been selected and an agreement was reached on their immediate implementation. The first project is the construction of a "power bridge" connecting Southern Yakutia, Sakhalin, and Japan. According to the project plan a chain of hydroelectric stations will be constructed on the Aldan river and thermal power stations will be constructed on Sakhalin. The implementation of the project will make it possible to export up to 30 billion kilowatts/hour of electric power to Japan annually. The second project deals with industrial production of natural gas by the East-Siberian oil company and its subsequent export to Japan from the Lower Priangarski region (the cost of two stages of the project amounts to 1.4 billion dollars). The third, rather exotic, project is a thermoplane-airship with a carrying capacity of up to 600 tons. Japan has a keen interest in this project, as it could be indispensable in the development of regions which are difficult of access.

It's interesting to note how short-lived forecasts have been. Just a year ago, some specialists were assuming that Sakhalin Island did not have much energy potential and that only an insignificant amount of oil would be produced in the next century, and that this would not be enough to supply even the Russian Far East. But we are already seeing progress in several Sakhalin projects. The international consortium (Exxon-30%, Japan's SODEKO-30%, Rosneft-17%, and Sakalinmorneftegaz-23%) engaged in the Sakhalin 1 project decided to invest up to 200 million dollars this year in seismic exploration and additional drilling.

Even more progress is seen in the Sakhalin 2 project (two offshore areas, Piltun-Astokhskoe and Lanskoye), which is owned by Sakhalin Energy Investment Co. Ltd, Tokyo (Marathon Oil Co.-37.5%; Mitsui & Co. Ltd.-25%, Mitsubishi Corp.-12.5%, and Royal Dutch Shell Group-25%). The project includes offshore oil and gas production platforms, sub-sea pipelines, onshore oil and gas pipelines, and onshore infrastructure. Investment in LNG production in Korsakov district (one of the ten biggest in the world) will cost approximately 3 billion dollars. Overall investment is expected to reach 10 billion dollars. Oil production is scheduled to start from July 1999 and LNG production from 2005. These are the first energy development projects in Russia based on production sharing agreements. On 18 December 1997, a project financing agreement (Phase I) was signed. The Japan Export-Import Bank will extend 116 million dollars, the EBRD and OPIC of the U.S. will invest 160 million dollars each.
Rather intensive activity can be observed in the framework of other Sakhalin projects. Rosneft is close to signing a production sharing agreement with three American companies: Exxon, Texaco, and Mobil (the Sakhalin 4 project), and Mobil will start drilling this summer. On 21 April 1998 Rosneft, its affiliate Sakhalinmorneftegaz, and ARCO signed an agreement on the Sakhalin 4 project. The two Russian companies will each own 25.5% of shares. ARCO will own 49%. This year the consortium is planning to start seismic exploration in the Astrakhan oil and gas area (offshore Sakhalin). In March 1998, British Petroleum also signed a preliminary protocol with Sakhalinmorneftegaz agreeing to participate in the Sakhalin 5 project to develop Sea of Okhotsk oil and gas. And on 26 May 1998 these two companies together with Rosneft agreed to form a strategic alliance to participate in the project. To enhance the marketability of oil from Sakhalin fields a Russian firm, Tyumen Oil, will construct a refinery (100 million dollars USD) in the Magadan region; it is expected to start up in 1999.

In the foreseeable future construction of a gas pipeline from the Tyumen region to the northern provinces of China (financed by an international consortium of banks at an estimated cost of 16 billion dollars) could play an important part in the region’s development. As could the Sakharas project which envisages production and transportation of natural gas via North Korea to South Korea (Yakutia-Khabarovsky-Vladivostok-Wensan-Seoul) and is estimated at approximately 25 billion dollars. So far the project remains in the feasibility study stage despite interest displayed by American and Japanese firms.

These examples provide a clear picture of Russia’s potential role in regional economic cooperation and in providing the import dependent Asia-Pacific countries with alternative sources of energy resources. Only multilateral cooperation with the active participation of “insiders” (Asia-Pacific countries) and “outsiders” (western TNCs) can help Asia meet its rising energy demand and solve the urgent problem of geographical diversification of its energy import sources. Russia’s efficient participation in such cooperation will mitigate potential security risks arising from increased competition for energy resources and increasing dependence on one major source of oil and gas supply.

NOTES

1 Oil and Gas Journal, 4 May 1998, p. 41.
4 Finansovye Izvestiya, 27 November 1997.
6 Oil and Gas Journal, 4 May 1998, p. 41.
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28 Izvestiya and Finansovye Izvestiya, 310 December 1997; Nezavisimaya Gazeta, 30 and 31 December 1997.
29 Nezavisimaya Gazeta, 9 December 1997.
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33 Segodnya, 28 May 1998.
34 Segodnya, 11 April 1998; Russkii Telegraph, 22 April 1998.
36 Oil and Gas Journal, 6 April 1998, p. 44.
Northeast Asia Energy Projects

Steve Cowper

Planners in Northeast Asia and in international bodies such as APEC and the World Bank believe that Japan, China, and South Korea should look toward natural gas from eastern Russia to provide a growing share of their energy supply. The environmental, security, and cost rationales for this strategy seem compelling, at least relative to competing energy sources.

But there is a long way to go. There are plans for international pipelines from eastern Russia to markets in China, Japan, and Korea. Their lengths range from 900 km to bring gas from the northeast coast of Sakhalin Island to Japan’s northern cape, to 4,100 km or more for the Irkutsk project’s main line through Mongolia, China, and Korea to Japan. In December 1997, Russian, Chinese, Japanese, Korean, and Mongolian authorities signed letters of intent to build the Irkutsk-to-Beijing pipeline, utilizing gas from the Kovytkinskoye field north of Lake Baikal. At a later stage, this line could be extended to each end to access natural gas reserves in Sakha and in Evenk for delivery to destinations further east.

Pipeline transportation of Sakhalin gas to Japan will depend on the construction of a Japanese domestic gas pipeline grid, which is not yet in a planning stage. Also, the Sakhalin gas fields so far identified are remote from each other, and each has a different ownership structure. Likewise, the much larger Irkutsk-Beijing line depends upon a major commitment by China to build a gas distribution system in Beijing, and the project would require cooperation among three national governments with relationships which are currently less than ideal, as well as several regional governments with divergent interests. Korea has a gas distribution system, but access depends on a land route through North Korea or an underwater route from the Shandung Peninsula.

But the sheer volume of the market will probably drive one or more of these ambitious projects forward. Where there is an assured supply and a corresponding demand, financing will probably be available once political roadblocks have been cleared. The time frame will be pushed forward, but the logic of the marketplace will probably make these massive projects a reality.
CORRECTION

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A Proposal to Establish a Natural Gas Pipeline Network in Northeast Asia to Distribute Highly Efficient Power Generation Systems to Reduce CO$_2$ Emissions

Masaru Hirata

In order to reduce CO$_2$ emissions to prevent global warming, the most promising way for electric penetration in Northeast Asia is to introduce highly efficient system technologies such as combined cycle, co-generation, repowering, gas-turbine integrated garbage incineration, gas turbines combined with coal-fired steam power generation, and gas turbines combined with nuclear power generation. All of these energy system technologies should be based on high-temperature gas turbines fueled by natural gas. As is well known, the volume of CO$_2$ emissions from natural gas combustion are almost half those of coal and two-thirds those of oil combustion.

Accordingly, to introduce these highly efficient technologies of power generation, natural gas demand in Asia should be greatly increased. To meet the big demand estimation, it is essential to have infrastructure such as pipelines already in existence. In North America, a network of 440,000 km of pipelines already exists. By contrast, Asia has no network. This paper proposes the construction of a Trans-Asian Pipeline Network, through which natural gas would be transported from sources such as East Siberia or Central Asia to major consuming countries such as China, Korea, or Japan.

The Worldwatch Institute in the U.S. published a book entitled Power Surge in 1994, which pointed out the following: at the beginning of the next century, highly efficient energy systems such as co-generation fueled by natural gas should be promoted. The fuel would gradually change to a mixture of natural gas and hydrogen—the so-called "hythane"—which is a mixture of around 15% hydrogen and 85% natural gas (methane). The hydrogen would be produced by electrolysis of water, using electricity generation from renewable energy such as solar, wind, or hydraulic power. According to their scenario, the CO$_2$ concentration in the atmosphere will peak at about 450 ppm around the year 2050, and after that it will gradually decrease.

East Siberia has a vast and undeveloped potential for hydro-power generation. For example, there are many famous big rivers such as Angara, Yenisei, Lena, and the Amur. If this potential should be developed to produce electricity and to be used for the production of hydrogen, the pipelines would become the most effective infrastructure also for the transport of hythane.
A Plan for a Northeast Asian International Pipeline Company

Shogo Kojima

OUTLINE OF A PLAN FOR A PROPOSED COMPANY

1. Name: Northeast Asian International Natural Gas Pipeline Company, Inc.
2. Capital: 2.5 billion dollars (investment from the governments of Russia, Mongolia, China, North Korea, South Korea, and Japan)
3. Stockholders: Russia, Mongolia, China, North Korea, South Korea, and Japan
4. Sales volume: 4 billion dollars/year
5. Amount of natural gas to be transported: 65 billion m³/year
6. Investment: 10 billion dollars
7. Term for collecting investment: 15 years
8. Borrowed funds: 7.5 billion dollars. (1) A parent company system will be adopted. (2) A company to construct and operate the pipeline will be established. (3) The construction and operation company for the pipeline, with credit from the parent company, will be financed directly by banks.
9. Balance: The balance will be in surplus in five years. The accumulated losses will be reduced to zero in ten years.
10. Depreciation of equipment: 13 years, a fixed amount, remaining value: 5%
11. IRR: 13%
12. Royalties on transportation: Germany and Austria do not impose toll charges but do impose taxes and dues. Tunisia and Morocco do just the opposite.
13. Assumptions concerning demand: See Table 1.
14. Maintenance: A subsidiary company will be established, with investment from the Northeast Asian International Natural Gas Pipeline Co., Inc.
15. Management and operation of the pipeline: (1) the transportation and wholesale company in a consuming country estimates the gas demand for the next day, and informs the natural gas productive company and International Natural Gas Pipeline Company of the estimated amount of supply. (2) The natural gas productive company supplies the designated amount of gas to the delivery point. (3) The International Natural Gas Pipeline Company pipes gas from the delivery point to the consumer in the most appropriate operation mode of the compressor regulator. (4) Normally remote-controlled from the control center, the site will be maintained according to the law.
16. Price of Natural Gas: In Europe, where the pipelines have already been furnished, the cheapest gas is available anytime from the North Sea, Africa, Central Africa, and West Siberia. The price of gas is set, not simply based on cost but on the cheapest price at any given time.

17. Other matters: Responsibilities for volumes purchased, charges for piping of gas, planning the caliber of the pipe, the pressure, etc.

18. Basic goals of the company: (1) to help protect the environment through lower CO₂, NOₓ, and SOₓ emissions. (2) To provide a steady supply of cheap natural gas to Northeast Asia. (3) To use the pipeline project to stimulate further economic development in Northeast Asia.

ISSUES AND QUESTIONS

1. Natural gas reserves: Are they adequate to maintain exports to Northeast Asian countries for forty years?

2. Political stability in the countries involved which enables them to join the project.

3. Demand for natural gas: China will also switch from using coal as a raw material for its city gas and will use natural gas instead. In Japan the transition from coal fuel to natural gas fuel is specified in the report by the Electricity Enterprise Council.

4. Credit guaranteed by governments.

5. Advanced technology.

6. No obstacle to the exploitation of natural gas, unlike a fall in the price of oil.

7. Transportation cost smaller than that of LNG.

8. Capability to manage the needed huge amount of construction funds: It is impossible to raise funds only in the region. The management of the project will be possible by arranging a financing organization on a global scale or by establishing a Northeast Asian Development Bank.


10. Environmental issues: The switch from coal or oil to natural gas will be one of the solutions for reducing carbon dioxide emissions.

Given both resources and markets, funds to connect them will be raised from the world without difficulty. For Japan a vision for economic reconstruction is essential. Temporary measures, such as the introduction of public funds or tax reductions, will only result in making the situation worse. If the grand project for a Northeast Asia International Natural Gas Pipeline is carried out multinationally, with Japan taking the initiative, it could become the very vision for economic reconstruction which will enable Japan, the rest of Asia, and the world to enter the 21st century with hope.
Table 1. Natural Gas Consumption in 2010

<table>
<thead>
<tr>
<th>Country</th>
<th>Amount (billion m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>58.3</td>
</tr>
<tr>
<td>Mongolia</td>
<td>10.0</td>
</tr>
<tr>
<td>ROK and DPRK</td>
<td>45.2</td>
</tr>
<tr>
<td>Japan</td>
<td>82.6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>196.1</strong></td>
</tr>
</tbody>
</table>

*Source: Adapted from “Natural Gas in Asia.”*

*Note: Volumes consumed in Mongolia and the DPRK are estimated at 10 billion m³ each.*
Construction and Development in China’s Energy Sector

Zou Ping

The Chinese government gives high priority to construction projects for the energy industry, so that it will be a pillar of China’s infrastructure and basic industry. Based on China’s overall planning, the following outline shows the plans for some major construction projects.

GUIDING PRINCIPLES IN ENERGY CONSTRUCTION

• Placing electric power at the center and using coal as the major fuel source.
• Strengthening exploration and development of oil and natural gas resources.
• Developing new sources of energy.

ENERGY CONSTRUCTION STRATEGY

• Using hydropower and thermal resources together in the electric power industry, developing nuclear power appropriately, and simultaneously developing the electric power grid.
• Cooperation in the coal industry between central and local governments and also simultaneously developing large, medium-sized and small coal enterprises.
• Stabilizing the petroleum industry’s production in eastern China and developing it in western China.
• Paying attention to both development and conservation of energy, giving priority to conservation.
• Applying sustained-development strategies for the development of energy supplies.

ENERGY DEVELOPMENT GOALS

• National 1998 energy production is projected to be 14.2 billion tons of coal, 1.57 billion tons of crude oil, 2.04 billion cubic meters of natural gas, 1,200 terawatt-hours of electricity generation.
SUGGESTIONS FOR COOPERATION IN ENERGY SECTOR CONSTRUCTION IN NORTHEAST ASIA

- Northeast Asia has abundant energy resources: developing the coal and electric power industries would be good for the economic development of the countries in this region.
- Create a peaceful, stable, and friendly international environment in this area.
- Further cooperative research on energy development.
- Developing energy technology exchange and cooperation on the basis of mutual benefit and fairness.
- Increasing investments from developed countries to accelerate the region’s energy development.
INTRODUCTION: IMPACT OF POPULATION AND CAPITAL ON THE GLOBAL ECOSYSTEM

Energy is inseparable from all material phenomena and is an essential condition for the mere existence of life. People need food, water, air and nutrients to grow, to maintain their bodies, and to produce new people. Machines need energy, water, and air plus an enormous variety of minerals, chemicals, and biological materials to produce goods and services, to maintain themselves, and to make more machines.

Population and capital draw materials and most forms of energy from the Earth and return wastes and heat to the Earth. There is a constant flow or throughput from the planetary sources of materials and energy, through the human economy, to the planetary sinks where wastes and pollutants end up. But there are limits to the rates at which human population and capital can use materials and energy, and there are limits to the rates at which wastes can be emitted without harm to people, the economy, or the Earth’s processes of absorption, regeneration, and regulation (Meadows, Beyond the Limits, 1992, p. 44-45).

ENERGY: A PRIORITY ISSUE

Energy became a priority issue when the oil crisis erupted in 1973 and 1979. Led by the U.S., a number of developed countries started looking for and developing alternative energy sources from renewable sources, e.g., solar, wind, hydrothermal and geothermal. However, when the oil crisis subsided, energy lost its importance again and the search for alternative energy sources dwindled.

In the early 1990s, energy resurfaced as a priority issue. These recent events resurrected energy as a priority issue:

- UNCED 1992/Earth Summit. Chapter 9 of Agenda 21 (Protecting the Atmosphere: Making the Energy Transition) stresses that “much of the world’s energy is currently produced and consumed in ways that could not be sustained if technology were to remain constant and if overall quantities were to increase substantially.”

- The application of sustainable development principles to the climate change issue also turned the spotlight on the contribution of fossil fuels to the creation of greenhouse gases.
• COP3 in Kyoto catalyzed nations to think in terms of concrete actions to the Kyoto Protocol. More than 160 countries agreed to lower the overall emissions of the six most deleterious greenhouse gases.
• Forest fires in Mongolia, Mexico, Brazil, Australia, and Indonesia openly demonstrated the impact of global warming and the transboundary nature of atmospheric pollution.
• The El Nino ocean-warming meteorological phenomenon caused droughts in some countries and flooding in others. It was blamed for forest fires in the Amazon, Indonesia, and other places. It was blamed for almost everything from the Argentine ants that swarmed many Los Angeles homes to the drop in catches of anchovies and sardines off Peru. El Nino became the scapegoat par excellence, according to The Japan Times of 19 July 1998.

DELETERIOUS IMPACTS OF INTENSIVE ENERGY PRODUCTION AND CONSUMPTION ON THE ENVIRONMENT

Global Warming
The so-called “greenhouse effect” is a natural phenomenon that is beneficial. It warms the Earth and makes it habitable. But too much warming, caused by human-generated carbon dioxide from fossil-fuel burning and by deforestation, is seen to be causing a global climate change that will be disastrous to all forms of life on Earth. There is overwhelming evidence that CO₂ emissions from the energy sector account for more than 50% of the human contribution to the greenhouse effect. This means that reforms in the area of energy will be crucial in the effort to meet the challenge of climate change.

Acidification
Along with climate change, acidification of the environment (due to sulfur dioxide and nitrogen oxide) is another deleterious effect of too much fossil-fuel burning which is disastrous to human health and vegetation. Acidification has been well established in North America and Europe for at least the last two decades. However, recent assessments have identified the northern and central parts of Europe, the eastern part of China, and southern parts of Asia as being the regions at greatest risk of acidification (UNEP, Global Environment Outlook [GEO], 1997, p. 222-223). As a result of the growth of energy use, deposits of acidifying substances have more than quadrupled compared with pre-industrial levels.
Depletion of Nonrenewable Natural Resources (Oil, Coal, and Gas).
Fossil fuels are nonrenewable natural resources; for the sake of its own survival, humanity cannot allow their depletion. The World Energy Commission projected in 1989 that a business-as-usual continuation of population and capital growth would increase world energy demand by another 75% by the year 2020 and that the mix of fuels supplying this energy would continue to be dominated by nonrenewable fossil fuels: coal, gas, and oil. In 1990, 88% of the commercial energy used in the world came from fossil fuels ((Meadows, Beyond the Limits). In 1997, eight years after the World Energy Commission meeting, energy demand is still projected to grow significantly both globally and across all regions. The increased energy demand is expected to continue to be met primarily by fossil fuels.

In the last 10–20 years, there have been signs of a de-coupling between economic activity and the use of energy and materials in industrial countries. This is associated with their transition into service-based, less resource-intensive economies, as well as efficiency improvements. Concerns about human health and more recently about the natural environment have induced governments of industrial countries to develop and enforce environmental regulations to curb the level of atmospheric emissions. Initially, this involved lowering concentration levels by dilution and dispersion (through high chimneys, for example); later, it entailed so-called end-of-pipe technologies, preventing pollutants from entering the environment, and an increased use of cleaner and more efficient production technologies. Recently, too, improved efficiency has been obvious in some parts of the world. As a consequence of these measures, global emissions of sulfur compounds have lately decreased, the emissions of nitrogen oxides have more or less stabilized, but carbon dioxide emissions continue to grow. At the regional level, CO₂ emissions are decreasing in Europe but significantly increasing in Asia.

Lessons from Rio+5 (The Need for Drastic Changes)
Value-Orientation
At the Rio+5 Conference in New York in 1997, discussions on energy focused on the need to orient producers and consumers alike towards the perception that energy supply and consumption are not ends in themselves. What people want is not coal or oil, or even gasoline or electricity; they want the services that energy provides, the basic components of human well-being and development, and quality of life. The focus is therefore on the end-uses of energy and on energy services.
Energy Services

Three types of energy services are encouraged: (1) energy services that correspond to domestic basic needs, that is, cooking, heating, lighting; (2) energy services that correspond to community needs, namely, clean water, sanitation, safe storage of food; and (3) energy services for the productive sector including motive power for industry and agriculture, energy for commercial transportation, tele-communications, and other economic activities.

To make these services available and accessible worldwide implies the need to make basic and radical changes in energy policies and practices in each of these sectors or levels. The changes will require integrating supply and demand patterns into a sustainable matrix where energy efficiency and renewable sources will play a decisive role.

REFORMS NEEDED IN THE ENERGY SYSTEMS

The overuse and misuse of energy which are generating environmental problems both in terms of pollution and depletion of nonrenewable natural resources are currently putting governments and the international community under pressure to develop and install reforms in the production, distribution, and use of energy. The current debates focus on two separate issues: (1) what can be done to achieve a sustainable and environmentally friendly energy system? (2) And how can the changes needed be brought about?

What Can Be Done

The possible solutions will come from the three service sectors—individuals and households, communities, and industries. Actions will range from changing consumer behavior by offering low energy demand goods, services, and vehicles, to changing the production technologies or systems altogether. Rapidly advancing technologies in areas such as, lighting, glazing, refrigeration, electronic controls, and synthetic materials will help speed up the pace of energy efficiency improvements. The solutions must not only be technically specific but also specific for each application as well as for each country setting. This aspect of specificity has received ample attention in respect of technology transfer projects, R&D programs, demonstration efforts, etc. But specificity is in a vacuum since the breakthrough technology—cheap, renewable, without environmental side effects—is as elusive as ever.

Many measures that can yield considerable improvements compared with existing energy systems have already been developed and validated, e.g., heating and lighting systems from solar and wind energy and power generation with photovoltaic cells (PVCs). However, even in the countries where these
alternative systems have been developed, commercialization of the systems remains a problem.

The possible solutions that would have to come from each of the service sectors would mean, among other things, these kinds of long term changes:

- Conscious, rationalized changes in individual consumptive styles to adopt energy conservation and less wasteful practices.
- Conscious, rationalized changes in community attitudes and behavior to maintain sanitation and prevent pollution, avoid/lobby against high-energy consuming domestic products, and adopt community guidelines for energy conservation, reuse, and waste avoidance.
- Conscious, rationalized changes in industry policies and behavior to produce low energy using products, to explore new products which use alternative energy sources, and apply cleaner production and environmentally sound technologies.

The industries have to also start measuring the impact of their ecological footprints in other countries. Most producers and consumers, in Japan and other developed countries, live in a virtual world. There is very little awareness of the countries from where the energy for production and the raw materials of the products that are marketed locally and abroad have originated. And there is very little concern, if at all, on the long-term impact that the loss of energy and natural resources in these countries will have on their economies and environments.

On the other hand, to reinforce these actions from the three services, governments will have to play the role of:

- Motivator/communicator of energy conservation consciousness by establishing dialogues and consultation mechanisms with communities as well as with industries to develop and implement mutually agreeable guidelines and by providing incentives for innovative ideas on how to conserve energy or reduce waste of energy as well as for compliance to policy guidelines.
- Enabler of energy conservation programs and practices by formulating policies and economic instruments supporting energy conservation (e.g., limiting use of energy by automatic stoppage of water, electricity, and gas flows at certain hours of the evening; encouraging water reuse by requiring buildings to install water reuse systems; levying an energy tax or incorporating environmental cost in utilities).
- Enforcer of energy conservation policies and instruments by strictly monitoring compliance to policy instruments and guidelines, withdrawing licenses, and imposing fines and penalties whenever necessary.
How to Implement Changes
This is the challenge behind the ideas of reform. Moreover, energy conservation is an area where UNEP can make significant contributions with the cooperation of governments and the international community. It should be noted that UNEP promotes the adoption and use of more energy efficient technologies and systems. It therefore is prepared to pursue this mission by using the force of its mandates within the UN.

The Role of UNEP
UNEP is the world’s negotiator for the environment. At the 5th Special Session of UNEP's Governing Council, the Council reinforced UNEP’s role in international environmental policy formulation and coordination. The core elements of its focused mandate consist of the following (policy statement of the Executive Director to the 5th special session of the UNEP Governing Council, 15 May 1998):

1. Global and regional environmental analysis and assessments based on the best scientific and technical capabilities available.

2. Development of environmental law and other environmental policy instruments, including developing coherent linkages among international environmental conventions.

3. Strengthen its role in coordinating environmental activities in the UN system, including the implementation of the Global Environment Facility (GEF).

4. Implementation of international agreements on the environment and fostering of cooperative action to respond to emerging environmental challenges.

5. Facilitate effective cooperation in the implementation of international environmental agenda.

6. Provide policy and advisory services in key areas of institution-building to governments and other relevant institutions.

Improved Energy Efficiency:
The Cornerstone of UNEP’s Role in Energy Conservation
UNEP encourages energy conservation through improved or improvements in energy efficiency. The concept of improved energy efficiency does not mean increased energy production nor decreased energy consumption. It simply implies a broader approach to the energy issue by addressing the sub-issues of production, distribution, and consumption on an equal scale, giving due consideration to the overall goal of satisfying the need for energy services in a sustainable and environmentally friendly manner.

Based on this concept, energy is conserved when technical means (use of tools or systems) are employed to improve efficiency or to reduce energy waste.
Energy efficiency is increased when an energy conversion device such as a household appliance, automobile engine, or steam turbine undergoes a technical change that enables it to provide the same service (lighting, heating, motor drive) while using less energy. In other areas, the energy efficiency of buildings can be improved with the use of insulation materials or insulated components; use of waste water reuse systems; use of design aspects such as solar orientation, shade tree landscaping, proper ventilation, and others. Further, the energy efficiency of communities and cities can be improved through urban design, integrated transport system design, and land use planning. Thus, on one hand, energy efficiency is an engineering and design aspect of energy production and distribution facilities. On the other hand, it is a design and planning feature of transportation systems and living spaces.

These ideas of 'efficiency' and 'conservation' contrast with energy curtailment. Curtailment involves a decrease in output (e.g., turning down the thermostat) or services (e.g., driving less) to curb energy use. Energy curtailment occurs when saving energy causes a reduction in services or sacrifices of comfort. It is often employed as an emergency measure.

To ensure improved efficiency in energy systems, UNEP will continue to encourage actors in the market to respond to incentives to increase the energy efficiency of their products and operations. In more specific terms, UNEP will:

1. Ensure and support the implementation of international agreements, particularly through the use of economic instruments, as a mechanism to attain at the national level international environmental objectives. In this regard, in 1999 UNEP will launch together with UNCTAD an Intergovernmental Panel on Economic Instruments. The Panel will study different aspects of economic instruments within the context of international environmental agreements, beginning with the UN Framework Convention on Climate Change. At its initial meeting, it will seek consensus on how economic policy can be used to achieve the targets set out in the Kyoto Protocol (policy statement of the Executive Director to the 5th special session of the UNEP Governing Council, 15 May 1998).

2. Continue to provide information and advisory services on environmentally sound technologies and cleaner production technologies, and to promote their adoption and use through its IETC Offices in Japan and IE Office in Paris.

3. Support environmental education to maintain global awareness in energy issues and their linkages with climate change issues.

4. Continue to monitor the state of the world’s environment and make assessments of global and regional environments.
Reforms at the National Level
While action by UNEP and the international community is important at the global and regional levels, government action for reforms at the national level is badly needed. Current governmental policies which are oriented towards increasing energy supply have to be redirected towards energy efficiency. The needed changes would fall into four categories:

1. Encouraging governments to reduce subsidies for fossil fuels and to raise taxes on them which reflect environmental costs. (The World Bank estimates that gradually removing energy subsidies would cut carbon emissions in 2010 by 7% below the projected level).

2. Encouraging or supporting governments to redirect research and development spending to focus on critical new energy technologies.

3. Encouraging governments to accelerate investment in new devices.

4. Channeling international energy assistance to developing countries.

The Role of Developing Countries
One of the important keys to reform lies in developing countries where most of the increased demand for energy over the next three decades is expected. The big challenge is the fact that currently developing countries have rates of energy use just one-fifth of the current level in Europe, but they are rapidly building fossil fuel-powered factories, buildings, and transportation systems. Turning the energy market in the developing countries toward new technologies will be a challenge. To encourage developing countries to take advantage of alternative energy sources, the large energy assistance programs that earlier pushed them down the fossil fuel path need to be redirected.

The Role of Multilaterals
The multilateral development banks play a most crucial role. Although these agencies provide no more than 10% of the roughly $60 billion invested each year in the energy sectors of developing countries, they often supply the “seal of approval” that private banks are looking for. It is to be noted that nearly four-fifths of the $57 billion the World Bank has loaned for energy projects since 1948 has been for power supply. And less than 1% of the $67 billion lent for energy projects in the 1980s by all the development banks went to improving end-use energy efficiency.

In 1993, as a result of UNCED, the Global Environment Facility (GEF) was set up under the auspices of the World Bank, UNDP, and UNEP to fund projects that are not yet fully justifiable in local economic terms but that have global environmental benefits. So far, the GEF has financed several dozen energy
efficiency and renewable energy projects under its mandate to support programs that reduce greenhouse gas emissions.

CONCLUSION

Environmental aspects of energy production, consumption, and distribution have gained the world’s attention through the processes leading to the Rio+5 meeting and Kyoto Protocol. The needed changes in existing structures to make energy systems sustainable pose a great challenge to most countries, particularly to their governments and businesses. Moreover, these challenges offer opportunities for improvements, both on the economic and environmental side. UNEP is committed to facilitating the required changes through its information, policy, and advisory services.

The importance of paying serious attention to energy issues on a global scale is aptly described in a World Energy Council study (1995) which states that: “the single most important conclusion is that, given the expected divergence of development paths post 2020, and the foreclosure of potentially desirable options, unless relevant policies are initiated and decisions taken long before then, action needs to start now.”
Economic Instruments to Combat Global Warming

Takamitsu Sawa

The Kyoto protocol has provided us with a second case in which the natural sciences have had significant influence on real politics and economics. The first case was provided by the Montreal Protocol which prohibited the use of chlorofluorocarbons. Decisions concerning the quantitative emission limitations and reduction of carbon dioxide (CO₂) have to be properly made in the following manner. First of all, it should be decided by scientists how much concentration of carbon dioxide in the air should be controlled in order to avoid serious damages caused by global warming. Following the opinions of scientists, we must proceed to the next step, that is, deciding what percentage of CO₂ emissions should be reduced in the commitment period compared with the base year of 1990. This second step requires the input of not only scientist but economists and engineers as well.

What kinds of measures should be implemented in order to combat global warming? Existing measures are classified into the following three categories: (1) voluntary actions by firms and consumers; (2) governmental regulations; (3) economic instruments including, for instance, the carbon tax, subsidies, and tax reform favorable to fuel-efficient cars. Among the above three measures, economic instruments should be recommended, as they are consistent with the market economy.

It is quite misleading to say that the use and implementation of economic instruments such as a carbon tax will retard economic growth. What happens by introducing a carbon tax is just a transfer of income from consumers and producers to the government. As long as the government expends the tax revenue properly, the amount of effective demand never decreases. The only problem concerns the "looser industry" that is likely to suffer significant losses from a carbon tax. The government should take appropriate actions so that the loss suffered, for example, by exporting an energy-consuming industry, will be minimized.
Nuclear Waste Disposal and Northeast Asian Cooperation

Hisatake Kato

Previously Mr. Hirata talked about the need to construct additional nuclear power plants in Japan, and Mr. Zou from China talked about his government's plan to increase the number of nuclear power plants in China in order to reduce CO$_2$ emissions. How many nuclear power plants in Asia will be needed to meet the reduction targets of the Kyoto conference (COP3)? Japan, for example, may need to build an additional 20 plants. Asia already has the highest concentration of nuclear power plants in the world.

By 2030 the high-level nuclear waste from 54 plants in Japan will amount to 70,000 vitrified bottles of waste that need disposal. Vitrified waste containers need to be encased in metal, and each container weighs 400 kilograms. Waste is removed from the nuclear reactor and vitrified; this requires a cooling down period during which the waste solidifies. This nuclear waste is stored in an underground room 1,000 meters deep and with an area of 2 km$^2$.

It is said that nuclear waste needs to be stored for at least 1,000 years. Therefore, many safety measures—preventing leakage, man-made damage, natural disaster damage, etc.—need to be maintained for these 1,000 years. We do not know what will happen in Japan or China during this long period. We do not know if the current political systems will be maintained or if there will be changes. It is a very long time.

According to a Japanese newspaper report of 26 January 1997, Taiwan had decided to transfer low-level nuclear waste to the DPRK for treatment and storage. The ROK government strongly opposed this action. Currently international opinion is very critical of international transfer of nuclear waste. There are efforts to establish international principles to prevent or prohibit international nuclear waste transfers. Each country should be responsible for its own waste.

In Japan, the Ministry of Science and Technology is responsible for studying measures for nuclear waste disposal, it is currently conducting research on methods for treating vitrified containers. It is important to gain the approval of the residents of nuclear waste storage areas, and to provide them with financial compensation. And it is most important to find and put to use the safest technologies.

However, because of the necessary long storage period, we should consider whether it is feasible and wise for Japan alone to deal with this matter. Perhaps we should consider multilateral cooperation, for example, the potential
establishment of a cooperative organization for the safe disposal of wastes in Northeast Asia. This organization may consist of the countries that can provide technology, money, and/or storage areas. This idea is important from scientific and economic points of view. The current political environment of Northeast Asia, however, precludes the immediate creation of such an organization.

Yet when we consider the 1,000 year time frame, the creation of a multilateral nuclear waste disposal organization does not seem impossible. Political conditions may change over the long term, creating a more favorable environment for this concept. We can start planning now, through feasibility studies, for the future.

Regarding the prospects of increasing the number of nuclear power plants in Japan, in 1996 a referendum was held in Maki City, Niigata Prefecture, over the construction of a new power plant. The voting turn-out was 88.2% with 60% voting against the new plant. Securing the approval of citizens is an increasingly difficult task. It is very important to articulate long-term needs and global perspectives to make wise decisions on nuclear power plants and waste disposal. We will need to “think globally and act locally.” We also need to increase local expertise. Recognizing this, Tottori Prefecture is making efforts to establish a strong environmental studies department that will be of benefit to the Northeast Asian region as a whole. Through this and other forums we should continue to discuss how to solve problems related to CO$_2$ emissions and nuclear waste through cooperation among Northeast Asian countries.
Mongolia’s Energy Policy, Northeast Asian Regional Development, and the Environment

Balganjav Khuldorj

Mongolia’s remote location, its distance from international and regional energy networks, and its harsh climate—months of severe winter—make a reliable energy supply a primary concern for economic development. Mongolia’s energy industry is based on a chain of coal-burning power stations which were built using Russian technology and are totally dependent on spare parts from Russia.

Mongolia’s vast territory and scattered population represent another reason why dependable energy sources and a nationwide distribution system are of vital concern. On the other hand, Mongolia’s unique nature, clean air, and pristine water are key factors for the prospering tourism industry. Mongolia is keenly aware of environmental issues and the need to balance industrial progress and environmental protection.

Today, Mongolia needs a dependable source of energy that will have minimal environmental consequences and will provide employment opportunities and an ongoing source of public revenue. The country needs a national energy development policy that promotes an appropriate and environmentally friendly energy industry.

Mongolia would like to play an active part in the regional gas pipeline project (from Siberia to Northern China) that is currently under discussion between Russia and China. The shortest route to Beijing from the southeastern part of Siberia is almost directly through Ulaanbaatar. If this route is used, 900 km of the pipeline will lie in Mongolia. In light of this regional gas pipeline project, Mongolia is interested in conducting environmental impact assessments of the project for the portions that would go through Mongolian territory.

I propose broad regional cooperation focused on conducting research and feasibility studies as well as financing studies on linking Mongolia’s energy development strategy with Northeast Asian infrastructure development plans. Mongolia welcomes emerging regional cooperation in energy development among the Northeast Asian nations. Mongolia also welcomes the recent agreements reached between the U.S. and China on the use of energy resources for peaceful ends, and the far reaching programs in environmental protection.
Environment and Food

Yoshichika Takeuchi

I wish to express my deep respect for the decision and great effort to hold this 8th forum for peace and growth in Northeast Asia. We will soon turn the corner to the 21st century, but regrettably, the relationship between the Earth and humans is marked by serious problems. We must clearly understand the complex interface between economic development and environmental issues. For example, the issue of CO₂ in the atmosphere. Surely, we can all recall the complexity of the mutual agreement on CO₂ emission controls of the Kyoto conference in 1997.

My area of specialty is agriculture, particularly the development of technical skills for crop cultivation. Based on my 40 years of research activity in this field, I would like to expound on the topic of “environment and food.”

Japan, as an island country, was generally regarded as having mostly unproductive land for paddy fields, for the cultivation of rice. Until 50 years ago, the sand dune area, which spreads along this coastline, was typical of unproductive areas. In 1946, the Sand Dune Research Institute of Tottori University began research on the use of the sand dune area for agriculture. Later, this research center developed into what is now the Arid Land Research Center of Tottori University. In 1954, the Japan Sand Dune Research Association, or the Japanese Society of Sand Dune Research, was founded in the Faculty of Agriculture of Tottori University. I believe these two organizations acted as the mainspring for the development of Japanese agriculture in sand dune areas.

Our techniques for agriculture in sand dune areas were methods to stop and stabilize sand drifting (for example, by developing windbreakers), field cultivation, irrigation facilities, and the choice of crops and techniques for cultivation. We have succeeded in “sand dune agriculture.” I believe our experiences can be of value to other sand dune areas around the world.

Lastly, I would like to introduce the work of the Arid Land Research Center of Tottori University. The Center is working on the development of agriculture in arid lands, tree planting in deserts, and combating desertification by using the experience gained through research on sand dune agriculture. It also conducts joint research with various research institutes in other countries. I’m grateful for the opportunity to introduce Tottori’s contribution in these areas and I encourage you to contact the relevant offices for further information.
Crisis Management for Natural Disasters
Crisis Management: A Summary

George Ariyoshi

Vice Governor Tomio Saito, provides some vivid illustrations of the aftermath of the earthquake suffered in the Awaji area, including serious damage caused to buildings and other structures. He also highlights the impacts on the people and the implications of what needs to be done in emergencies such as this. In the case of Kobe, he provides a striking account of what actually happened while attempts were being made to respond to the disaster. In particular, he points out the breakdown in communications and the destruction of disaster-management facilities, which made it impossible to respond immediately to the needs of the people affected.

Steve Cowper talks about man-made disasters, such as oil spills, with particular reference to the costs of preparedness. He emphasizes that it is too late to try to make any preparations after an oil spill has occurred. Preparations have to be made ahead of time, with a view toward how to cope with whatever situations we will have to face in the future. Hyogo Prefecture, for example, has worked out a disaster management system to better cope with future disasters. The prefecture is proposing that Northeast Asia work closely in sharing information and wisdom, and in appreciation for assistance it has received, the prefecture is committed to such efforts.

Richard Collins, raises a novel idea concerning responses to physical damage and to peoples’ needs under emergency situations. He points out cases in which national disaster assistance did arrive, but it turned out to be inappropriate and inefficient. A system is therefore needed to ensure that the needs of the people affected by such disasters are met quickly and effectively. Mr. Collins broaches the idea of finding ways to provide insurance, so that a fund would be available immediately to dispense to people in urgent need of assistance.

Clearly, a great deal of work remains to be done on how best to respond to disasters and how to disseminate the necessary information on a timely basis. We recommend that this Forum further pursue this program.
Improvement of Crisis Management Systems: Lessons from the Great Hanshin-Awaji Earthquake

Tomio Saito

The Great Hanshin-Awaji earthquake affected 10 cities and 10 towns. It measured 7 on the Richter scale and resulted in 6,398 deaths and 40,073 injuries. About 450,000 homes were damaged, and the total damage was estimated at up to 10 trillion yen. The damage caused exceeded the response capabilities of the area immediately affected. Moreover, the earthquake destroyed or heavily damaged emergency-response facilities in the area. The building housing Kobe city office (responsible for disaster emergency) collapsed, as did the police station, and part of the municipal hospital. Roads, railways, and water mains were also damaged, limiting transportation and water for firefighting.

Generally speaking, Japan's disaster prevention and emergency response system is similar to that of the U.S. That is, the first action in response to an emergency is taken at the municipal/city level, then prefectural resources are tapped, and finally the central government has a role. Thus, cities and towns are in the front line of disaster response. The main lesson of the Hanshin-Awaji earthquake, however, is that this paradigm of crisis management needs revision and improvement.

LESSONS LEARNED

1. Japan in general and the areas affected in particular did not sufficiently recognize the importance of disaster preparedness and crisis management systems. The damage created by the earthquake was not anticipated. We did not believe that the Hanshin-Awaji region was earthquake prone, and therefore, little provision was made for the crisis that ensued. Furthermore, there was a lack of transparency in the system that was in place. After the earthquake struck, at both the local and central level, the government appeared to be in a state of confusion. It became clear that there was a lack of staff assigned to disaster preparedness and response. At the prefectural level, for example, the government was able to mobilize only 20% of staff available to respond to the earthquake. The actions required overwhelmingly exceeded the number of staff available. A need for a better coordinating mechanism that enables immediate response became evident.

2. A critical problem that arose was a virtual paralysis in communication systems. Normal telecommunication lines could not be used to share information
among relevant agencies because of damage to circuits and the overflow of incoming calls. Satellite communications systems could not be used because of a failure in the standby power generator. Disaster prevention radio transmitters and receivers could not be accessed. Damage to the prefectural building included damage to the main computer room, and all equipment including the backup power generator could not be used. In this case, the main lesson learned was the need to strengthen the function of information and telecommunications facilities, and to have a good backup system ready.

3. Perhaps the most important lesson learned was recognizing the role of community action, particularly in the initial phases of emergency response. In Kobe, for example, 59 fires broke out during the first 15 minutes after the earthquake, and the contribution of local volunteers to firefighting and rescue was invaluable. Fire personnel could not possibly have coped alone. The cooperation of local residents is indispensable. Also important was the role of the international community and its cooperation efforts. Trained dogs from Switzerland, for instance, greatly aided rescue operations.

**REINFORCING CRISIS MANAGEMENT SYSTEMS**

Hyogo Prefecture has recently completed a crisis management plan that anticipates potential damage by an earthquake. The plan is detailed according to seasons, time of day, etc. Hyogo has also prepared an emergency response plan for maritime accidents taking the lessons learned from the *Nakhodka* oil spill into consideration. These plans include clear divisions of responsibility, 24-hour monitoring, and special staff for emergency response on standby alert. Monthly drills will be conducted, and 350 senior staff will carry portable phones or pagers. In addition a new position was created within the prefectural government. The new Chief of Emergency Management will coordinate horizontal organization, when needed, transcending the vertical division of responsibilities.

We will also introduce an information system that links all relevant disaster prevention agencies and organizations in Hyogo Prefecture. This system will enable immediate anticipation of damages and the collection and transmittal of information (digital images will be transmitted and analyzed through geographic mapping systems to assess damage to an area).

Furthermore, Hyogo Prefecture has designated Mike City public park as the center for education and research on emergency management. The prefecture has also concluded cooperation agreements with neighboring prefectures in Japan and the state of California in the U.S.
A PROPOSAL TO THE NORTHEAST ASIAN REGION

There is a need for the countries and localities of the Northeast Asian region to work more closely in emergency response and disaster management of earthquakes, floods, fires, oil spills, etc.—major threats to the environment and to the development of the region’s socio-economy. The sharing of information and wisdom may help mitigate damage.

Hyogo Prefecture recognizes a responsibility to share the lessons it has learned with the international community. To this effect, Japan has established the Asian Disaster Prevention Center in Hyogo. This center will bring together researchers and specialists from around the world to share knowledge and improve emergency response and crisis management systems. Hyogo Prefecture supports proactive action to increase knowledge on disaster prevention. Northeast Asia can benefit greatly from cooperation and mutual exchange of information technologies in the field of disaster prevention.
International Cooperation in Emergency Disaster Management

Steve Cowper

When the Russian tanker *Nakhodka* sank in the Sea of Japan in 1997, the Prefectural Government of Hokkaido requested the Northern Forum to furnish Tottori Prefecture officials with critical information on the 1989 *Exxon Valdez* oil spill from the State of Alaska, which proved to be useful to Tottori and the other prefectures affected by the spill. The Northern Forum was able to comply with this request, as it had in the 1994 oil spill in the Komi Republic in Northwest Russia, caused by ruptured pipelines. In the Komi spill, the Northern Forum helped to arrange for World Bank funding of the spill cleanup. We are now attempting to solicit aid for the victims of the Lena River flood in the Sakha Republic.

These actions underscore the importance of a link among regional governments for emergency management, a link which can save valuable time and effort when an emergency situation is being dealt with and time is of the essence. National responses are important, of course, but frequently national governments (other than the nation where the disaster occurs) must go through long and tedious processes before any meaningful action is authorized. At least in the United States, each state has its own emergency management structure, specifically designed for the types of emergencies likely to occur. Regional governments in other nations can take advantage of this expertise by creating an alliance among regional governments for responding to disasters.

Over the past 35 years, the State of Alaska has had to contend with the strongest earthquake in recorded history, the largest oil spill in U.S. history, and numerous tsunamis, floods, mudslides, major fires, and volcanic eruptions. This experience lends itself to meticulous preparation for the unexpected. It also creates a source of knowledge and experience which can be drawn upon by other regions. It is of vital importance to create these regional alliances in advance, so that each member of the alliance has a reasonable expectation of what the others can contribute within a given time frame.

The Northern Forum offers an institutional framework for such regional alliances, and a clearinghouse for information for member regions when an emergency event takes place.
Regional Cooperation in the Response to Natural Disasters

Richard Collins

No man is an Island, entire of it self; every man is a piece of the Continent, a part of the main; if a clod be washed away by the sea, Europe is the less, as well as if a promontory were, as well as if a Manor of thy friends or of thine own were; any man's death diminishes me, Because I am involved in Mankind; And therefore never send to know for Whom the bell tolls; it tolls for thee.

John Donne (C. 1571–1631)

I believe that we recognize the importance of international management of disaster assistance when we acknowledge that we are bound together. When a catastrophe befalls a people, city, or country we are all affected. Devastating events, natural or man-made, can often overwhelm national resources in much the same manner as catastrophic illness may strike an individual or a family.

Nations, no less than families, can suffer from a breakdown of structure, psychological trauma, or overwhelming financial loss. With international support, however, individual nations can maintain the integrity of their society and summon the managerial and financial resources to overcome the effects of disaster.

Consequently, I believe that we need to upgrade international programs for disaster preparation, mitigation and recovery, and crisis management, to enable international networks of support to function for the organized society in the same manner that catastrophic health insurance provides for individuals and families. International management of these disaster assistance programs will allow us to better handle even the most difficult situations that may arise.
The Tumen River Area and Northeast Asian Development
The Development of the Tumen River Region and Northeast Asia

Hisao Kanamori

It is only within the past ten years that the notion for the countries of Northeast Asia to work together for the development of the area has arisen. In this time, there have been many obstacles to success such as, delays in funding and in technology, but we can say that a cooperative environment is gradually being created.

In a speech made during a visit to Vladivostok in July of 1986, Mikhail Gorbachev said that the Soviet Union was an Asian-Pacific nation. Since then, interest in the Far East has grown. The Long-term Development Program of Far East Zaibaikal which runs from 1996 to 2005 was formulated. Progress in the development of oil and natural gas by South Korean companies is also expanding into Jilin province. And North Korea has established free trade zones in Rajin and Sonbong and is encouraging trade with China and Russia.

Of all the economic development taking place in Northeast Asia, the most progress has been made in the development of the Tumen River area. Particularly noteworthy is the development of the Hunchun region. Many companies have expanded into the Hunchun region since it was designated an Economic Development Zone in May of 1992, and its population has grown to 250,000.

North Korea has endeavored to attract foreign capital by establishing the Rajin and Sonbong free trade zones and permitting capitalist management practices, establishing various favorable tax policies, and giving companies the freedom to set prices and to send profits back to their home countries. Communication networks are also developing. In between Rajin and Pusan, there is now regular container vessel service, and goods are shipped from Rajin to Hunchun and Yanji by truck. Moreover, a railway between Hunchun and Zarubino has been laid.

The development of Northeast Asia is a long-term endeavor. Each country must advance its cooperative organizations. The improvements in Japanese-Russian relations will work to strengthen the cooperative mood for development. The major factors holding back development are the lack of infrastructure and funding. In order for these issues to be properly addressed, it is desirable to establish a Northeast Asian development bank.
CORRECTION

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The Development of the Tumen River Region and Northeast Asia

Hisao Kanamori

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New Directions for the Tumen Program

David Husband

As a relatively new participant in the challenges and opportunities surrounding economic cooperation in Northeast Asia, I must defer to others on how best to proceed. However, my experience in Southeast Asia, where I have been a Senior Advisor since 1992 for the ADB-sponsored program of economic cooperation among the six Mekong countries, may prove useful in charting new directions for the UNDP-supported Tumen River Area Development Program.

The Tumen Program in Brief

For those unfamiliar with the Tumen Program, the UNDP initiated discussions in 1991 leading to agreement among five Northeast Asian countries to cooperate in the economic development of the following areas: (1) the Rajin-Sonbong Free Economic and Trade Zone in the Democratic People’s Republic of Korea, (2) Eastern Mongolia, (3) the Yanbian Korean Autonomous Prefecture in northeast China, and (4) the Primorsky Territory in the far east of the Russian Federation. Collectively, these areas are referred to as the Tumen Region and connecting hinterland. The Tumen River serves as a border where China, the DPRK, and Russia meet, hence the name for the Tumen Program. The Republic of Korea is the fifth member of the Program, providing much needed financial and technical support.

Since 1995, the Program has been guided by the following institutional framework:

- the Tumen River Area Development Consultative Commission, which comprises representatives—at the Vice Ministerial level—from the five member countries of the Program; the Commission identifies common interests and opportunities for cooperation and sustainable development, and promotes investment in Northeast Asia and the Tumen Region; the Chairman of the Commission rotates on an annual basis among the member countries;
- the Tumen River Area Development Coordination Committee, which comprises representatives—again at the Vice Ministerial level—from the three riparian countries that share the Tumen river; the Committee coordinates economic development of the Tumen River Economic Development Area, especially as it relates to trade and investment facilitation;
the Tumen Secretariat provides advice and support for the above two inter-governamental bodies, and it is the implementing agent for activities and initiatives agreed to under the Program;

- national teams are inter-ministerial working groups which include representatives of several Ministries; in the case of DPRK, for example, the national team includes the State External Economic Affairs Commission, the Korean Committee for the Promotion of External Economic Cooperation, and the Rajin-Sonbong Zone Government; each national team has a national coordinator.

After an initial $3.5 million allocation to the Program, and top-ups to ensure continuity, the UNDP has committed another $3.2 million over the 1997-99 period. This too will likely be topped-up to enable activity in 1999 to match that budgeted for 1998. Contributions by other UN agencies, the ROK, the Nordic countries, and the Program member countries add another $2 million to $3 million to the financial resources. Also, the Global Environmental Fund has agreed to provide $5 million to develop a Strategic Action Plan for the Tumen Region; the project is expected to commence later this year, with particular attention to water pollution of international waterways and biodiversity loss.

Increasingly since 1996, the Program has supported a number of pragmatic activities designed to promote sustainable economic development and regional economic cooperation—the original twin objectives of the Program. Prominent among these activities have been investment promotion programs, tourism development, environmental initiatives, and efforts to reduce cross-border impediments to the freer flow of goods and people. A detailed study is underway of current and likely long-term trends in cross-border transport, and a pre-feasibility study was recently completed of a rail link between eastern Mongolia and the Tumen region. A series of forums and workshops have been held concerning the main sectors included in the Program, and there have also been a number of study tours on various topics.

THE ECONOMIC AND POLITICAL CONTEXT FOR THE PROGRAM

The economic and political context for the Tumen Program has been difficult, especially during its early phases. The collapse of the Soviet Union resulted in precipitous declines in the economies of the Russian Federation, Mongolia, and DPRK, three of the four core countries in the Program. Indeed, it appears that these three economies, and their respective areas included in the Tumen Region, declined by some 50 percent during the 1990s.

In recent years, Mongolia has started to show renewed growth, but at a moderate rate. The outlook for 1998 and beyond has been clouded by falling
commodity prices (copper and cashmere) and serious weaknesses in its financial system. Mongolia is landlocked and has no road or rail access linking it directly to the Tumen gateway and the Sea of Japan (or East Sea).

With respect to the Russian Federation, transition to a market-based economic system has been slow with frequent set-backs due to policy changes or other governance problems. The “big bang” approach to the transition appears to have been ill-advised. Over the past year the Asian financial crisis has greatly compounded Russia’s difficulties, raising the prospect of default, steep currency devaluation, hyper-inflation and social breakdown; fortunately, another IMF rescue package has just been concluded. In addition to these developments, the Primorsky Territory has been hard hit by a number of other factors including: massive cuts in the national defense budget with consequent loss of port-related and local expenditure; non-competitive user charges for the Trans-Siberian Railway and now disruptions to trains by striking coal miners; energy shortages and breakdowns in other critical infrastructure; and poor national/local government relations together with widespread corruption.

The DPRK’s problems appear to reflect hesitation concerning economic policy changes; unlike Vietnam and China with their variants of market socialism, the DPRK has maintained a more orthodox central planning system. The DPRK has adopted new trade partners since the collapse of the Comecon system, including the ROK and Japan, but total trade (i.e., exports plus imports) in 1997 amounted to only $2.2 billion compared with $4.7 billion in 1990. Data presented to a recent donor meeting for the DPRK show its GDP declining from approximately $20 billion in 1992 and 1993 to $10 billion in 1996; GDP per capita is now less than $500, or half what it was in the early 1990s. The DPRK’s GDP appears to have continued to decline in 1997 and 1998, reflecting the impact of the Asian financial crisis and natural disasters. Alternating drought and floods have severely affected agricultural production, resulting in widespread starvation and malnutrition.

China’s impressive growth stands in contrast to the rest of the Tumen Region. While northeast China has lagged the extraordinary performance of the southern coastal provinces, it is evident that the major cities and towns in the area are prospering. Changchun, Jilin, Yanji, Tumen City, Hunchun, and Jilin Province generally have benefited from foreign investment and the market buoyancy of China. To the end of 1997, approximately $450 million in foreign investment had been disbursed in the Yanbian Korean Autonomous Prefecture. Trade has been growing at a rapid pace, both domestic and international. Of course, recession in several countries in Asia and steep currency devaluations by the ROK, Thailand, and Indonesia, and the weakening Japanese yen, have affected China’s export performance. In response, the Government is attempting
to offset the slowdown in growth by an extensive infrastructure program. This latter initiative may be fortuitous for northeast China and the Tumen area, as infrastructure deficiencies are one of the main impediments to rapid growth and trade. Another impediment to rapid growth is the large number of unprofitable state-owned enterprises.

The ROK has been very badly affected by the Asian financial and economic crisis. Despite a $57 billion rescue package by the IMF, the private sector is heavily burdened by corporate debt—made worse by high interest rates and the increased cost of servicing foreign-denominated debt with a greatly depreciated won. Numerous large companies are hovering on the brink of bankruptcy. Ironically, recent strengthening of the won is viewed as a mixed blessing, as it weakens ROK’s export position vis-à-vis Japan and other competitors. The ROK’s set-back is a set-back for the Tumen Program, as it was becoming a major source for trade, investment, and tourism for the Tumen Region. At the very least, the ROK’s difficulties will delay projects such as industrial parks planned by the Korean Land Development Corporation in the Nakhodka Free Economic Zone in Primorsky Territory and the Rajin-Sonbong Economic and Free Trade Zone in the DPRK. In summary, economic conditions in the Region have hardly been conducive for the UNDP-supported Tumen River Area Development Program.

Nor has the political climate been conducive. Relations between Russia and China have thawed only slowly, and seemingly particularly slowly along the Primorsky Territory border with China where top military security prevailed throughout the cold war. Even now, the Hunchun-Kraskino border crossing is reminiscent of Check-Point Charlie in the former East Germany. As noted in a recent article in *The Economist* (27 June 1998), Russia closely guards Vladivostok and the surrounding territory, perhaps out of lingering worries about a too sparsely populated territory that is remote from Moscow and that used to belong to China and Korea. The much more sensitive relationship, of course, is between the two Koreas. The ROK’s new President, His Excellency Kim Dae Jung, is making overtures to ease the relationship—with some effect. However, this process has only just begun and it will take time and a good deal of confidence-building before relations between the two Koreas show any semblance of normalization. For its part, The DPRK is showing signs of wanting to improve relations with its northeast Asian neighbors, including with Japan. Again, the process will be slow. Even Mongolia has reservations, sandwiched between China (with deep-seated cultural differences) and Russia (with its large state enterprise transplants now defunct). It is easy to understand why Mongolia’s support for economic cooperation largely focuses on breaking the country’s land-locked nature. As in the case of economic conditions, the political
climate in Northeast Asia has hardly been conducive to the Tumen Program's objective of promoting regional economic cooperation.

CONCEPTUAL PROBLEMS WITH THE TUMEN PROGRAM

On top of everything else, conceptual problems have clouded the Tumen Program. In a well researched analysis, Professor Richard Promfret, University of Adelaide, Australia, has detailed the early trials of the Program—including an ambitious but unrealistic attempt to establish a Tumen River Area Development Incorporated Company. The authors of this concept envisaged a new Hong Kong in the heart of the Tumen Region, built on land leased from China, the Russian Federation, and the DPRK. Thereby, an internationally managed cross-border Tumen River Economic Zone would be created. They also envisaged $30 billion in investment in infrastructure in the Tumen Region, a staggering amount for a population of only 4 million.

Reservations by Russia about leasing land for this grand scheme, and well-founded doubts by all countries that the infrastructure plans could be even remotely realized, led in 1995 to a more conventional and institutional approach to development and economic cooperation. As described earlier, there are now formal agreements concerning the institutional framework for the Tumen Program. Also, the five member countries have signed a Memorandum of Understanding concerning protection of the Environment. These formal agreements entailed a good deal of consultation. This raises questions about their utility, and whether they detracted from concrete regional cooperation initiatives. According to Professor Promfret, “there has been much talk and little action on trade facilitation and infrastructure coordination.”

Economic cooperation initiatives in other regions provide lessons about what works effectively, and what to avoid. ASEAN, for example, appears to have suffered from an overly complex institutional and decision-making system, and a highly bureaucratic Secretariat. One of the lessons to be drawn from regional cooperation programs is the desirability of simple procedures and informal institutional arrangements. The ADB-sponsored program of economic cooperation in the Greater Mekong Subregion has focused on infrastructure linkages and has deliberately shied away from formal arrangements entailing intergovernmental ratification.

The Tumen Program has continued to evolve and, as noted earlier, since 1996 it has become more results oriented. That is, there has been less emphasis on major studies and more emphasis on investment promotion, tourism development, protection of the environment, and cross-border issues. However, while these activities have been highly relevant to local area development or
interests, many of the activities have had little to do with regional economic cooperation. The lion’s share of Program resources since 1996 has been devoted to initiatives of local or national benefit rather than regional benefit. Particularly questionable have been vehicle purchases, and some overseas study or promotional tours. While the initial phases of the Program favored international consultants, it would appear that the most recent phase has favored national and local interests. The UNDP, with the concurrence of the Tumen member countries, is determined to refocus the Program.

NEW DIRECTIONS FOR THE TUMEN PROGRAM

The comparative advantage of the Tumen Program is regional economic cooperation—not local area development. Indeed, the Tumen Program provides a unique forum for the five participating countries to identify and act upon regional initiatives. These include initiatives to open borders and to resolve cross-border environmental and other problems or challenges of shared interest. In particular, the Program can and should give priority to infrastructure projects vital to linking the Region and to creating a favorable investment climate.

Why is regional economic cooperation so important? Essentially, because it is integral to the process of globalization. Regional economic cooperation, and global economic integration more generally, allow for the sharing of human, capital, and natural resources. By encouraging trade and investment, regional economic cooperation facilitates technology transfer, management know-how, and market access. Through specialization in higher value-added crops, labor intensive light manufacturing, and resource extraction, productivity and competitiveness are strengthened. In this manner, employment opportunities and living standards are improved. And by addressing environmental issues cooperatively, cross-border problems can be resolved. Further, environmental standards can be adopted to prevent industries migrating to areas seeking to compete unfairly through lax environmental policies and regulations. Most importantly, regional economic cooperation complements better political relations; the peace dividend is the ultimate benefit, allowing governments and businesses in the region to interact with trust and confidence in meeting the needs and aspirations of the people.

Area or local initiatives that have dominated the Tumen Program over the past two years are better left to country programs of the UNDP, World Bank, ADB, and other development agencies (notably Japan’s OECF and JICA). Aside from having no comparative advantage in area or local initiatives, Program resources are too limited to support multiple objectives. After some persuasion,
the member countries have tentatively agreed that the Tumen Program should focus exclusively on regional economic cooperation.

With a singular focus on regional economic cooperation, projects selected for support under the Tumen Program should have one or more of the following features:

- it facilitates commercial relations among the participating areas of the Region (e.g., by improving the transportation or telecommunications linkages, or reducing the non-physical impediments to the free flow of goods and people);
- it contributes to realizing development opportunities involving two or more of the areas in the Region (e.g., development of energy projects requiring regional cooperation to most efficiently rationalize distribution among energy deficient and energy surplus areas; also, regional cooperation to promote tourism development);
- it contributes to mitigating cross-border problems (e.g., reducing pollution of international water-ways and other environmental "externalities"); and/or
- it contributes to meeting some common resource or policy needs (e.g., regional cooperation to address human resource development needs, such as control of communicable diseases—tuberculosis and HIV/AIDS; also, cooperation in certification and standards for technical trades contributes to labor market development and mobility).

Normally, projects selected for support under the Tumen Program should involve two or more of the member countries.

The distinction between what classifies as a regional project and what is best left to country programs is not always clear. A case in point is investment forums. Even local-based investment forums generate at least some regional benefits, through drawing business people to the region and encouraging cross-border production chains. However, Program resources are limited and must be used to greatest effect if a significant contribution to regional economic cooperation is to be achieved. Thus, to the extent possible, Program support for investment forums should be directed to enhancing the regional dimension.

What does this mean in practice? First, it means providing generic material about the Tumen Region. That is, material that describes the investment opportunities and climate on a regional basis. This is important, especially since the Tumen Region is still relatively unknown and international investors have become much more discriminating in light of the Asian financial crisis. The Program should relay the improved political relations in the Tumen Region, and the economic strengths associated with rich natural resources, a well-trained pool of highly competitive labor, and the gateway advantages of the Region. When
the opportunity presents itself, as at the Northeast Asia Economic Forum in Tottori Prefecture, Japan, Program participants should promote the Region as a whole to interested investors, governments, and other observers.

Second, the Tumen Program should assist local-based investment forums to promote infrastructure projects linking the Tumen Region. To accelerate development in the Tumen Region, infrastructure deficiencies must be overcome. However, the financial requirements associated with this task are very large; investments are needed in every field, including transportation, energy, telecommunications, water supply, and waste disposal. Governments in the Region are having a very difficult time coping with these requirements. A partial solution is to mobilize private sector participation in investment in infrastructure. While BOT-type investment will not be viable in most cases, there are likely many opportunities for joint public/private investments in infrastructure. The Tumen Program should be instrumental in helping to formulate the structured financing necessary to make public infrastructure projects “bankable”. Only by acting as a catalyst for resource mobilization can the Program hope to make a significant contribution to regional economic cooperation.

This latter point relates to another new direction for the Program—the Tumen Region as a subset for regional cooperation in Northeast Asia more generally. It should be recognized that the Tumen Region is comprised of small areas of large countries. Primorsky Territory is a small and remote portion of the Russian Federation, as is Yanbian Prefecture and the Rajin-Sonbong Zone of China and DPRK, respectively. Eastern Mongolia is not even contiguous to the Tumen River area. In many respects, the Tumen Region is at the perimeter of national concerns. This is reflected in the lack of ownership of the Program; national governments have yet to demonstrate the commitment required to make regional economic cooperation effective. This is especially the case of the Russian Federation, but greater involvement by all governments concerned is needed. National involvement is essential for opening borders and in other ways facilitating the free flow of goods and people.

The Tumen Program must help demonstrate the benefits of regional economic cooperation in Northeast Asia. Further, it must help create a process for identifying and implementing key regional economic cooperation initiatives. To this end, it may be desirable for the Program to establish a Council of Eminent Persons, following the lead of APEC and the Northeast Asia Economic Forum. Council members would be expected to have the attention of the most senior levels of national and local governments, and the business community, enabling regional economic cooperation initiatives to be brought to the prompt attention of influential authorities. To ensure substance in such a process, the Program needs to harness the input of senior economists and other experts in
Northeast Asia and abroad, including the Northeast Asia Economic Forum. Information well documented and presented can be a powerful tool for change.

In summary, the suggested new directions for the Tumen Program are three-fold:

- adoption of the sole objective of regional economic cooperation, leaving local development initiatives to country programs of other donor agencies, including UNDP's country programs;
- greater partnership with the private sector, particularly so as to help mobilize resources for infrastructure linking the Tumen Region; and
- a wider vision for the Program, wherein it is seen as a catalyst for regional cooperation in the Northeast Asia context, and wherein the Program is less input or activity driven and more results oriented.

**MEDIUM-TERM PRIORITIES**

In light of experience to date, and the suggested new directions for the Tumen Program, a tentative list of medium-term priorities is as follows:

**Key Transportation Infrastructure**

- completion by the year 2000 of the highway improvement from Yanji-Tumen-Hunchun, and from Hunchun to Quanhe/Wonjong at the China/DPRK border; a tunnel under construction will cut through the main mountain barrier to the gateway;
- completion by the year 1999 of the coast highway improvement from Rajin to Sonbong, and from Sonbong to Wonjong; this will bypass another mountain barrier to the gateway;
- reconstruction of the Kraskino-Zarubino-Slazyanka highway in Primorsky Territory;
- opening of the rail line from Hunchun to Kraskino, and completion of marshaling yards and handling facilities in Kraskino;
- upgrading of the rail line between Tumen City and Rajin, and upgrading of the rail line between Tumen City and Hunchun;
- extension of the Changchun-Arxan rail line to the Mongolian-China border, and to Tamsagbulag just inside Mongolia to link with a proposed road from Ulaanbaatar;
- upgrading of port facilities in both Primorsky Territory and the Rajin-Sonbong Zone;
- designation of Yanji Airport Terminal as an international airport;
- opening of a helicopter service from Rajin to other cities in the DPRK, and to Vladivostok and Yanji.
Key Cross-Border Facilities

- upgrading of the DPRK Wonjong border crossing facility;
- opening of the Hunchun-Kraskino border to foreign travelers;
- easing of travel restrictions at the Khasan border crossing between Russia and DPRK;
- reduction of non-physical impediments to the free flow of goods and people at all three border points;
- agreement among China, DPRK, and ROK on a Memorandum of Understanding allowing for the opening of a ferry service between Sokcho, ROK, and Rajin, DPRK; passengers would proceed overland to Hunchun and to Mt. Changbai, which is a cultural site for Koreans.

Energy Infrastructure

- consideration of a power grid system in the Tumen Region, to rationalize energy production and use among surplus and deficit areas;
- BOT investments in energy generation to replace outdated facilities (e.g., Sonbong power plant);
- regional cooperation in introducing energy demand management measures (e.g., marginal cost pricing and energy conservation technologies).

Telecommunications

- loop the telecommunications systems linking the Tumen Region to reduce costs and improve reliability.

Investment Promotion

- establish a regional network of business centers, capable of promoting local areas in a regional context;
- develop detailed information about the Tumen Region and make available in a useable format for investors;
- initiate pre-feasibility studies concerning key infrastructure projects, and make available to potential investors or partners with the public sector;
- conduct investment forums in selected centers in Asia, North America, and Europe, to enhance awareness of investment opportunities in the Tumen Region;
- establish the Tumen/Northeast Asia Investment Corporation, designed to enhance the bankability of infrastructure projects and, thereby, private sector investment;
- promote such projects in local-based investment forums.
Tourism Promotion
- improve access to the Tumen Region (easing of visa restrictions, opening of Yanji Airport to international traffic, opening of Sokcho-Rajin ferry service);
- improve product development (eco-tourism, circuit of tourism “jewels”, tourism services);
- improve recognition (cooperation with PATA and WTO, cooperation in promotional material);
- establishment of a regional facility for coordinating tourism activities.

Human Resource Development
- regional cooperation in standards and certification for key trades, so as to facilitate greater cross-border labor mobility;
- regional cooperation in technical training, so as to encourage centers of excellence;
- regional cooperation in halting the spread of communicable diseases (e.g., tuberculosis, HIV/AIDS).

Environment
- identification of main cross-border problems (e.g. industrial pollution of international waterways and biodiversity loss);
- development of a regional strategy for dealing with these problems; commencement of the GEF/SAP initiative in 1998;
- greater use of economic instruments to protect the environment (e.g., polluter pay principle);
- involvement of international community (e.g., tradable pollution rights, establishment of an international park for protection of tigers and leopards).

This list goes well beyond the current Program. Some elements, such as infrastructure projects, are being undertaken by the governments independently of Program financing. This illustrates the Program as a framework for regional economic cooperation, rather than as simply a fund for financing activities. The list and the approach would, of course, require the endorsement of the member countries. It would also require a more successful degree of resource mobilization than has been the case to date.
RESOURCE MOBILIZATION:  
THE TUMEN/NORTHEAST ASIA INVESTMENT CORPORATION

Resource mobilization must derive from three sources: the member countries themselves, the donor community, and the private sector. In terms of the member countries, the critical determinant for four of the five participants is getting their economies back on course. The ROK has been an important contributor to the Program, but its current circumstances can be expected to lead to resource constraints. At the very least, one would expect more careful assessment of the proposed use of funds. In the case of the DPRK, Mongolia, and the Russian Federation, it is unlikely that their economic difficulties will be resolved in the near term. It will be hard to convince these countries to finance their participation in Program workshops and the like, which the UNDP would welcome as a demonstration of ownership. Even the annual $25,000 contribution expected of the member countries has been difficult to collect in some cases. In contrast, China has been a generous supporter of the Tumen Secretariat. Very importantly, also, it is investing heavily in infrastructure—key to the success of the Tumen Region as a gateway for international trade.

Resource mobilization from the donor community has been disappointing. While participation by donor agencies at the annual intergovernmental meetings of the Tumen Program has been good, it has not been matched by offers of financial support. The Nordic countries have been an exception. Other countries must be drawn into the Program, including the United States and Japan. The latter have a strong strategic interest in regional economic cooperation in Northeast Asia. However, to gain greater support from the donor community the Program must demonstrate real value added. It is hoped that the new directions for the Program outlined above will win the approval of the donor community.

Resource mobilization from the private sector has been growing rapidly, reflecting transition to more market-based systems by the core member countries. By the end of 1997, approximately $900 million in foreign direct investment had been dispersed in the Tumen Region. As mentioned earlier, $450 million of this was in the Yanbian Korean Autonomous Prefecture; $350 million was in Primorsky Territory, and the balance in the Rajin-Sonbong Zone. Of particular note, two-thirds or more of these amounts have been dispersed since 1993. Indeed, before the 1990s, foreign investment in the Tumen Region was minimal. In addition to investment in labor intensive industries such as textiles, some corporations—including Hyundai of the ROK—have been involved in port projects and other infrastructure.

Still, private sector participation in infrastructure has been limited. This must change if the Region is to accelerate infrastructure investment. In today’s
gloomy financial climate, however, this is a tall order. To assist in making such investments more attractive and viable for the private sector, the Program is exploring the possibility of establishing a special purpose financing facility—termed the Tumen/Northeast Region Investment Corporation.

As outlined in a draft Prospectus for the Investment Corporation, it will act as a catalyst for co-financing and mobilizing capital, especially market and private sector capital. The Corporation will complement other multilateral financial institutions, rather than attempting to duplicate their functions. Its distinct role will be to:

• partner private capital with public capital, thereby leveraging public sector funds committed to infrastructure and non-infrastructure projects;
• assist small and medium-sized enterprises to gain access to commercial financing;
• administer special purpose funds for technical training in financing and for environmental dimensions of development projects.

Establishment of the Corporation will very much depend on how the proposal is viewed by potential sponsors or supporters—including the multilateral financial institutions.

GROUND FOR A RENEWED REGIONAL COOPERATION EFFORT

Participation in the Tumen Program requires a certain act of faith. In addition to believing strongly in the merits of regional economic cooperation, the participant has to believe that the member countries are serious about implementing measures to more closely integrate their economies. Regional cooperation is ultimately dependent upon the commitment of all involved to make it work.

There are grounds for optimism. Borders are opening among the member countries and trade has increased significantly. The infrastructure is improving and the elements fundamental to making the gateway concept a reality are nearing completion. Some progress has been made on “software” issues, such as visa permits, and more progress on these issues would sustain the Program during this period of financial uncertainty. Private enterprise is trans-border, helping to nudge former adversaries into more cooperative relations. Trust and confidence among the member countries appears to be growing, and there are special opportunities to assist the two Koreas in their aspirations for eventual unification. An institutional framework is in place for promoting regional cooperation initiatives, and the member countries are utilizing this framework to pursue dialogue on sensitive issues. There appears to be increasing awareness of shared interests—including protection of the environment.
Cooperation in the Development of the Tumen River Area

Rim Thae Dok

Let me, first of all, express my thanks to the distinguished personages in Tottori Prefecture, Japan, and the East-West Center for their kind invitation to the Eighth meeting of the Northeast Asia Economic Forum extended to our delegation and all the facilities accorded to us. I deem it a great pleasure to be able to deliver a speech on the issue of the development of the Tumen River area, particularly the Rajin-Sonbong Economic and Trade Zone in the northern part of our country.

It is the consistent policy of the Government of the DPRK to develop relations of economic exchange and cooperation with different countries of the world transcending differences in ideology and system under the ideals of independence, peace, and friendship.

We, in our endeavors to improve economic cooperation and exchange with other nations, have attached primary significance to developing relations of cooperation and exchange with the countries located in the same Asian continent, particularly with those countries in East Asia sharing geographical proximity. We have spared no effort in bringing this to effect.

Entering the 1990s when movements for furthering economic cooperation and exchange among countries in Northeast Asia gained momentum, we, with a positive approach to such a trend, have actively participated in undertakings to develop economic cooperation and exchange with countries in this region, under the principle of equality and mutual benefit. To this end, we have effectuated a series of practical arrangements.

The development of the Rajin-Sonbong Economic and Trade Zone which forms a part of the Tumen River Area Development Program (TRADP), is a case in point. As all of you are well aware, many issues on the agenda of previous meetings of the Northeast Asia Economic Forum aimed to improve regional cooperation and exchange in Northeast Asia. The development of the Tumen River area has always been, without exception, the focal point of such deliberations. It is recognized as a project of key importance in further developing such regional economic cooperation and exchange.

Although the development of economic cooperation and exchange in the Northeast Asian region has been extensively addressed for the last 10 years at governmental and civilian levels as well as in economic and academic circles, Northeast Asia still lags far behind other parts of the world in several aspects,
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Rim Thae Dok

Let me, first of all, express my thanks to the distinguished personages in Tottori Prefecture, Japan, and the East-West Center for their kind invitation to the Eighth meeting of the Northeast Asia Economic Forum extended to our delegation and all the facilities accorded to us. I deem it a great pleasure to be able to deliver a speech on the issue of the development of the Tumen River area, particularly the Rajin-Sonbong Economic and Trade Zone in the northern part of our country.

It is the consistent policy of the Government of the DPRK to develop relations of economic exchange and cooperation with different countries of the world transcending differences in ideology and system under the ideals of independence, peace, and friendship.

We, in our endeavors to improve economic cooperation and exchange with other nations, have attached primary significance to developing relations of cooperation and exchange with the countries located in the same Asian continent, particularly with those countries in East Asia sharing geographical proximity. We have spared no effort in bringing this to effect.

Entering the 1990s when movements for furthering economic cooperation and exchange among countries in Northeast Asia gained momentum, we, with a positive approach to such a trend, have actively participated in undertakings to develop economic cooperation and exchange with countries in this region, under the principle of equality and mutual benefit. To this end, we have effectuated a series of practical arrangements.

The development of the Rajin-Sonbong Economic and Trade Zone which forms a part of the Tumen River Area Development Program (TRADP), is a case in point. As all of you are well aware, many issues on the agenda of previous meetings of the Northeast Asia Economic Forum aimed to improve regional cooperation and exchange in Northeast Asia. The development of the Tumen River area has always been, without exception, the focal point of such deliberations. It is recognized as a project of key importance in further developing such regional economic cooperation and exchange.

Although the development of economic cooperation and exchange in the Northeast Asian region has been extensively addressed for the last 10 years at governmental and civilian levels as well as in economic and academic circles, Northeast Asia still lags far behind other parts of the world in several aspects,
due to its failure to surpass such objective factors as differences in social systems, standards of economic development, size of territory, population, etc.

Therefore, in effectuating the development of cooperation and exchange in Northeast Asia, it is reasonable to take a case-by-case approach, rather than a package scheme approach, whereby practicable projects are given precedence and fulfilled one after another. We assume that the development of the Tumen River area fits in with the above-mentioned idea and, based on such an assessment, have proclaimed the Rajin-Sonbong area near the Tumen River as an economic and trade zone, and we are now pushing ahead with this development project with vigor.

As you know, the development of the Rajin-Sonbong Economic and Trade Zone was personally initiated by our fatherly leader Comrade Kim Il Sung in 1991, but it is still quite new to us and the main resources for its implementation are expected to come from foreign investment and support rather than from our own single-handed investment. We, therefore, have already instituted relevant laws and regulations to ensure that potential investors can make unrestricted and secure investments and perform business activities in different sectors in the Rajin-Sonbong zone. We have established a variety of preferential treatments and incentives which are strictly guaranteed by law.

The development of the Rajin-Sonbong zone is a long-term project of an ambitious scale which envisages turning the zone into a world-class economic and trade zone with all the characteristics of a regional hub for transit transport that take advantage of favorable geographical and natural conditions. It is also envisioned as an export processing center in the field of light industry, electronic industry, foodstuffs industry, etc. as well as an excellent service center.

At present, the top priority for us in developing the Rajin-Sonbong zone is to effect the completion of infrastructure development in actual terms in the fields of telecommunications, transportation, power, etc.—given that the legal framework has already been laid to provide for protection and guarantees of the investment to be made by foreign investors. Although infrastructure development requires an enormous amount of investment, as a matter of course, the development of the zone is inconceivable apart from such development. Therefore, we have so far attached great significance to promoting investment in infrastructure development while taking other steps necessary for the development of the zone.

As a result, the first phase investment project in the telecommunications sector has been fulfilled by Loxley Group of Thailand, so that investors in the zone are given full and unimpeded access to telecommunications services, both international and local. In addition, the ground for construction of the International Telecommunications Center will be broken soon.
Moreover, with investment from a Hong Kong company in the construction of a road from Rajin to Wonjong Bridge, the border crossing point across China, we have basically finished civil works for the roadbed and are now engaged in preparations for paving the road. At the same time, contract negotiations are being held to secure investment from a Chinese company in a project for improving the railway from Rajin to Namyang, the railway transit point across China.

Some investments have also been effected in modernization of the existing facilities and equipment in Rajin Port such as the construction of a new fertilizer warehouse and installation of loading/unloading equipment, a gantry crane, to name a few.

We are also making positive efforts to finish the construction of a heli-pad in the zone, so we may begin Rajin-Yanji and Rajin-Vladivostok helicopter services from September 1998. The heli pad will be important while investment for an international airport is sought.

In order to cope with the increase in travel to and from the zone by foreigners, we have increased accommodation capacity to about 700 beds through new hotel projects as well as reconstruction projects in the zone. Meanwhile work progresses in the first phase project of a five-star hotel invested with investment from the Hong Kong Emperor Group (scheduled to be completed in the first half of next year).

Regarding power, negotiations with Taiwanese and Dutch companies on effecting investment in power plant projects are underway, with a view to concluding a contract within this year.

As mentioned above, certain progress has been made in infrastructure development in the Rajin-Sonbong Economic and Trade Zone. Still, the issue of how to finance infrastructure reconstruction/improvement poses itself as the most urgent pending issue in the realization of the development of the Rajin-Sonbong zone and the Tumen River area as a whole. Without such infrastructure improvement it is impossible for the Tumen River area to be developed into a hub of transit transportation, a main center for the manufacturing industry, or as a tourist and service center. This is so regardless of how simplified border-crossing procedures might be or how sufficient a legal and institutional framework for investment promotion is in place. Without this, the overall development of the Tumen River area will lose sight of its desired success.

Based on such recognition, our country and other riparian countries are making (on their own) every effort to secure funding for infrastructure development in the Tumen River area and, at the same time, we are seeking further cooperation among the countries concerned.
Such cooperative efforts by these countries for mobilizing the enormous amount of funds needed for infrastructure development in the Tumen River area are taking place in a more positive way through participation in the Consultative Committee and Coordination Commission—the inter-governmental bodies dedicated to the development of the Tumen River area.

As is well known, the TRADP is the only development program through which almost all countries in Northeast Asia have made a commitment to effect cooperation at the governmental level. The Consultative Committee and Coordination Commission, whose mandate is to help implement the Program, have been dealing with the issues of international cooperation on an extensive scale.

Of all the efforts made by these two inter-governmental bodies, infrastructure development in the Tumen River is placed high among priorities. And the issue of generating huge funds for it has been seriously addressed since the period of the Program Management Committee (PMC) of the UNDP-sponsored TRADP, which was the predecessor of the Consultative Committee.

The initiative by the riparian countries to accommodate common mobilization and utilization of funds for infrastructure development in the Tumen River area through the respective lease of specified amounts of land and the setting up of a Tumen River Area Development Corporation was not realized for several reasons. Nevertheless, it marks the first such initiative by the riparian countries designed to achieve infrastructure development in the area.

The member countries of the Consultative Committee and Coordination Commission have sought and deliberated on different methods of cooperation for securing the colossal funds needed for infrastructure development. In this course, the establishment of a Tumen River Area Development Facility was recognized as the most practical option in the third meeting of the Consultative Committee and Coordination Commission, where it was recommended that further studies and concrete preparations be made to put it in practice.

It is well known that the resources for funding a project as big as infrastructure development are rather limited, and they generally come from national investment, loans, and borrowings from major donor countries, and from financing by international financial institutions and development banks.

On the basis of the analysis of the merits and demerits as well as potentiality for mobilization of such funds from the aforesaid resources, the member countries recognized that, apart from making continued efforts to obtain such resources, it would be most effective to set up a development facility of a reasonable scale which is properly composed of state investment, financing by international financial institutions and development banks, and private sector participation.
The advantages of such a development facility as seen by the Tumen Secretariat are that: a) it can mobilize greater funds through the medium of relatively modest amounts of state investment; b) it can be established faster than any new regional development bank; c) the establishment and operation of such a facility, if successful, would accumulate certain experiences and lessons, lay the basis for setting up a regional development bank such as the Northeast Asian Development Bank, and demonstrate to major potential financial institutions the tangible opportunities of capital financing for the Tumen River area.

Notwithstanding such advantages, however, there is still a long way to go before the development facility can be realized in practice, i.e., carrying out studies and discussions in more detail, effecting cooperation among member countries, conducting exchanging expert opinions and so forth.

One of the major themes of this meeting's agenda concerns the cooperation and possible interconnection between the TRADP, sponsored by the Consultative Committee and Coordination Commission, and the Northeast Asia Economic Forum. Since the TRADP has always been the highlight of all discussions of the Northeast Asia Economic Forum in the past, it would be conducive for the Forum in its endeavors to bring its activities closer to practice if it provides cooperation and keeps in touch more with the development of this area. We believe that the Northeast Asia Economic Forum is in a good position to render useful cooperation with respect to funding for infrastructure development, inter alia, the establishment of the Tumen River Area Development Facility, which is at the heart of the whole development process of the Tumen River area.

According to the preliminary estimates by the Tumen Secretariat, US$300,000–500,000 is needed for technical consultant fees for developing a detailed scenario for setting up the Facility as well as for implementation plans for 1–2 show-case projects. Given the academic nature of the Forum, it is believed to be able to provide more effective consultant services for the establishment of the above-said Facility with less financial resources.

To help realize such interconnection and cooperation, an institutional relationship between the Consultative Committee and the Forum should be established. For example, the Consultative Committee, for all its status as an intergovernmental body, may have as observers not only the countries capable of making substantial contributions to the development of the Tumen River area, but also foundations, banks, academic societies, etc.

Therefore, our delegation recommends that the officials of the Tumen Secretariat, of the Consultative Committee, and of the Forum perform a thorough analysis of the feasibility and scope of mutual cooperation, in order to produce the most optimal option to be studied for implementation.
Northeast Asian Economic Cooperation and the Role of Regional Government

Wang Shengjin

As a result of China’s open-door policy, the transition to a market economy, and the end of the cold war, new economic cooperation has been promoted among the countries of Northeast Asia. The three northeast provinces of China are geographically the closest to the rest of Northeast Asia, but the development of these provinces has been restricted in the past by central planning. These provinces have many large steel-making plants and other big state-owned enterprises, but their industrial equipment is old and technology is lacking.

China’s northeast provinces propose a development strategy to make the most of their geographical advantages and their existing industry. Development projects for the 21st century include the Liaotung peninsula and the free-port development plan in Liaoning Province, the development of natural resources and the Tumen River area in Jilin Province, border trade with Russia and the Sanjiang River area development plan, and so on. It is expected that these projects will contribute to rapid economic growth in Northeast Asia, while also contributing to regional economic cooperation.

The Northeast Asian region has changed rapidly along with the end of the cold war and with the changes in the political and economic situation. Socialist countries have introduced a market economy, and economic and technical relations between countries have strengthened. The region has a population of about 300 million and a GNP of $3.3 trillion, which is great enough to make it a natural economic territory. Its most prominent characteristic is the interdependence among countries, with regard to natural resources, finance, technology, and labor. What is needed is simultaneous development by all the countries of the region through mutual cooperation, rather than independent development of individual countries.

In 1991 the United Nations Development Program (UNDP) announced that it was considering the Tumen River Area Development Program (TRADP) as a priority for Northeast Asian development. This had a positive effect on exchanges and cooperation among the countries of the region. TRADP enables China to promote economic development in its northeastern provinces through cooperation with other countries of the region in the Tumen basin. TRADP can contribute to opening the Russian Far East and North Korea to foreign countries, developing their east coast ports, and improving their economic power. It can also promote further development of South Korea’s east coast and increase the
Successful development of the Rajin-Sonbong Economic Zone is an inescapable part of the development of the Tumen River area. It was the life-time wish and last will of our respected leader Comrade Kim Il Sung to bring the development of the Rajin-Sonbong Zone into fine fruition. And our great leader Comrade Kim Jong Il always provides us with sagacious leadership in this regard.

As in the past, and so also in the future, the Government of the DPRK, will vigorously push ahead with the development of the Rajin-Sonbong Economic and Trade Zone, and thus make a positive contribution to further expanding and developing economic cooperation and exchange in the Northeast Asian region.
Revitalization Program for the Northeast Asian Economy

Yong Hak Kim

To strengthen the economic infrastructure of Northeast Asia, there is a need for close partnership among neighboring nations. In building new infrastructure, such a partnership is needed at all stages, from formulation to final implementation and operation. This kind of cooperation will provide mutual benefits, as opposed to focusing on each individual nation’s interests. Now is the time for all the Northeast Asian countries to use a cooperative strategy as a means of improving their competitive edge in world markets. If Northeast Asia is to assume a leading position in the world economy, it must prepare itself to meet the challenges of globalization and regionalism. A critical task in this process is to select and develop mutually agreed target areas for nucleus cities.

From this standpoint, the Tumen River Area Development Program (TRADP), which has been debated since the early 1990s, is by every measure a model project for revitalizing the Northeast Asian economy, in the sense that the main countries of the region (China, Russia, Japan, and North and South Korea) are concerned with this area. In addition, tremendous investments have already been made in the nucleus cities, such as Rajin-Sonbong in North Korea, Hunchun in China, and Nakhodka in Russia. In spite of these favorable conditions, however, the Tumen area has not yet become an engine for accelerating the economic growth of this region, because the three bordering countries (North Korea, China, and Russia) seem to have established their own individual development plans, which do not take full advantage of each other’s strong points and the potential benefits of mutual cooperation.

TRADP is expected to play a substantial role in the Northeast Asian economy. This role can best be accomplished if the three bordering countries take advantage of their complementarities and thereby balance respective strengths and weaknesses, based on the understanding that this is a project of mutual interest and benefits.

To tap the full potential of the Tumen River area, which in turn will contribute to the revitalization of the Northeast Asian regional economy, the main solution would be to build up the multinational free-trade zone around the border area. A leading component of this zone would be an industrial complex, which would serve as a large-scale site for industrial production, while also offering auxiliary services, including residential, commercial, logistical, entertainment, and so forth.
Northeast Asian Economic Cooperation and the Role of Regional Government

export of capital and technology. Finally, as a result of the TRADP, Japan will help to narrow this remaining gap in the Pacific rim and speed up the development of the coastal regions of the Japan-Sea rim.

In Northeast Asia, as in other regions, industrial development has been concentrated in big cities. In a sense, therefore, future economic and technical cooperation will be cooperation among cities. The cities of the Japan-Sea rim differ in terms of population, structure, and development stage. Each city has unique characteristics based on its transportation system, finances, technology, industries, natural resources, and labor resources. The complementarities among these cities provide an important basis for economic cooperation. Factors that need to be examined include the following: (1) the concrete bases of complementarities, (2) areas in which cooperation can be carried out in the short and medium term, (3) priorities for economic and technical exchanges, (4) the structure and volume of maritime trade in the Sea of Japan, (5) annual capacities of each port, (6) the potential for developing tourism, (7) costs of opening new sea routes, and (8) the establishment of management institutions.

In addition to economic and technical areas, regional cooperation should also include general exchanges in areas such as history, culture, political philosophy, and so forth. This would require establishing an integrated Northeast Asian studies institution.

Following the end of the Cold War, economic regionalism has become stronger. Northeast Asia has attracted attention in recent years, because it has the greatest potential for regional development in the world. Although the region still faces various development problems, both economic and institutional, the recent trends of economic cooperation and improved international relations make its future prospects brighter than ever.
We are confident that such a cooperative community will serve as an economic bridgehead for Northeast Asian development, that it will enhance the capabilities of the countries involved, and that it will contribute to peace and prosperity for the region as a whole.
The Role of Mongolia in Northeast Asian Regional Cooperation

Tsrendash Damiran

The policy concept adopted by the government of Mongolia in 1994 states that Mongolia will exert efforts to strengthen its position in Northeast Asia and to take part, constructively and appropriately in political and economic integration processes in this region. Therefore, Mongolia has great interest in the Tumen River Area Development Program (TRADP).

Mongolia’s geographic location makes it a vital part of the landbridge connecting the significant and expanding markets of Asia and Europe. TRADP plans envision linking the Tumen River area Chinese railway networks to Mongolia and to existing railway in Russia. Mongolia, for its part, intends to carry out a feasibility study for railway construction from Ulaanbaatar to Choibalsan and from Choibalsan to a Chinese station. The goal is to shorten transport time from the Tumen River area to Western Europe. The government of Mongolia believes that the development of this land-locked region is directly relevant to the development of the Tumen River area and therefore it seeks bilateral and multilateral cooperation with TRADP participating countries.

Regarding air transport, in 1997 Mongolia completed the construction of an international airport in Ulaanbaatar. Currently there are regular flights by both private and state-owned civil aviation companies from Ulaanbaatar to Moscow, Irkutsk, Beijing, Seoul, Osaka, Frankfurt, and Istanbul. In addition, charter flights connect Ulaanbaatar to Singapore, Vietnam, Thailand, and some other countries.

The airport in Choibalsan could provide the only direct link for Eastern Mongolia and its surrounding regions. Therefore, in 1997 Mongolia commenced the renovation of Choibalsan airport’s air navigation equipment, lengthening of the runway, and the construction of a new airport building. Furthermore, Mongolia is now designing a long-range plan, with the assistance of the ADB, to upgrade its aerospace capacity and convert to a satellite navigation system.

Other feasibility studies include one on tourism that will lead to a master plan for the tourism sector up to 2015, and one on telecommunication linkages between Far Eastern Mongolia and the Tumen River economic development area. This study includes telecommunication networks to link Mongolian northern and southern cities, a fiber optic network linkage between Mongolia and China, and linkages between Russia and China through Mongolian territory.
Mongolia also is very interested in taking part in projects such as the construction of high voltage electricity lines and gas pipelines from Russia to China. Under the TRADP, Mongolia intends to carry out a feasibility study on power supply to Dornod Province and Eastern Mongolia and on the extension of the electricity grid to this area.

In the past few years, Mongolia has undertaken significant actions to develop international transport using loans and grants from Japan, the World Bank, and the Asian Development Bank. For example, through these loans Mongolia has increased its railway capacity which now reaches up to 4 million tons of cargo through Mongolia to Russia and China. Mongolia is very interested in strengthening links between its northeastern part (Choybalsan Railway) and the road and railway networks of Russia (Baikal Amur Railway) and China (Northeast China Railway).

Mongolia has concluded transportation agreements with China, Russia, Kazakhstan, and the DPRK. Mongolia also actively cooperates with the International Road Transport Association of the Russian Federation, the National Transport Associations of the U.S. and Japan, and with the International Road Transport Union. Moreover, in 1990 Mongolia joined the Asian Highway Organization and has been included in the Asian Highway Network. A number of transport organizations and companies are now engaged in cargo transport to Russia and China via Mongolia. Business is likely to grow over time.
The Russian Far East: Time for Decision

Pavel A. Minakir

ECONOMIC PROFILE: THE RUSSIAN CASE
Throughout the 20th century the models of state government of the Russian Far East (RFE) have changed. The strong governmental regulation and direct financial support that began in 1917 in order to develop the region as a military base on the Pacific and as a reserve territory for agricultural migration from Central Russia, ended almost completely between 1922-1930, making the RFE (during that period) practically economically autonomous. The region could have continued this trajectory of independent development based on its own resources and on income from trade with Northeast Asian countries. However, the course of the RFE’s development would be very different. From 1930-1990 the Russian Far East fell under the strong regulation of the Central Soviet Government and the main purpose for the region’s development was to construct and support a military power on the Pacific capable of competing with U.S. military forces. To achieve this goal, the Central Soviet Government transferred to the region great economic and financial resources despite the evident inefficiency with which they were used in the region. This period was characterized by the creation of a very closed command economy on the Pacific: 75% of all commodities produced in Russia’s Pacific region were exported internally to USSR regions, 20-21% were sold within the Pacific region, only 4-5% was exported abroad.

This situation has changed drastically since 1991. The main changes were in the “rules of the game.” Although all of Russia experienced change, the Russian Far East has been especially affected. Changes in regulations or rules represent the most fundamental reason for the economic catastrophe experienced, more so than more evident reasons such as price liberalization, privatization, hyperinflation, and so on. Of course, these latter are the most popular way to explain what is happening in the Russian economy as a whole and to the Russian regions.

The changes in the “rules of the game” can be seen in the two main goals declared at the very early stage of reform. The first goal was to create and then inject into the Russian economy new market regulations. The second was to destroy the previous system of state regulation.

There are two general ways to recover macroeconomic equilibrium. The first is to freeze incomes and to focus common resources on consumer commodities production (stabilization approach). The second is to cut the money supply by
putting into place a “money confiscation reform” or by severely regulating the national financial system, including the banking system (deflation approach). Ideally both approaches must lead to structural changes in the economy.

Theoretically, a deflation approach is much crueler but it leads to a quicker reconstruction of the economy. That is why the Russian government chose the deflation policy. Based on this, the following model of market regulation has been followed in Russia.

1. Cutting of consumer demand on the basis of general price liberalization.
2. Cutting of demand on investment goods on the same basis plus on the basis of circulating capital.
3. Cutting of credit emissions by decreasing credit resources in commercial banks through a quotation of these resources by the Central Bank of Russia and by substantially increasing interest rates.

In reality the economic model and changes in economic regulation were needed just to facilitate the real modernization in the Russian economy—converting state property into property of the “criminal-bureaucrat community.”

Limiting the money supply, decreasing the volume of loans, increasing interest rates, and cutting effective demand will, in theory, decrease production costs and stop ineffective production. It should stimulate technological changes, improve production, and lead to other structural changes. However, Russia was not experiencing an over-investment of capital in the economy before economic reform began. On the contrary, during the last 12 years before 1990 real physical capital had been gobbled up. That is why Russian enterprises had no real opportunities to make structural maneuvers except to cut jobs. But the decrease in the number of jobs made no sense from the point of view of the adaptive capability of enterprises. The share of salaries in production costs was too low. Therefore, enterprises all but ignored the theoretical recommendations and did not cut jobs substantially until 1995, when the “transitional crisis” in Russia had become a classic economic crisis.

Managers of state (and later privatized) enterprises chose another economic strategy—a strategy of non-declared bankruptcy. They stopped payments, and in three years a transition crisis in Russia turned into a financial crisis. Instead of a dramatic surge in the financial system, the financial system was simply killed. Producers had no money; because of this they began to ignore their obligations. Bad debts became new money. And a new financial system appeared in the economy in the form of barter trade. Quite a new situation, a very new economic model has been created—the government stimulated a crisis at the micro-level of the economy to manipulate the behavior of enterprises so that it would correspond with a standard scheme. But the reaction of enterprises was not adequate; in essence they provoked a non-monetary inflation, in addition to the
standard inflation. Given the situation, both the state and producers wanted to decrease the inflation rate, but automotive regulators could not work.

A strategic mistake was made at the very beginning of the reform in Russia. The application of financial regulation and implementation of compensators and stabilizers into the economy can be done if it is a market economy. In the case of Russia it was decided to create and apply a system of market regulators to a non-market economy.

Another mistake was to use a single approach of economic regulation in different regions. From the initial stage of the economic reform Russia was viewed as a single economy, but the reality was that the country was so large that it had diversified economic systems. In 1995 it became evident that the central government was beginning to look for new policies which could be implemented successfully in different regions with very different economic profiles, history, specialization, and basic trends.

**ECONOMIC PROFILE: THE RUSSIAN FAR EAST CASE**

The Russian central government has stopped all subsidies to the Far Eastern region (transport, energy and wages subsidies, financial subsidies for capital formation, etc.). The region has lost the Russian domestic market and the markets of the new CIS countries because of a decrease in general demand. The GNP in 1997 was estimated as 42% of the 1990 level. Production costs, which now are no longer covered by the state budget, increased greatly. As a result by 1995 75% of regional products were sold inside the RFE, 12% were exported to the domestic market, and 13% were exported abroad. This means that a new economic model for the Russian Far East is ready to be activated—a model based on, as in the 1920s, economic cooperation with Northeast Asian countries.

The domestic market of the RFE itself is too small to support effective demand. That is why the total decrease in regional output from 1991-1997 was about 58%, even in 1997 the regional growth rate was -5.6%. In the RFE one can hardly see any structural changes. Changes in industrial structure are the result of price proportion variations and differentiations in relative growth rates in different industries.

The most serious problem is the decrease in total investments. In 1997 the total volume of investments in the region was estimated at 15% that for 1990. The share of the RFE’s investments in the investment activity of Russia as a whole was about 5% in comparison with 8% in 1991. The share of budget investments was 23% in comparison with 92% in the 1980s and 33% in 1994. Two-thirds of all investments were commercial investments. That is why the investment climate in the region is so important for future development.
The main industrial complexes in the Far East have decreased their output. In comparison with the maximum level of output in the 1980s the extraction of coal consists only of 59%, oil-73%, timber-28%, fish-56%, gold-85%, production of steel-10%, wood products-12%, paper-10%, cement-23% and so on. For many industries the coefficient of production capacity used is very low—from 87% in the coal industry to 6% in the production of cellulose. Before the reform the share of the production of consumer goods in the industrial production of the Far East was about 4.1%, now it is only 0.6%. The most serious problems are in machinery. Before the reform more than 50% of the output in this industry was devoted to military purposes. In 1997 the output of RFE machinery was estimated at 24% of the 1990 level.

There is only one sector of the RFE’s economy that has grown since the beginning of economic reform—the export sector. The external trade turnover increased from 1992 to 1997 from $2.7 billion to $4.9 billion. The main trade partners for the region are Japan, the U.S., ROK, and China. More than 50% of foreign trade is connected to Northeast Asian countries. At the beginning of 1997 the total volume of accumulated foreign direct capital was estimated at $550 million. From 1995-1997 Primorsky Krai, Magadan Oblast and Kamchatskiy Oblast saw a total investment of about $240 million in the form of foreign loans.

Given this situation, regional authorities and the academic community have proposed a new concept of regional economic development. Its essence is to return to the model of the 1920s, to recover the economic autonomy of the Russian Far East based on the creation of an “open regional economy” and on cooperation with Northeast Asian countries.

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Table 1. Investment Ratings in the Russian Far East

INTERNATIONAL COOPERATION: TRADP AND RELATED PROJECTS

The Tumen project could be used to strengthen Russian participation in Northeast Asian economic cooperation. On the Russian side the area encompassed in this project is the Tumen River-Zarubino-Vladivostok-Nakhodka-Pogranichny-Tumen River area. There are sub-projects, related to the general TRADP itself.

Modernization of Zarubino Port

Modernization of Zarubino port and the construction of the Hunchun-Zarubino railroad will provide China with a new exit to the Sea of Japan. And a new cargo route will be created through China and Zarubino to Northeast Asia and Europe. The railroad was completed in 1996, linking Russia with Hunchun in China. The port of Zarubino is managed as an open joint-stock company. In 1997, 700,000 tons of cargo were handled at the port. According to the plan, the figure will be increased to 7 million tons. The next step is the beginning of Zarubino port modernization. Through Zarubino, Russia will transport steel and other metal products exported from Russia. But transit cargoes from China still account for only a very small percentage. It is noteworthy that wood chips from Jilin Province are now transported to Japan through Zarubino port. Based on a contract concluded by Jilin Province in Japan, 740,000 tons of chips were transported in 1997.

Zarubino Seaport Management Co., Ltd., is responsible for the management of Zarubino port; it does not plan to handle container cargoes for the time being. This policy is presumably due to the Russian government’s intention to avoid competition between Zarubino port and container ports in Nakhodka, Vostochny, and Vladivostok.

Modernization of Trans-Siberian Railroad Container Service

General cargo flows in the RFE have decreased greatly. From 1990 to 1996 cargo flows decreased by nearly two-thirds (from 113.5 million tons in 1990 to 41 million tons in 1996). Because of this the Trans-Siberian is operating at only on 31% of its full capacity. It means that Russia is loosing benefits and cannot substantially decrease transportation tariffs for the Far Eastern region. The international container service through Siberia was opened in 1971. The dynamics of transporting international containers between Asia-Pacific and Europe were as follows: 1971–1,992 containers, 1981–136,455 containers, 1990–69,879 containers, 1996–22,068 containers. In the 1980s the Trans-Siberian Container Service transported 5-6% of the total number of containers from Asia to Europe. This figure has decreased to 0.7%. The most important
cause for this is an enormous increase in transport tariffs and cargo shipment tariffs at seaports. Transport tariffs in Russia in 1990-1997 increased 22,113 times, industrial prices during that same period increased only 8,895 times.

If economic and institutional barriers were overcome the Trans-Siberian container service could transport about 1 million containers per year. There is a federal program to achieve this result. First, in 1997 transport tariffs were decreased by 10% and in the near future there will be an additional decrease of 30-50%. Second, the Ministry of Transportation and the Far Eastern Railroad Company have started to run special trains, which can transport containers from Vostochny to Luzaika in 10-11 days. Third is the simplification of custom procedures. Custom duties not in harmony with international practices will be eliminated. Fourth, the value-added tax will be eliminated in the case of container transportation tariffs. Fifth is the modernization of the railroad bridge through the Amur River near Khabarovsk, which has been completed.

The Nakhodka Free Economic Zone (FEZ)
After several years of difficulties in creating a Free Economic Zone under unfavorable conditions—the central government was not eager to provide additional incentives for investors—the Administrative Committee in Nakhodka and the administration of Primorsky Krai decided to activate a new program for developing the FEZ. A main part of this program is the construction of local, small-scale economic zones in the territory of Nakhodka. Five local zones are now under construction. The most interesting and promising are the Russian-American and Russian-Korean technological parks. A very important project is the establishment of a customs-free zone in Vostochny port for the handling of containers.

The Sakhalin Oil and Gas Project
Khabarovsk Krai and Primorsky Krai are waiting for the gas from Sakhalin to improve their energy situation, mainly to cut energy tariffs for producers. Moreover, the beginning of oil and gas extraction will mean the beginning of a new stage in economic cooperation in Northeast Asia because of greater physical and economic interdependence among Russia, Japan, China, Korea, and Mongolia.

CONCLUSION
The future development of the Russian Far East and possibilities for regional cooperation in Northeast Asia are connected with the success of the State Long-term Program for the Development of the Far East to the Year 2005. The
program has many problems, particularly problems with federal budget financing. In 1997 the region received 13.5% of the planned budget investments. In 1998 because of the financial and budget crisis in Russia the prospects were even worse.

The Russian Far East has great potential for effective participation in Northeast Asian economic cooperation because of the RFE’s extremely rich natural resources, advanced technological base in industry, and skilled population. Two main things are needed to realize this high potential: first, a stabilization in economic development and a solution on this basis of financial problems; second, coordination in economic policy between the territories of the RFE and central authorities.
Grouping Towards Economic Cooperation in Northeast Asia

Tetsuya Endo

REGIONAL ECONOMIC COOPERATION DEVELOPMENT

• APEC takes a role as the hub of the Asia-Pacific region.
• The participation of Russia in APEC is considered.

NORTHEAST ASIA AND REGIONAL ECONOMIC COOPERATION

Northeast Asia, composed of South and North Korea, Japan, China, Mongolia, and the Russian Far East, is off the current stream of regional economic cooperation.

Reasons

• North Korea is a missing link in Northeast Asia and prevents regional coordination in government-level relations. The region is an aggregate of bilateral relations, some of which are not officially normalized.
• The North Korean economy is in devastatingly bad shape.

POTENTIAL AND PROSPECT FOR THE DEVELOPMENT OF REGIONAL ECONOMIC COOPERATION

Northeast Asia is an economically promising area with abundant labor and natural resources. The following approaches are suggested as examples for the development of regional economic cooperation in the region.

• Further strengthening of existing bilateral relations (remarkable improvement of Russia-Japanese relations is a tendency to be welcomed).
• Normalization of relations between North Korea on one hand and Japan, South Korea, and United States on the other hand. Encourage North Korea to become a constructive partner in the region.
• Separate economy from politics and promote a step-by-step practical approach in economic cooperation (e.g., regional cooperation plans in the field of agricultural technology).
• Formulate regional cooperation plans in energy such as natural gas.
• Encourage the United States to participate in this area.
Prospects for Multilateral Cooperation: Japan, China, and Russia

Vladimir I. Ivanov

In 1998, some of the impediments for cooperation in the Northeast Asian economic subregion still remain, but, compared with 1992-1997, there has been considerable progress in Moscow-Tokyo and Moscow-Beijing political and economic dialogues. Also, in 1998 key regional bodies such as APEC are expanding to involve new economies such as Russia, thus making the Northeast Asian subregion better represented in its working structures.

Recent positive developments in Northeast Asia allow us for the first time to single out the Japan-Russia-China "triangle" and study prospects for potential mutually beneficial and long-term linkages among these three neighbors which have historically played key roles in Northeast Asia—traditionally known as an area of rivalry and conflict, not cooperation.

As a subregion poised for economic cooperation, Northeast Asia became a focus of economic analysis only in the early 1990s. But despite the growing primacy of economics (after immediate security concerns subsided), one can identify "strategic spots" in the subregion or a proposed "triangle" of issues that are key to the relationships and stability of Northeast Asia: common borders, modalities of mutually beneficial access to natural resources across borders, and long-term environmental concerns.

The first set of problems is deeply rooted in history and associated with past conflict. All three powers continue with their long-time disagreements with regard to some portions of their borders. The question is how and when these impediments will be removed and what underlying philosophy could help to manage these disputes if the disagreements linger.

The second set of problems is long-term energy needs and options for meeting them. The question is how the new links of interdependence in the area of energy production and supply will influence long-term state-to-state relations and public perceptions.

The third set of problems is the threat of environmental degradation in Northeast Asia. The question is how China, Russia, and Japan can deal with environmental problems that do not respect borders and already affect vital interests of the people of these three countries.

The modality of contacts in these three areas among Japan, China, and Russia and the philosophy underlying their relationships could strongly
influence—as was always the case in the past—the nature of multilateral interaction in the whole of Northeast Asia.

The focus on a “triangle” is promising in two respects: (1) it provides an opportunity to test a “modular multilateralism” approach, and (2) it explores prospects for these three countries’ long-term constructive and mutually beneficial engagement.

The question is how the concept of modular multilateralism can work in the environment of Northeast Asia. One can assume that each “module” (country-wise) means much more than a combination of bilateral economic issues and opportunities—rather each “module” can encompass a number of common or shared interests that cannot be effectively addressed through unilateral or bilateral efforts.

The expectation is that the concept of modular multilateralism (issue-wise) as an “open” system can facilitate cooperative relationships among all countries and economies of Northeast Asia, not only between Japan, Russia, and China. However, if cooperation within this “triangle” is successful, it will become a catalyst for the consolidation of the entire subregion, incorporating other issues and participants.
Regional Cooperation for Telecommunications Infrastructure in Northeast Asia

Meheroo Jussawalla

In today's globally interconnected new economy—linking the world's markets, banks, and currencies closer together—it becomes imperative that we recognize the significant role of the information industry, which now has a turnover (total sales revenue) of $1.5 trillion as of 1997.

Market demand has exploded and global traffic is growing at a dizzying pace. The Information Age has heralded a worldwide explosion of demand for converging technologies like the Internet, Electronic Commerce, Internet Protocol Telephony (voice over computers), and an integration of telephones with cable broadcasting, resulting in large scale mergers like AT&T's with TCI, which is the largest cable company in the world, and with British Telecoms, virtually establishing a monopoly over international convergence services and defying the U.S. Telecommunications Reform Act of 1996. Transmission channels are racing to catch up with this demand bringing about declining costs, increasing profits, and greater choice and perhaps greater affordability of access to information. In this technological revolution, the Asia-Pacific region has been a leading player which has slowed down somewhat due to financial constraints. The region's share of international traffic will rise from 4% in 1988 to an estimated 24% in 2003. Similarly the teledensity of some of the countries varies widely with China trying to catch up to eight telephones per 100 persons by the year 2000.

Major drivers of international telecom demand have been privatization and deregulation of statutory telephone monopolies in the Asia-Pacific region, as in the cases of Malaysia, Thailand, South Korea, and Singapore, along with entry of new independent carriers in cellular and satellite services. In February of 1997, the WTO got an Agreement for Basic Services, from 67 countries to enforce the re-balancing of telephone tariffs. The FCC provided Bench Mark rates for telephone calls between the U.S. and Asia-Pacific countries, which would prevent call-back services making arbitrage profits at the expense of even small Pacific Island nations. All this was placed on hold because of the currency crisis in Asia.

As of February 1998, 50% of the traffic over the Pacific Ocean was Internet driven. The estimated growth of Web users in the region will be 12% by 2002. Technology is maturing and will provide supplies as the market expands. Data transmission rates by 1999 will be 80 kbps and are estimated to grow to one
terabit per second by 2001. The China-U.S. submarine cable with an investment of one billion dollars will carry traffic at 80 kbps using a new technology of wave division multiplexing which means using various channels transmitting data in larger volume. AT&T, BT, and Japan Telecom signed an agreement to build a one billion dollar submarine fiber optic cable. It will touch Kahe Pt. on Oahu and then reach San Luis Obispo—a 13,000 mile link to be completed by 2000. It will carry 8 million voice calls simultaneously. Even low-income countries like China and India have invested in the capital stock of Iridium to benefit from instantaneous connectivity. The significant questions for the region are: does technology guarantee connectivity to the low-income and remote regions within these countries? Or does it widen the gap between the tele-haves in the urban areas and the tele-have-nots in the rural farmlands? Does a rising tide lift those without boats?

It is against this backdrop that Korea Telecom, a partially privatized monopoly telephone company of South Korea decided it is time for it to venture into global markets and become competitive in its supply of services. Its goal was to make Korea one of the strategic telecom hubs of the Pacific.

In keeping with the goals of the East-West Center in technical interchange, Korea Telecom decided in 1996 to support a large-scale research study at the East-West Center to ascertain the challenges and policy options being tacked by the telecom sectors of other leading countries in the field such as the United States, Europe, and Japan. Research papers were commissioned from the best scholars and practitioners in the field along with written critiques of each country’s study. A preliminary workshop was held in the summer of 1997 to learn the results of these surveys and to discuss the dynamics of changing technologies and their impact on industry structure, investments, and trade in both equipment and services. These discussions also focused on the changing international regime such as the new rule-making policies of the International Telecommunications Union (based in Geneva with a membership of 170 countries) with respect to harmonization of standards, allocation of the radio frequency spectrum, and meeting the competitive demand for the satellite orbit. From Brussels to Tokyo value-added networks and policies were evaluated by these scholars for the European Union, the FCC, and the MPT of Japan. The FCC, in keeping with the Telecommunications Reform Act of 1996 for the US, laid down bench mark rates for countries that had international traffic agreements with the US, and Japan’s MPT ordered the break up of the Nippon Telephone and Telecommunications Company (NTT) which was the dominant monopoly carrier for decades. These issues were carefully scrutinized by the authors, policy makers, and industrialists who imparted their expertise in lively exchanges during these sessions.
All papers were critiqued by other experts in the field, and the presenters agreed, after deliberations, to revise the contents appropriately to cover the spate of mergers and acquisitions and the flows of direct foreign investment. The only other Asian country (with the second largest market for telecommunications in the world) which was studied was China with recommendations for Korea Telecom’s late entry into this exploding market.

A final conference in the winter of 1997 and early 1998 brought to the East-West Center a veritable galaxy of world renowned experts. These international practitioners and policy makers imparted their knowledge and experience to the research papers in lively exchanges over a period of three days. The final output of these studies in the United States, Europe, and Japan (China was excluded) are to be published in a volume, *Globalization of Telecommunication Markets: Competition and Collaboration*. Having recently been admitted to the OECD and having taken the lead in telecommunications at the Bogor Meeting of APEC, South Korea’s ambitious programs were forging ahead when the currency contagion spread and stalled the investment programs that were already on the anvil, one of the casualties being the APII Summit to be held Honolulu.

Along with these studies another trail-blazing research project in telecommunications was undertaken in 1997 by the East-West Center in collaboration with the Northeast Asia Economic Forum. On the eve of the 21st century the world in general and the UNDP in particular has begun to attach great importance to Northeast Asia as a vast economic and operational theater in the world of the future. Studies were commissioned to assess the benefits and costs of communication infrastructure development in the low-income triangle of the Tumen River Delta. This study involved all six member countries of the Forum: China, Japan, Mongolia, North Korea, Russia, and South Korea. The Tumen River originates in the Changbai Mountain range which spans eastern Jilin Province in Northeast China. The river runs for 600 km from this mountain though North Korea and enters the Sea of Japan by the city of Khasan in Primorsky Krai of Russia.

An in-depth analysis was done by accomplished scholars from Australia, Japan, the University of California, and the University of Hawaii, who collected statistical information hitherto unavailable and gave their insights into the future potential of the region. These papers were discussed at a preliminary meeting held in Ulaanbaatar in Mongolia in July 1997, which brought to light the relatively advanced telecommunications infrastructure in the city of Ulaanbaatar, but with next to nothing beyond the periphery of that city. The focus of this meeting was to discuss a summit of policy makers and telecom service suppliers in Honolulu in January 1998, in order to design a framework for creating opportunities for infrastructure development in the Tumen River Delta region in
general and the Rajin-Sonbong area in particular, which has been declared a Free Economic and Trade Zone and is being assisted by the UNDP. (Ian Davies of the UNDP Tumen Secretariat told The Economist of 27 June 1998 that US$900 million had already been invested in the Tumen Delta and more than US$3 billion will be required, but border controls have to be eased—Rajin-Sonbong and Nakhodka are declared FTZs.) For the first time in recent history, North Korea sent a group of six experts to the meeting, of whom some were engineers and a couple were policy makers, they spoke English. They were joined by representatives of Nakhodka Telecoms Company from Russia, which is a subsidiary of Cable and Wireless, and by the Government-operated telephone company of Mongolia, along with top officials from KDD and NTT of Japan, and from Korea Telecom.

Under the chairmanship of Dr. Lee-Jay Cho, this workshop resulted in a fruitful exchange of information and ideas regarding the progress of landlines, cellular systems and satellite receiving stations such as VSATs (very small aperture terminals). Both KDD and Korea Telecom have made investments in Mongolia, and Telstra and Intelsat have provided the earth station for that country. Likewise North Korea has contracted Loxley Telecom Company of Thailand for its cellular linkages. This workshop also resulted in a volume of papers, commentaries, and data awaiting publication, with the permission of the East-West Center.

Finally all these representatives of the Northeast Asia Economic Forum participated in a Round Table Discussion at the 20th Annual Conference of the Pacific Telecommunications Council (PTC) held in Honolulu and attended by 1100 participants. The North Korean and Mongolian participants from the East-West Center workshop expressed their countries’ needs and policies which evoked considerable interest among vendors in search of new markets. The PTC Board of Trustees welcomed this opportunity, the first of its kind in 20 years, to have North Korean and Mongolian participants join various sessions and visit equipment exhibits.

The future of this project will be further deliberated at an upcoming meeting to be hosted in Yanji City in Jilin Province, China, which borders the Tumen River delta area. This meeting is planned for 21-24 September 1998 and will coordinate with the UNDP Forum on Investment in the region. Once set in motion, these infrastructure developments will truly acclaim the “death of distance” in the remotest parts of the globe; a globe which is not yet a global village.

For the Yanji Meeting a background paper has been prepared by Sun Lin and Meheroo Jussawalla, who have analyzed alternative models of infrastructure development. Instead of linear economic forecasts, we have provided scenarios
based on different levels of demand as well as available technology and operational issues. Our report is based on the belief that a sound understanding of the reality of the region and its growth potential is crucial for valid business perspectives, so that successful strategies may be implemented which will deliver practical benefits to the Tumen River Delta in the long run. In the Demand diagram which we have presented and the index used is a combination of composite demand and service and equipment on the supply side. Demand is difficult to project especially when it is not backed by purchasing power, but as the Commerce Department in the U.S. gives a price index based on a basket of commodities commonly used, we have combined a number of types of demand such as demand reserved over a period of time (business demand), unfulfilled demand, demand for emergency communications, and demand of low-income dwellers. The “Missing Link” has been calculated for this region and the rationale behind the Telecommunications Infrastructure that we have proposed is to deviate from the UNDP Master Plan by extending existing networks within a politically sensitive environment by keeping the costs as close to reality as possible. With the availability of funding from international institutions, new infrastructure patterns can be worked out later based on our proposed model. In any scenario, the close cooperation of the member countries of the Forum becomes the most significant component of success. These details will be thrashed out at the upcoming Yanji Meeting in late September.
Table 1. Major International Telecom Demand Drivers

- Privatization and Deregulation
  Entry of new carriers
- Accounting Rate Reform
- Innovative New Services
- Internet and Services through Internet
  (the most important and significant of all drivers)

Table 2. What Is Driving Internet Growth

- Digital Delivery of Goods and Services
  Delivery through Internet—Software, Newspapers, Music CDs,
  Banking, Airline Tickets, Securities, Insurance, Consulting Services,
  Education, Billings of all kinds of business
- Retail Sale of Tangible Goods
  Internet malls and shopping of all kinds

Table 3. Major Internet Service Providers in China (June 1997)

<table>
<thead>
<tr>
<th>Web Site</th>
<th>Service</th>
<th>ISP</th>
</tr>
</thead>
<tbody>
<tr>
<td>bta.net.cn</td>
<td>General</td>
<td>Beijing Telecom Admin.</td>
</tr>
<tr>
<td>bol.co.cn</td>
<td>General</td>
<td>Intercom Co.</td>
</tr>
<tr>
<td>cci.go.cn</td>
<td>Economics &amp; Trade</td>
<td>State Information Center</td>
</tr>
<tr>
<td>dragonweb.co.cn</td>
<td>Entertainment</td>
<td>Dragonweb Technology Co.</td>
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<tr>
<td>sonic.net.cn</td>
<td>General</td>
<td>China Internet Info. Ctr.</td>
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<tr>
<td>edu.cn</td>
<td>Education &amp; Research</td>
<td>State Education Commission</td>
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<tr>
<td>casnet.cn</td>
<td>Science &amp; Research</td>
<td>China Academy of Sciences</td>
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<tr>
<td>east.co.cn</td>
<td>General</td>
<td>East Telecommunications, Ltd.</td>
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<td>Entertainment</td>
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<td>chinabike.beijing.cn.net</td>
<td>Entertainment</td>
<td>BIKE Electronics Tech. Co.</td>
</tr>
<tr>
<td>online.sh.cn</td>
<td>General</td>
<td>Shanghai Telecom Admin.</td>
</tr>
</tbody>
</table>

*Source: CTR Group, 1997*
Figure 1. Teledensity in Asia-Pacific and China
Source: International Telecommunication Union
Figure 2. Demand for telecom services in the TR region/China

Figure 3. A proposed Tumen River region telecommunications infrastructure
Figure 4. Telecom industry alliances map
Source: Ovum, Ltd. 1996.