

Keynote Address

"The Global Financial Crisis and Subregional Economic Cooperation in Northeast Asia"

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Today, I would like to talk about the impact of the global financial crisis on Northeast Asia, and the medium-to long-run implications of the crisis for the subregion, particularly the need to step up subregional cooperation to achieve sustained economic growth, prosperity and peace in the post-crisis period.

Economic Characteristics of Northeast Asia

Northeast Asia has witnessed impressive economic development and growth over the last three decades. Following Japan's success in the 1960s and 1970s, the Republic of Korea (South Korea) embarked on outward oriented policies, and the People's Republic of China (China) accelerated its economic reform and opening in more recent years. The integration of the core Northeast Asian economies—Japan, China, and South Korea—with other East Asian economies has also been an important factor for this remarkable achievement. Northeast Asia consists of Japan, China, South Korea, the Democratic People's Republic of Korea (North Korea), Mongolia, and the Russian Far East.

The output share of Northeast Asia in the world economy has risen over the last three decades. The GDP share of Japan, China, and South Korea in world GDP, measured in purchasing power parity (PPP) values, increased from 11% in 1980 to 17% in 2000 and then to

20% in 2008 (Table 1). According to IMF projections, this share will rise to 24% in 2014. Adding Mongolia, North Korea, and the Russian Federation (instead of the Russian Far East due to the lack of consistent subnational data available) to these core countries would not change the general trend and the five countries—excluding North Korea where GDP estimates are hard to come by—would account for 27% of the world economy in 2014. If measured in nominal GDP (in US dollars), Northeast Asia has experienced some stagnation during the 2000s, but the overall trend is still a rising weight of Northeast Asia in the world economy.

Northeast Asian economies are diverse not only in political systems but also in economic characteristics—e.g., economic size, population, industrial structure, openness, and stage of economic development (Table 2). Japan and South Korea are advanced economies with OECD membership, while China, Mongolia, North Korea, and Russia are transition economies. Mongolia is the most open Northeast Asian economy in trade and inward foreign direct investment (FDI), while North Korea is a highly controlled, closed economy without a functioning market system. Russia and North Korea have yet to join the World Trade Organization (WTO).

The degree of human development is a good proxy for a country's stage of economic development. It is captured

Table 1: Share of Northeast Asia's GDP in World GDP (%)

	1980	1990	2000	2008	2010	2014
<i>Purchasing Power Parity (PPP) GDP</i>						
(1) Japan	7.9	9.1	7.6	6.3	5.9	5.4
(2) China	2.0	3.6	7.2	11.4	13.2	16.2
(3) South Korea	0.8	1.4	1.8	1.9	1.9	2.0
(4) Mongolia	0.0	0.0	0.0	0.0	0.0	0.0
(5) Russia	--	4.2	2.7	3.3	3.0	3.0
(1)+(2)+(3)	10.7	14.0	16.6	19.6	21.1	23.6
(1)+(2)+(3)+(4)+(5)	--	19.2	19.3	22.9	24.1	26.5
<i>Nominal GDP (in US dollars)</i>						
(1) Japan	9.1	13.4	14.5	8.1	8.6	7.8
(2) China	2.6	1.7	3.7	7.1	8.7	11.1
(3) South Korea	0.6	1.2	1.7	1.5	1.4	1.6
(4) Mongolia	0.0	0.0	0.0	0.0	0.0	0.0
(5) Russia	--	0.4	0.8	2.8	2.3	2.8
(1)+(2)+(3)	12.3	16.3	19.9	16.7	18.7	20.4
(1)+(2)+(3)+(4)+(5)	--	19.4	20.7	19.5	21.0	23.3

Source: IMF, *World Economic Outlook*, October 2009, database.

Table 2: Key Economic Indicators of Northeast Asian Countries, 2008

	GDP	POP	GDP/ POP	Inv/ GDP	Sav/ GDP	Industrial Structure			Exp/ GDP	Imp/ GDP	FDI/ GDP
						Agr	Ind[Man]	Serv			
						Bill.US\$	Mill	US\$			
Japan	4,909.3	127.7	38,443	24.0	25.2	1.5	30.1[21.4]	68.4	16.1	14.8	4.1
China	4,326.2	1,325.6	3,263	42.6	49.2	11.3	48.6[34.4]	40.1	35.0	28.4	8.7
South Korea	929.1	48.6	19,115	31.4	30.2	2.5	37.1[28.1]	60.3	52.9	54.1	10.7
Mongolia	5.3	2.6	1,998	40.2	38.8	23.0	41.5[4.5]	35.6	64.3	65.7	37.3
North Korea	--	23.9	--	--	--	--	--	--	--	--	9.4
Russia	1,607.8	141.8	11,339	25.3	36.3	4.8	38.5[19.0]	56.8	33.4	22.5	12.8

Note: Inv = investment, Sav = savings, Exp = export, Imp = import, FDI = stock of inward FDI.

Source: IMF, *World Economic Outlook*, October 2009, database; World Bank, World Development Indicators; UNCTAD, *World Investment Report*, 2009.

Table 3: Human Development Index in Northeast Asia

	1980	1990	2000	2007
Japan	0.887	0.918	0.943	0.960
China	0.533	0.608	0.719	0.772
South Korea	0.722	0.802	0.869	0.937
Mongolia	--	--	0.676	0.727
North Korea	--	--	--	--
Russia	--	0.821	--	0.817
EU27	0.856	0.866	0.894	0.921
USA	0.894	0.923	0.949	0.956

Note: Data for EU27 are averages for the 27 countries for which data are available.

Source: UNDP, *Human Development Report* (2009).

by the Human Development Index (HDI) constructed by the United Nations Development Program (UNDP), which is a composite indicator measuring the average achievements in three basic dimensions of human development: a long and healthy life, knowledge, and a decent standard of living. These HDI indicators show that Japan and South Korea performed as well as or slightly better than the European Union average of 0.92 in 2007, whereas China, Mongolia, and the Russian Federation (representing the Russian Far East) lagged behind (Table 3).

Trade integration in Northeast Asia has increased during the last decade. The share of intra-Northeast Asian trade in the subregion's total trade with the world has risen from 15% in 1992 to 23% in 2008. Most of this intra-Northeast Asian trade is due to trade among Japan, China, and South Korea. The share of trade among these three core countries in their total trade with the world was 14% in 1992 and 22% in 2008. During this period, Japan and South Korea became increasingly dependent on trade with China (Table 4), shifting their focus away from the US and Europe. Although China's trade dependence on Northeast Asia declined, the overall trade integration among the three Northeast Asian countries has deepened robustly.

The Russian Far East's trade dependence on Northeast Asia may be high, but the lack of data cannot confirm it; the available data for the Russian Federation shows that its trade dependence on Northeast Asia has been low, at around 12% in 1992 and 14% in 2008. The trade dependence of Mongolia and North Korea on other countries in Northeast Asia is much higher but declined during the same period

Table 4: Trade Dependence of Individual Countries on Northeast Asia (%)

	1992	2000	2008
Japan	10.9	16.6	25.1
China	22.2	26.7	20.1
South Korea	23.5	26.0	32.0
Mongolia	78.2	67.6	75.5
North Korea	54.1	34.0	35.7
Russia	12.5	8.1	14.4

Source: IMF, *Direction of Trade*, online.

from 78% to 76% and from 54% to 36%, respectively. Overall, trade links between the three core countries with Mongolia, North Korea, and Russia to date have remained minimal. This can be explained by both economic and non-economic factors: economic factors include a low degree of marketization in North Korea, low levels of trade-related foreign direct investment in North Korea and Russia, and a weak physical infrastructure; and non-economic factors include security tensions in the case of North Korea and geographic remoteness for Mongolia and the Russian Far East. This suggests that there is still huge potential for further trade integration in Northeast Asia.

Developing a positive environment conducive to business is crucial for attracting the required investment for sustainable growth of the subregion. The current performance of Northeast Asia's business environments, as measured by the World Bank's Doing Business Index, is mixed (Table 5). Surprisingly, China's Doing Business Index is not high, despite the large size of inward FDI. Russia faces a formidable challenge of improving the quality of its business environment, while North Korea is not in the position to attract investment though no data are available.

Problems areas in Northeast Asia include: "dealing with construction permits" (Russia, China, and Mongolia); "trading across borders" (Russia and Mongolia); "starting a business" (China, Russia, and Japan); "employing workers" (South Korea, China, and Russia); "paying taxes" (China, Japan, and Russia); "closing a business" (China and Russia); and "protecting investors" (China and Russia). The Northeast Asian economies are encouraged to work on these areas for improvement.

Table 5: Business Environment Rankings of Countries in Northeast Asia, 2010

Index Factor	Japan	China	South Korea	Mongolia	Russia
Overall Ranking	15	89	19	60	120
Starting a Business	91	151	53	78	106
Dealing with Construction Permits	45	180	23	103	182
Employing Workers	40	140	150	44	109
Registering Property	54	32	71	25	45
Getting Credit	15	61	15	71	87
Protecting Investors	16	93	73	27	93
Paying Taxes	123	130	49	69	103
Trading Across Borders	17	44	8	155	162
Enforcing Contracts	20	18	5	36	19
Closing a Business	1	65	12	110	92

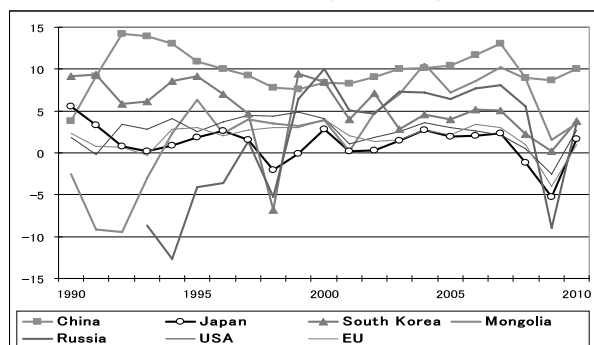
Source: World Bank, *Doing Business Index* Database 2010

Impact of the Global Financial Crisis on Northeast Asia

The impact of the global financial crisis on the world economy and trade has been generally more severe for advanced economies. According to the most recent IMF estimates, the global economy contracted last year by 0.8%, which was the first decline in world output in the post-WWII era. Advanced economies contracted by a total of 3.2%, while emerging and developing countries grew by 2.1%. The volume of world trade in goods and services saw an estimated drop of 12.3%, with a sharper contraction in manufactured product trade.

As a result of sharp export contraction, GDP growth rates in Northeast Asian economies were significantly affected (Figure 1). However, not all economies saw negative growth in 2009; growth performance was mixed. Russia suffered the most in the wake of the global financial crisis, having likely registered a negative growth rate of 9.0%, followed by Japan with a likely negative growth rate of 5.3%. South Korea was also impacted severely in the first half of the year, but began to recover strongly in the second half and, as a result, registered a 0.2% growth rate for the year 2009. China grew by 8.7% last year so did Mongolia at the likely rate of 2.8%. This year Japan is expected to recover at 1.7%, and China is expected to continue to grow robustly at 10% according to the IMF. Due to the economic recovery, trade among these Northeast Asian economies is expected to perform better than world trade generally.

Figure 1: Real GDP Growth Rates of the US, EU, and Northeast Asia (1990-2010)



Source: IMF, *World Economic Outlook*, October 2009, database.

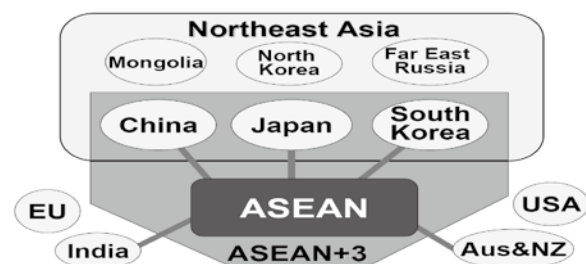
It is still too early to draw definite implications of the global financial crisis for the longer run growth prospects in Northeast Asia. However, given that economic recovery in the United States and Europe is likely to be weak over the medium term, it will be necessary for the Northeast Asian economies to expand domestic and subregional demand through concerted policy efforts. They must rebalance sources of growth away from excessive dependence on external demand in the US and Europe towards domestic and subregional demand. To achieve this, they need to further invigorate trade and investment and integrate their economies into a larger subregional market so that they can benefit from a scale economy and thus produce and spend more.

Lessons from ASEAN for Northeast Asia

Following the 1997-98 Asian financial crisis, East Asia has been the main driver of regional economic integration, without much involvement from the three non-core Northeast Asian countries. Although Japan, China, and South Korea have increasingly integrated among themselves and with Southeast Asian economies and the rest of the world, other Northeast Asian economies have not witnessed any significant integration. The main challenge is how to integrate Mongolia, the Russian Far East, and North Korea with the core countries of Japan, China, and South Korea, and with wider East Asia.

Over the past 25 years, the major drivers of East Asia's outward-oriented economic growth and integration have been market-driven trade, FDI and finance, and the formation of regional production networks and supply chains linked to international markets. The expansion of intra-East Asian trade has been remarkable compared with those of the North American Free Trade Area (NAFTA) and the European Union. Due to the slow progress of WTO-led multilateral trade negotiations, there has been an increasing worldwide trend towards regional integration through free trade agreements (FTAs), and Asia has been no exception. Most East Asian economies embarked on FTA negotiations with partners inside and outside East Asia.

East Asian economies have also intensified other types of cooperation such as infrastructure development, energy security, environmental protection, and finance. Such cooperation has been based on subregional

Figure 2: ASEAN, ASEAN+3 and Northeast Asia

Source: Author.

cooperation initiatives. The most successful example of subregional cooperation is that of the Association of Southeast Asian Nations (ASEAN), which is composed of Brunei Darussalam, Cambodia, Indonesia, Lao People's Democratic Republic, Malaysia, Myanmar, the Philippines, Singapore, Thailand, and Viet Nam. These countries have been working hard to accelerate economic integration through the establishment of the ASEAN Free Trade Area, the ASEAN Framework Agreement on Services, and the ASEAN Investment Area, and through infrastructure, energy and environmental cooperation. They are now heading towards the establishment of an ASEAN Economic Community by 2015.

As a result of these efforts, ASEAN is now the *de facto* hub for East Asian economic integration; it has established a series of ASEAN+1 processes, particularly in the form of ASEAN+1 FTAs such as those with China, Japan, South Korea, India, Australia and New Zealand, and others. It is now the core group of the ASEAN+3 process that puts together the 10 ASEAN members plus China, Japan, and South Korea (Figure 2).

Northeast Asia can learn from the experience of ASEAN integration and cooperation to enhance its own subregional integration and cooperation in areas such as trade and investment, infrastructure development, energy security, environmental protection, and finance. To achieve further economic growth, it is of utmost importance to enhance Northeast Asian integration and facilitate it becoming a competitive economic zone. ADB's 2008 study entitled, *Emerging Asian Regionalism: A Partnership for Shared Prosperity*, concluded that "emerging Asian regionalism is good for individual economies, good for the region, and good for the world". Northeast Asia as a key subregion of East Asia has an important role to play in this

process.

Northeast Asia as a Key Subregion

To achieve long-run sustainable growth, Northeast Asia needs to deepen subregional economic integration as well as integration with the rest of East Asia and the other world economies. A subregional cooperation mechanism in Northeast Asia would boost institutional (or policy-driven) economic integration not only for the subregion, but also for wider East Asia, as such a mechanism could eventually connect Northeast Asia with ASEAN. One of the principal goals of Northeast Asia's integration is the peaceful reunification and integration of North and South Korea so that a more peaceful, stable, and prosperous Northeast Asia can be realized. For this to be possible, North Korea must normalize its political relationships with South Korea, Japan, and the international community at large and embark on serious economic reforms and open-door policies. A peaceful Northeast Asia is an essential public good for the entire East Asian region as well as for the whole world.

Northeast Asia is unique in terms of economic integration. Overall, *de facto* (or market-driven) integration through trade and investment among the three core countries has proceeded smoothly. However, other countries in the subregion remain isolated from the movement toward economic integration, and as a whole lag behind other major economic subregions in both *de facto* and institutional economic integration. In Northeast Asia, there is not one single bilateral FTA between subregional countries, let alone a subregional FTA. Although Japan, China, and South Korea have recently signed many bilateral FTAs with countries both inside and outside East Asia, and have implemented their respective plurilateral FTAs with ASEAN as part of the ASEAN+1 processes, they have not concluded any between each other (Table 6). Northeast Asia suffers from dual gaps; one between *de facto* and institutional economic integration for Japan, China, and South Korea, and the other between these three core countries and the remaining countries in terms of *de facto* economic integration.

Several proposals have been made, and some joint studies have been conducted on forming FTAs among Japan, China, and South Korea, but no negotiation has been initiated on a Japan-China FTA or a China-South Korea FTA. Although Japan and South Korea began FTA negotiations in December 2003, no tangible progress was made and negotiations were suspended in November 2004.

Table 6: Free Trade Agreements in Northeast Asian Countries

	Within Northeast Asia	Outside Northeast Asia
Japan	--	ASEAN, Brunei, Chile, Indonesia, Malaysia, Mexico, Philippines, Singapore, Switzerland, Thailand, Viet Nam
China	Asia-Pacific Trade Agreement (APTA)	ASEAN, Chile, Hong Kong, Macao, New Zealand, Pakistan, Singapore, Thailand (Peru signed)
South Korea	APTA	ASEAN, Chile, EFTA, India, Singapore (US, EU signed)
Mongolia	--	--
North Korea	--	--
Russia	--	Armenia, Georgia, Kyrgyz Republic, Ukraine

Source: WTO, RTA database.

Negotiations on investment agreements between Japan, China, and South Korea have been under way since March 2007, but without much progress. It is recommended that the three countries negotiate on a comprehensive economic partnership agreement (EPA), including both trade and investment, as this would provide wider opportunities. For example, if Japan could agree to widen agricultural and fishery trade, China could make commitments to the protection of foreign investment and intellectual property rights, and South Korea could pursue efforts to strengthen the industrial supplier system, then the scope for agreement can be significantly widened.

Obstacles to institutional economic integration and agreements in Northeast Asia consist of not only economic factors but also non-economic factors, such as remnants of historic animosities, national rivalries, and a lack of community spirit. So various types of cooperation—including human and cultural exchanges, policy dialogue, and joint studies on history—could help ease these obstacles and create conditions for institutional economic integration.

Infrastructure Cooperation for Northeast Asian Connectivity

Northeast Asia's diversity is its strength, providing opportunities for trade, investment, and economic growth through enhancing its physical connectivity. An important area for the subregion's cooperation is in binding the economies more closely through efficient infrastructure linkages in transportation, telecommunications, and energy. Economies can flourish when they become intertwined with each other and the rest of the world. International supply chains developed among Japan, China, and South Korea—and ASEAN—take advantage of each country's comparative advantage, but these cannot be developed without the support of cross-border infrastructure connectivity. To address these needs and fill this demand, appropriate financing mechanisms need to be designed.

The global competitiveness of Northeast Asian economies depends heavily on the quality of their infrastructure. Table 7 shows that Mongolia is weak in infrastructure and there is also room for improvement

in Russia and China. It is essential to strengthen infrastructure—particularly in transport and energy—within and between countries to improve the competitiveness of the entire subregion.

As part of a postcrisis agenda, there are five reasons for increasing infrastructure investment, particularly for subregional connectivity, in Northeast Asia. First, infrastructure investment will continue to aid economic development and poverty reduction. Second, infrastructure will increase the competitiveness and productivity of an economy. Third, an increase in infrastructure investment can form an important part of growth rebalancing. Fourth, subregional infrastructure investment provides opportunities for further economic cooperation in other areas and trust building among the countries involved. Fifth, properly designed subregional infrastructure projects—in areas such as railways, wind farms, and hydroelectric grids—could address environmental concerns, climate change, and energy security problems in a collective manner.

Some Northeast Asian economies are currently undertaking an ambitious infrastructure cooperation initiative, called the Greater Tumen Initiative (GTI), established in 1995. Its objective is to identify and implement subregional projects and programs that encourage economic growth, improve living standards, and contribute to peace and stability in Northeast Asia. Presently, the GTI is a joint initiative of four member countries—China, South Korea, Mongolia, and Russia—and is supported by the United Nations Development Program (UNDP).¹ The Tumen Secretariat has been established to promote subregional infrastructure projects (Table 8) and identify potential investors and donors for funding.

Northeast Asia could further expand subregional infrastructure projects. The successful infrastructure cooperation in the Greater Mekong Subregion (GMS)—Cambodia, Lao PDR, Myanmar, Thailand, Viet Nam and the southern part of China—shows the value of enhancing subregional physical connectivity. The GMS, established in 1992, has aimed at developing infrastructure for economic development, promoting freer flows of goods and people, and encouraging the sharing of the resource base. Similar

Table 7: Global Competitiveness Index and Infrastructure Quality in Northeast Asia

	2001-2002			2008-2009		
	GCI	Infrastructure		GCI	Infrastructure	
	Rank	Rank	Score	Rank	Rank	Score
Japan	15	15	6	9	11	5.8
China	47	61	2.9	30	47	4.22
South Korea	28	27	4.8	13	15	5.63
Mongolia	--	--	--	100	133	--
Russia	63	--	--	51	59	--

Note: GCI = Global Competitiveness Index; Score for infrastructure: 1= poorly developed and inefficient; 7= among the best in the world

Source: World Economic Forum (2001, 2008)

¹ The Greater Tumen Initiative (GTI) originally started as the Tumen River Area Development Programme (TRADP) in 1995, intended to be a regional cooperation mechanism including North Korea also. But North Korea withdrew in 2009.

Table 8: Approved GTI Projects

Projects	No.	Name of the project
Transport	1	NEA Ferry Route Border Infrastructure Framework
	2	Modernization of Zarubino Port
	3	Mongolia-PRC Railway Construction
	4	Resuming Hunchun-Makhalino railway
	5	PRC Road, Harbor Project in the Border Between PRC and North Korea
Energy	6	Capacity Building on GTI Energy at Regional Level
Tourism	7	Capacity Building on GTI Tourism at Regional Level
Investment	8	Training Program for Officials from GTI Member countries
Environment	9	GTI Environmental Cooperation: focusing on Trans-boundary Environmental Impact Assessment (TEIA) in GTR and Environmental Standardization in the Northeast Asia
	10	Feasibility Study on Tumen River Water Protection

Source: GTI (2010).

Table 9: Primary Energy Consumption Needs in North East Asia (million TOE)

	Actual		Forecast		Average Annual Growth Rate (%)		
	1990	2000	2010	2020	1990-2000	2000-2010	2010-2020
Japan	439	525	543	561	1.8	0.3	0.3
China	673	932	1406	2063	3.3	4.2	3.9
South Korea	93	191	262	303	7.5	3.2	1.5

Note: TOE = ton of oil equivalent

Source: ADB/ADBI, *Infrastructure for a Seamless Asia*, 2009.

serious efforts are needed to connect Northeast Asian economies within the subregion, as well as with other economies outside the subregion.

The recent ADB/ADBI study, *Infrastructure for a Seamless Asia*, proposed the creation of a Pan-Asian Infrastructure Forum so that various subregions in Asia can coordinate and prioritize their subregional projects to realize a seamless Asia. The study also proposed the creation of an Asian Infrastructure Investment Fund to mobilize both public and private funds for Asia's infrastructure development. I would like to suggest the establishment of a Northeast Asian infrastructure investment fund to promote and finance cross-border infrastructure investment. This will require a common vision, strong leadership, and a shared commitment by Northeast Asian leaders, as well as support by international and regional development partners and bilateral donor organizations.

Energy and Environmental Cooperation

Emerging Northeast Asian economies, particularly China, are facing the difficult reality of meeting the increasing demand for energy while lowering the impacts on its environment and climate change in the face of rapid industrialization, urban expansion and development, and increased pollution. Critical efforts are needed to make transport and energy investments more environmentally friendly, protect the environment, and discourage greenhouse gas emissions. It is important that new infrastructure investment, particularly in transport and energy, should target environmentally sustainable projects.

In November 2005, an Inter-governmental Collaborative Mechanism on Energy Cooperation in Northeast Asia was established to facilitate energy cooperation and trade to enhance energy security in

Northeast Asia. Its vision is "improving energy security in Northeast Asia through energy cooperation in a sustainable manner by 2020." The major objectives include: (i) increasing the supply of energy in the subregion by lessening its dependence on energy imports from outside the subregion; (ii) enhancing the economy and efficiency of the supply and use of energy; and (iii) minimizing the environmental impact of energy production and consumption through an improved energy mix and greater energy efficiency.

Northeast Asian economies have already been involved in energy and environmental cooperation under GTI. In 2005, the GTI member countries declared the environment as a cross-cutting theme for priority areas of joint cooperation, such as transport, tourism, energy, and investment. The GTI is also undertaking a feasibility study on "Tumen River Water Protection" to protect the Tumen River from water pollution through subregional cooperation. Effective environmental cooperation would require standardized data and information across countries.

Energy consumption in the three core economies of Northeast Asia, particularly in China, is expected to rise significantly (Table 9). Green energy cooperation to enhance energy security and encourage a shift toward a low carbon society is essential for sustainable economic growth of the subregion. A shift toward a low-carbon society would call for a set of market-oriented policies to encourage energy efficiency and a wider mix of energy sources. As these policies would require reduction of energy price subsidies and/or caps on energy prices, thereby forcing energy prices to rise, strong social protection measures are needed to mitigate the negative impact of price liberalization on the poor and the socially vulnerable. In addition, these policies must be supported by international

assistance for financing, technology transfer, and capacity building.

Toward an Integrated Northeast Asia

In addition to meeting the challenges brought about by the global financial crisis, an enlarged and more integrated Northeast Asian market will contribute to realizing a peaceful Northeast Asia. Although non-economic factors can be important obstacles to Northeast Asian economic integration, closer subregional economic cooperation could help reduce tension, prevent conflicts, and build community spirit. European and ASEAN economic integration, and GMS infrastructure cooperation, provide clear positive examples.

A good place to start the economic integration process in Northeast Asia would be within the core countries of Japan, China, and South Korea. Such integration could then be expanded to include other economies in Northeast Asia. Therefore, a Japan-China-South Korea Economic Partnership Agreement (EPA) should be the first target to reach in forming a greater Northeast Asia FTA (NEA-FTA), and these three countries should strengthen other types of economic cooperation initiatives, including cross-border infrastructure development, energy security, and environmental protection. Mongolia may also participate in the trilateral cooperative initiatives. For the Russian Far East to be a member of the NEA-FTA, the Russian Federation will need to first join the WTO to set conditions for substantial trade and investment liberalization.

To support a subregional FTA in Northeast Asia and promote other types of cooperation initiatives from a

comprehensive perspective, a new institutional body, such as a secretariat for Northeast Asian Economic Cooperation, may be set up. Given the political situation in Northeast Asia, it is realistic for Japan, China, and South Korea to exercise leadership to build this type of economic cooperation body. The Secretariat could encourage Northeast Asian government officials to discuss various economic cooperation and subregional issues, by involving business people, scholars and researchers, and non-government organizations. The fact that the leaders of the three countries have met regularly since November 1999 would facilitate such institutional cooperation.

In these uncertain times, Northeast Asian economies should forge ahead with the challenging—and the immensely rewarding—task of integrating this diverse subregion for the benefit of all its citizens. Subregional cooperation and integration will help to further boost growth and prosperity in Northeast Asia and spread its benefits more widely. It will enhance the subregion's competitiveness and extend its global reach. It will help reduce poverty and promote greater environmental sustainability. Once the potential for substantial benefits—due to subregional cooperation in trade and investment, infrastructure development, energy, and the environment—is shown, these efforts could provide strong incentives for North Korea to open up and cooperate with these economies. This would strengthen the prospects of a peaceful Northeast Asia and the drive for further integration in wider East Asia. To achieve this, exemplary and visionary leadership, as well as firm and unflinching commitment, will be needed.

*Keynote Address***"The Kyoto Protocol and Northeast Asia"**

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Context

How will the Kyoto Protocol and the current carbon market change from 2012? How may they change? The Copenhagen climate conference¹ did not reach any agreement that impacts the Kyoto Protocol for further commitment periods. Therefore, this keynote address will not be able to present a "new framework." Nevertheless, many of the issues "on the table" will be agreeable on in one formulation or another, hopefully sooner rather than later.

After lengthy and difficult negotiations, even with 115 heads of state attending, only a general non-binding political statement, the Copenhagen Accord, was agreed at the last-minute (and that only by five countries²). Many observers believe that the Accord did not "*seal the (sort of) deal*" that was hoped for and that Copenhagen did not turn out to be Hopenhagen (as widely advertised in the city). The reverberations of what many call a failure, and some a small but promising first step, are still echoing through the press.

The future of the Kyoto Protocol and the carbon market as well as their post-2012 architecture therefore remains in limbo for at least another year while the two working groups (AWGs) continue their deliberations, refining their respective draft reports for submission to the Parties in December this year. It is therefore still unclear, at the time of making this presentation, if there will be a new Protocol that covers all Parties, a continuation of the Kyoto Protocol with "alterations", or two (or more) separate Protocols. Parties, in the meantime, will decide whether or not to accede to the Accord or indeed, as some surmise, to continue with one or more separate, politically-led process outside of the UNFCCC.

The United Nations Secretary-General, in his briefing to the UN General Assembly on the outcome of the Copenhagen Conference, identified a number of tasks that the international community should now undertake and suggested examining its lessons and consider how to improve the negotiation process. In that respect, and given the Convention- and Protocol-related positions of the countries attending this conference, there is an opportunity in the coming months, perhaps under the auspices of this Institution³, to hold *indicative* discussions leading

to a deeper mutual understanding of the positions of the different negotiating groups. Such discussions could lead to proposals for formulations that satisfy each group, the results of which could be communicated by the participants to their respective group leaders to bolster common positions in advance of the Mexico COP. Such a pro-active and timely approach may help to relieve the tensions and lack of faith in the UN-led process that have built up over the last 12 months and could go a long way to making COP16 a much-needed success.

But I am getting ahead of myself! Nevertheless, I ask that you keep the foregoing ideas in mind as I continue.

After setting the scene with the foregoing appetizer and the following introductory remarks, this keynote address takes a look at the Kyoto Protocol as currently configured and practiced, highlighting the involvement of the countries represented here today. The focus will be upon the carbon market that has emerged since the entry into force of the Protocol in 2005 and the "effect" that the "flexible (market) mechanisms" have had on the countries of North East Asia.

The address will then turn to those results from Copenhagen that may eventually be part of the future regime that may have an impact on the mechanisms of the Kyoto Protocol and the carbon market; this review will include the CMP decisions on the Clean Development Mechanism (CDM) and (briefly) Joint Implementation (JI) as well as the Copenhagen Accord and the draft texts of the two AWGs but in reverse order so as to end on a "high-note". Other important Convention issues such as adaptation, financing and technology will only be addressed in so far as they may impact these mechanisms, and then only in passing.

To add further perspective to tomorrow's discussions, the address will review publicly-announced, post-Copenhagen, national "commitments" from countries of this region; the stress on the word "commitments" is deliberate and its meaning will become apparent later.

A few observations arising from the analysis will conclude this address.

Introduction/ background

As recorded by ERINA, the region of Northeast Asia

¹ 15th Conference of the Parties to the Climate Convention (COP), 5th Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol (COP/MOP or CMP), 10th Ad Hoc Working Group on Further Commitments for Annex I Parties under the Kyoto Protocol (AWG-KP) and 8th Ad Hoc Working Group on Long-term Cooperative Action under the Convention (AWG-LCA)

² China, USA, India, Brazil and South Africa

³ The Economic Research Institute for Northeast Asia (ERINA)

is "diverse in terms of ... socio-economic development and industrial structures"⁴. That diversity translates into different "positions" of these countries in the Kyoto Protocol as all are Parties that have ratified it and established the required institutions.

As you will all know, the Protocol has three "flexible mechanisms"; Joint Implementation (JI/ Article 6); the Clean Development Mechanism (CDM/ Article 12); and Emissions Trading (ET/ Article 17) and the Parties to the Protocol are divided into geographic groups that determine for which mechanisms they are eligible. Japan is an Annex I country (AI to the Convention but Annex B to the Protocol) and is therefore eligible to take part in all three mechanisms. Russia, also an Annex I/Annex B country, but one flagged as an "economy in transition", is currently only associated with two of them (JI & ET). The remaining countries of the region (China, Mongolia, the ROK and the DPRK) belong to the non-Annex I (NAI) group and are only eligible to take part in the CDM.

These distinctions are further reflected in the countries' respective roles within the carbon market and the types of carbon credits they can either utilize as part of their efforts to reduce national emissions or benefit from in terms of obtaining carbon finance or cleaner technology. In concrete terms, Annex I countries can buy or sell Assigned Amount Units (ET/ AAUs) and buy Emission Reduction Units (JI/ ERUs—note that Russia can also sell ERUs) and Certified Emission Reduction units (CDM/ CERs) but only to the extent that their national legislation allows. NAI countries can only generate and benefit from the "sale" of CERs.

The Carbon Market

The "carbon market" is currently a misnomer as there is not (yet) a single market; rather it consists of a number of disparate elements some of which are currently inter-linked (i.e. consist of "fungible" carbon instruments), some with relatively lengthy existence and experience (e.g. the European Emissions trading Scheme (EU ETS)), others in early stages and yet others (hopefully) soon to come into existence. It is generally hoped that these separate systems will eventually merge into one global carbon market that will send sufficient carbon price signals and provide the sort of incentives that the private sector requires to participate in emission-reducing activities in a significant manner. This slide [shown as Figure 1 in the Japanese version] shows a mixture of allowance-based (cap-and-trade), project-based, regulated and voluntary market components.

The carbon market was valued at US\$126 billion in 2008 and, according to some estimates, is likely to reach \$670 billion by 2013 and \$1 trillion by 2020. The figures in this slide [not shown] start at entry into force of the Protocol in 2005 with \$11b; thereafter, the market trebled in value the first full year of operation and doubled each year from 2006 up to \$126b in 2008. But the exponential growth stopped in 2009 (current estimate is \$136b) and is forecast to grow at a much slower rate until 2012 partly due to the economic crisis and partly because of post-2012 uncertainties. Thereafter, the belief is that rapid

growth will again be seen but this will largely depend upon the decisions and subsequent rules and regulations implementing them that will now have to be made at a later Conference of the Parties, hopefully at COP16/ CMP 6 in Mexico.

At the time of writing, the carbon market is depressed following the failure of last December's negotiations to conclude an inclusive and legally-binding agreement; European carbon prices crashed by almost 9% on the first day of trading after the Accord was announced. The market is expected to remain "bearish" throughout 2010. While there have been increasing calls for post-2012 clarity in the market over the last year market participants will undoubtedly exert further pressure on the negotiators in the coming year.

We can see from the next slide [shown as Figure 2 in the Japanese version] that the EU ETS dominates the carbon market in terms of the different carbon certificates currently being traded through its internal compliance (cap-and-trade) certificates—European Allowances (EUAs)—the value of which was \$91.9 in 2008 as shown in the previous slide [not shown]. In addition, Kyoto certificates (CERs and ERUs) are allowed into the EU scheme through the European Parliament's Linking Directive (2004/101/ EC); these currently represent 26% of the 2008 value of the carbon market (primary CERs/ pCERs and secondary/ sCERs being 6.5b and 26.2b US\$ respectively). The remainder of the carbon certificates traded in 2008 were in much smaller volumes: ERUs (from JI) at \$0.3b; \$0.4b in the voluntary market; in the USA the Chicago Climate Exchange traded \$0.3b and the East Coast Regional Greenhouse Gas Initiative (RGGI) \$0.2b; in New South Wales (Australia) it was \$0.1b. European governments and Japan started purchasing AAUs from a couple of former Eastern European countries in 2008 to the tune of \$0.2b.

Five of the six countries covered by this conference are currently only "vendors" (i.e. they either already own or can generate) carbon certificates that they can sell to the carbon market. Japan is the only current "buyer" in the region although the ROK is gearing up to become a major regional buyer and trader. Both countries have established national carbon trading platforms.

As is widely known, China dominates the CDM host-country market; 84% of the CER volume in 2008 were transacted there and there are 1,700+ Chinese projects in the "pipeline"; half of these have been recorded since 2008. At the time of writing, the CDM Executive Board has issued 174,537,938 CERs (that is 47.6% of all issuances). Even from different perspectives such as number of registered projects (currently 724) or CERs expected until 2012, China is a long way ahead of other countries.

While the ROK has only a few registered projects (35), it has still generated a significant number of CERs (47,664,437) mostly coming from large-scale, industrial gas projects.

The remaining two NAI countries from the region are still in the very early stages of entry into the CDM market with Mongolia having only 3 registered projects that

⁴ ERINA

will generate 71,000 CERs until 2012; the DPRK has no projects so far.

Moving on to JI, Russia has a 68% market share of transacted volumes from a total pipeline of 95 projects with an estimated volume of 198 million ERUs; however, all are still at the "determination" stage so none have so far been registered. Also, despite a huge surplus of Russian AAUs (50% of the estimated potential supply), none have so far entered the market due to there being no clear system in the country for allocating carbon revenues to "green investments" (GIS).

Japan, as a buyer of carbon credits, so far only accounts for 5% of purchases from the project based mechanisms (CDM and JI) as the main buyers of these certificates are European due to the early implementation of the EU ETS Linking Directive and the aggressive entry into the market of a few EU countries with the UK well in the lead. The Japanese government has only recently started to purchase AAUs through its Kyoto Mechanisms (KM) Credit Acquisition Program and has secured two transactions of 70Mt to help towards its Kyoto target. CERs are all being purchased by the private sector in Japan with entities such as Mitsubishi and Marubeni being among the top ten largest buyers. Japanese companies have purchased credits from over 250 registered CDM projects with a 2012 value of 553 Mt CO₂e. According to the reports from which this data was obtained, Japan has so far purchased carbon credits valued at 620 Mt CO₂e (i.e. there are some CDM and JI projects that have not yet been registered). Should the Kyoto Protocol be extended in its present form until 2020 and the CERs from the projects carried forward, the value of the currently-purchased CERs bought by Japanese companies from registered projects would rise to 1.3 trillion tons (1,325 Mt).

From the foregoing it is clearly apparent that most of the countries in this region have a significant interest in the regulated carbon market under the Kyoto Protocol.

The Future Regime?

I will now take a look at issues under negotiation among the Parties to the Convention and the Kyoto Protocol that are likely to be relevant to the carbon market.

As previously mentioned, there were several parallel sessions going on at the same time at COP 15 and, contrary to the generally negative impression that the press is giving, progress was made in some areas, even under the Ad-hoc Working Groups that were unable to finalize their reports and submit them to the COP and CMP for decisions; both AWGs were given a further year for their deliberations^{5,6}.

Therefore, we will have to read between the lines of the current "state of play" as reflected in the reports of the various negotiating sessions to get an idea of the types of changes that may eventually occur. I hope that the following will provide useful input to tomorrow's discussions on this topic.

The Ad-hoc Working Groups

As previously indicated, there are two ad-hoc working groups, one deliberating under the Convention track, the other under the Protocol track.

Kyoto Protocol

The draft report of the Ad Hoc Working Group on Further Commitments for Annex I Parties under the Kyoto Protocol (AWG-KP) still includes a great deal of bracketed text and blank sections; issues relevant to the carbon market include:

- Amendments to the Protocol
 - Text and tables on revised and new emission reduction commitments for the second commitment period (until 2017 or 2020)
 - Carry-over of AAUs into the second commitment period (especially important for Russia)
 - Consideration of carbon units generated from new market mechanisms under the Protocol or Convention;
- Land-use, land-use change and forestry (LULUCF)
 - Making it more inclusive and reducing risks under the CDM
 - Improving and increasing available methodologies
 - Accounting and inventory issues;
- The market mechanisms
 - The possible inclusion or exclusion of carbon capture and storage (CCS), nuclear energy, nationally appropriate mitigation actions (NAMAs), and standardized baselines in the CDM
 - Special attention to countries with less than 10 registered projects
- Simplified modalities for demonstrating additionality and
- Provision of up-front financing for transaction costs (both adopted under the CMP decision on the CDM)
 - Inclusion or exclusion of nuclear energy under Joint Implementation
 - To limit or fully allow units to be banked for future commitment periods
 - Deduction of a share of proceeds for adaptation from AAU transactions
 - Establishment of new market mechanisms under the CMP that allow voluntary participation of Parties and
 - Supplimentarity.

In addition, greenhouse gas values, calculation and reporting issues are included as well as a new gas, nitrogen trifluoride (NF₃).

Cooperative actions

The main sticking points in this year's negotiations, still not resolved, are related to capping global emissions (including the "historical responsibility" of developed countries) and actions taken to mitigate them (especially those by developing countries). The former even led to a walkout by the G77 as they considered that insufficient attention was being paid to this issue. In relation to the

⁵ http://unfccc.int/files/meetings/cop_15/application/pdf/cmp5_awg_auv.pdf

⁶ http://unfccc.int/files/meetings/cop_15/application/pdf/cop15_lca_auv.pdf

former, a few pledges were made in advance of the conference but are widely considered to be cumulatively less than required to stay below a 2°C threshold (more on this later). On the other side, it seems that there is an emerging consensus for mitigation actions by developing countries in so far as actions taken domestically need only be reported through a NAI country's National Communication and those supported by international partners should go through a measurement, reporting and verification (MRV) process and be recorded in a registry on nationally appropriate mitigation actions. How these issues will play out and eventually impact upon the carbon market remains unclear at this time.

The draft conclusions proposed by the Chair of the Ad Hoc Working Group on Long-term Cooperative Action under the Convention (AWG-LCA) also contain a significant number of bracketed and blank sections. The draft includes items directly or indirectly relevant to the Kyoto Protocol and the carbon market such as:

- Financial resources and investment;
- Technology development and transfer;
- Capacity-building;
- Nationally appropriate mitigation actions by developing country Parties;
- Forestry;
- Various approaches to mitigation, including opportunities for using markets;
- Sectoral approaches and sector-specific actions in agriculture.

I will now briefly take a look at the potential implications of some of these issues but only as they might relate to the post 2012 carbon market.

The draft report, "*without prejudice to the possible form and legal nature of the agreed outcome*"—i.e. no decision on the form of an agreement has as yet been made—recognizes that the Kyoto Protocol is playing an important role in contributing to the ultimate objective of the Convention and goes on to present various expectations under a future mitigation regime.

Provision of **financial resources** is, *inter alia* closely related to the discussion of internationally-supported NAMAs in NAI countries. The draft report discusses establishment of a climate fund that would support the various initiatives under the Convention; the fund would channel "*new and additional, and adequate funding*" supplemented by funding from the private sector and "*other innovative sources*". A Finance Board would monitor financial flows and could, *inter alia*, assist NAI Parties find financial support for mitigation actions and that may, in turn, lead to increased financial flows of project finance; a significant barrier for many CDM and JI projects.

Actions in the **forestry** sector through reducing emissions from deforestation and forest degradation (REDD) are reported to be closer to agreement than other aspects of the draft reports of the AWGs. REDD will most likely be introduced in phases, starting with policies, incentives, strategies, plans and capacity building and demonstration activities. There is a significant interest in REDD from both AI and NAI countries but, as the issue is being considered under the LCA umbrella it is not clear if

or how REDD will relate to the carbon market; however, the AWG-KP is working on an expansion of LULUCF so it is possible that these two related approaches eventually find common ground.

The consideration of **sectoral approaches** has so far made most progress in the **agriculture** sector where they are considered in the light of food security and sustainable livelihoods from the perspectives of both mitigation and adaptation. This issue may eventually feed into the carbon market as it is categorized as "sectoral" and could reduce a significant volume of emissions. The whole question of sectoral CDM is still open to debate with strong views for and against. Those against are mostly NAI countries not wanting to take on "commitments" so their antipathy may be mitigated as progress is made under the NAMA discussions. Those that promote sectoral CDM see it as a means of scaling up emission reductions and reducing the transaction costs and approval processes.

Technology development and transfer has the potential to feed into new methodologies and mitigation projects in the carbon market so it is worth keeping an eye on developments under this rubric and the work that would be undertaken in a Climate Technology Centre/Network, should they be initiated. This development has been particularly lobbied for by China for several years. **Capacity-building** is closely related to technology transfer and the proposed network of centres as well as to most of the other issues under the Convention therefore continued calls for support can again be found in this draft report. Capacity-building is also relevant for mitigation activities and for development of CDM and JI capabilities in many NAI countries, but any support given will be dependent upon the availability of financial resources and, in some cases, to up-front funding of CDM transaction costs (more relevant to Mongolia and the DPRK).

Other aspects of mitigation that are included in the AWG-LCA draft report relate to: "*various approaches, including opportunities to use markets*" that leaves room to carry on with the market mechanisms of the Protocol, whatever legal form that may eventually take. While aviation and bunker fuels/ shipping are specifically mentioned here, it not clear what other sectors or types of activity that may be relevant to carbon markets, would be included.

Some other issues that have not been resolved include: supplementarity (i.e. the discussion of purely domestic measures in AI countries vs. more flexible approaches such as inclusion of the CDM—for instance, Japan plans to source a high percentage of its future commitment from offshore projects while the EU is considering restricting access post-2012); the role of LULUCF (apart from afforestation/ reforestation and sectoral approaches in agriculture); MRV and compliance.

Once adopted by the two groups of AWG negotiators, the reports will be presented for decisions at COP 16 in Mexico at which time it should be clear whether or not separate tracks will be maintained post-2012 or if there will be a convergence on some or all issues under discussion in both groups.

The Copenhagen Accord⁷

The much-maligned Copenhagen Accord is a non-binding political statement that, as such, does not provide a platform to change, expand, extend or replace the Kyoto Protocol in a post-2012 climate change regime. It remains therefore unclear from this document whether an additional, new, protocol is likely to emerge from the negotiations; or indeed, whether a politically-driven, largely bilateral process will take over from the multilateral negotiations under the UNFCCC. Given the way COP 15 moved towards a political summit, that is certainly going to be one of the means of continuing discussions in 2010.

As mentioned earlier, the Accord was reached between the USA, China, India, Brazil and South Africa as a last ditch effort to achieve a result in Copenhagen and was only "taken note of" by the final plenary of the UNFCCC. No "decision" was taken on the Accord. However, it was supported as a compromise document by Japan, Russia and the EU that, together with the ROK, participated in the process.

The unprecedented agreement between the USA and four major NAI countries, represented by the content of the Accord, is arguably the main achievement of COP 15. Several of the issues that are included in the Accord would have an impact upon the carbon market if it becomes legally bonding. More importantly, most of these issues are also contained in the draft reports of the AWGs in nascent form so could very well emerge from negotiations in another form should there be continued dissent around the Accord. Among the issues are:

- Agreement to enhance long-term cooperative action to combat climate change (as indicated in the previous section of this address);
- Recognition of the 2°C ceiling for temperature rises due to global warming;
- Non-Annex I "nationally-appropriate mitigation actions" (NAMAs)
 - If nationally-supported only domestic MRV will be needed
 - If externally-supported, they will be recorded in an international registry and subject to international MRV;
- Incentives for forestry, especially REDD-plus;
- Consideration of "various approaches", including markets;
- Incentives, including the provision of financing, a "significant portion" of which will flow through the "Copenhagen Green Climate Fund"
 - \$30 billion would be available for the period 2010-2012 (as a quick start package) and
 - \$100 billion a year by 2020; and
- Establishment of a Technology Mechanism.

The Accord is considered by a few heads of state to be a "small but necessary step" but the jury is still out on whether or not this will be sufficient to maintain momentum in 2010.

The final Accord document includes tables for pledges by Annex I and non-Annex I Parties that included those previously announced through the press. China, Japan, Russia and the ROK are Parties from the North East Asia region that have publicly stated their intentions and are already included in those tables.

It should be re-stated here that the Accord is not (yet) an official document of the UNFCCC and is therefore not binding. Should there be insufficient support for it from other Parties in the coming year (e.g. Cuba has already announced it will not accede), it will not be the basis for the post-2012 UNFCCC architecture; neither will the promise it holds for funding and other support be realized through this potential instrument.

Other decisions

While the foregoing results of the Copenhagen conference are not as encouraging as many had hoped for, the work of other bodies under the Convention did bring results and progress was made on a number of fronts. For instance, a CMP decision⁸ on the CDM made further adjustments to its functioning including issues relevant to the countries of this region that are related to:

- Governance, by requesting the Executive Board (EB) to
 - Take national legislative requirements into consideration but to make sure that these do not create perverse incentives (a reference to the feed-in tariff argument that affected the wind power project submissions in China);
- Methodologies, especially as they apply to under-represented project types and countries
 - SBSTA has been requested to further examine standardized baselines;
- The demonstration of additionality. In this respect
 - There is a new simplified rule that covers renewable projects under 5MW and energy efficiency projects that save up to 20 GWh/ year (may be relevant for Mongolia and the DPRK)
- The EB has been requested to further examine carbon capture and storage (CCS) (a technology that would reduce significant emissions from all countries in this region);
- Registration and issuance in relation to
 - Programmes of activities (PoAs) and
 - Establishment of an appeals procedure;
- Geographic distribution; for countries with less than 10 registered projects (i.e. Mongolia which has 3 and the DPRK none)
 - Deferring the registration fee until after the first issuance
 - Allocation of loans to support project development, validation and verification that is to be repaid after the first CER issuance.

The COP decision on Joint Implementation⁹ was largely about progress in development of its facilities and procedures.

⁷ http://unfContinuation.ccc.int/files/meetings/cop_15/application/pdf/cop15_cph_auv.pdf

⁸ http://unfccc.int/files/meetings/cop_15/application/pdf/cmp5_cdm_auv.pdf

⁹ http://unfccc.int/files/meetings/cop_15/application/pdf/cmp5_ji_auv.pdf

Emission Reduction "Commitments"

Unfortunately, the Copenhagen discussions did not lead to what many had originally hoped for since the Bali forward-looking decisions (Bali Action Plan and Bali Road Map) with predictions being progressively scaled down in the run-up to the conference, then suddenly hope being expressed as so many world leaders agreed to participate, only to be let down in the end by the last-minute Accord developed by so few countries.

The issue of binding emission reduction "commitments" remained a major sticking point in the negotiations; rejected out-of-hand by those countries that are not an Annex I Party. Over the last year however, a new term has emerged among the negotiators that might replace "commitments"—although the application of the word "binding" is still being debated. "Nationally appropriate mitigation actions" or NAMAs are different to "commitments" in so far as the term applies the concept of "*common but differentiated responsibilities*" so it is not surprising that this approach has gained a broad acceptance among non-Annex I countries.

While negotiations continue at various levels, some countries continue to work on their own policies and legislation supporting their climate change actions. For instance: Brazil has announced that it will maintain its emission reduction target (36.1% - 38.9% below business-as-usual projections by 2020) to be regulated by its new National Policy on Climate Change; Mexico has committed to reduce its emissions by 50 Mt a year starting in 2012 with its own means and funds; South Africa said that it would undertake mitigation actions which will result in a "*deviation below the current emissions baseline*" of around 34% by 2020 and by around 42% by 2025; and India has set a voluntary target to cut its carbon intensity by 25% by 2020 from 2005 levels. Meanwhile, Australia, Canada, Papua New Guinea and the Maldives have already announced that they will accede to the Copenhagen Accord; presumably they will also announce their pledges at that time.

According to the "Climate Action Tracker"¹⁰ pledges so far put forward by industrialized and developing countries show that the world is headed for a global warming of 3.5°C - 4°C by 2100; much more than the 2°C rise above pre-industrial levels, the widely accepted boundary beyond which scientists do not recommend going and the target mentioned in the Copenhagen Accord. The slide [not shown] shows the reference scenario for emissions (i.e. business-as-usual) at the top, followed by the trend line in red that current pledges will follow and how they are expected to impact global average temperatures. These are compared to targets of 450ppm and 350ppm that are expected to lead "only" to a 1.5°C rise.

The global volume of emissions is, now, not just a problem being caused or continued by developed countries; developing countries currently emit as much as developed

countries and therefore have an equal potential and opportunity to mitigate those emissions and that more cost-effectively than the former.

It is worth noting at this point that the countries of this region cumulatively represent almost 34% of global carbon emissions, largely due to China's "leading position"! Considering that agreeing to a maximum overall global temperature rise and consequently to mitigation actions are key issues in the negotiations and that the results of this discussion will affect the future of the carbon market, countries and regions such as this one, that have significant emissions, as well as a keen interest in the carbon market, clearly have a major role to play and interest in the outcome of negotiations.

Now to some related observations on the individual countries in this region.

Japan

As mentioned earlier, Japan is an Annex I country. When signing up to the Kyoto Protocol, the country agreed to a target reduction of 6% from its 1990 level of 1,261 Mt¹¹ CO₂e/ year. Prior to COP 15, Japan, reported as being a supporter of the Copenhagen Accord, proposed to decrease emissions to 25% below 1990 levels by 2020 and to 60-80% below 2005 levels by 2050. Recent government announcements reconfirmed that the country will stick to its 2020 target and that this pledge will be registered with the United Nations, under the Accord, by the end of January. However, the goal, considered to be "sufficient" by the "Climate Action Tracker"¹², is conditional that all major emitters commit to ambitious targets.

Japan is also in favour of the international carbon market mechanisms and has stated that it would cover up to 60% of its 25% emission reduction target through their use. The country's trial domestic emissions trading scheme, based on voluntary participation and launched in October 2008, should provide sufficient experience upon which to base a transition to mandatory participation and a full-blown scheme that will provide a cost-efficient means of moving towards achieving their target.

Russia

As the other Annex I country in this region Russia was allowed to retain its level of 1990 emissions that was 3,323 Mt CO₂e/ year and has also been reported to have supported the Copenhagen Accord, even though it is not shown as an originator of the final text.

Russia announced target emission reductions ahead of the Copenhagen conference that were 10-15% below 1990 by 2020¹³, and 30% below 1990 thereafter. But, according to figures recorded by the UNFCCC, Russian emissions are already 33.9% below 1990 levels¹⁴ largely due to the contraction in its economy; therefore, the Climate Action Tracker considers this pledge to be inadequate¹⁵. The

¹⁰ <http://www.climateactiontracker.org/>

¹¹ http://unfccc.int/ghg_data/kp_data_unfccc/base_year_data/items/4354.php

¹² <http://www.climateactiontracker.org/country.php?id=1165>

¹³ Another figure of 20-25% has been announced

¹⁴ http://unfccc.int/files/ghg_data/ghg_data_unfccc/image/pjpeg/changes_in_ghg_excluding_lulucf.jpg

Russian President, in addition, recently announced a long-term goal of 50% reduction from 1990 levels by 2050.

As the last country to ratify the Kyoto Protocol in early 2005, Russia was widely applauded as this led to its entry into force. However, the country has been relatively slow in implementing procedures and measures necessary to benefit from the carbon market. A recent decree¹⁶ and anticipated amendments to a previous resolution¹⁷ are expected to facilitate procedures that will finally open the carbon market for the country.

In addition to the potential for gaining carbon credits under Joint Implementation, Russia could also benefit from the sale of its surplus AAUs. This potential has so far been unrealized as the country has not developed any Green Investment Schemes (GIS's) that would allow the incoming funds from their sale to be "greened"; a condition that buyers are imposing on vendors with AAUs resulting from contractions in the economy rather than from specific measures taken to reduce emissions. However, a recent press report indicates that Russia and the European Bank of Reconstruction and Development (EBRD) are exploring opportunities that will channel funds from AAU sale into an energy efficiency programme.

Given the large volume of surplus AAUs, Russia is naturally interested in an option to carry them forward into future commitment periods; one of the issues still under debate.

China

China is one of the authors of the Copenhagen Accord and it has become clear, since the closing days of COP15 that the country is in a very good negotiating position! However, it has been criticized by many of its former Group of 77 colleagues for agreeing to the Accord and for other positions taken during the Conference; but one needs to look at the broader picture that shows an initiative that may pave the way for an inclusive agreement in 2010.

China and the other three NAI author-countries (India, Brazil and South Africa) are key developing countries and the largest in their respective geographic regions. Together with the USA, the other author-country, they represent close to 50% of the world's carbon emissions, notwithstanding the fact that China's emissions per capita are far lower than in the USA. Apart from these NAI countries "politically" agreeing (albeit non-binding) to take on a form of emission reduction commitments (the NAMA discussion), the Accord may also provide the essence of what legislators in the US need to finalize their domestic legislation. This could well be the key to breaking the long-standing deadlock between NAI countries and the USA, not to mention the problems this issue has caused with the Parties to the Protocol, as well as being an extremely

contentious issue that nearly derailed the Copenhagen talks.

"In 2006, China's five-year plan set a target for a 20% cut in the energy intensity of GDP by the end of 2010. ... by the end of last year (2008) it had managed 10%"¹⁸ (according to reports this was extended to 16% by the end of 2009). Given that achievement it is perhaps no surprise that China's pre-conference announcement to reduce its CO₂ emissions per unit of GDP by 40% - 45% from 2005 to 2020 was widely thought to be close to business as usual. The Climate Action Tracker rates this target as inadequate¹⁹ given that this would probably be achieved through implementation of current national policies²⁰ anyway. However, as this is China's own proposed contribution to mitigate climate change according to its national circumstances and will be by its own efforts, further reductions should be possible if financial resources and technologies are made available from AI Parties. And that seems likely given the pre-COP bilateral discussions China held with various developed countries including with the USA and the EU, the latter agreeing to cooperate on CCS that alone would lead to significant additional emission reductions in the country given its current heavy reliance upon carbon-intensive energy production.

The ROK

The ROK, still a NAI Party although a member of OECD, is also reported to have been involved in discussions of the Accord and recently announced that it will publish its emission reduction target, of 30% below "reference emissions" in 2020 (4% below the 2005 value), under the Accord. According to the Tracker, this pledge is considered to be "medium"²¹.

In addition, the country is widely expected to become an Annex I country post-2012 and is already preparing itself to become a key player in the carbon market. A pilot emissions trading scheme will start operations this month with a target of reducing 1% of 2005 emissions from the installations covered. The country already has a carbon fund. A number of institutions are also actively sourcing projects in the Asia/ Pacific region intent on investing in suitable projects as well as in obtaining carbon credits from them.

Neither Mongolia nor the DPRK have come forward with proposals for emission reduction targets.

Recommendation

In conclusion, it is clear that the larger countries in this region have not only the potential to influence negotiations under the UNFCCC and its Protocol, but also to gain significant benefits from the resultant mechanisms: China and Korea embraced the Protocol and the CDM early on; Japan is a major buyer of carbon credits and is

¹⁵ <http://www.climateactiontracker.org/country.php?id=1168>

¹⁶ Decree No. 884-r, 27 June 2009

¹⁷ Resolution No. 332

¹⁸ A long game: China sees opportunities as well as dangers in climate change, *The Economist*, December 5th-11th 2009

¹⁹ <http://www.climateactiontracker.org/country.php?id=1152>

²⁰ China has agreed and is implementing a domestic energy efficiency target (-20% per unit of GDP from 2005 to 2010) and a renewable energy target (15% of primary energy by 2020) and various other measures which have an effect on reducing greenhouse gas emissions

²¹ <http://www.climateactiontracker.org/country.php?id=630>

further gearing up its facilities; Russia is poised to enter the market. Only Mongolia and the DPRK have not benefitted but may well do through reforms and future developments of the flexible mechanisms.

Perhaps, considering the Convention-related positions of the countries attending this conference, and their obvious interest in maintaining the market aspects of the Kyoto Protocol despite their different viewpoints, the coming months could be utilized to hold indicative discussions. These, held under the auspices of this Institution²², could lead to a deeper mutual understanding of the positions of the different UNFCCC and other negotiating groups.

The objectives embedded in the Copenhagen Accord, co-authored by China with the tacit support of Japan, Russia and the ROK, could be a starting point. Discussions could also review the negotiating texts under the AWGs and suggest alternative formulations that would satisfy the Parties in each group. Results could be communicated by

the participants to their respective group leaders to bolster common positions in advance of the Mexico COP. Such a pro-active approach (if timely) may help to relieve the tensions and lack of faith in the Convention process that have built up over the last 12 months. It could also go a long way to making COP16 a much-needed success while re-directing attention back to the multilateral table. This in turn, could help to avoid a "de-railing" of the Convention process through bilateral or plurilateral negotiations that have already started.

Whatever legal form the discussions in this group and under the UN take, it is in everyone's interest to find common ground and formulations so that acceptable processes can be established that build upon the foundation laid in Kyoto in 1997. Perhaps Japan, again, with its neighbours from this region, could be recognized for being instrumental in bringing a new era of international climate cooperation to bear.

²² The Economic Research Institute for Northeast Asia (ERINA)