



Trilateral Environmental Cooperation in Northeast Asia

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Northeast Asia was incorporated into the world economy in the late 19th century. Despite the relatively late introduction, China and Japan has become the world's second and third largest economy and Korea, with its division of north and south, has also become one of economically strong countries. The three countries now account for 18 percent of the world's total energy consumption and are major importers of oil and natural gas. While trilateral trade and economic relationship have increased significantly, environmental cooperation has not seen such improvement.

As a result of rapid economic growth, the three countries have experienced similar environmental problems. Japan, currently the most environmentally developed country, was faced with serious environmental pollution issues in the early periods of industrialization. Korea was able to overcome most of its serious air and water pollution problems thanks to increased efforts and investments for environmental quality improvement by the government, business and the society. China seems to be suffering from serious environmental pollution problems now. Such problems in China will be tackled in the near future with proper environmental policy and expenditures spurred by peoples' awareness for the importance of environmental quality.

However, transboundary environmental issues rely on the characteristics of externality that cannot be resolved independently by each nation. Such issues in the Northeast Asia can be categorized into three areas - atmosphere, sea and ecology. The most detrimental transboundary atmospheric environmental issue is acid rain. Sulfur dioxides mainly originated from China travel in the wind and affect the Korean peninsula and the Japanese archipelago in the form of acid rain. An international team of experts studied this transboundary issue in the Rains-Asia Project and called for concerted efforts of Northeast Asian countries. Yellow dust is caused by dust particles which originate mainly from Mongolian desert area in spring. However, increase in the concentration of fine dust have aroused new concerns for atmospheric researchers. Transboundary marine pollution occurs mainly in the Yellow Sea between China and Korea, and in the East Sea (Japan Sea) between Korea and Japan. Until recently, oil spills caused by vessel accidents and waste dumping had been primary concerns of marine pollution. However, the Fukushima radiation accident of 2011 has alarmed neighboring countries that nuclear power plant accidents could be another form of formidable environmental catastrophe. The three

Northeast Asian countries operate 91 nuclear power plants which comprise 20 percent of the world. It is expected that China would quadruple the number in 6 years from 20 to 83 plants. Nuclear power plant accidents would leak radiation not only into air but to soil and water as well contaminating drinking water and agricultural products. South Korean president Park proposed to establish "Northeast Asia Nuclear Safety Consultative Body" in August this year, responding to people's increased concern on this issue.

Northeast Asia has no geographic borders to flora and fauna. For example, fish and migratory birds live in the region moving freely in the sea and air, so trilateral cooperation becomes essential for their protection. The division of North and South Korea for the past 60 years has blocked movement of wild animals in the Korean peninsula and resulted in the extinction of tigers, wolves, and foxes in South Korea. Now is the time for joint efforts to restore and protect the wildlife and to maintain ecological diversity in Northeast Asia. Tripartite joint investigation of the regional ecosystem is vital and preservation of the DMZ area will be an important initiation for this endeavor. The Nagoya Protocol has gone into effect starting October this year and future efforts to protect the biological diversity of each country will be strengthened.

To mitigate global warming cooperatively, flexible mechanism such as CDM, tradable permit system, and joint implementation was developed and executed widely so far. A good example of international policy response to meet the regional acid rain problem is the Convention on Long-Range Transboundary Air Pollution (CLRTAP) of 1979 initiated by UN ECE. This is the first multilateral convention attempting to deal with transboundary air pollution problems. CLRTAP led to the adoption of the Helsinki Protocol in 1985 - the Protocol on the reduction of sulphur emission or their transboundary fluxes by at least 30 percent. In 1989, the Sophia Protocol - the Protocol on the reduction of nitrogen oxides - was adopted, and the Protocol on the control of emissions of volatile organic compounds was adopted in 1991.

Meanwhile, the three countries have maintained various multilateral as well as bilateral channels for regional environmental cooperation. Inter-governmental cooperation channels are NEAREP for environmental cooperation in Northeast Asia, NOWPAP for Pacific Northwest conservation plan, and TRADP for the Tumen River basin development plan. Other non-governmental cooperation channels are ECO-ASIA, expert meetings for the construction of acid rain monitoring network in East Asia, expert meetings on long range air pollution materials, and NEACEC for Northeast Asia environmental cooperation. Effective cooperation and agreement had been difficult to achieve due to differences in the economic system and the stages of economic development. However, as China is now advocating the market economy and has become one of world's major economic powers, it is imperative for the three countries to open

up a dialogue regarding trilateral environmental cooperation based on the principle of equality and mutual benefit.

Environmental cooperation efforts should be expanded with active participation of the civil society. For a more practical and lasting effect, participation of university and college students as well as professionals should be encouraged as well. The Green campus movement has been active in developed countries since 1990 to enhance sustainability in education and research at universities. In Korea, KAGCI (Korean Association for Green Campus Initiative) was established in 2008 under the leadership of Yonsei University and has led the green campus movement in Korea. In China, CSUN (China Sustainable University Network) was established under the leadership of Tongji University in Shanghai. Kyoto University in Japan has established CAS-Net Japan (Campus Sustainability Network - Japan) this year and is promoting the cooperation of China, Japan, and Korea for the enhancement of sustainability in Northeast Asia. It would be possible to discuss the trilateral regional environmental cooperation issues in the China-Japan-Korea joint green campus seminar.