Interim Environmental Review

United States - Korea Free Trade Agreement

Office of the U.S. Trade Representative

December 2006

Executive Summary

Pursuant to authority delegated by the President in Executive Order 13277 (67 *Fed. Reg*. 70305) and consistent with Executive Order 13141 (64 *Fed. Reg*. 63169) and its Guidelines (65 *Fed. Reg*. 79442), the Office of the United States Trade Representative (USTR) submits this Interim Environmental Review of the prospective United States – Korea Free Trade Agreement (KORUS), as provided for under section 2102(c)(4) of the Trade Act of 2002 (Trade Act).

On February 2, 2006, in accordance with section 2104(a) of the Trade Act, U.S. Trade Representative Rob Portman notified the Congress of the President's intent to enter into negotiations for a free trade agreement (FTA) with the Republic of Korea (Korea). As of the date of this Interim Review, five rounds of formal negotiations have taken place and additional rounds are scheduled. Negotiations are scheduled to conclude in early 2007.

The environmental review process examines possible environmental effects that may be associated with the proposed FTA. This review was formally initiated by publication of a notice in the Federal Register, which requested public comment on the scope of the review (*see* 71 *Fed. Reg.* 10999 (March 3, 2006)). A notice in the Federal Register also requested public comments on the overall negotiation and announced a public hearing on the proposed FTA, which took place on March 14, 2006 (*see* 71 *Fed. Reg*. 6820 (Feb 9, 2006)). Comments and testimony addressing environmental issues received in response to both notices were taken into account in the preparation of the KORUS Interim Environmental Review. The review also draws on the environmental and economic expertise of federal agencies. Consistent with Executive Order 13141 and its Guidelines, the focus of the review is on potential impacts in the United States. Additionally, this review includes consideration of global and transboundary effects.

This interim review provides provisional conclusions and identifies areas for further attention in the course of the ongoing negotiations and in the review of the final agreement. The Administration welcomes public comment on these preliminary conclusions:

- Based on existing patterns of trade and investment and changes likely to result from an FTA, the impact of the proposed KORUS on total U.S. production appears likely to be very small. As a result, the KORUS is not expected to have significant direct effects on the U.S. environment through changes in production. However, specific issues identified for further analysis include the potential for increased trade to contribute to localized environmental impacts at selected U.S. maritime ports and the potential for increased risk of introduction of invasive alien species. In both cases, the likelihood and magnitude of these effects and any increased risks resulting from an FTA, while difficult to quantify, appear to be small.

- Based on an analysis of the impact of comparable provisions of previous FTAs, the proposed KORUS is not expected to have a negative impact on the ability of U.S. government authorities to enforce or maintain U.S. environmental laws or regulations.

- As compared to the United States, it is possible that the proposed KORUS could have relatively greater effects on Korea's economy and, as a consequence, economically driven

environmental effects in Korea. However, because exports already account for a significant share of Korea's economy, the effects of the KORUS on Korea's economy and environment appear likely to be relatively small. This review will examine a variety of transboundary and global issues to identify possible environmental concerns to be considered in the course of negotiations, as well as areas for possible priority attention in bilateral and regional cooperation. Korea is also conducting an environmental review of the FTA.

- The KORUS could have positive environmental impacts in Korea and the United States through further liberalization of trade in environmental goods and services. The KORUS also provides a context for enhancing cooperation activities to address environmental issues of mutual interest, both in Korea and in the region.

Environmental Review of the United States – Korea Free Trade Agreement

I. LEGAL AND POLICY FRAMEWORK

A. The Trade Act of 2002

The Trade Act of 2002 (Trade Act) establishes a number of negotiating objectives and other priorities relating to the environment. As relevant here, the Trade Act contains three sets of objectives: (i) overall trade negotiating objectives; (ii) principal trade negotiating objectives; and (iii) promotion of certain priorities, including associated requirements to report to Congress.

Overall environment-related trade negotiating objectives include:

- ensuring that trade and environmental policies are mutually supportive and seeking to protect and preserve the environment and enhance the international means of doing so, while optimizing the use of the world's resources (section 2102(a)(5)); and

- seeking provisions in trade agreements under which parties to those agreements strive to ensure that they do not weaken or reduce the protections afforded in domestic environmental and labor laws as an encouragement for trade (section 2102(a)(7)).

In addition, the Trade Act establishes the following environment-related principal trade negotiating objectives:

- ensuring that a party to a trade agreement with the United States does not fail to effectively enforce its environmental laws, through a sustained or recurring course of action or inaction, in a manner affecting trade between the parties, while recognizing a party's right to exercise discretion with respect to investigatory, prosecutorial, regulatory and compliance matters and to prioritize allocation of resources for environmental law enforcement (section 2102(b)(11)(A)-(B));

- strengthening the capacity of U.S. trading partners to protect the environment through the promotion of sustainable development (section 2102(b)(11)(D));

- reducing or eliminating government practices or policies that unduly threaten sustainable development (section 2102(b)(11)(E));

- seeking market access, through the elimination of tariffs and non-tariff barriers, for U.S. environmental technologies, goods, and services (section 2102(b)(11)(F)); and

- ensuring that environmental, health, or safety policies and practices of parties to trade agreements with the United States do not arbitrarily or unjustifiably discriminate against U.S. exports or serve as disguised barriers to trade (section 2102(b)(11)(G)).

The Trade Act also provides for the promotion of certain environment-related priorities and associated reporting requirements, including:

- seeking to establish consultative mechanisms among parties to trade agreements to strengthen the capacity of U.S. trading partners to develop and implement standards for the protection of the environment and human health based on sound science and reporting to the Committee on Ways and Means and the Committee on Finance ("Committees") on the control and operation of such mechanisms (section 2102(c)(3));

- conducting environmental reviews of future trade and investment agreements consistent with Executive Order 13141 and its relevant guidelines, and reporting to the Committees on the results of such reviews (section 2102(c)(4)); and

- continuing to promote consideration of multilateral environmental agreements and consult with parties to such agreements regarding the consistency of any such agreement that includes trade measures with existing exceptions under Article XX of the GATT 1994 (section 2102(c)(10)).

B. The Environmental Review Process

The framework for conducting environmental reviews of trade agreements is provided by Executive Order 13141–*Environmental Review of Trade Agreements* (64 *Fed. Reg*. 63169) and the associated Guidelines (65 *Fed. Reg*. 79442). The Order and Guidelines are available on USTR's website at http://www.ustr.gov/environment/environmental.shtml.

The purpose of environmental reviews is to ensure that policymakers and the public are informed about reasonably foreseeable environmental impacts of trade agreements (both positive and negative), to identify complementarities between trade and environmental objectives and to help shape appropriate responses if environmental impacts are identified. Section 5(b) of Executive Order 13141 provides that "as a general matter, the focus of environmental reviews will be impacts in the United States," but "[a]s appropriate and prudent, reviews may also examine global and transboundary impacts." Reviews are intended to be one tool, among others, for integrating environmental information and analysis into the fluid, dynamic process of trade negotiations. USTR and the Council on Environmental Quality (CEQ) jointly oversee implementation of the Order and Guidelines. USTR, through the Trade Policy Staff Committee (TPSC), is responsible for conducting the individual reviews.

The environmental review process provides opportunities for public involvement, including an early and open process for determining the scope of the environmental review ("scoping"). Through the scoping process, potentially significant issues are identified for in-depth analysis, while issues that are less significant – or that have been adequately addressed in earlier reviews – are eliminated from detailed study.

The Guidelines recognize that the approach adopted in individual reviews will vary from case to case, given the wide variety of trade agreements and negotiating timetables. Generally, however, reviews address two types of questions: (i) the extent to which positive and negative environmental impacts may flow from economic changes estimated to result from the

prospective agreement; and (ii) the extent to which proposed agreement provisions may affect U.S. environmental laws and regulations (including, as appropriate, the ability of state, local and tribal authorities to regulate with respect to environmental matters).

II. BACKGROUND

Occupying the southern part of the Korean Peninsula, Korea holds a central position in East Asia. The Korea Strait, off the country's southeastern coast, is an important maritime passage in the region. Seoul, the capital, is located in the northwestern part of the country. Korea is approximately the size of the State of Indiana (38,022 square miles), with mountain ranges, narrow valleys and coastal plains (primarily in the south and west). Korea has a largely temperate climate.

Korea is a highly developed country and has one of the highest population densities in the world, with 483 persons per square kilometer (compared to 33 persons per square kilometer in the United States). Much of the population is concentrated in urban areas: more than 20 million persons live in cities of over one million residents. Over 97 percent of Koreans are literate, and Koreans have a life expectancy of approximately 77 years at birth. The country's birth and total fertility rates are among the lowest in the world. In recent decades, a significant number of Koreans have emigrated to China, the United States, Japan and the states formed from the former Soviet Union.

The Korean constitution distributes power between a popularly elected president and a legislature. The president serves a single five year term and is responsible for appointing the State Council (Cabinet), which is drawn largely from members of the assembly. The unicameral legislature, known as the *Kuk Hoe* (National Assembly), is directly elected on a proportional basis, with members of parliament serving four-year terms. Political power is also shared among the nine provinces and seven separately administered cities of the country.[1]

A. Economy in Korea

Over the past 30 years, Korea has transformed itself into one of the world's leading economic powers. Starting with a per capita Gross National Product (GNP) of only $100 in 1963, Korea adopted an economic development strategy based on the export of goods from labor-intensive light industries. As the country developed, it began to branch out into high-tech and heavy industries, leading to a 2005 per capita GNP of over $16,300. During this time, the United States became Korea's third largest trading partner. The United States was the market for almost 15 percent of the Korea's estimated $284 billion in exports in 2005. Other major Korean trading partners are China, the European Union and Japan. Electronic products ($15 billion) and transportation equipment ($12 billion) were the most important Korean exports to the United States in 2005 (see Table 6).

[1] Further background information is available in the Korea country report of the Organization for Economic Cooperation and Development (OECD) (available at: http://www.oecd.org/korea).

Leading Korean industries are electronics, automobile production, mining, chemicals processing, textiles and footwear. A large portion of the country's workforce (67 percent) is employed in services. Roughly one-fourth (26 percent) are employed in manufacturing and the remainder (six percent) work in agriculture. The country has been successful in keeping unemployment at or below four percent over the last five years. Korea has also benefited from a recent export boom, which contributed to an average GDP growth of 4.5 percent from 2001-2005.

B. Environment in Korea

Many of Korea's principal environmental concerns are directly related to the demographic and economic trends in the country. High population density and the legacy of rapid economic development have placed significant pressure on environmental and natural resources.

Environmental regulation has grown and matured as Korea has prospered. Today, Korea dedicates 1.5 percent of GDP annually to pollution abatement and control. Public consciousness about the importance of conservation and sustainable growth has also grown with rising levels of per capita income. Nevertheless, pollution from current economic activity as well as the legacy of previously unregulated industrial and chemical development continues to threaten Korea's environment.

The Ministry of Environment, Korea's primary environmental regulation and enforcement body, traces its origins to the beginning of the country's modernization efforts, when it was organized to monitor air quality. By 1980, an autonomous environmental protection agency had been established, and full ministerial status was granted in 1994. Other environmental organizations, such as the Korea Environment Institute and the National Institute of Environmental Research, were organized in the 1980s and 1990s to complement the statistical and regulatory efforts of the Ministry of Environment (*see* Annex III for further information on Korea's environmental regulatory and institutional framework).[2]

Key Environmental Trends

Air and Water Quality and Management: Korea's rapid economic development over the last 30 years led to recurring air quality problems from elevated ambient levels of sulfur dioxide (SO_2), carbon monoxide (CO) and hydrocarbons. Ambient levels of CO and hydrocarbons have been decreasing in recent years, though nitrogen dioxide (NO_2) emissions have risen and air quality in major cities is often below World Health Organization standards. A major contributor to air pollution is the increasing number of motor vehicles. In spite of improvements in fuel quality and engine technology, rapid growth of the vehicle fleet and automobile use has resulted in increased emissions.

The 1990 Air Quality Preservation Act was an important step toward achieving improvements in ambient air quality. Data from Korea's Ministry of the Environment show improvements in SO_2

[2]Information has been drawn in part from the 1997 and the 2006 Korea Environmental Performance Reviews available at http://www.oecd.org.

ambient concentrations. Less significant but notable improvements in CO, NO_2 and 10μm particulate matter (PM10) air quality values place Korea in the mid-range among OECD countries. Much of the progress was achieved through better fuel quality and emissions controls and better enforcement through the use of telemetry monitoring of large fixed sources. Significant room for improvement remains, however. Regional cooperation to tackle environmental issues will play an important role because transboundary sources of air pollution from China and other countries are as significant as domestic sources.[3]

Management of water resources also continues to be an important environmental issue for Korea. Extensive dams and water supply and sewage systems have been constructed to help mitigate the risks of flooding and improve the supply of clean water and disposal of waste water. Despite these efforts, better enforcement mechanisms may be required to meet water quality objectives for rivers and reservoirs. In addition, two thirds of wastewater sludge is still dumped offshore; therefore, proper management of water resources is also necessary for the country to sustain the extensive coastal fisheries.

Solid Waste Management: The need for proper solid waste management is heightened by Korea's high population density. As economic development has thrived and material consumption has grown, Koreans produce increasing amounts of waste that the country must dispose of in an efficient and environmentally sustainable way. Koreans have begun utilizing more effective landfill technologies (including improved incinerators) and have high recycling rates. However, while Korea has been effective in decoupling economic growth from waste generation and improving municipal waste management, concerns remain regarding industry's generation of hazardous waste, which is growing at a faster rate than industrial production.

Wildlife Trade: Korea became a party to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) in 1993. Korea's Law Concerning the Protection of Wildlife and Game, administered by the Ministry of Environment, was revised in 1994 to include legal provisions to control trade in CITES-listed fauna and flora. Traditional medicine, however, continues to be important in Korea. Due to its high reliance on wildlife parts, the importance of traditional medicine in Korea presents an ongoing challenge for regulating the domestic use and import of CITES-listed species, and concerns remain over illegal imports of CITES Appendix I species for use in Korea for traditional medicine.[4]

Marine Fisheries: The waters surrounding the Korean peninsula abound in diverse marine life. Fish and seafood are widely consumed in Korea and represent an important component of the nation's diet. Reported production by Korea's fleets was 2.7 million tons in 2005, of which production from distant water fisheries accounted for 552,000 tons (down from 740,000 tons in

[3] Prevailing winds carry air pollutants from China to Korea compounding the effect of local sources. Information for both the air quality and waste sections is also derived in part from the Korean Ministry of the Environment's Statistics Year Book (available at http://eng.me.go.kr/). Additional information is available from the U.S. Environmental Protection Agency.

[4] Additional information on wildlife trade and the implementation of CITES in Korea including efforts to control illegal trafficking for use in traditional medicine can be found at http://www.traffic.org.

2001).[5] Aquaculture plays an increasingly important role in Korea's marine fisheries sector, with shallow sea cultures expanding from 655,000 tons in 2001 to 1,041,000 tons in 2005 (*see* Table 10, Annex IV). Overall, however, Korea's fleets have been unable to supply rising domestic demand, and Korea has become a net fish and seafood importer.

Korea has a solid regulatory and institutional framework in marine fisheries. Both the fisher population and the number of fishing vessels have steadily declined since 1982, in part the result of the government's fleet reduction program.[6] Despite these efforts to reduce its commercial fleet, Korea continues to provide some support to its fisheries sector. In this context, Korea, along with Japan and Taiwan, has questioned the need for stronger rules on fisheries subsidies in the negotiations launched in 2001 in the World Trade Organization.

Environmental Laws: Korea's framework of environmental laws has been evolving in recent decades and has contributed to important advances in environmental quality and natural resources management. Many of the new laws incorporate the use of economic instruments to accelerate the pace at which the private sector internalizes the costs of reducing the burden on the environment. However, regulatory oversight of environmental laws is shared among a number of agencies. Additionally, greater delegation of regulatory oversight to the local level may in some circumstances contribute to weakened enforcement.

C. U.S. – Korea Goods Trade

Korea is the world's tenth largest economy. Korea's trade in goods and services represents 41 percent of its economy, whereas trade in goods and services represents 13 percent of the U.S. economy.[7] Two-way goods trade between the United States and Korea totaled $72 billion in 2005, with U.S. goods exports to Korea totaling $28 billion (up 54 percent from 1994) and goods imports from Korea at $44 billion (up 123 percent from 1994).[8]

Electronic products and transportation equipment were the largest sectors of goods imported by the United States from Korea. Passenger motor vehicles and electronic transmission equipment were the largest subsets within each these categories, accounting for $8.6 billion and $4.9 billion of imports respectively in 2005. U.S. exports to Korea were more evenly distributed among sectors, with electronic products and chemicals and related products occupying the top of the list in 2005. In 2005, Korea was the sixth largest export market for U.S. farm and ranch products and the third largest export market for U.S. fishery products.[9] Tables 5-7 of Annex IV summarize U.S. trade in goods with Korea.

---

[5] Korea's fisheries production and trade data is available from the USDA Foreign Agricultural Service at http://www.fas.usda.gov/gainfiles/200611/146249420.pdf. Further information on Korea's marine fisheries sector is available from the United Nations Food and Agriculture Organization (FAO). *See* http://www.fao.org/fi/fcp/en/KOR/body.htm.

[6] Capacity reduction programs seek to improve the conservation and management of fisheries. A common approach is through a "buy back" of vessels and/or fishing permits to secure a reduction in fishing capacity, usually with public funds, and the subsequent scrapping or permanent withdrawal of the boats from fishing.

[7] *See* OECD Statistical Profile of Korea at www.oecd.org/korea.

[8] *See* http://www.census.gov/foreign-trade/balance/c5800.html#2005 for additional data.

[9] Data taken from http://www.fas.usda.gov/ffpd/Fish-Circular/Archived_Trade_Data/2000_2005.htm

As shown in Table 8 of Annex IV, approximately one quarter of all U.S.-Korea goods trade passes through the Los Angeles Customs District (LACD), the ports of Los Angeles and Long Beach. In 2005, with total trade valued at nearly $18 billion, Korea was the third largest market for goods exported and imported through this Customs District. Nevertheless, trade with Korea accounted for only six percent of total trade through the LACD in 2005.

D. U.S. Objectives in the Proposed Free Trade Agreement

The KORUS is expected to help foster economic growth in the United States by reducing and eliminating barriers to trade and investment between the two countries, enabling American companies to increase their exports of goods and services to Korea. An FTA would require Korea to eliminate its tariffs on U.S. industrial and agricultural goods, remove any unjustified sanitary and phytosanitary (SPS) measures and improve the transparency of its regulatory and licensing procedures. The KORUS negotiations provide an opportunity to reduce or eliminate restrictions that make it difficult for U.S. service providers to operate in the Korean market. The KORUS is also expected to promote bilateral investment. U.S. companies are already the largest source of foreign investment in Korea, while Korea is a growing source of investment in the United States.

As set forth in the notification letters to Congress, the Administration's specific objectives for negotiations with Korea are as follows:

Trade in Goods:

- Seek to eliminate tariffs and other duties and charges on trade between Korea and the United States on the broadest possible basis, subject to reasonable adjustment periods for import-sensitive products.
- Seek to eliminate non-tariff barriers in Korea to U.S. exports, including permit and licensing barriers on agricultural and other products, restrictive administration of tariff rate quotas, unjustified trade restrictions that affect new U.S. technologies and other trade restrictive measures that U.S. exporters identify.
- Seek to eliminate government practices that adversely affect U.S. exports of perishable or cyclical agricultural products, while providing for improved U.S. import relief mechanisms as appropriate.
- Pursue a mechanism with Korea that will support achieving the U.S. objective in the WTO negotiations of eliminating all export subsidies on agricultural products, while maintaining the right to provide bona fide food aid and preserving U.S. agricultural market development and export credit programs.
- Pursue fully reciprocal access to the Korean market for U.S. textile and apparel products.

Customs Matters, Rules of Origin and Enforcement Cooperation:

- Seek specific and trade facilitative customs commitments to ensure that Korea's customs operations are conducted with transparency, efficiency and predictability, and that Korea's customs laws, regulations, decisions and rulings are applied in a

manner that facilitates the efficient and timely release of goods, and prevents unwarranted procedural obstacles to international trade.
- Seek rules of origin, procedures for applying these rules and provisions to address circumvention matters that will ensure that preferential duty rates under an FTA with Korea apply only to goods eligible to receive such treatment, without creating unnecessary obstacles to trade.
- Seek terms for cooperative efforts with Korea regarding enforcement of customs and related issues, including in the area of trade in textiles and apparel.

Sanitary and Phytosanitary (SPS) Measures:
- Seek to have Korea reaffirm its WTO commitments on SPS measures and eliminate any unjustified SPS restrictions.
- Seek to strengthen cooperation between U.S. and Korean SPS authorities.
- Seek to strengthen collaboration with Korea in implementing the WTO SPS Agreement and to enhance cooperation with Korea in relevant international bodies on developing international SPS standards, guidelines and recommendations.

Technical Barriers to Trade (TBT):
- Seek to have Korea reaffirm its WTO TBT commitments and eliminate any unjustified TBT measures.
- Seek to strengthen collaboration with Korea in implementing the WTO TBT Agreement and create a procedure for exchanging information with Korea on TBT-related issues.

Intellectual Property Rights:
- Seek to establish standards to be applied in Korea that build on the foundations established in the WTO Agreement on Trade-Related Aspects of Intellectual Property Rights and other international intellectual property agreements, such as the World Intellectual Property Organization (WIPO) Copyright Treaty, the WIPO Performances and Phonograms Treaty and the Patent Cooperation Treaty. In areas such as patent protection and protection of undisclosed information, seek to have Korea apply levels of protection and practices more in line with U.S. law and practices, including appropriate flexibility.
- Seek to strengthen Korea's laws and procedures to enforce intellectual property rights, such as by ensuring that Korean authorities seize suspected pirated and counterfeit goods, equipment used to make such goods or to transmit pirated goods and documentary evidence.
- Seek to strengthen measures in Korea that provide for compensation of right holders for infringements of intellectual property rights and to provide for criminal penalties under Korean law that are sufficient to have a deterrent effect on piracy and counterfeiting.

Trade in Services:
- Pursue disciplines to address discriminatory and other barriers to trade in Korea's

services market, and pursue a comprehensive approach to market access, including any necessary improvements in access to the telecommunications, financial services, professional services or other sectors.
- Seek improved transparency and predictability of Korean regulatory procedures, specialized disciplines for financial services and additional disciplines for telecommunications and other service sectors, as necessary.

Investment:
- Seek to establish rules that reduce or eliminate artificial or trade-distorting barriers to U.S. investment in Korea, while ensuring that Korean investors in the United States are not accorded greater substantive rights with respect to investment protections than U.S. investors in the United States, and to secure for U.S. investors in Korea important rights comparable to those that would be available under U.S. legal principles and practice.
- Seek to ensure that U.S. investors receive treatment as favorable as that accorded to domestic or other foreign investors in Korea and to address unjustified barriers to the establishment and operation of U.S. investments in Korea.
- Provide procedures to resolve disputes between U.S. investors and the Korean government that are in keeping with the Trade Promotion Authority goals of being expeditious, fair and transparent.

Electronic Commerce:
- Seek to have Korea affirm that it will allow products and services to be delivered electronically and will not unjustifiably discriminate among those products and services.
- Seek to affirm that Korea does not apply customs duties to digital products that are delivered electronically.
- Seek to ensure that Korea determines the dutiable value of digital products contained on carrier media based on the value of the media, not their content.

Government Procurement:
- Seek to expand on Korea's commitments in the WTO Government Procurement Agreement (GPA), thus providing greater opportunities for U.S. firms to secure construction and supply contracts with the Korean government, particularly by allowing U.S. suppliers to compete for smaller contracts that are not currently open to U.S. bidders or goods.

Transparency/Anti-Corruption/Regulatory Reform:
- Seek to make Korea's administration of its trade and investment regime more transparent, and pursue rules that will permit timely and meaningful public comment before Korea adopts trade and investment related measures.
- Seek to eliminate Korean government regulation or other measures that discriminate against or deny full market access for U.S. exporters or investors.
- Seek to ensure that Korea applies high standards prohibiting corrupt practices

affecting international trade and investment and enforces such prohibitions.

Competition:

- Address anticompetitive business conduct, designated monopolies, state enterprises and other competition-related issues, as appropriate.
- Seek provisions that foster cooperation on competition law and policy and that provide for consultations on specific competition issues that may arise.

Trade Remedies:

- Provide a safeguard mechanism during the transition period to allow a temporary revocation of tariff preferences if increased imports from Korea are a substantial cause of serious injury or threat of serious injury to the domestic industry.
- Make no changes to U.S. antidumping and countervailing duty laws.

Environment:

- Seek to promote trade and environment policies that are mutually supportive.
- Seek an appropriate commitment by Korea to effectively enforce its environmental laws.
- Establish that Korea will strive to ensure that it will not, as an encouragement for trade or investment, weaken or reduce the protections provided for in its environmental laws.
- Seek to develop ways to work with Korea, including through consultative mechanisms, to promote sustainable development and address environmental issues of mutual interest.

Labor:

- Seek an appropriate commitment by Korea to effectively enforce its labor laws.
- Establish that Korea will strive to ensure that it will not, as an encouragement for trade or investment, weaken or reduce the protections provided for in its labor laws.
- Based upon review and analysis of Korea's labor law and practices, establish procedures for consultations and cooperative activities with Korea to strengthen its capacity to promote respect for core labor standards, including compliance with ILO Convention 182 on the worst forms of child labor.

State-to-State Dispute Settlement:

- Encourage the early identification and settlement of disputes through consultation.
- Seek to establish fair, transparent, timely and effective procedures to settle disputes arising under the agreement.

In addition, the KORUS will take into account other legitimate U.S. objectives including, but not limited to, the protection of health, safety, environment, essential security and consumer interests.

III. SCOPE OF THE ENVIRONMENTAL REVIEW

To determine the scope of this review, the Administration considered information provided by the public and input from environmental, trade and investment experts within federal agencies. In addition to providing guidance on the scope of the environmental review, any information, analysis and insights available from these sources are being taken into account throughout the negotiating process and are being considered in developing U.S. negotiating positions. As envisaged by the Guidelines, environmental reviews are an ongoing process to examine environmental issues and inform negotiations. This document describes the results of this process at this interim stage of the KORUS negotiations.

Section III.A describes the process used to solicit comments and advice on the scope of the environmental review, including a summary of the comments received. Section III.B discusses the possible direct impacts of the proposed KORUS on the U.S. environment resulting from prospective changes in the U.S. economy. Section III.C describes a number of environmental issues associated with possible transboundary effects of an FTA. Although possible domestic impacts are the primary concern of this environmental review, global and transboundary impacts are to be considered as appropriate and prudent.[10] Section III.D considers the extent to which the KORUS might affect U.S. environmental laws, regulations, policies and/or international commitments.

A. Public Outreach and Comments

This review was formally initiated by publication of a notice in the *Federal* Register, which requested public comment on the scope of the review (*see* 71 *Fed. Reg.* 10999 (March 3, 2006)). A notice in the *Federal* Register also requested public comments on the overall negotiation and announced a hearing on the proposed KORUS (*see* 71 *Fed. Reg*. 6820 (Feb. 9, 2006)). The preparation of this Interim Review takes into account comments received in response to both notices and testimony at the public hearing concerning environmental issues (*see* Annex I for a list of organizations providing comments).

One commenter raised concerns with Korea's role in wildlife trade, particularly in connection with the use of CITES-protected species in the traditional medicine sector. These comments also drew attention to the incidental killing of whales as by-catch by Korean fishing vessels. Other commenters raised concerns regarding enforceable environmental protections, the existence and adequacy of environmental and labor regulations and Korea's framework for the environmental control and registration of chemicals applied to foreign corporations.

B. Potential Economically Driven Environmental Effects in the United States

Korea is an important market for some U.S. producers and exporters, but the impact of the KORUS on total U.S. production through anticipated changes in U.S. exports appears likely to be small. Exports to Korea currently account for three percent of total U.S. exports (*see* Table 1

[10] *See* Section I.B, above on the FTA Environmental Review Process.

and Table 5 of Annex IV) and an even smaller portion of total U.S. production. Even if substantial increases in U.S. goods exports to Korea result from the KORUS, associated increases in U.S. production will represent a very small change in the aggregate U.S. economy. Although small changes in production and exports in environmentally-sensitive sectors could raise issues regarding the KORUS's direct environmental effects in the United States, no basis for such concerns was identified in interagency analysis. However, specific issues concerning a possible incremental impact of increased goods trade on pollution at U.S. ports and a possible increased risk of introduction of invasive alien species were identified for further analysis. These issues are discussed below.

Liberalization of services is not expected to have an economically driven environmental impact in the United States. The United States already allows substantial access to foreign service providers, including in environmentally-sensitive areas (*e.g.*, tourism, maritime shipping and services incidental to energy distribution). As discussed in Section III.D below, existing environmental regulations in these sectors would not be affected under KORUS. Freer trade in environmental goods and services resulting from the KORUS could facilitate access to and encourage the use of environmental technologies, which can support environmental and natural resource stewardship goals in both countries (*e.g.*, improved sanitation, pollution prevention and renewable energy).

Port-Related Environmental Issues

Air and water pollution at maritime ports result from the concentration and cumulative effects of emissions from ships, trucks, trains and goods-moving equipment associated with international trade.[11] As an illustration of environmental concerns associated with ports, a 2006 report by the American Lung Association identified emissions from ships and locomotive engines, both associated with port facilities, as key contributors to air quality problems at ports such as Houston, Los Angeles and New York.[12] About one-fourth of U.S.-Korea goods trade currently passes through southern California ports (*see* Section II.C above). Increases in trade associated with the KORUS could exacerbate existing environmental concerns associated with trade-related goods movement. The extent of any incremental increases in pollution is difficult to quantify, but is believed to be small relative to pollution resulting from total goods trade in these ports. As noted above (Section II.C), trade with Korea accounted for six percent of total trade through the LACD ports in 2005. The Administration welcomes public comment on this issue.

Invasive Species

Korea's climatic zones overlap significantly with those of the United States, which enhances

[11] This topic is discussed in detail in the Interim Environmental Review of the U.S.-Thailand Free Trade Agreement. That document is available at http://www.ustr.gov/Trade_Sectors/Environment/Environmental_Reviews/Section_Index.html.

[12] The report is available at http://lungaction.org/reports/sota06_full.html.

vulnerability to the establishment and spread of invasive species.[13] To the extent that the KORUS stimulates increases in commodity trade along known pathways for invasive species, there is a risk that the KORUS could contribute to the increased movement of invasive species between Korea and the United States. For example, commercial marine traffic between the two countries carries some risk of new invasions from ballast water discharges or hull fouling. Therefore, an increase in goods trade may be associated with an increased risk of introducing invasive species.[14] Although Korea has not been specifically identified as the origin of introduction of these species into the United States, some of the most damaging invasive species in the United States, such as the Asian Longhorned Beetle and the Chinese Mitten Crab, are native to Korea.[15] In addition to extensive economic and environmental damage these pests have caused, both countries have invested millions of dollars in their eradication.[16]

The risk of increased introduction of invasive species associated with the KORUS is difficult to quantify, but appears to be small. The KORUS would not affect existing U.S. regulatory and other measures to monitor, prevent and combat invasive species. The problem of invasive species is also the focus of considerable international effort, including through work in the International Plant Protection Convention, the International Maritime Organization and the North American Plant Protection Organization. Moreover, the KORUS offers opportunities to enhance U.S.-Korea cooperation in monitoring, preventing or controlling invasive species. The Administration welcomes public comment on these issues.

C. Transboundary and Global Issues

While the environmental impacts of expected economic changes in the United States attributable to the KORUS are expected to be minimal, the Administration examined a large number and wide variety of environmental issues with potential global and transboundary impacts in determining the scope of this review. These were provisionally identified through public comments in response to the Federal Register notice (*see* Section III.A) and through an open-ended scoping process among agencies with environment, trade and economic expertise. Subsequently topics were eliminated from further and more detailed analysis when initial findings revealed that there was no significant effect through the proposed FTA. The following topics warranted further consideration.

1. Economically Driven Environmental Effects in Korea

[13] The term "invasive species" refers to species not native to a particular ecosystem that are intentionally or unintentionally introduced as a result of human activities and cause, or are likely to cause, harm to ecosystems, economic systems or human health.

[14] A comprehensive discussion of issues concerning invasive species, including economic costs associated with invasive species, the role of trade, possible links of increased risks of invasions to the changes in trade patterns, historical invasion patterns and preventive measures, is contained in Annex V of the U.S.-Thailand Interim Environmental Review at http://www.ustr.gov/Trade_Sectors/Environment/Environmental_Reviews/Section_Index.html.

[15] Further information is available from the National Invasive Species Council at http://www.invasivespeciesinfo.gov/.

[16] Other damaging species native to Korea, such as the Northern Snakehead and four species of Asian Carp, have been imported legally to the United States and carelessly released in favorable habitats.

As compared to its effects in the United States, the KORUS could have relatively greater impacts on Korea's economy and, through those impacts, effects on its environment. Although net changes in Korea's trade and production are difficult to predict, the importance of trade to Korea's economy and the importance of the United States as a trading partner suggest that the KORUS could have economically driven environmental effects in Korea.[17]

To the extent that the KORUS has significant effects on the Korean economy, over time, the environmental effects could be both positive and negative. The KORUS is expected to lead to increased trade and investment and could increase Korea's production, which might further pressure the environment. On the other hand, some new investment may bring environmentally-preferable technologies, production methods and services as well as higher standards for private sector environmental performance.

2. Wildlife Trade

Korean citizens engage in trade in a wide variety of wildlife products (animals and plants), both CITES-listed and non-CITES-listed species, with certain cases of illegal trade[18], including Appendix I species such as tiger, rhinoceros and leopard. The import trade is primarily for the traditional medicine and food markets, although there are pet and manufactured products markets as well. Public comments raised concerns with illegal shipments of wildlife entering Korea in connection with traditional medicine (*see* Section III.A above).[19] There are also concerns that Korean travelers returning from China may be illegally importing bear and tiger medicinal products which they purchase while vacationing or on business trips.

Currently, Korea is listed as a "Category 1" country by the CITES Secretariat's National Legislation Project, meaning that Korea has legislation in place that adequately implements the Convention's obligations. Nevertheless, Korean authorities face difficulties enforcing CITES trade controls, and illegal trade of endangered species continues, particularly in products used in traditional medicine.[20] The illegal trade is not primarily associated with the United States, however. U.S. imports of CITES-listed species from Korea are limited.[21] In 2004, approximately 110 illegal medicinal products imported from Korea (primarily bear and horned mammal products) were seized upon entry. However, fewer than 35 shipments have been seized since January 1, 2005, and most of these involved a single importer who apparently imported CITES-listed coral species without required documentation. In 2004, U.S. exports and re-exports of CITES-listed animal species to Korea comprised a variety of species, including

[17] Korea's Ministry of Environment is conducting a review of environmental issues associated with the FTA.
[18] Kang, S., and Phipps, M. (2003). *A Question of Attitude: South Korea's Traditional Medicine Practitioners and Wildlife Conservation*. TRAFFIC East Asia, Hong Kong. http://www.traffic.org/content/236.pdf
[19] Trade in bears and bear parts was noted as a particular concern.
[20] For eample, the OECD Korea Environmental Performance Review cites continuing challenges controlling the illegal trade of endangered species and a need for increased manpower trained to detect illegal traffic (see pages 25 and 237 of the review at www.oecd.org)..
[21] Korea exports a significant volume of non-CITES-listed species to the US, including live fish, butterflies, feather products, leather products and (farmed) turtles.

American alligator, crocodile, lizard skin and coral products; all of this trade appears to have been conducted in accordance with CITES requirements.

Current U.S. tariffs on wild plants and animals imported from Korea are already low or zero; therefore, the KORUS is unlikely to contribute to an increase in trade of wildlife or endangered species. Instead, the KORUS and its associated environmental cooperation mechanism may offer opportunities for increased collaboration between the United States and Korea to address wildlife trade concerns, including efforts to reduce illegal trade in wildlife. The Administration welcomes comments on wildlife trade concerns, including on opportunities for cooperation with Korea to strengthen protection of endangered species in the Asia region.

3. Invasive Species

Just as species originating in Korea may raise environmental concerns in the United States (*see* Section III.B above), species originating in the United States may potentially have harmful effects in Korea. The Red-eared Slider, Black Bass, Bluegill and White Snakeroot are all examples of species indigenous to the United States that are invasive in Korea. The KORUS' potential incremental effect of these risks is difficult to quantify, but appears to be small. Moreover, the expected environmental cooperation mechanism associated with the FTA (*see* Section IV) could provide opportunities for enhanced cooperation and consultation to reduce risks associated with invasive species. The Administration welcomes public comments on these preliminary findings.

4. Environmental Goods and Services

Increased trade in environmentally beneficial goods and services represents an opportunity for positive environmental impacts resulting from the KORUS. Environmental goods and services include a wide variety of services and technologies relevant to, for example, pollution control and waste management and natural resource protection.

Korea was the eighth largest export destination for U.S. environmental goods in 2005, with nearly $1.2 billion in imports.[22] However, high tariffs on many environmental goods limit opportunities for U.S. exporters and restrict access in Korea to potentially beneficial technologies. Certain industrial sectors are potential direct beneficiaries of increased trade in environmental goods and services. For example, in 2004 Korean shipyards were the top world producers of merchant cargo vessels, and the vast majority of vessels built in Korea are exported to foreign customers. While Korean production is at the vanguard of the industry, the complex design and construction of new vessels offers continual challenges requiring the adoption of more advanced and efficient technologies, which are often more environmentally benign. The KORUS may provide opportunities to promote to Korean shipbuilders the use of advanced, more environmentally friendly technologies that are produced by U.S. companies.

More generally, continuing environmental challenges in Korea (*see* Section II.B) and the

[22] Data are available from the U.S. Department of Commerce at http://www.export.gov/industry/environment/.

government's stated commitment to meet them could lead to increased demand for environmental infrastructure projects and related consulting, engineering, testing and other services. Korea's proposed services commitments in the KORUS should provide Korean entities with greater access to U.S. environmental technologies and services. In this way, the KORUS provisions regarding environmental services could have a positive environmental impact in Korea and the surrounding region. The Administration welcomes comments on this preliminary assessment.

5. Marine Fisheries

Korea's fishing fleets are no longer able to meet domestic demand for fish and seafood, and as a consequence Korea has become a net importer of fish and seafood. In 2005, Korea was the third largest market for U.S. fishery product exports. Rising demand has also encouraged the expansion of domestic production through marine aquaculture, and the Korean government seeks to raise the production ratio of aquaculture to wild catch from 27 percent in 2000 to 45 percent in 2030.[23] Although aquaculture may reduce pressure on wild stocks, production has also been associated with environmental damage such as nutrient loading and the loss of genetic diversity of natural fish stocks, resulting in a greater risk from diseases, parasites or invasive species. The United States had been collaborating closely with Korea on the development of less environmentally damaging and more productive off-shore aquaculture techniques (*see* Annex II).

This review analyzes the involvement of Korean vessels, or Korean-owned vessels flying flags of convenience, in illegal, unreported and unregulated (IUU) fishing. Based on currently available information, we have concluded that Korea has made significant progress tackling the issue. However, opportunities exist for further collaboration in the protection of wild fish stocks, for example through the International Network for the Cooperation and Coordination of Fisheries-Related Monitoring, Control, and Surveillance.[24] In addition, the Administration considered the issue of the sale of whale meat "by-catch" from commercial fishing vessels, a concern raised in public comments. In Korea, accidental by-catch can be legally sold in the domestic market. A Minke Whale can command prices of $20-50 thousand dollars. Publicly reported data indicate that the Korean by-catch of large whales per area of fishing waters is the largest in the world.[25]

The KORUS offers the potential to expand channels for better cooperation and information exchange on by-catch minimization policies and techniques, better control of IUU fishing and greater collaboration on improved aquaculture techniques. The Administration invites public comment on these issues, including on the potential for enhanced cooperation.

D. Potential Regulatory Impacts

Consistent with Executive Order 13141 and its Guidelines, this review includes consideration of

[23] Recent data are available at http://www.lib.noaa.gov/korea/index.htm
[24] For more information see http://www.imcsnet.org. Korea is not currently a member of this network.
[25] Based on an analysis of 2005 by-catch data submitted to the IWC.

the extent to which the KORUS might affect U.S. environmental laws, regulations, policies and/or international commitments. The KORUS negotiators are aware of the need to preserve the U.S. government's ability to maintain strong environmental laws and regulations and an effective process for enforcing them. As the KORUS negotiations proceed, negotiators will continue to focus on this important objective.

FTA obligations related to services, SPS measures and TBT, government procurement and investment can have particular significance for domestic regulatory practices concerning the environment, health and safety. Previous environmental reviews, including the interim and final reviews for the Jordan, Chile, Singapore, Dominican Republic-Central America and Peru FTAs, have considered potential impacts on the U.S. regulatory regime with respect to such obligations and have found that the respective trade agreements were not anticipated to have a negative impact on U.S. legal or regulatory authority or practices. Further, in all cases, the reviews noted the potentially positive impact that the FTAs could have on the U.S. environmental regulatory regime as a result of FTA commitments to effectively enforce U.S. environmental laws, not to weaken U.S. environmental laws to attract trade or investment, and to ensure that U.S. environmental laws and policies provide for high levels of environmental protection.

Based on this previous analysis, the Administration does not expect that the KORUS would have a negative impact on the ability of U.S. government authorities to enforce or maintain U.S. environmental laws or regulations. For a more in depth analysis of general FTA commitments and their potential regulatory impacts in the United States, please see the interim and final reviews for the above mentioned FTAs.[26] We welcome comments on this preliminary finding.

Investment

FTA investment provisions were a matter of intense debate during Congress' consideration of the Trade Act. The central question was the appropriate balance between the rights of U.S. investors abroad and preserving the ability of the federal government and state and local governments to regulate with respect to health, safety and the environment. The Trade Act strikes this balance by establishing negotiating objectives with respect to both substantive investment provisions of particular concern (notably provisions on expropriation and "fair and equitable treatment") and procedures for resolving disputes between Parties and investors (the investor-State dispute settlement mechanism).

Following TPA guidance, and after consultations with interested stakeholders, the Administration has included a number of substantive clarifications and procedural innovations in Investment Chapters of recent FTAs and is seeking similar provisions in the KORUS. A fuller discussion of these and other relevant investment provisions and their potential regulatory impact is provided in final environmental reviews of recent free trade negotiations particulartly those for the Morocco FTA and the CAFTA-DR.[27]

[26] Text of recent FTAs is available on the USTR website at http://www.ustr.gov/Trade_Agreements/Bilateral/Section_Index.html

[27] *See* http://www.ustr.gov/Trade_Sectors/Environment/Environmental_Reviews/Section_Index.html.

The Administration is seeking similar provisions in the KORUS, including: clarifications of the definitions for expropriation and minimum standard of treatment ("fair and equitable treatment"); increased transparency in the administration of the trade and investment regime; and provisions to establish fair, transparent, timely and effective procedures to settle disputes. Based on the previous analysis, we do not expect that the KORUS will result in a significant potential for negative impacts on U.S. environmental measures. We invite comments on this preliminary finding.

IV. ENVIRONMENTAL COOPERATION

The Trade Act of 2002 establishes that a principal negotiating objective of the United States is to strengthen the capacity of our trading partners to protect the environment through the promotion of sustainable development. In addition, the Trade Act instructs negotiators to seek to establish consultative mechanisms among parties to trade agreements to strengthen the capacity of U.S. trading partners to develop and implement standards for the protection of the environment and human health based on sound science. Environmental cooperation is an important complement to the environmental provisions of the KORUS.

The United States and Korea already work together on a bilateral basis to address environmental issues through a number of ongoing projects. The United States also works with Korea through multilateral mechanisms such as the United Nations Environment Program and the World Bank. In addition, U.S. agencies have several regional and bilateral environment programs in Korea, principally through the Department of Commerce (including the National Marine Fisheries Service), the Department of State and the Environmental Protection Agency. Annex II summarizes recent environmental cooperation activities supported by federal agencies.

The United States expects to enter into an environmental cooperation mechanism in association with the KORUS, as it has with other FTAs. Given Korea's status as a developed country with an evolved environmental regulatory regime, a framework for cooperative activities between the United States and Korea is expected to contribute to regional, as well as national efforts to protect, improve and conserve the environment. The Administration welcomes public comments on the general approach to cooperation in the context of the KORUS, as well as objectives and priorities for cooperative activities.

ANNEX I – Organizations Providing Comments

Received in response to 71*Fed. Reg*. 10999 (March 3, 2006)

- *Humane Society International (March 31, 2006)*

Received in response to 71 *Fed. Reg*. 6820 (Feb. 9, 2006)

- *American Federation of Labor and Congress of Industrial Organizations (Public Hearing, March 24, 2006).*
- *U.S.-Korea Business Council and the American Chamber of Commerce in Korea (March 24, 2006)*
- *American Chemistry Council Comments (March 29, 2006)*

ANNEX II – Selected Recent Environmental Cooperation Activities with Korea

This annex provides examples of recent environmental cooperation activities between U.S. Government agencies and partners in Korea. Although illustrative of the number and variety of cooperative activities, the list is not exhaustive. Further information on these activities is available from the respective agencies.

A. Department of the Interior

The United States and Korea have ongoing cooperation related to management of parks. The U.S. National Park Service (NPS) is currently hosting six Korean park rangers who will began three month residencies in five U.S. National Parks later in summer 2006.[28] In addition, the United States Geological Survey has a memorandum of understanding (MOU) with the Korea National Geospatial Institute to help establish a national geospatial data infrastructure for Korea, in particular to help establish standards for data and metadata that can be used to address environmental issues. The United States and Korea fund their respective costs for cooperation in these projects.

B. Department of Commerce, National Oceanic and Atmospheric Administration (NOAA) and National Marine Fisheries Service (NMFS)

NOAA pursues a broad range of activities with Korean ministries that benefits both countries. Examples of recent activities include:

1. Marine science and technology cooperation

Vice Minister Kang of the Korean Ministry of Marine Affairs and Fisheries (MOMAF) and his delegation recently visited NOAA. During the visit, Korea and the United States agreed to extend the U.S.-Korea Agreement for Scientific and Technical Cooperation in Integrated Coastal and Ocean Resources Management until 2010. The agreement is a framework agreement under which NOAA and MOMAF cooperate on a wide variety of joint projects, including short and long term technical and management exchanges and training.

Proposals under review for work in the coming year include coastal management, marine protected area management, ocean observations and monitoring, fisheries, aquaculture, national geodetic survey systems, ecological risk assessment, marine contaminants, oil spills, ocean data, and harmful noxious substances. Funding is primarily provided by Korea to support costs associated with the exchanges and activities, with additional funding provided by NOAA programs, as available.

2. Satellite and information services

[28] In addition, portions of the NPS web site have been translated into Korean. *See* http://www.nps.gov/koreanwebsite/.

NOAA and the Korean Meteorological Administration (KMA) are cooperating in the field of satellite meteorology, including by NOAA hosting temporary KMA staff. In addition, Korea will operate a geostationary meteorological satellite beginning in 2008 as a contribution to the Global Earth Observation System of Systems (GEOSS).

3. Atmospheric Agreement

In November 2005 NOAA and KMA signed a Protocol on Cooperation in the Field of Atmospheric Science and Technology, pursuant to the Science and Technology Agreement existing between the United States and the Republic of Korea. This overarching NOAA-wide agreement merges NOAA's bilateral agreements with KMA into one umbrella Atmospheric Protocol to streamline its relations with Korea and consolidate activities under one reporting and coordinating entity.

4. Aquaculture

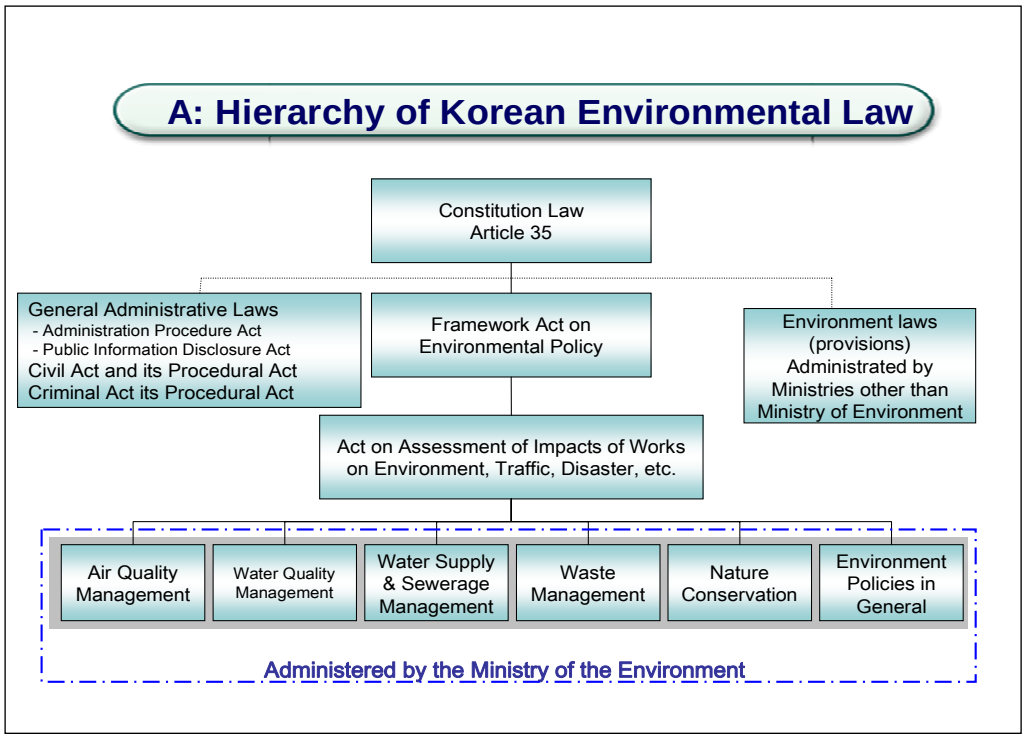
NOAA and Korea's National Fisheries Research and Development Institute (NFRDI) are collaborating on aquaculture issues initiated under the United States-Korea Joint Coordination Panel for Aquaculture Cooperation. Korea recently instituted new legislation limiting aquaculture production in near shore waters. Korea and the United States are ideal aquaculture partners because Korea relies on large-scale aquaculture production, and the United States can provide offshore technology. In response, Korea and the United States have agreed to the following:

1. The United States will provide Korea with offshore production expertise;
2. Korea will share information with the United States on environmental monitoring and evaluation to compliment existing information from existing U.S. pilot projects;
3. U.S. and Korean scientists will determine the feed and nutritional needs of marine fish being cultured; and
4. U.S. and Korean scientists will develop a socioeconomic analysis of new technology under U.S. and Korean conditions.

5. Asia-Pacific Economic Cooperation (APEC) forum

The United States and Korea are among the 21 members of the APEC forum and cooperate in two APEC fisheries-related working groups, the Marine Resources Conservation Working Group (MRCWG) and Fisheries Working Group (FWG). Korea hosted, and the United States participated in, the first APEC Oceans Ministerial Meeting (AOMM) in April, 2002 in Seoul. One outcome of this meeting was the Seoul Oceans Declaration which addresses the critical issues of ecosystem-based management of marine resources, expanding global ocean and climate observation systems.

ANNEX III – Korea's Primary Environmental Legislation and Government Agencies[29]



B: Environmental Laws (provisions) administrated by other Ministries

Ministry of Construction and Transportation	Acts related to designation of areas with development restrictions, water quantity management etc.
Ministry of Trade, Industry and Energy	Acts related to energy supply and management, energy efficiency, development of new energy resources etc.
Ministry of Agriculture and Forestry	Acts related to forestry management
Ministry of Maritime Affair and Fishery	Prevention of marine pollution and marine resource management
Ministry of Science and Technology	Control of the transport, handling and disposal of radioactive waste Research on basic science on environment
Ministry of Finance and Economy	Economic instruments
Ministry of Foreign Affairs and Trade	International Environmental Issues

[29] Information provided by Korean Ministry of the Environment Officials during the second round of negotiations held in Washington, DC in August of 2006.

ANNEX IV – Data Tables

Table 1 – Population, economic and trade data for Korea and the United States, 2005

	Population [b] *Million*	Gross Domestic Product			Exports	
		Nominal *Billion US$*	Per capita *US$/capita*		Total *Billion US$*	As a share of GDP *Percent*
			Nominal	PPP [a]		
Korea	48,294,140	788	16,309	20,400	284	36
United States	296,496,640	12,455	42,007	41,800	906	7.3

[a] Purchasing Power Parity.
[b] July 2006 estimate

Sources: World Bank, World Trade Atlas, U.S. Department of Commerce, U.S. Central Intelligence Agency.
Data available at: http://www.worldbank.org/data and http://www.ita.doc.gov/td/industry/otea/ and http://www.cia.gov/cia/publications/factbook/

Table 2 – Selected development indicators for Korea and the United States

	Population density *People per square km*	Urban population *Percent*	Access to improved water source *Percent*	Adult population Literacy rate *Percent*	Under-5 mortality *No. per 1,000 births*	Life expectancy at birth *Years*
Korea	483	84	92	98	5.5	77
United States	32.5	80	100	98	7	77

Source: World Bank, World Development Indicators, 2004.

Data available at: http://www.worldbank.org/data

Access to an improved water source refers to the percentage of the population with reasonable access to an adequate amount of water from an improved source, such as a household connection, public standpipe, borehole, protected well or spring and rainwater collection. Unimproved sources include vendors, tanker trucks and unprotected wells and springs. Reasonable access is defined as the availability of at least 20 liters a person a day from a source within one kilometer of the dwelling. (World Health Organization and United Nations Children's Fund, Global Water Supply and Sanitation Assessment 2000 Report).

Access to improved sanitation facilities refers to the percentage of the population with at least adequate excreta disposal facilities (private or shared, but not public) that can effectively prevent human, animal and insect contact with excreta. Improved facilities range from simple but protected pit latrines to flush toilets with a sewerage connection. To be effective, facilities must be correctly constructed and properly maintained. (World Health Organization and United Nations Children's Fund, Global Water Supply and Sanitation Assessment 2000 Report).

Table 3 – Land area, land use, and forest cover change for Korea and the United States[a]

	Land area *Million square kilometers*	Land use *Percent total land*		Annual change in forest cover, 1990-2000 *Percent*	Share of land in protected status[b] *Percent*
		Forest	Agriculture		
Korea	0.1	63.5	2.1	-0.1	3.6
United States	9.4	30	12.8	0.2	15.8

[a] Data are for 2003 or the most recent available.
[b] Nationally protected areas.

Sources: United Nations Food and Agriculture Organization; World Bank, World Development Indicators, 2004.

Data available at: http://www.fao.org and http://www.worldbank.org/data.

Table 4 – Recent biodiversity indicators for Korea and the United States

	Number of protected areas *Number*	Area of biosphere reserves *Thousand hectares*	Species threatened *Number (Percent known species)*		
			Mammals	Birds	Plants[a]
Korea	350	128	13 (26%)	25 (18)	NA
United States	7,448	31,570	37 (8.6)	55 (10.8)	169 (0.8)

[a] Flowering plants only.

Sources: United Nations Environment Program; World Bank; and World Resources Institute Earth Trends Country Profiles. Data available at: www.worldbank.org and www.earthtrends.wri.org.

Protected areas refers to management categories I through V of the International Union for the Conservation of Nature and Natural resources (IUCN). (*See* http://www.iucn.org for additional information.)

Biosphere reserves refers to areas representative of terrestrial and coastal/marine environments that have been internationally recognized under the United Nations Educational, Scientific and Cultural Organization (UNESCO) Man and the Biosphere Programme. (*See* http://www.unesco.org/mab/BRs/AsiaBRlist.shtml for additional information.)

Table 5 – United States goods trade with Korea, 2001-2005[1]

	2001	2002	2003	2004	2005
	Billion U.S. Dollars				
U.S. Total Exports	22.2	22.6	24.1	26.3	27.7
U.S. Total Imports	35.2	35.6	37.0	46.2	43.8
U.S. Goods Trade Balance	-13.0	-13.0	-12.7	-19.9	-16.1

[1]Total exports and total imports, customs value.

Source: U.S. Department of Commerce
Data available at: http://www.ita.doc.gov/td/industry/otea/ and http://dataweb.usitc.gov

Table 6 – United States trade with Korea: Exports and imports by major industry and commodity sectors, 2003-2005[1]

Item	2003	2004	2005	Change, 2005 from 2003 Absolute	Change, 2005 from 2003 *Percent*
	Million dollars				
U.S. exports of domestic merchandise to Korea:					
Agricultural products	3,307	2,863	2,646	-661	-20.0
Forest products	699	696	688	-11	-1.6
Chemicals and related products	3,320	4,388	4,363	1,044	31.4
Energy-related products	472	674	690	217	46.1
Textiles and apparel	207	208	205	-1	-0.6
Footwear	12	12	19	7	56.6
Minerals and metals	1,138	1,497	1,447	310	27.2
Machinery	2,713	3,293	3,808	1,095	40.3
Transportation equipment	2,809	3,126	3,594	785	27.9
Electronic products	7,085	7,388	7,896	811	11.5
Miscellaneous manufactures	344	453	439	95	27.6
Special provisions	419	398	414	-5	-1.1
Total	22,525	24,994	26,210	3,686	16.4
U.S. imports of merchandise from Korea for consumption:					
Agricultural products	266	296	330	64	24.1
Forest products	467	517	544	78	16.7
Chemicals and related products	1,672	2,178	2,885	1,214	72.6
Energy-related products	286	553	1,110	824	287.7
Textiles and apparel	2,986	3,030	2,359	-627	-21.0
Footwear	50	51	45	-5	-10.2
Minerals and metals	1,478	2,168	2,783	1,304	88.2
Machinery	2,505	2,771	3,725	1,220	48.7
Transportation equipment	9,836	12,241	12,450	2,614	26.6
Electronic products	15,955	19,699	15,381	-574	-3.6
Miscellaneous manufactures	715	699	647	-68	-9.5
Special provisions	714	860	895	181	25.3
Total	36,930	45,064	43,155	6,225	16.9

[1]Import values are based on customs value; export values are based on f.a.s. value, U.S. port of export. Trade under special provisions includes exports under chapter 98 of the Schedule B and imports under chapters 98 and 99 of the Harmonized Tariff Schedule of the United States (HTS). All other product sectors listed are from chapters 1-97 of the Schedule B and HTS.
Note: Calculations based on unrounded data.
Source: Compiled from official statistics of the U.S. Department of Commerce.

Table 7 – Selected U.S. goods imports from Korea, 2005[1]

	U.S. imports for consumption	Dutiable imports	Calculated duties collected	Share of U.S. imports for consumption represented by dutiable imports	Average calculated duty collected on dutiable imports
	Thousand dollars			*Percent*	
Agricultural products	330,272	223,450	13,301	67.7	6.0
Forest products	544,431	7,118	297	1.3	4.2
Chemicals and related products	2,885,418	2,063,390	97,324	71.5	4.7
Energy-related products	1,110,103	1,001,526	6,324	90.2	0.6
Textiles and apparel	2,359,050	2,237,148	312,287	94.8	14.0
Footwear	45,236	42,801	4,102	94.6	9.6
Minerals and metals	2,782,670	683,529	27,154	24.6	4.0
Machinery	3,724,900	1,869,879	51,810	50.2	2.8
Transportation equipment	12,449,979	10,564,143	268,651	84.9	2.5
Electronic products	15,380,816	1,396,003	52,015	9.1	3.7
Miscellaneous manufactures	646,986	346,843	21,807	53.6	6.3
Special provisions[2]	894,674	213,297	401	23.8	0.2
Total	43,154,535	20,649,127	855,473	47.8	4.1

[1] Import values are based on customs value; export values are based on f.a.s. value, U.S. port of export.
Note: Calculations based on unrounded data.
Source: Compiled from official statistics of the U.S. Department of Commerce.

Table 8 – U.S. merchandise imports from Korea and exports to Korea, by U.S. Customs District, 2000-2005

Million dollars

U.S. imports from Korea
Imports for consumption, customs value

Customs District	2000	2001	2002	2003	2004	2005	Percent of 2005 total
Los Angeles, CA	10,615	9,267	9,473	9,551	10,771	10,329	23.9
San Francisco, CA	9,075	4,925	5,151	4,724	6,666	5,598	13
New York, NY	4,573	4,607	3,931	4,371	4,899	4,316	10
Chicago, IL	1,949	2,310	2,204	2,201	2,520	3,065	7.1
Savannah, GA	928	1,077	1,257	1,291	2,556	2,955	6.8
Anchorage, AK	1,002	568	708	665	565	589	1.4
Seattle, WA	1,127	1,174	1,345	1,556	2,088	2,244	5.2
Columbia-Snake, OR	1,070	1,404	1,502	1,771	1,879	1,635	3.8
Honolulu, HI	71	56	78	52	46	81	0.2
San Diego, CA	243	173	131	159	194	120	0.3
All other Customs Districts	9,174	9,356	9,506	10,588	12,878	12,223	28.3
Total	39,829	34,917	35,284	36,930	45,064	43,155	

U.S. exports to Korea
Domestic exports, F.A.S.

Customs District	2000	2001	2002	2003	2004	2005	Percent of 2005 total
Los Angeles, CA	7,751	5,904	5,521	5,896	5,578	6,760	25.8
San Francisco, CA	5,220	3,341	3,336	3,490	3,499	3,457	13.2
New York, NY	2,878	2,327	2,377	2,255	2,534	3,179	12.1
Chicago, IL	890	619	669	682	960	1,153	4.4
Savannah, GA	542	559	596	721	1,038	1,109	4.2
Anchorage, AK	857	1,126	1,031	1,315	1,156	1,537	5.9
Seattle, WA	3,290	3,438	3,521	2,891	3,066	2,276	8.7
Columbia-Snake, OR	628	520	408	479	590	495	1.9
Honolulu, HI	46	60	20	32	40	333	1.3
San Diego, CA	23	9	1	10	10	3	0
All other Customs Districts	4,179	2,996	3,671	4,753	6,524	5,910	22.5
Total	26,302	20,900	21,151	22,525	24,994	26,210	

Source: Compiled from official statistics of the U.S. Department of Commerce (dataweb.usitc.gov).

Table 9—Applied Tariffs in the United States and Korea

a. Non-Agricultural Applied Tariffs in percent, ad valorem	Korea	U.S.
Wood, pulp, paper, and furniture	3.7	0.7
Textiles and clothing	10.1	9.6
Leather, rubber, footwear, and travel goods	7.9	4.3
Metals	4.9	2.1
Chemicals and photographic supplies	6.9	3.4
Transport equipment	5.4	3.2
Non-electric machinery	6.1	1.2
Electric machinery	6.0	1.9
Mineral products and precious stones	5.8	2.0
Manufactured articles not specified	6.5	2.5
Fish and fish products	16.1	1.1
Petroleum	5.1	1.9

b. Agricultural Applied Tariffs in percent, ad valorem	Korea	U.S.
Fruit and Vegetables	53.6	6.0
Coffee, tea, cocoa	54.4	4.9
Spices, cereal, and other food prep	93.6	4.1
Grains	188.4	1.5
Animals and Products	22.6	3.3
Oil seeds, fats and oils	14.0	4.3
Cut flowers, plants, vegetable materials	28.0	1.2
Beverages and spirits	31.6	6.3
Dairy products	69.1	19.0
Other agricultural products	10.3	1.5

Source: World Trade Organization. Data available at:
http://www.ustr.gov/assets/Document_Library/Fact_Sheets/2006/asset_upload_file650_8883.pdf

Table 10—Korea's Fisheries Production (M.T.).

	Total Production	Adjacent Water Fisheries	Shallow-sea Cultures	Distant Water Fisheries	Inland Fisheries
2000	2,514,225	1,189,000	653,373	651,267	20,585
2001	2,665,124	1,252,099	655,827	739,057	18,141
2002	2,476,188	1,095,812	781,519	580,346	18,511
2003	2,487,042	1,096,526	826,245	544,591	19,680
2004	2,519,101	1.070,687	917,715	499,400	25,299
2005	2,713,908	1,097,016	1,041,058	552,096	23,738

Source: NOAA and USDA at http://www.fas.usda.gov/ffpd/Fish-Circular/attaches.html#Korea
Note: Shallow Sea cultures are exclusively aquaculture. Inland Fisheries include not only on-shore aquaculture production facilities but also catches from freshwater inland sources like lakes, rivers and stream.