



USDA Foreign Agricultural Service

GAIN Report

Global Agriculture Information Network

Template Version 2.09

Voluntary Report - public distribution

Date: 5/18/2007

GAIN Report Number: KS7037

Korea, Republic of

Fishery Products

Counteracting Overfishing Through International Maritime Principles

2007

Approved by:

Lloyd Harbert
U.S. Embassy

Prepared by:

Demeteris Hale/Susan Phillips

Report Highlights:

Korea, a peninsula with a continental coastline that stretches 11,542 kilometers and a distinct food culture with seafood as a dietary staple, is the world's 11th largest producer of fishery products. The lack of government oversight and management in the 1980s led to the overexploitation of marine resources to the point where Korea's fisheries were unable to keep pace with demand. Korea waited for the United Nation Convention on the Law of the Sea (UNCLOS) declaration, which had been under consideration since 1982, before finally implementing serious marine conservation policies in the 1990s. This report explains Korea's approach to the UNCLOS declaration and the effectiveness of this approach.

Includes PSD Changes: No
Includes Trade Matrix: No
Unscheduled Report
Seoul [KS1]
[KS]

Table of Contents

Executive Summary	3
Production and Demand	3
Fisheries Legislation	4
The 1990 Fishery Act	4
The 1994 General Buyback Program.....	4
The Ministry of Maritime Affairs	4
The Total Allowable Catch System.....	5
Ocean Korea 21	5
Multilateral and Bilateral Agreements	5
Bilateral Catch Quotas.....	6
Conclusion	6
Appendix	8
Table 1: Timeline of Important Events.....	8
Table 2: Annual Fisheries Production By Location	8
Table 3: Per Capita Consumption of Fishery Products.....	8
Table 4: Bilateral Fishery Agreements.....	9
Glossary	10

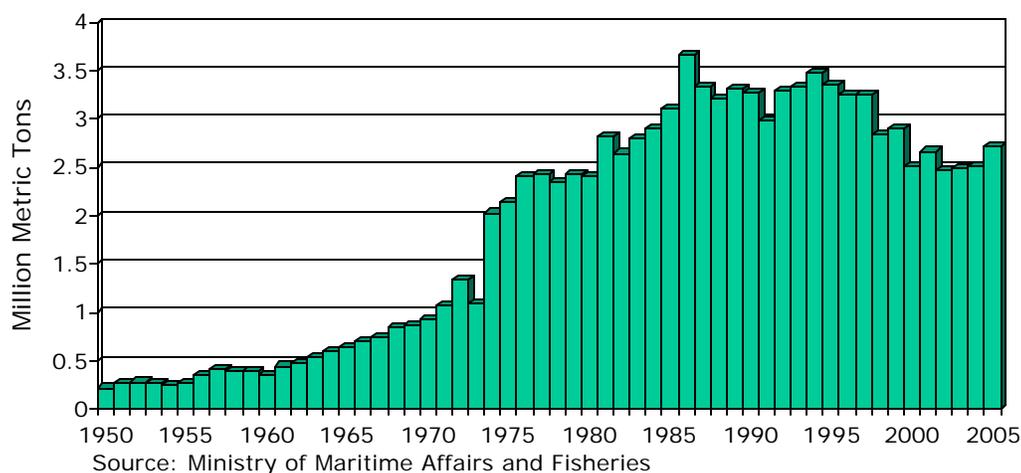
Executive Summary

Korea, a peninsula with a continental coastline that stretches 11,542 kilometers and a distinct food culture with seafood as a dietary staple, is the world's 11th largest producer of fishery products.ⁱ The lack of government oversight and management in the 1980s led to the overexploitation of marine resources to the point where Korea's fisheries were unable to keep pace with demand. Korea waited for the United Nation Convention on the Law of the Sea (UNCLOS) declaration, which had been under consideration since 1982, before finally implementing serious marine conservation policies in the 1990s. This report explains Korea's approach to the UNCLOS declaration and the effectiveness of this approach.

Production and Demand

Coastal and offshore fisheries began to develop in the late 1950s when non-powered vessels were replaced by powered-vessels and cotton fishing nets were replaced by nylon nets. However, the overall amount of the catch did not increase much until the 1960s when inflows of capital into the fishing industry began to increase. Through the years of the 1970s, the number, tonnage, and total horsepower of fishing vessels all began to increase.ⁱⁱ

Table 1: Korean Fishery Production, 1950-2005



In the early 1980's, Korea achieved high levels of production by establishing large offshore fisheries, mainly for Alaska Pollack, and increasing their catches of from coastal waters, mainly mackerel and anchovy. In 1985, fishery production reached its peak at 3.3 million tonsⁱⁱⁱ; however, the profitability of Korea's fisheries started to decline as a result of overcapitalization and reduced resources and catches. As the implementation of U.N. Convention on the Law of the Sea (UNCLOS) became inevitable, the Korean government began to prepare regulations that would address these issues.

In 1996, Korea launched the Ministry of Maritime Affairs and Fisheries (MOMAF) and with it a new marine conservation policy that caused production to decline further as MOMAF reduced the size of the fishing fleet and restricted licenses. The number of fisherman and fishing vessels has decreased continuously since the 1980s and that trend is expected to continue. Production began to drop in the 1990s due a decline in fish prices since the liberalization of imports in 1997 and the shrinking of the fishing ground after the Korea-Japan Fisheries Agreement in 1999.

Technological advances mainly in shallow sea aquaculture, Korean fishery production has rebounded in the past few years. Shallow sea aquaculture now accounts for one third of total fishery production. In 2005, total production of fishery products was 2.7 million tons with an estimated value of 5 trillion won.^{iv}

Korean fishery production is expected to remain relatively stable in the future. While Korea is strengthening its marine conservation efforts, the industry is struggling to meet domestic demand, which is increasing at a faster rate than production. Since 1998 fishery product consumption has increased by 25 percent and imports have tripled. Since 1999 Korea has been a net importer.

Fisheries Legislation

The 1990 Fishery Act

In response to the looming enforcement of the United Nation Convention on the Law of the Sea (UNCLOS), Korea began serious efforts to organize and implement a marine conservation policy. In 1990, Korea enacted the Fishery Act to enhance and protect fishery resources^v. The Act established a fishing license scheme, a zoning scheme, and controls on gear and vessels as Korea attempted to manage their fisheries through input control.

However, the emphasis began to shift from fish harvesting to fish cultivation as Korea pursued aquaculture. Initially, the Act allowed local administrative authorities the power to formulate their own development plans; however in 1996, the Ministry of Maritime Affairs and Fisheries (MOMAF) was launched and the Act was amended to designate MOMAF as the primary manager of Korea's fisheries.

The 1990 Act was also developed to improve the livelihood of the rural sector and to bring about structural adjustments in the fishing industry.^{vi} Despite the contributions of the fishing industry to the food supply, the depletion of fish resources resulted in lower incomes for fishing families even compared with other agricultural families. In addition, the depletion of fish resources and the increase in imports has aggravated the economic status of fishing families, resulting in an increase in their debts.

The 1994 General Buyback Program

Fish prices had been declining due to the liberalization of fisheries products after the conclusion of the Uruguay Round. The General Buy Back Program was established to reduce the total catch by reducing the fleet size. Direct payments were made to fishermen for their vessels that were selected based on their age, gear, profitability, and sector. The government targeted vessels that were low profiting and resource destructive. As a result of this reduction program, 614 vessels were scrapped during the period of 1994 to 1998 for a total cost of 93,644 million Won. The success of this program prompted the creation of a second more comprehensive Buy Back Program whereby more boats were purchased.

The Ministry of Maritime Affairs

The Ministry of Maritime Affairs and Fisheries, or MOMAF, is a cabinet-level ministry that was established as part of a general reorganization in 1996.^{vii} For the preceding 35 years, maritime functions had been divided among 13 various departments. In addition to fisheries, MOMAF is also responsible for overseeing the marine police, the nation's ports, its maritime shipping, and its marine environmental policies.^{viii}

MOMAF became largely responsible for fishing vessels in coastal and distant waters, as well as for foreign-flagged vessels within Korea's boundaries. Since its inception, it began to regulate everything from the mesh size of the fishing nets to the timeframe of the fishing season.

MOMAF's strategy has three basic objectives: the development of sustainable marine resources, the establishment of a knowledge-based marine industry, and the creation of a living ocean.

The United Nations under UNCLOS created sea zones called Exclusive Economic Zone (EEZ). The EEZ's are territorial limits, which measure 200 nautical miles from a nation's shore and enable states to enact environmental and resource protections around fisheries.^{ix} In 1996, Korea declared its sovereignty over its zone and the following year declared its intent to enforce those rights. In 1998, Korea set the rules for the enforcement of its sovereignty that included all regulations related to the monitoring and controlling of foreign fishing vessels, special rules related to keeping fishing order, and supervision of foreign fishing vessels.^x The formation of EEZs by many other coastal nations significantly reduced the area that Korean vessels could operate in and it increased the financial burden from high-sea fishing permit fees.

The Total Allowable Catch System

The Total Allowable Catch (TAC) system was introduced in 1999 as a management system to ensure responsible fisheries and as an alternative to the licensing system. To operate the TAC, observers are employed to check the amount of catches at landing places and to collect biological data of the catches. The Korean government plans to gradually expand the number of species covered by the TAC system. Currently it covers common mackerel, Jack mackerel, Pacific sardine, purple washing clam, red snow crab, pen shell and spiny top shell.

Ocean Korea 21

To address the challenges in the 21st century of public health and productivity of Korea's marine resources, in 2005 MOMAF created a national ocean strategy called Ocean 21, or OK21. OK21 has seven specific goals consisting of 100 special projects.

- ❖ Keeping the domestic seas healthy and productive by pursuing coastal maintenance projects and conducting research on marine resources within Korea's EEZ.
- ❖ Ensuring a cleaner and safer marine environment by expanding sewage facilities, designating sea area for special environmental management, and conserving the coastal ecosystem.
- ❖ Promoting a high value-added and knowledge-based marine industry by increasing investment in research and development.
- ❖ Creating the world's largest marine service industry by establishing an international shipping exchange.
- ❖ Establishing sustainable fishery production fundamentals by developing an "Aqua Belt," a 12-mile area within Korea's territorial sea that will be managed as sustainable fishing grounds.
- ❖ Commercializing marine minerals, energy and space resources.
- ❖ Expanding marine and fisheries cooperation with other countries. Korea plans to reorganize their import levy and subsidy system and establish an international body in Northeast Asia that will manage fishery resources in the region.^{xi}

Multilateral and Bilateral Agreements

Korea is party to several international multilateral agreements aimed at fostering international cooperation for marine resource management and sustainable development. The most significant agreements are the United Nation Convention on the Law of the Sea (UNCLOS), the Code of Conduct for Responsible Fisheries, Agenda 21, and the December 10 1982 Agreement for the Implementation of UNCLOS (the Fish Stocks Agreement). In general, these agreements charge their participants to share information collected, increase research and development in marine biotechnology, encourage marine conservation, and observe responsible fishing practices.

Korea is also a party to many preservation agreements both commercial and regional. The first APEC Ocean-related Ministerial Meeting was held in Seoul in April 2002. At this meeting, the APEC member economies adopted the "Seoul Ocean Declaration," a major milestone for cooperation in the region to work towards the sustainable management of marine and coastal resources. The Seoul Ocean Declaration lists the shared concerns and commitments of the members of Asia Pacific Economic Cooperation. The signatories agreed to implement appropriate programs domestically and through regional cooperation. Korea has fulfilled its obligation to this agreement by pursuing its current marine conservation policy, OK21.

In 2003 Korea gave its support to the Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas. The agreement obligates signatories to prevent high seas fishing vessels from engaging in fishing activities that are detrimental to marine conservation by subterfuge, especially making fraudulent nationality representations and fraudulent paperwork. To meet its obligation Korea is enhancing its patrols and checks of foreign flagged vessels under the OK21 strategy.

Korea has also been actively participating in global efforts to promote sustainable use of fishery resources as a member of 16 international fisheries organizations such as the International Commission for the Conservation of Atlantic Tuna (ICCAT), the Commission for the Conservation of Southern Bluefin Tuna (CCSBT), the International Whaling Commission (IWC), the Inter-American Tropical Tuna Commission (IATTC), and the Western and Central Pacific Fisheries Commission (WCPFC).^{xii}

Bilateral Catch Quotas

Korea uses bilateral fishery agreements to help ensure they have enough fish to meet domestic consumption needs. Korea only has reciprocal agreements with Japan and China; however, they have purchased the right to fish in several other countries EEZs. Under these agreements Korea is permitted to fish the waters of neighboring nations. Korea is obligated to limit their catch to an amount specified in the agreement, to use only the specified methods of fishing and pay a fee.

Conclusion

Korea has made important strides to follow its commitment and manage its resources. The productivity and profitability of the fisheries industry is clearly a priority as the country is somewhat poorly endowed with land resources. To continue making progress and protect its environment, Korea must find a way to balance its international obligations with its national interest.

Korea has used international agreements as a guide to creating its marine conservation institutions and legal framework. The Code of Conduct, which describes appropriate fishery

management, has been especially instrumental in guiding Korea. Korea's legislative framework conforms closely with FAO Technical Guidelines.

The critical task facing the sector is effective and efficient implementation policies and management interventions that are environmentally sound, socially equitable and consistent with new global trade and ocean management policies. Although prospects for further development, such as through aquaculture are promising, catches seem to be approaching their limits. Even though current fishery policies are based on efficient management techniques, efforts to regulate the catch of individual fishers have not been entirely successful. Current fish harvests and the number of vessels both exceed the limits established in 1982.

Failure to effectively control the fish harvests has also resulted not only in the depletion of the fish stock, but created cutthroat competition between fishers and their companies. Despite quantitative and qualitative regulations, frequent violations indicate the need for a more vigilant monitoring system from government authorities.^{xiii}

Growing demand, illegal fishing, unsettled boundary disputes, and regional competition remain challenges for Korea. Korea's fishery production may grow slightly, but overall, it is expected to remain around its current plateau. The future of Korea's marine resources will continue to be constrained by regulatory and supply restrictions.

Appendix

Table 1: Timeline of Important Events

Year	Event
1990	The Fishery Act passed
1994	General Buy Back Program Introduced UNCLOS comes into force
1996	Ministry of Maritime Affairs and Fisheries Launched Korea Declares Sovereign Right to Govern Exclusive Economic Zone
1997	Korea Declares Its Right to Enforce Jurisdiction Over Zone
1998	The Coastal Management Act Passed
1999	Total Allowable Catch Program Introduced Special Act Supporting Fisherman By Back Program By the International Agreements
2000	Basic Program for Ocean Development (Ocean Korea 21) Introduced
2000	Aquaculture Ground Management Act
2000	Culture-based Fishery Promotion Act
2002	Seoul Ocean Declaration Adopted
2003	Agreement to Promote Compliance with International Conservation and Management Measures By Fishing Vessels on the High Seas
2005	Bali Plan of Action adopted
2006	United Nations Fish Stock Agreement

Table 2: Annual Fisheries Production By Location

Year	Adjacent Waters (Coastal)	Shallow Sea Aquaculture	Distant Waters (Offshore)	Inland Waters
1997	1,367,406	1,015,134	829,403	31,796
1998	1,308,336	777,230	722,597	26,852
1999	1,336,062	765,252	791,409	17,846
2000	1,189,000	653,373	651,267	20,585
2001	1,252,099	655,827	739,057	18,141
2002	1,095,812	781,519	580,346	18,511
2003	1,096,526	826,245	544,591	19,680
2004	1,076,687	917,715	499,400	25,299
2005	1,097,041	1,041,074	552,096	23,839
Source : Ministry of Maritime Affairs and Fisheries 2006 Statistical Year Book of Maritime Affairs & Fisheries				

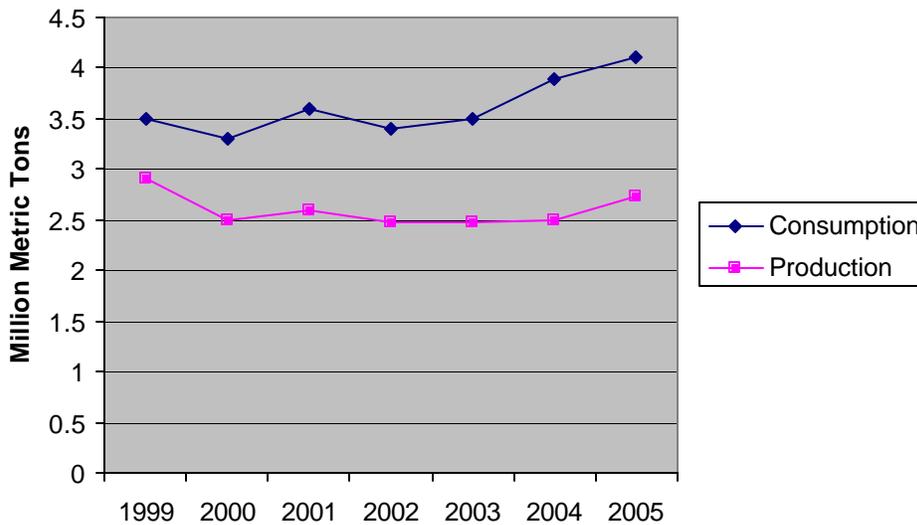
Table 3: Per Capita Consumption of Fishery Products

	1998	1999	2000	2001	2002	2003	2004
Fish and Shellfish	25.9	30.7	30.6	35.6	36.31	38.5	40.8
Seaweed	7.1	7.6	5	6.1	8.21	6.4	7.9
Total (kg/year)	33	38.3	35.6	41.7	44.52	44.9	48.7

Table 4: Bilateral Fishery Agreements^{xiv}

Country	Date Agreement Went Into Effect	Targeted Fish Species	Status of Access
Japan	22-Jan-99	Mackerel, Squid	In operation
China	30-Jun-01	Hair tail, Croaker	In operation
Iran	1-Apr-78	-	Withdrawn
Tuvalu	18-Jun-80	Tuna	In operation
Solomon Islands	12-Dec-80	Tuna	In operation
Kiribati	18-Dec-80	Tuna	In operation
Russia	22-Oct-91	Alaska pollock, Saury, Cod, Squid	In operation
Papua New Guinea	15-Apr-92	Tuna	In operation

Chart 1: Production and Consumption of Fishery Products, 1999-2005



Glossary

Coastal or Adjacent Waters: The waters within the territorial jurisdiction of a country. For the United States this consists of the Great Lakes, their connecting waters, harbors, roadsteads and estuary-type areas such as bays, shallows and marshes.

Distant Waters: The waters located within the territorial limits of another country accessible with a license.

Inland Waters: The waters located within the interior of the country including rivers, dams, lakes, reservoirs and water streams or water surfaces of other artificially created fresh water streams.

Shallow Sea Aquaculture: Aquaculture of mollusks, shrimp, and seaweed carried out in shallow sea areas.

ⁱ United Nations Food and Agriculture Organization. National Fishery Sector Overview: Republic of Korea Fishery Sector Overview. 2003. www.fao.org

ⁱⁱ Hong, Seong-gul, Jeong-gon Ryu and Sun-pyo Kim, *Adjustment of Fishing Fleet Capacity in Korea for Sustainable Resources Exploitation: Programs and Achievements*, October 1999.

ⁱⁱⁱ The Ministry of Korean Maritime Affairs and Fisheries (MOMAF) www.momaf.go.kr

^{iv} The Ministry of Korean Maritime Affairs and Fisheries (MOMAF) www.momaf.go.kr

^v OECD Country Note on National Fisheries Management Systems - Korea.

<http://www.oecd.org/dataoecd/10/42/34429182.pdf>

^{vi} Fisheries Act. Act No. 4253 & 5131

^{vii} Fisheries Act. Act No. 4253 & 5131

^{viii} The Ministry of Korean Maritime Affairs and Fisheries (MOMAF) www.momaf.go.kr

^{ix} United Nations Food and Agriculture Organization. National Fishery Sector Overview: Republic of Korea Fishery Sector Overview. 2003. www.fao.org

^x United Nations Food and Agriculture Organization. National Fishery Sector Overview: Republic of Korea Fishery Sector Overview. 2003. www.fao.org

^{xi} The Ministry of Korean Maritime Affairs and Fisheries (MOMAF) www.momaf.go.kr

^{xii} OECD 2006 Review of Fisheries: South Korea

^{xiii} FAO, Fishery and Aquaculture Country Profile – Korea, Republic of, 2003.

^{xiv} OECD 2006 Review of Fisheries: South Korea