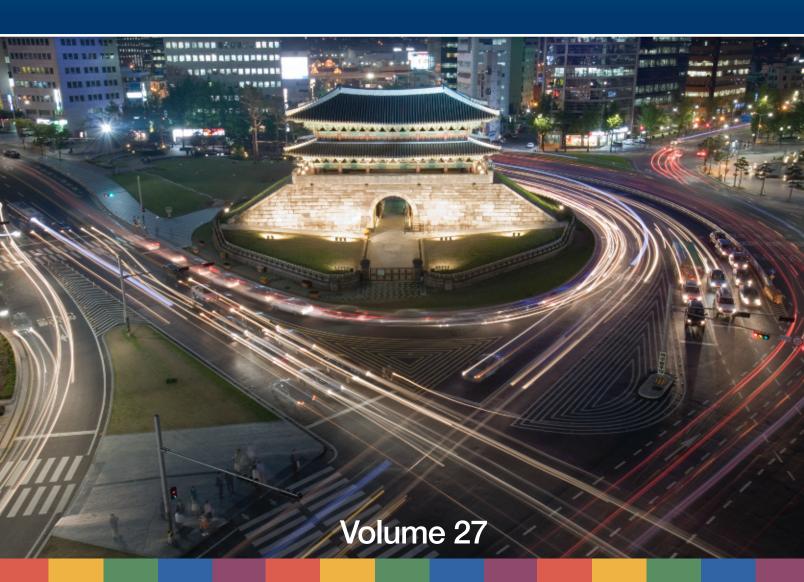


KOREA'S ECONOMY

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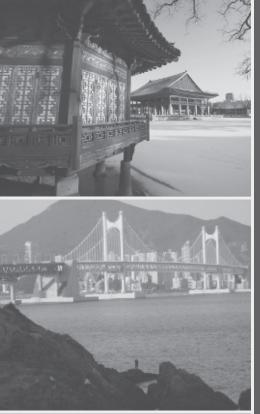
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FINANCIAL INSTITUTIONS AND MARKETS-FOCUS ON GREEN GROWTH

AN OCEAN IN TROUBLE, AN OCEAN OF OPPORTUNITY

By Andrew Snowhite and Philippe Cousteau

The author Arthur C. Clarke once wrote, "How inappropriate to call this planet Earth when it is quite clearly Ocean."

Our history with the ocean is long and complex, from ancient Phoenician mariners who spent their lives plying the waters of the Mediterranean to the giant cruise ships that cross the Atlantic in mere days. The ocean has had a defining influence on our cultural, political, and economic development since *Homo sapiens* first stood upright on the shores of East Africa and stared out upon its vast expanse.

Without a doubt, the ocean nurtures all life on our planet, providing up to 70 percent of our oxygen, regulating our climate, and providing the majority of protein to more than 1 billion people as well as making possible hundreds of billions of dollars for economic growth around the world, from fisheries to energy and commerce. The ocean is key to the survival of humankind and yet, in spite of this, it has long been the refuse dump of civilization, abused and neglected.

A few of these issues are worth exploring in detail as they relate to Asia and the food security and environmental challenges that are becoming more urgent every year. Coral reefs are of particular concern. Although they constitute a mere 0.2 percent of the ocean's area, they are home to one-third of all marine fish species and tens of thousands of other species, thus representing some of the planet's most biodiverse and valuable habitats—more biodiverse than rain forests. Coral reefs also serve as natural barriers against the ocean, providing protection from storms and beach erosion for coastal communities around the world. In fact, one mile of healthy coral reef produces between one to three tons of sand per day, a fact that was not lost on the residents of Southeast Asia as there is little doubt that healthy coral reefs would have reduced the damage from the tsunami in 2004.

Unfortunately, an estimated 20 percent of our planet's coral reefs have already disappeared! In addition, reports "estimate that at least 58 percent of the world's coral reefs directly are threatened by human activity," including coastal development, destructive fishing practices and general overexploitation of marine resources, marine pollution, and increased terrestrial runoff associated with agriculture and deforestation.

Furthermore, fisheries around the world are facing collapse, with some scientists predicting that, barring major management and conservation efforts, most large-scale pelagic (oceangoing) fisheries will collapse by the middle of the century. Of particular concern is shark finning. Sharks are being slaughtered around the world at a rate of 70 to 100 million a year; this rate of extermination is unsustainable and is a global crisis impacting not only sharks but other fisheries as well. Sharks are a critical member of the food chain that keeps ecosystems in balance; without healthy shark populations a domino effect is created that can ripple through the food chain,

^{1.} Status of Coral Reefs of the World: 2004 (Townsville: Australian Institute of Marine Science, 2004).

^{2.} D. Bryant, L. Burke, J. McManus, and M. Spalding, *Reefs at Risk: A Map-Based Indicator of Threats to the World's Coral Reefs* (Washington, D.C.: World Resources Institute, 1998).

negatively impacting other more important food stocks. Shark finning is often conducted in developing nations, exporting the problem and causing a humanitarian crisis. Although there is no doubt that cultural traditions should be respected, those that present a serious global threat to both the environment and humans should be reconsidered. The decline of fisheries, and in particular sharks, will have increasingly dire consequences on global food supply and the food security and cultural identity of many countries, especially those in Asia that are so deeply connected to seafood.

Perhaps of greatest concern, however, is climate change. This is essentially an ocean problem originating in the Arctic Ocean, which is in essence the air-conditioning unit of the planet. The high reflectivity of the snow and ice along with long periods of little or no sunlight in the Arctic cause a net loss of heat into space. In addition, the Arctic plays a vital role in regulating the circulation of the Earth's atmosphere and oceans by distributing heat from the tropics to the poles, making the Earth overall a much more habitable place. As sea ice melts, causing less reflectivity and disrupting oceanic currents, this crucial function may change with potentially dire global consequences. The last 13 years have shown a significant annual decrease in summer sea ice levels. Anyone who depends on a stable climate to provide water for drinking, sunlight for agricultural crops, and all the other lifegiving functions that it provides—essentially every human being on the planet—faces a much more uncertain and volatile future. As the Earth's population passes the seven billion mark and rapidly heads toward nine billion by the middle of the century, dwindling natural resources are of increasing concern; thus any volatility in the world's climate is of global significance.

According to a report by the World Wildlife Fund, we use 1.5 times the amount of resources that the planet can replenish each year.³ You might say we are like farmers eating our seeds. One recent study is so dire that it suggests that the "world's ocean is at high risk of entering a phase of extinction of marine species unprecedented in human history."⁴

For industrial nations like South Korea, the stakes are high as increasing competition among populous Asian countries for dwindling resources presents a very serious threat to economic stability and national security. As a member of the Group of 20 and a technological and economic leader in the world, South Korea has an opportunity to lead the way in Asia as a steward of ocean resources and an innovator in conservation and management. From practicing sustainable aquaculture to effective fisheries reform that advocates science-based quotas and the elimination of shark finning, South Korea has an opportunity to pioneer solutions to the fisheries crisis. With respect to coral reefs and other threatened marine ecosystems, South Korea could continue to innovate and export, through foreign assistance and consulting, best practices in coastal development and the establishment and enforcement of effective marine protected areas.

Finally, climate change is a problem that affects all of humanity, but it will take leadership on the part of a small group of innovative countries to pioneer clean technology, effective carbon reduction programs, and investment in developing countries to help them adapt to those shifts in weather patterns (including precipitation), sea level, and increasing food scarcity that will come with climate change.

It is fortunate that South Korea is already showing its leadership regarding ocean issues both regionally and globally. Through hosting Expo 2012 Yeosu Korea, whose theme is the "Living Ocean and Coast," Korea will educate 10 million visitors about ocean and coastal issues. The Korean government has also made significant commitments regarding greenhouse gases through the National Strategy for Green Growth, which includes an

^{3.} Living Planet Report (Gland, Switzerland: World Wildlife Fund, October 2010).

^{4.} A. D. Rogers and D. d'A. Laffoley, *International Earth System Expert Workshop on Ocean Stresses and Impacts: Summary Workshop Report* (Oxford: International Programme on the State of the Ocean [IPSO], June 2011).

emissions reduction target of 4 percent below 2005 levels by 2020 (or 30 percent below the business-as-usual level). With continued focus on creating solutions to such critical issues and by embracing associated opportunities, South Korea will be well positioned as a 21st-century ocean leader.
Andrew Snowhite is the cofounder of Azure Worldwide. Philippe Cousteau is the cofounder of Azure Worldwide and CEO of EarthEcho International.

^{5.} Jill Kosch O'Donnell, *The U.S.-ROK Alliance: A Catalyst for Green Growth?* (Washington, D.C.: Asia Foundation, Center of U.S.-Korea Policy, March 2010).

Selected Commentary

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A Reflection on the Seoul Summit

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