

A photograph of two people climbing a tall wooden tower with a weather vane on top, set against a sunset sky over a rural landscape. The sky is filled with soft, white clouds, and the sun is low on the horizon, casting a warm glow. The foreground shows a field and some trees.

Seeking Solutions Over The Horizon

The Nautilus Institute

VISION & MISSION

*Our vision is a peaceful, ethical, and sustainable world.
Our Mission is to apply and refine the strategic tools of cooperative engagement in order to build global security and sustainability.*

STRATEGIC OBJECTIVE I

To use and improve the tools of cooperative engagement on a high impact symbolic project that demonstrates the possibility of alternative futures. Our current focus is on reducing the danger of nuclear war, moving investors to improve the environmental performance of companies, and increasing the leadership skills and environmental literacy of youth.

STRATEGIC OBJECTIVE II

To share the improved tools of cooperative engagement with others engaged in global problem solving.

These strategic tools are:

- *Information and Knowledge Systems*
- *Convening/Scenarios Methodology*
- *Collaborative Research and Analysis*
- *Increased Transparency and Accountability*
- *Human Understanding: Networking, Mapping, Training, Partnerships*

The Nautilus Institute

for Security and Sustainability

Since its founding in 1992 by Peter Hayes and Lyuba Zarsky, the Nautilus Institute has evolved into a thriving public policy think-tank and community resource. Along the way it has addressed critical security and sustainability issues such as the United States nuclear policy in Korea and the effect of the U.S.-China relationship of environmental insecurity. The Institute has built a reputation not only for innovative research and analysis of critical global problems. It also translates ideas into practical solutions, often with high impact.

The key to reducing global insecurity—in short, to making the world peaceful, equitable, and sustainable—lies in the creation of a global civil society committed to joint problem-solving. The Nautilus community is a global network built around this strategy that serves thousands of people who already use our products every day to improve their own work in over fifty countries.

Over the last decade, the Institute has:

- Reduced the danger of nuclear war and proliferation in Korea by engaging cooperatively the DPRK in projects such as the Unhari wind turbine system that provides villagers with light at night.
- Provided a voice of reason for U.S. nuclear policy in Korea with the publication of *Pacific Powderkeg* and informed media and citizens in South Korea, Japan, and the United States about the risks of nuclear weapons.
- Increased the transparency and accountability of American nuclear weapons plans through the use of the Freedom of Information Act.
- Created a dialogue and network of energy experts from China, North Korea, South Korea, Japan, Russia, and the U.S. on energy security in the region.
- Increased US-Chinese mutual understanding of the array of uncertainty that may affect the future of the US-China relationship by convening Chinese and American security, energy, and environmental experts to generate *Scenarios for the Future of United States-China Relations 2001-2010*.
- Published internationally acclaimed books and standard reference texts including *Global Greenhouse Gas Regime, Who Pays?* (1994), *Peace and Security in Northeast Asia* (1995), and *Human Rights and the Environment: Conflicts and Norms in a Globalizing World* (2002).
- Articulated 'sustainable and ethical' rules for international investment and applied these principles to Californian investment institutions.
- Enabled citizens to improve social corporate performance by producing "Whose Business?" and conducting trainings on human rights and the environment, especially in the high technology sector in California, India, Taiwan, and Thailand.
- Convened the first-ever scientific conference on the ecological and public health impacts of trans-Pacific pollution transport from East Asia to North America.
- Informed public opinion by interviews given to CBS Evening News, Lehrer News Hour, CNN, regular commentary on National Public Radio's Morning Edition and All Things Considered and global media including BBC, Australian Broadcasting Commission and Radio Free Asia; written opeds in Newsweek, San Francisco Chronicle, Korea Times (Seoul), Asahi Shimbun (Tokyo); and profiles in papers such as LA Times, San Jose Mercury News.
- Increased environmental awareness and youth leadership by providing 2000 Bay Area youth with a marine environmental education curriculum and access to the San Francisco marine environment.

Wind Turbines

Power for Peace

In the early nineties, the specter of nuclear war loomed on the horizon. The delicate balance in the Korean Peninsula was shattered when North Korea threatened to make its own nuclear weapons. The region became a focal point of international politics, but few considered working with North Koreans to increase stability in the region. The Nautilus Institute changed that.

Nautilus sent two missions to Unhari Village in North Korea to build seven wind turbines and a distribution system to power a kindergarten, a clinic, and households. During these missions, the Nautilus team worked shoulder-to-shoulder with North Korean engineers. As they bent their backs to the task, they communicated in English, Chinese, Korean, French, sometimes via technical drawings—and hard work.

The villagers quickly warmed to the Nautilus team. When construction began, few villagers were to be seen, but by the time the turbines were up, villagers were welcoming the team into their homes.



“The Nautilus Institute... I can tell you, they’re really doing the lord’s work over there.”

-- Former US Defense Secretary William Perry

Recently, Nautilus returned to North Korea to install the first water-lifting windmill. This windmill pumps drinking water in the winter when there is no power to pump water from underground. Nautilus’ Chris Greacen said of working atop the windmill tower on a three foot platform shared with a North Korean engineer: “It was a mix of coordination, balance, and trust in challenging circumstances. For me this represented a lot of what the spirit of the mission was about.”

Today, Nautilus is working to provide solar-powered units to purify the drinking water in Unhari Village along with additional water-pumping windmills.

For six years, the cooperative village energy project in North Korea has demonstrated that it is possible to do business with North Koreans. In North Korea, the word is out that Americans have delivered on their commitments. Now the task is to get governments to do the same.

Energy--Not Weapons

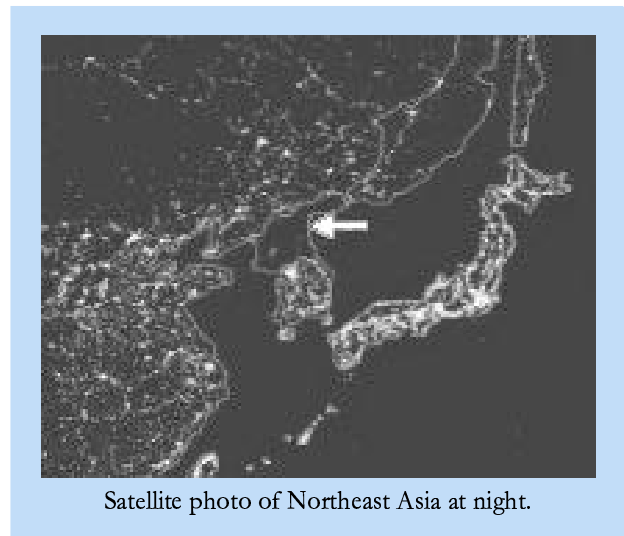
A Key to Peace and Security

When Nautilus researchers informed South Korea's National Security Advisor that North Korea lacked an electric power grid capable of supporting the two light water reactors that are under construction in North Korea, he was incredulous.

The light water reactors are designed to produce the electricity necessary for supporting industry and are less proliferation-prone in terms of nuclear weapons than other nuclear reactors. They are a critical element in the effort to stop North Korea from building nuclear weapons.

To help resolve the problem, Nautilus convened the first regional grid connection workshop in Beijing in June 2000, co-sponsored by China's State Power Corporation International Service and the Electric Power Research Institute of China.

Nautilus consultant John Bickel explained to the North and South Korean, Chinese, Russian, and Japanese experts that in fact the reactors cannot be operated safely without a reliable electric power grid. Attempting to do so could result in a reactor accident that would combine the worst of Three Mile Island with Chernobyl.



"It is better to light candles than to curse the darkness."

Ancient Chinese proverb

edge and partnerships for solving cross-national problems has been critical in enhancing communication, planning, and security in the region.

Nautilus and its regional partners are convening a series of studies that will examine the economic and environmental realities; the technological desirability; and challenges of linking the electric grids of the two Koreas with Russia, China, and Japan. Once again, the Institute's ability to build knowl-



Emergency Response

Nautilus in Action

In this world of instant news, Nautilus has demonstrated the ability to respond rapidly and thoughtfully, to bring diverse views together in times of shock, grief, fear and uncertainty, to foster understanding, and to help all people find and respect the common denominators of global civil society. Short-term crises with long-term, global impacts demand an emergency response that goes beyond routine daily information. At such times, superb initiatives, excellent tools, and global networks need to fuse to apply instantly all the knowledge at our disposal in ways that make an immediate difference. And Nautilus does move quickly.

When the massacre began in East Timor on September 6th, 1999, Nautilus issued eleven essays within four days. The first two were produced in less than 24 hours. These analyses were unique assessments written by key experts from throughout the world in an effort to promote and broaden the debate over appropriate responses to the crisis.

“Nautilus’ rapid response special fora on critical global security issues are invaluable for those of us in the policy and research communities who need timely access to analyses that don’t simply reflect US mainstream views.”

-- Andrew Mack, Director of the Human Security Centre at UBC

Through our website, experts shared, debated and explored these perspectives. The critical issues discussed included the sources of authority for actors in East Timor and in Indonesia; the roles for outside parties in the crisis (including the United Nations, the ASEAN Regional Forum, the United States, and other regional states); the pros-

pect of forceful international intervention in East Timor; the contrast of the cases of East Timor and Kosovo; and the implications of the crisis for regional and global security and human rights regimes. Writers included Americans, Indonesians, Filipinos and Australians.

Andrew Mack, now Director of the Human Security Centre at UBC and then Director of Strategic Planning in the Executive Office of the UN Secretary General who sent a key fact-finding mission that was instrumental in ending the killing, wrote:

Nautilus’ rapid response special fora on critical global security issues are invaluable for those of us in the policy and research communities who need timely access to analyses that don’t simply reflect US mainstream views.

Two years later, in September 2001, Nautilus again mobilized despite the shock that shook the world. Within hours the Institute launched the “Special Forum on the September 11 Attacks” to enable interested individuals worldwide to understand the unfolding consequences of these attacks. Over 44 essays were published in the subsequent months. A particular objective was to ensure that diverse and opposing informed views from different cultural perspectives were published. Authors from Pakistan, India, Afghanistan, South Korea, China, Japan, Australia, Canada, United Kingdom, and the United States contributed to this transnational effort.

Moving the Markets

Promoting Responsible Corporate Governance

Throughout East Asia, workers assemble and wire the semiconductors that power the global information revolution. The flowering of the high tech industry in the region has helped fuel the 'East Asian economic miracle', which other developing countries jealously seek to follow.

There is a dark side to the high tech miracle, however, and it is being felt all over the world.

Taiwan's Hsinchu Industrial Park and the surrounding communities embody the mixed blessing of high tech. As a key player in the global high tech supply chain, Hsinchu is home to the subsidiaries of major U.S. and Japanese high tech firms. Until the Nautilus Institute commissioned a local research team to conduct a field study, little was known about the kinds of social and environmental impacts that multinational high tech companies were having on local communities in Taiwan.

Visible problems began in Hsinchu in the late 1990's when thousands of fish started turning belly up in the local rivers and acrid smells choked the air. In July 2000, the source of pollution was revealed: the Shengli Chemical Company, a waste handler contracted by the high tech firms, consistently dumped toxic chemicals in the Kaoping River—the primary drinking supply for Taiwan's second largest city. The incident set off alarms among local residents that existing environmental laws might not be protecting the health of the community.



The Nautilus-led investigation revealed that the environmental problems facing the people of Hsinchu run deeper than isolated incidents. Of the 60,000 tons of toxic water drained into the water treatment plant each day, only 20,000 tons is treated. The rest is dumped into the water system, damaging local farmlands, endangering human health, and threatening wildlife.

As a result of the investigation, the citizens of Hsinchu are demanding that the risks to their health and continuing environmental degradation be addressed. It is also a crucial step towards holding multinational high tech companies accountable for the misconduct of their suppliers. The Institute is putting the power back where it should be: in the hands of the people.

The Pegasus Project

Reaching out to the Community



Meet Chris, an economically disadvantaged, Hispanic teenager with the distractions of street culture knocking at his door. Through strong support from his single mother, Marta, and the care provided by the community organization The Berkeley Boosters, Chris was introduced to the Pegasus Project's Youth-At-Risk Sailing Program. Chris started out shy and a bit unsure of himself, but sailing in the marine wilderness of the San Francisco Bay struck a chord and he began to return time and again to sail, train as a crewmember, and learn about the bay environment.

After three years of dedication and hard work, Chris received the "Kid Who Cares Award" from the Northern Californian Grantmakers Association and two scholarships for dinghy sailing and small keelboat certification. Once certified, Chris was rated on Pegasus crew stations and served as full crewmember for youth voyages and teacher trainings. His self-confi-

dence increased dramatically through his mentoring both by adults and for other youth in the project, and, in 2000, he won a scholarship to the Sea Education Association's Summer Science-at-Sea Program. According to Chris, "the most important result of me being allowed to attend this summer would be to take the information that I will have learned and share it with others in my community that come from similar backgrounds and empower them..." Chris went on to graduate high school and pursue a bachelor's degree in Oceanography. He remains a committed crewmember and gives talks to help widen the horizons of incoming youth.

"We need the Pegasus Project. Our youth need access to the Bay and innovative educational programs. This is the kind of public/private partnership which makes miracles happen for our kids."

-- Shirley Dean, Mayor, City of Berkeley

Since 1992, the Pegasus Project has helped youth like Chris discover the marine wilderness and themselves in empowering ways. A sailboat offers a unique environment that cultivates teamwork, self-esteem, leadership, and communication. As most inner city youth never leave their urban world, bringing kids on the bay aboard Pegasus imparts them with life skills and respect for each other and the environment around them. The project addresses both the need for youth to succeed in order to become positive, productive adults, and the need to fill the gap in environmental awareness in low-income communities. This project owes its success to strong partnerships with community organizations and the extremely dedicated volunteer crew.

Environmental Education

A Voyage of Discovery



The Pegasus Project provides local youth with the opportunity to learn about sailing, teamwork, the marine environment, and the history of San Francisco Bay, all while aboard our 51-foot sailing vessel. In marrying the traditional science-based components of an environmental education program to the social science dimension of the history, discovery and explorers of the bay, our curriculum provides teachers with many options to integrate the program activities into their existing lesson plans and to increase students' environmental literacy.

“As a fifth grade teacher I have been trying for a number of years to arrange an educational trip on the Delta or San Francisco Bay for my class. These opportunities are very limited. Pegasus is especially important for our young people because they are the future stewards of our environment.”

-- Evangeline Freenor, Hillcrest School



Thanks to the support of the National Fish and Wildlife Foundation and our partnership with the Shorebird Nature Center, we have created a curriculum module that treats the voyage on Pegasus as a voyage of discovery – reenacting portions of Ayala's voyage and discovery of SF bay, keeping journals that log trip activities and experiences, working with Ayala's original maps, and taking compass readings to use for in-class mapping work. Classes prepare for the voyage with a set of pre-voyage teaching materials that include a study of navigation history and methods, the history and ecology of SF Bay upon discovery, and work with compasses. Post-voyage work includes time for personal reflection and creativity through essays and artwork, activities on how the bay landscape has changed in modern years, a mapping activity, and culminates in a logbook that includes their work from the entire module.

Nuclear Policy

Promoting Transparency and Accountability

Truth is the first casualty of any war.

But even in peacetime, excessive government secrecy deprives the public of information necessary for us to make informed political decisions—the foundation of democracy. Of particular concern to Nautilus is information about nuclear weapons and the policies that guide them. Although some information must be safeguarded to protect national security, the public must have access to other information if they are to fulfill their responsibility as global citizens. The

Nautilus Institute works to increase the availability of information regarding nuclear weapons thereby creating greater transparency in nuclear policy, improving government accountability, and reducing the risk of nuclear war.



“Thank you for this tremendously expert and useful discussion. I hope you will be able to continue investing the resources in further frequent updates and dialogue.”

— Martin Stein, Doctoral candidate, Woodrow Wilson School of Public and International Affairs Princeton University

In late 2001, the Bush administration completed a yearlong analysis of US nuclear forces and policy, the Nuclear Posture Review. The widespread public debate that followed the leak of the review revealed a widening abyss between the official and public understanding of U.S. nuclear policy: the government claimed that policy hadn’t changed, but scholars, journalists, and independent experts documented a dramatic shift from avoiding nuclear war to preparing to fight the next one. Rather than deterring the former Soviet Union, the new US policy focused on the use of nuclear weapons against smaller opponents such as North Korea, Iraq, Iran, Libya, and Syria.

The Nautilus Institute came to play a unique role in the debate. Through extensive use of the Freedom of Information Act to declassify information about nuclear policy, Nautilus Institute senior researcher Hans M. Kristensen provided declassified documents to major news organizations, including the Washington Post, Global Security Newswire and the San Jose Mercury News, enabling the public to better understand the Nuclear Posture Review and its implications. The information showed how US nuclear planners had used public concern about the proliferation of weapons of mass destruction to systematically expand the scope of US nuclear planning to include smaller countries armed with not only nuclear but also other forms of weapons of mass destruction. The actual documents were published on the Nautilus web site, enabling researchers anywhere in the world to inspect and interpret the original texts.

In depth research, use of the Freedom of Information Act, media access and a commitment to reducing the dangers of nuclear war are just a few of the tools used by the Institute to promote understanding, knowledge and informed decision making.

The Pen Versus The Missile

A Fable of Activism

One winter's day in November 1984, Nautilus founder Peter Hayes was reading a heavily edited, three-volume study of arcane technical aspects of U.S. missile testing programs, which had been released to the Institute under the Freedom of Information Act.



His eyes scanned a table and stopped: Sydney was listed as a transit point for U.S. airplanes that collect data from strategic missile tests. He pulled out a wall-sized map of the region and calculated the flying radius of the aircraft from Sydney. It indicated that the “splash down” target zone for the test missile’s re-entry vehicles must be in the Tasman Sea. Chatham Island, east of New Zealand, was also mentioned elsewhere as a “target.” But that didn’t make sense—why would these planes fly via Sydney to go east of New Zealand?

Shortly afterward, Hayes published a short article on this testing program in an Australian newspaper, *The National Times*. When he read the article, Australian Defense Minister Kim Beazley was shocked to learn of the missile test. As Minister of Defense, he assumed he knew everything about military activities arising from the alliance with the United States—especially those as significant and politically sensitive in the Australian Labor Party as a MX missile test—arguably a first strike weapon—in the oceans around Australia. He asked his Defense Department to explain the Sydney connection.

It was soon revealed that the former government had secretly approved the plan in 1981, and the new Prime Minister had confirmed Australian support for the missile test in a direct discussion with the US Defense Secretary, and had not advised his own Minister of Defence of the arrangement!

In response to the public outcry, the nuclear missile test series was cancelled. It was the first and only time that popular opposition forced the abandonment of a strategic missile test. Such is the power of the pen armed with the Freedom of Information Act.

“I particularly like your efforts to present relations between Asian nations. This is rare to come by in the US.... You run a great service, and I know that a large number of journalists and researchers regularly rely on your service to get their work done.”

-- E. B. Keehn, President, Japan-America

SANDNet

South Asia Nuclear Dialogue Network

“Uncertain”, “dangerous”, “complex”, are just some of the adjectives frequently used in reference to South Asia. Recently, as the United States led coalition forces went to war in Afghanistan, the U.S. experts and policy makers worried about the tenacity of the Taliban, the survivability of the Pakistani government, and the possibility of a popular uprising in the Muslim world. The experts could not have been more wrong: the Taliban militia collapsed rapidly, religious parties in Pakistan were unable to present a significant challenge to the government, and the streets of the middle east remained relatively quite. Clearly, there is a lack both of good information and a sound framework for interpreting news from the region. The South Asia Nuclear Dialogue Network’s (SANDnet) Weekly Report aims to fill this gap.

“SANDNet is the Early Bird for South Asia watchers.”

--Dr. Zia Mian, Princeton University



Since its inception in January 2000, SANDnet Weekly Report has evolved to become – according to Professor Stephen Cohen, one of the foremost South Asia experts in the U.S. “the best service” for accessing news and analysis coming out of the region. Through careful selection and presentation of news and analysis being published in the South Asian media, the report serves as an invaluable tool for information about and understanding of events as they unfold in the region.

SANDNet is shared by a worldwide community of over one thousand experts, scholars and policy makers who are committed to fruitful dialog about the complexities and subtleties of South Asia.

“Careful selection and depth of coverage makes SANDnet an indispensable resource for anyone involved with society and politics in South Asia.”

-- Admiral L. Ramdas

NAPSNet

North Asia Peace and Security Network

In 1994, the United States and North Korea were in the midst of a standoff over Pyongyang's nuclear program and the threat of a second Korean War hovered over the peninsula. In response, Nautilus founded the Northeast Asia Peace and Security Network (NAPSNet), a daily e-mail newsletter, which provided up-to-the-minute information and analysis making it possible for policymakers on all sides to know how events were being perceived in the different countries involved.

In his book *Disarming Strangers: Nuclear Diplomacy with North Korea*, former New York Times correspondent Leon Sigal cited the important role that NAPSNet played in keeping "a small but influential circle up to date on the subject [of North Korea's nuclear development], and reduc[ing] the blatant propaganda in wide circulation on North Korea. It was a way to use the new information technology to gather and disseminate information in real time at least as well as the intelligence agencies."

From this small but vital beginning, NAPSNet readership has grown to several thousand readers worldwide.

NAPSNet is more than a simple news summary; it is a community of professionals working on Northeast Asia that includes some of the most prominent names in government, business, academia, and non-governmental research institutes.

NAPSNet's multinational production gives readers access to sources of news and analysis that are not readily available in all countries. NAPSNet organizes its summarized information into one daily package, allowing busy professionals and policymakers to receive their desired news without having to sift through several newspapers or websites.

Originally seen as a temporary project, the NAPSNet Daily Report celebrated its 8th anniversary in May 2002. As Robert Scalapino, one of the world's leading experts on Asian Studies said of NAPSNet, "I simply know of no other service that provides the breadth and quality of information on Northeast Asia both to ordinary citizens like myself and to top policy-makers."

"The Daily Report has become the authoritative reference source for the latest news and views concerning critical issues of security, especially nuclear weapons proliferation threats, in the [Northeast Asia] region."

-- Donald Gregg, President of the Korea Society

Information

The Change Agent of the 21st Century

Deep research. Critical analysis. Strategic mapping. Networking. Crisis management. Getting quality information to the general public and key decision makers is fundamental to global problem solving. It is not enough for information compiled and synthesized by Nautilus to exist: it must be disseminated and used.

Consequently, the over ten thousand readers who receive international news regularly from the Institute are just the foundation of our information strategy: Nautilus recognizes the importance of “hand-delivering” critical news in times of crisis.

For example, in December 1994, a US helicopter strayed north of the DMZ and was shot down. Nautilus provided the Korea Desk at the State Department the text of the US Forces Korea 1978 Command History released

under a Freedom of Information Act request. This text described how an earlier helicopter incident had been resolved. US officials read it over an open phone line to then-congressman Bill Richardson in Pyongyang who was attempting to get the surviving pilot released by the North Koreans. The open phone line ensured that the North Koreans also received the information.

“US officials believe that with every hour that passes, North Korea is losing the opportunity to make this unfortunate incident contribute to the building of a new relationship with North Korea, rather than a new irritant that may even threaten the smooth implementation of the US-DPRK agreement.”

-- Peter Hayes, Director of the Nautilus Institute

Concurrently, a rare commentary written by Peter Hayes in the NAPSNet Daily Report aimed at the North Korean readers stated: “US officials believe that with every hour that passes, North Korea is losing the opportunity to make this unfortunate incident contribute to the building of a new relationship with North Korea, rather than a new irritant that may even threaten the smooth implementation of the US-DPRK agreement.”

There is no way to measure what, if any, role Nautilus played in the timely and safe return of the surviving pilot or in the productive conversations between Richardson and North Korea. What we do know is that when quality information gets to the right people at the right time, the probability of peaceful solutions to crisis situations increases.

Pockets, inside back cover.

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