

East Asia Science & Security Network Report, Feb. 14, 2007

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1. DPRK Denuclearization

Jungmin Kang, Nautilus Institute Senior Associate and Science Fellow at the Center for International Security and Cooperation (CISAC) at Stanford University, describes the first steps that can be taken by the DPRK to "irreversibly dismantle its plutonium production programs and move the Six Party Talks forward."

[First Technical Steps for North Korean Denuclearization](#)

2. Nanotechnology

A commentary in OhmyNews International (John Horvath, "Nanotechnology: The Next Battleground?" 02/02/07) discussed the potential dangers of nanotechnology, both with regards to military applications and health concerns. It notes that some scientists are calling for a deceleration of nanotechnology research to allow policy to catch up to the science.

[Nanotechnology: The Next Battleground?](#)

3. Japanese Nuclear Power

In a commentary in OhmyNews International, Hisane Misaki ("Japan's Nuke Power Policy Limpes Along," 02/10/07) argues that although an accident-prone reactor has now been brought back online, Japan's "pluthermal" program remains beset with problems. Not the least of these is public skepticism of nuclear power.

[Japan's Nuke Power Policy Limpes Along](#)

4. Climate Change

The Intergovernmental Panel on Climate Change issued its fourth assessment report, which concluded that global warming is a indisputable and most likely caused by human activities. The summary for policy makers describes progress in understanding the drivers of climate change, climate processes and attribution, and estimates of projected future climate change.

[IPCC summary for policy makers](#)

5. Security Implications of Climate Change

Reuters (Mark Trevelyan, "Climate change seen fanning conflict and terrorism," 1/24/07) reported that participants at a conference on climate change and security warned that global warming could exacerbate the world's rich-poor divide and help to radicalize populations and fan terrorism in the countries worst affected.

[Climate change seen fanning conflict and terrorism](#)

[Conference website](#)

6. Carbon Sequestration

The Toronto Globe and Mail (Shawn McCarthy, "Piping the problem underground") reports that some scientists see a massive potential for carbon sequestration, given the large amount of potential space in depleted oil and natural gas fields. Other scientists, however, worry that the CO₂ could leak back onto the surface, or into the groundwater.

[Piping the problem underground](#)

Kyodo News ("Japan to embrace CO₂ storage in seabed," 02/05/07) reported that Japan's Environment Ministry plans to promote projects to confine factory-emitted carbon dioxide in layers of porous rock more than 1,000 meters below the ocean floor to help fight global warming. Scientists believe that water-bearing layers surrounding the Japanese archipelago could retain up to 150 billion tons of carbon dioxide, equivalent to more than 100 years of carbon dioxide emissions by Japanese plants. As of February 10, storage of carbon dioxide (CO₂) under the seabed is now allowed under amendments to an international convention governing the dumping of wastes at sea.

[Japan to embrace CO₂ storage in seabed](#)

[New international rules to allow storage of CO₂ in seabed](#)

7. Portable Biorefinery

A group of scientists have developed a portable generator for the U.S. military that turns waste into electricity. The "tactical biorefinery" could alleviate the expense and danger associated with transporting waste and fuel, while at the same time removing garbage remnants that can provide clues to a military unit's movements.

[Scientists develop portable generator that turns trash into electricity](#)

8. Geothermal Development

A comprehensive new MIT-led study of the potential for geothermal energy within the United States has found that mining the huge amounts of heat that reside as stored thermal energy in the Earth's

hard rock crust could supply a substantial portion of the electricity the United States will need in the future, probably at competitive prices and with minimal environmental impact.

[MIT-led panel backs 'heat mining' as key U.S. energy source](#)

[Download report here](#)

9. Bird Flu Pandemic

The Institute for Foreign Policy Analysis issued a report on a workshop held in Tokyo to discuss the threat of an influenza pandemic in the Asia-Pacific region. Participants discussed how to enhance collaboration to minimize the health and economic impacts of an outbreak.

[The Pandemic Influenza Challenge](#)

The East Asia Science and Security Network (EASSNet) delivers timely news and innovative research across a range of issues relating to science and security, including energy security, bio-security, nano-technology, nuclear fuel cycle, missile technology, and information technology, especially within the East Asia region. The network draws on research from Nautilus Institute and its partners in China, Japan, South Korea, Russia, Australia, and North Korea, as well as grantees of the MacArthur Foundation, of MacArthur Foundation, Ploughshares Fund, New Land Foundation, Korea Foundation, Ford Foundation, and US Department of Energy. The service provides researchers, journalists, and policymakers access to and understanding of developments beyond their own disciplinary, academic, or industrial communities.

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