East Asia Science & Security Network Report, May 9, 2007

1. Climate Change Mitigation

Working Group III released its contribution to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, which deals with mitigation. The report outlines current trends and mitigation strategies, and also discusses the remaining unknowns.

Summary for Policymakers

http://www.ipcc.ch

2. Security Aspects of Climate Change

At a meeting sponsored by the Woodrow Wilson Center's Environmental Change and Security Program on March 6, 2007, Columbia University’s Marc Levy and University of New Hampshire’s Charles Vörösmarty discussed the preliminary results of their team’s effort to overlay geospatial information with demographic and conflict data to assess the connections between environmental factors and conflict. The researchers hypothesize that the links connecting environmental scarcity and conflict are found between groups at the local—not the state—level, and that changes in availability and distribution of local resources, and the context in which scarcity occurs, are the true indicators of increased risk of environmental conflict.

Climate-Security Connections

The Economist (“The Big Dry,” 4/26/07) reports that Australia's extended drought has led to disputes between the federal and local governments over water use, and warns that other countries will face similar problems as the global climate warms.
3. US Nuclear Weapons Stockpile

Robert Norris of the National Resources Defense Council and Hans Kristensen of the Federation of American Scientists published a fact sheet on US nuclear weapons stockpile. They estimate that the stockpile will decline from more than 9,930 weapons currently to just over 5,040 by 2012.

Estimates of the US Nuclear Weapons Stockpile

4. US Plutonium Reprocessing

In a research report for the International Panel of Fissile Materials, Frank Von Hippel argues that the push for reprocessing spent fuel in the United States is fundamentally illogical, as it would be enormously costly and would provide no tangible benefits over dry cask storage.

Managing Spent Fuel in the United States

The Federation of American Scientists' Security Blog notes that, since Congress failed to pass a budget for this year, the Department of Energy used its allocation flexibility to put $167.5 million into the Global Nuclear Energy Partnership for this year, and is requesting $405 million from Congress next year. The blog states that the allocations “are consistent with the administration’s headlong rush to commit the country to reprocessing, and particular reprocessing technologies, over the next couple of years. The sense of urgency can only be political because there is no technical or economic reason to hurry.”

http://www.fas.org/main/content.jsp?formAction=297&contentId=525

5. Australia-India Uranium Deal

Ron Walker, a former Australian Permanent Representative to the International Atomic Energy Agency, argues that instead of making an exception in regulations for uranium sales for India, Australia should work to strengthen the international nuclear non-proliferation system and engage India in that process. The result could be a more effective non-proliferation regime and one that includes India and, potentially, one day, the other two NPT holdouts.

http://www.lowyinstitute.org/Publication.asp?pid=588

6. High Altitude Electricity Generation

The San Francisco Chronicle ("Scientists Look High in the Sky for Energy," 5/7/07) reported that researchers are looking into the feasibility of building huge kite-like generators to produce electricity from the jet stream. Ken Caldeira at Stanford University calculates that 1 percent of the energy in high altitude winds could provide enough energy for the entire planet.

Scientists look high in the sky for power

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