

Clearinghouse Update

From time to time we update our readers on situations which have been described in our *Newsletter*.

Delays in Hanford Cleanup

In our Winter 1996 issue the editor described his tour of the Hanford, WA, nuclear site which produced the plutonium for the nuclear weapons exploded at Alamogordo and Nagasaki in 1945. Fifty years later more people were working to clean up Hanford's nuclear waste than the number of people originally needed to operate its facilities. On 1 May 2006, little more than another decade later, *The Seattle Post-Intelligencer* reported delays and cost escalations of the cleanup, attributed to poor management by the Bechtel Corporation, which had experienced similar problems on a similar but smaller project at Savannah River. In both cases, the problem has centered on building plants to "vitrify" the nuclear waste buried at the site -- incorporate it into a glassy compound which could be stored without fear of leakage into the environment.

Engineering Statistics Revised

Concern about the erosion of the U.S. advantage in science and technology has focused on comparing the number of engineers graduated in China and India relative to that in the U.S. The May 2006 issue of *NSTA Reports* and National Public Radio's "Morning Edition" on 12 June 2006 pointed up how figures of 70,000 engineering graduates in the U.S. in 2004 compared with 60,000 in China and 350,000 in India were found by Gary Gereffi and Vivek Wadhwa to be misleading. When they defined "engineer" in the same sense of a graduate of a four-year U.S. engineering program (rather than a "technician"), Gereffi and Wadhwa found that the number of U.S. engineering graduates was actually twice the previously-quoted figure of 70,000, while the Chinese and Indian figures were considerably smaller (350,000 and 100,000, respectively).

"Rethinking the Fall of Easter Island"

"Rethinking the Fall of Easter Island" is the title of an article by anthropologist Terry Hunt of the University of Hawaii in the September-October 2006 issue of *American Scientist*. Accepting an invitation of a former student to do research on Easter Island (called Rapa Nui by its inhabitants), Hunt was surprised that his findings did not match the story told by Jared Diamond in *Discover* (9, 62-29, August 1995) and *Collapse: How Societies Choose to Fail or Succeed* (reviewed in our Winter/Spring 2006 issue). Once unreliable radiocarbon dates were eliminated, Hunt concluded that the island was not populated until 1200 A.D. (four centuries later than previously believed) and that population increase and environmental degradation set it almost immediately. But the population reached a maximum of only about 3000 (rather than the previously believed 15,000-20,000) and held steady at that amount until the first Europeans visited in 1722. Although much deforestation had occurred prior to that first European visit, some forest still remained at that time. Perhaps it was concern about total deforestation that caused the natives to switch from wood to plants and grass for fuel. Furthermore, Hunt found evidence in the form of gnawing on shells housing palm seeds by rats that these rats were

responsible for a great deal of the deforestation. And the greatest contribution to the downfall of Rapa Nui's civilization came from invading Europeans, who at one time carried away a thousand of the natives as slaves. Hunt's article is Resource #6 in this issue.

The End of Oil: Two Years Later

Two years after his book, *The End of Oil* (reviewed in our Spring 2005 issue), was published, author Paul Roberts was interviewed (on 10 September 2006) by National Public Radio about recent discoveries of a deep oil field in the Gulf of Mexico that promised to increase U.S. oil reserves by 50%. Roberts discounted the significance of this, because 1) U.S. oil reserves are small to begin with, and 2) it will take time to extract this oil. However, that oil prices had gone higher than those Roberts felt would lead to economic depression suggested that the world economy is more resilient than Roberts expected.