

March 1, 2004

Volume 82, Number 9

CENEAR 82 9 p. 10

ISSN 0009-2347

Chemical & Engineering News

## CLIMATE IMPACTS

### A WORST-CASE VIEW OF GLOBAL CHANGE

Defense Department report warns of "abrupt" global warming impact

[JEFF JOHNSON](#)

A pentagon report made public last week lays out the worst-case impact from an abrupt change in climate, driven by global warming. It was prepared by two futurists under a Defense Department contract to gauge the national security impact of climate change.



PHOTODISC

**HIGH AND DRY** Prolonged drought and high temperatures will transform the world's croplands.

The report warns of average temperature drops of 5 °F in Asia, North America, and Northern Europe and average temperature increases of 4 °F in Australia, South America, and Southern Africa, as well as droughts, severe winter storms, and intense winds.

The report considers a scenario of a fast change in climate, rather than a more gradual one in which technological innovation could help stave off disaster. That fast scenario could develop in as short as a decade, the authors say. The scenario springs from recent research indicating that global warming could lead to a quick slowing of the ocean's thermohaline conveyor, which would upset global weather patterns.

The authors caution that the scenario would most likely occur in only a few regions and the magnitude may be

smaller than they describe. However, they add that it is plausible and would challenge U.S. national security and therefore should be considered immediately.

Wealthy countries may be better positioned than most to avoid the worst of the scenario, the report says. The U.S. is likely to survive a harsh climate and shorter growing season because of its diverse agriculture and climate, wealth, technology, and abundant resources, but it would put much effort into building "defensive fortresses" to hold back the "unwanted starving immigrants."

The report warns that, under its scenario, large movements of refugees are inevitable and U.S. diplomatic action will be particularly needed in affected areas, such as Asia and the Caribbean. It predicts border tensions and the need for new forms of international security agreements for energy, food, and water.

Although the U.S. might be relatively better off, the Pentagon report says, it would find itself in a world where Europe will be struggling and Asia will face a crisis over food and water. "Disruptions and conflict will be endemic features of life."

<http://pubs.acs.org/cen/topstory/8209/8209notw9.html>