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Greenhouse Blowback?

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It could start with a drought, as shifting wind patterns blow rain clouds farther north of the Sahara each year. Or a storm could trigger a crisis, if a massive typhoon annihilates the slums of Karachi or Dhaka. Millions of refugees then would pour into countries whose governments are ill equipped to help, possibly sparking violence along ethnic lines.

Many U.S. lawmakers worry that catastrophes like these are more likely to occur as the planet warms, causing sea levels to rise, tropical storms to grow in intensity, and drinking water to dry up. The National Intelligence Council (NIC), at the request of the House and Senate intelligence committees, on June 25 issued a report about how climate change could affect U.S. security interests around the world. The report is confidential, but the NIC permitted some researchers who were involved, including Columbia geospatial data expert Marc Levy, to release findings they contributed.

Levy and several colleagues at Columbia's Center for International Earth Science Information Network (CIESIN), which is part of the Earth Institute, were asked to assess the vulnerability of 183 nations to drought or flooding over the next 20 years. The Columbia researchers analyzed huge data sets composed of census figures, information from satellite images, and the results of previous climate studies to identify susceptible areas that are densely populated. The researchers also considered each nation's ability to deal with such crises based on the stability of its political and economic institutions. They concluded that South Africa, Nepal, Morocco, Bangladesh, Tunisia, Paraguay, Yemen, Sudan, Côte d'Ivoire, Poland, and Iraq are potential trouble spots to watch.

Other nations that could experience internal turmoil include Iran, Sudan, Kuwait, Congo, Ethiopia, and Jordan, given the likelihood of diminished rainfall and crop

failures. Some countries — the Netherlands, China, Egypt, Indonesia, and the Philippines among them — have large numbers of citizens in low-lying coastal areas but also have a reasonable capacity to deal with disasters such as floods, Levy and his colleagues concluded.

“There is clearly great interest among policy makers in knowing whether climate change will make crises, such as the conflict in Darfur, more prevalent,” Levy says. “The science of climate change does not yet give us a definitive answer to this question, but at least now we’re looking at it seriously.”

The NIC now plans to study how global warming could affect relations among the major powers and whether combating climate change could create unintended security risks.

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