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Desperate Moves

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They'll flee Laos, Thailand, Cambodia, and Vietnam, where rising seas could inundate half of all farmland in the region. They'll move out of southern Mexico, parts of Central America, and Africa's Sahel Belt, all regions where rainfall will decline by as much as 50 percent. They'll disperse from Calcutta and from the rest of the Ganges River Delta, where waters from melting Himalayan glaciers initially will intensify flooding and then disappear when the glaciers are gone, causing water shortages.

Because of climate change, human migrations could occur on an unprecedented scale in these areas by midcentury, according to a new report by researchers at the Columbia Center for International Earth Science Information Network, the United Nations University, and CARE International. The report, whose authors include Columbia geographers Alexander de Sherbinin, Susana Adamo, and Tricia Chai-Onn, is based on the first global survey of environmental and population projections. *In Search of Shelter: Mapping the Effects of Climate Change on Human Migration and Displacement* contains maps showing where and how large displacements could occur if temperatures continue to rise.

While the study doesn't attempt to calculate how many people might be uprooted worldwide, estimates from other reports it cites range from 25 million to almost 700 million by 2050.

To mitigate the effects of climate change, de Sherbinin and his colleagues recommend that poor nations invest in low-till agriculture, irrigation technology that uses less water, disaster-preparedness systems, and economic diversification. The researchers say that nations also must begin planning to help resettle people from low-lying areas and to improve the ability of emigrants to send remittances to those left behind in affected regions.

Guide to school abbreviations