Prospects for climate-driven migrations

Gérard-François Dumont

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Population science can predict neither the timing nor the local intensity of climate change. On the other hand, based on the generally accepted hypothesis of a warming of the planet on average, it can put forward the following scenario.

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If the average rise of temperatures and ocean levels, as announced and sometimes observed in certain parts of the world[1], were to modify the state of the inhabited world in many places, several types of migrations could ensue.

Forced migrations

The first category, the first that comes to mind, concerns forced migrations, linked to the rise in sea levels or the intensity of tides. It is true that these can be partially or totally countered, as they already are in a number of territories in various countries (Argentina, Bangladesh, United States[2], France[3], Japan, Netherlands…), but the costs of investing in and maintaining the relevant structures can only increase. It would certainly not be possible to carry out in all the locations concerned all over the world the reinforcement of existing seawalls, the construction, wherever necessary, of flood-protection dikes, or the design of habitations adapted to the new sea levels. Those populations wanting to live on safe ground would be forced to migrate, and, for many parts of the planet, such migrations could be of an international nature.

Negative heliotropism

A second type of migrations driven by climate change would be of a more deliberate character. It would concern territories where such change would bring temperatures to levels which some inhabitants would deem incompatible with their notion of quality of life. The emergence of periodic heatwaves would push people to move to less exposed locations. The ensuing process could then be defined as a wish to move away from spots considered to be overexposed to sunlight, *i.e.* as negative heliotropism, as opposed to the positive heliotropism[4] observed in various countries during the last decades.

New attractive territories

Finally, climate changes could induce economic migrations towards territories which should become easily habitable and exploitable in view of the importance of the thawing and of the maritime or terrestrial routes opened or facilitated by this change. Indeed, some areas in the northern hemisphere, such as northern Canada, Greenland (which would recover its ancient greenness) or Siberia, are today scarcely populated and hardly exploited, because of current climate. Their situation could change, generating climate-driven migrations.

In an even more futuristic scenario pertaining to geography-fiction, one could also imagine Antarctica, a land almost inhabitable in the early XXIst century, being partially released of its ice sheet to become, up to a point, the sixth inhabited continent…

Translation:
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1. Cf. the International Panel on Climate Change created in 1988 by the World Meteorological Organization (WMO) and the United Nations Environnement Programme (UNEP), based in Geneva: www.ipcc.ch

2. Remember the events in New Orleans in 2005; cf. Zaninetti, Jean-Marc, « Catastrophes naturelles et pauvreté : le cas de La Nouvelle-Orléans », *Population & Avenir*, n° 679, September-October 2006.

3. For example Cape Ferret or the Giens Peninsula.

4. This is an opportunity to underline that the southward migratory moves observed in some countries like France derive from a logic not of heliotropism, but of positive heliotropism. Cf. Dumont, Gérard-François, *La population de la France, des régions et des DOM-TOM*, Paris, Éditions Ellipses, 2000; Wackermann, Gabriel (direction), *Dictionnaire de Géographie*, Paris, Ellipses, 2005.