

Here comes the flood

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Policymakers must start to view mass migration as a form of adaptation so that the global response to climate-induced migration is one of facilitation rather than neglect.

Two leviathans are about to collide on the world stage of science and politics — climate change and migration¹. Their combination brings us to a tipping point that could spawn a phenomenon of a scale and scope not experienced in human history². Beyond reducing the greenhouse gases that drive global warming, we are now faced with the task of finding ways to deal with the impact of climate change. Next in line, perhaps even ahead of mitigation, adaptation is the new game in town.

Governments of some 192 nations are currently meeting in Poznan, Poland, for the latest round of UN climate talks. This marks an important step along the road to the Copenhagen summit in 2009, when world leaders will decide on the architecture of a climate deal to replace the Kyoto Protocol when it expires in 2012. Timing is therefore crucial — in the coming months climate negotiators must define a plan that will address the increasing vulnerability, particularly of developing countries, to rapidly changing environments that help fuel migration. If done in an orderly manner, migration may be seen as an adaptation measure, but the same term also covers precipitous flight for survival. The global response to this situation could tip towards the negative or positive. Here we call on countries, particularly climate negotiators, to address this issue with swift decision making and to adopt a balanced approach to climate-induced migration.

FLIGHT FOR SURVIVAL

Already, some countries cannot afford to wait for a new climate deal. Nations such as the Maldives now anticipate the loss of their sovereign territory. In November their President-elect, Mohammed Nasheed, announced the islanders' wish to buy a new homeland as sea level rise threatens to drown the archipelago, most of which lies only 1.5 metres above the surface of the Indian Ocean. Nasheed told the media,

"I don't want Maldivians to end up as environmental refugees in some camp ... if the islands are sinking we must find high land some place close by. We should do that before we sink³."

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As the longer-term effects of sea level rise and desertification become increasingly apparent, and extreme events, such as flooding and droughts, become more frequent and severe, liveable surface area will become restricted. For regions that experience a systematic economic collapse, environmentally induced migration could affect millions and come at a time when points of 'no return' have been

crossed for critical ecosystem services⁴. Owing to migrant network connections, environmental degradation may perpetuate existing patterns and drive the movement of people towards traditional destinations. Such migration flows will increasingly originate from resource-stressed environments — areas where large-scale humanitarian assistance or peacekeeping is already required.

Consider, as an example, that up to 120,000 migrants from sub-Saharan Africa enter northern Africa every year. Some seek a better life there, while tens of thousands attempt to cross the Mediterranean. Their destination is Europe. Since 2006, experts have witnessed a sharp increase in attempted crossings. Between January and September 2006, around 24,000 migrants arrived on the Canary Islands, a considerable increase compared with 4,772 in 2005 and 9,900 in 2002 for the same period. The first seven months of 2006 saw 10,400 migrants detained on the



Inhabitants of the Maldives plan to buy a new homeland, as sea level rise threatens to drown the archipelago.

Italian island of Lampedusa south of Sicily, compared with 6,900 over the same period in 2005 [ref. 5].

Drought, desertification and other forms of water scarcity are estimated to affect as much as one-third of the world's population today. As this worsens, it will increase the flow of people migrating away from areas such as sub-Saharan Africa in order to secure their livelihoods (Fig. 1). The scale of such flows, both internal and cross-border, is expected to rise, with unprecedented effects. The most widely cited estimate of 200 million additional migrants by 2050 suggests that environmentally induced displacements could involve almost three per cent of the present world population in just four decades from now⁶. These estimates, including the underlying methods, are subject to scientific debate⁷. And the social and economic costs of this uprooting, accounting for both losses and responses, so far remain unknown. Good science is essential, but the need to clarify academic controversies is not an excuse to leave creeping processes unaddressed.

IN THE BALANCE

The post-2012 climate agreement will lock the international community into

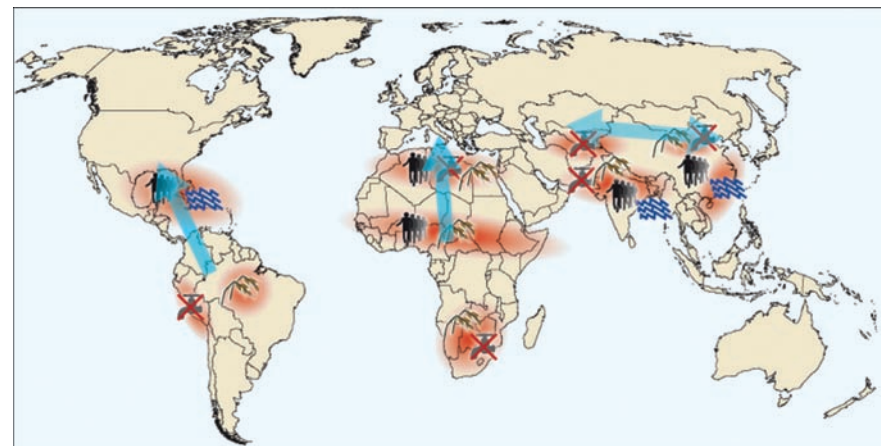
an agreement to address mitigation and adaptation for the coming 10 to 15 years. It is therefore vital that migration be addressed within that process and a platform for dialogue and exchange be created so that no more precious time is lost. Other looming problems, including the financial, food and energy crises may tempt countries to take a defensive stance and ignore the growing plight of people on the move. Indeed, the current economic situation could even be an excuse to ignore the consequences of worsening climatic conditions. We now find ourselves in a defining moment where the global response to this situation could evolve towards the negative or positive. Short-sightedness could prove fatal.

If the balance tips towards the positive, we may see compromise and rapid action. Mass-scale resettlement programmes are now in the realm of the politically thinkable. Islands of the Pacific, countries located in deltas and flood-prone coastal areas are already pursuing resettlement programmes as a matter of national policy. Government responses vary from offering 'mobility incentives' to mandatory resettlement programmes, with mixed results. Relocation moves people out of harm's way. But resettlement is expensive,

and exposes displaced people to loss of livelihood, debt and disintegration of communities, without addressing the environmental stressor itself. The Australian and New Zealand governments are exploring the sovereign resettlement of their Pacific neighbours. Some countries such as the Maldives, Tuvalu, Kiribati, Mozambique, Egypt and others are already planning for the relocation and resettlement of affected populations.

In other regions, such as the US, political shifts open the door for a considerable rethink on migration policies. In the EU, political interest in acknowledging environmentally induced migration is also growing, partly owing to Europe's proximity to Africa and migration pressures topping the political agenda. The reformulation of migration policies brings opportunities to decriminalize migration, and to win time as some countries try to find solutions to their shrinking land area.

If, on the other hand, the balance tips towards the negative, then delayed action practically guarantees a humanitarian crisis. Policymakers could find migration too complicated an issue to tackle, and may turn their backs on efforts to understand its interaction with climate change. Such a scenario would put culture, social structure, peace, resources and political stability in grave danger. Domestic, international and other crises could promote defensive thinking and frame migration as a threat. The result would be to close any window of opportunity to help environmentally devastated areas before a humanitarian crisis becomes widespread. Failure of climate negotiators to decide on an acceptable successor to the Kyoto Protocol could exacerbate the drivers of climate change, while leaving those most affected empty-handed and more likely than ever to migrate. Conversely, the success of international climate negotiations could not only steer policy in the right direction, it could have the extra benefit of giving hope to those affected.



Conflict constellations in selected hotspots



Figure 1 Migration, environment and conflict. Areas where drought, desertification, and other forms of water scarcity are expected to worsen, and could contribute to people migrating away from these areas to secure their livelihoods. Main projected trajectories are added where climate change-related migration can be expected in the future. Figure source: German Advisory Council on Global Change WBGU. *Climate Change as a Security Risk* (2008) reprinted with permission, modifications by authors.

A WAY FORWARD

Now is the time to decide which way the scale will tip. With an agreement on the post-Kyoto Protocol due at the end of next year in Copenhagen, negotiators have shown a willingness to consider proposals about how to address environmental change and migration. We urge parties involved in the climate negotiations leading up to the UN conference to adopt a 'five-pronged approach'. Conceived by the UN University Institute for Environment and Human Security (UNU-EHS), this framework⁸ acknowledges the need for

further research and calls for simultaneous and concerted efforts in five areas including science, public awareness, legislation, strengthening institutions, and humanitarian response.

First is the need to build a strong scientific base, to make real progress in understanding the interactions between climate change and migration. This could be accelerated if the scientific community fostered rigorous, sustained quantitative research. The EU spearheaded this task in 2007, but additional work must be initiated immediately. Second, the concept of environmental migration and environmentally displaced persons needs to be included in the agreed outcome of the Copenhagen summit next year, as well as in continuing work by the UN Convention to Combat Desertification and the Intergovernmental Panel on Climate Change (IPCC). Awareness and inclusion in international protocols is a vital early step to improving frameworks and legislation that manage migration issues. However, adding a new category to the Geneva Convention could weaken the case of categories of refugees already covered by it, and hence this is not an option. Individuals who are clearly displaced by environmental degradation (even if mixed with other socio-economic factors, as will often be the case) should be protected adequately by an international mechanism that would afford them certain rights.

Furthermore, the continuing climate negotiations should call for an international mechanism to recognize this category of individuals. This would empower relevant entities in the UN system, and other main humanitarian assistance organizations, to

provide aid to environmentally displaced people, particularly when considering the displacement of entire communities. In addition, climate negotiators should discuss institutional cooperation, possibly through regional centres, to help ensure safe, non-criminal and orderly migration relations pertaining to climate change and adaptation. As an example of such collaboration, the International Organization for Migration (IOM), the United Nations Environment Program (UNEP), United Nations University and the Munich Re Foundation (MRF) have decided to merge their activities to form the Climate Change, Environment and Migration Alliance (CCEMA) as a multi-stakeholder global partnership. The alliance helps to mainstream environmental and climate change considerations into the migration management policies and practice, and to bring migration issues into the world's environmental and climate change as well as development discourse. Finally, further cooperative efforts are needed to improve monitoring and assistance of migration, including an increased ability to confront criminal activities, such as smuggling and trafficking. However such efforts will require appropriate resources.

With increasing numbers of the world's population living in areas exposed to the negative consequences of climate change, we need urgent action to identify adaptation pathways that prevent or at least reduce environmental migration flows. A rapid and collaborative effort is needed to discuss options, including resettlement, and to further understand the implications of climate change-related migration

for affected countries and regions. Fundamentally this requires dialogue about things we know already, as well as vigorous imagination, to find alternatives that will keep this planet a home for all of us, rather than for just the fortunate few.

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