



Communities in many places face problems like degradation of water resources and adverse weather forcing migration (EACHFOR®)

★ The Environmental Change and Forced Migration Scenarios (EACH-FOR) project (www.each-for.eu) is a systematic attempt to detect the degree to which environmental stressors affect migration and the pathways through which it happens. These issues demand to be addressed, says **Dr Koko Warner**

Researching environmental change and migration

Rapid-onset environmental stressors (e.g. extreme weather events such as floods and cyclones); slow-onset environmental stressors (e.g. water scarcity, desertification, soil degradation or deforestation) or development-induced environmental change (e.g. construction of dams) are all possible factors in people's decisions to migrate. One particular form of environmental change - climate change - is currently a major concern and the impact is likely to be felt in many areas, including

migratory patterns. Climate change will inflict increasingly frequent and violent hazards on both urban and rural areas. Floods, intense storms, droughts, and more gradual but also shifts in regional climates all place great stress on livelihood systems, and such events are likely to become more common. Faced by environmental change on a grand scale, migration may be either an adjustment mechanism of first resort, or a survival mechanism of last resort. Environmentally

induced migration has the potential to become a phenomenon on a scale and scope without precedent in living memory.

The European Commission has sponsored the EACH-FOR project to explore these issues further and to assess the impact of environmental change on migration at the local, national, regional and international level. The project has conducted fieldwork in 22 case study locations in six regions of the world to address the following questions:

- 1.) Which people are emigrating to escape environmental degradation?
- 2.) Where are environmental migrants coming from and where are they going?
- 3.) Why do people migrate? What role has environmental degradation or change played?
- 4.) How does environmental degradation interplay with other social, economic and political factors in forming their decisions about emigrating?
- 5.) What might lead people to reconsider their decision to migrate? What assistance is needed? What is currently lacking?
- 6.) Why do some people remain in areas affected by environmental degradation while others migrate? What are their coping strategies and capacities?
- 7.) How does environmentally induced migration occur? What destinations are typically chosen? Which networks are used?
- 8.) What role do people's perceptions of environmental degradation play in triggering their decision to migrate?

EACH-FOR field studies identified three main trends:

- Environmental factors have a discernable influence on migration patterns. Many other factors are also at play. Migrants remarked that they were most concerned about finding stable livelihoods, often noting that environmental factors had made it impossible to support their families in their places of origin. Livelihoods deteriorate due to changing climatic conditions and land degradation. The more direct the link between the quality of the environment and livelihood, the stronger the role it plays as a factor encouraging migration.
- Migration typically occurs after a certain environmental tipping point has been exceeded. EACH-FOR research found that non-migrants living in areas facing environmental degradation could eventually choose to migrate if environmental conditions worsen. However, the timing of the tipping point remains unknown.
- Government responses vary from offering 'mobility incentives' to mandatory resettlement programmes, and the results thus far have been mixed. For example, the Egyptian government is fighting desertification by offering land to those willing to migrate to

Western Desert reclamation project areas. However, groundwater salinity levels threaten the sustainability of the scheme and only a few migrants remain in the land reclamation areas. Meanwhile, some have moved to unexploited reclamation areas where the water salinity problem has not yet appeared. These migrants fit into an overall pattern of both internal and cross-border migrants seeking more secure livelihoods. The governments of Vietnam and Mozambique have used relocation as a way to address environmentally related migration and reduce physical vulnerability of exposed people. After a decade of increasingly frequent and devastating flooding, the government of Mozambique recently initiated the mandatory resettlement of people living on flood plains to relocation centres on higher ground. Similarly, in Vietnam the government has relocated people living in areas threatened by riverbank erosion, flooding and storm surges to safer places. While these are commendable humanitarian actions in themselves, there are significant drawbacks; resettlement costs are high and do not address the major cause of environmental change itself: communities can disintegrate, livelihoods can crumble, household debt can spiral.

Adapting to environmental change

Environmental change undoubtedly has a significant impact on livelihoods,

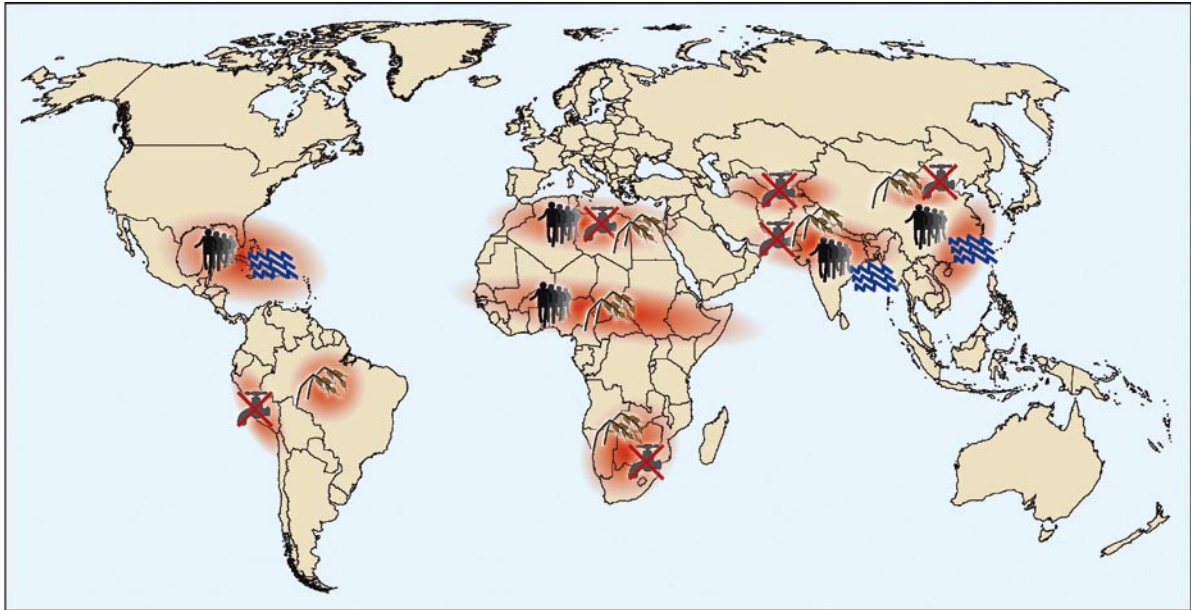
particularly in rural areas. The literature suggests that more affluent households are better able to secure their standards of living in the face of change than poorer households. Yet there is still a need for empirical research about the degree to which migration is a coping mechanism and how it helps households secure the standard of living they desire. Meanwhile, research has also documented how rural-to-urban migrants help those they have left behind. After migration, they often send money back home to support family members still living in rural areas. Others noted that sending one or two children away to cities to earn a living was a form of risk management for families whose livelihoods depended heavily on the environment.

Environmentally-induced migration has profound policy relevance for human security. Climate-related stressors, combined with ecosystem change (such as land degradation and water shortages) and rapid-onset events (such as flooding and extreme storms), have already driven greater levels of migration and prompted national governments to plan for the relocation and resettlement of affected populations. The funding provided by the European Commission allowed the EACH-FOR project to undertake a pioneering global survey of environmental change and migration, which will be used to derive a clear set of recommendations.

It is crucial that we build a strong scientific base for discussion of this topic.



Flooding can mean land is no longer a feasible habitat (EACHFOR®)



Conflict constellations in selected hotspots



Climate-induced degradation of freshwater resources



Climate-induced decline in food production



Hotspot



Climate-induced increase in storm and flood disasters



Environmentally-induced migration

Figure 1: A map of conflict and migration induced by environmental stressors
 (Source: German Advisory Council on Global Change - WBGU (2007): Climate Change as a Security Risk)

Fieldwork on environmental migration (EACH-FOR)





Bangladesh – environmental change means food shortages (EACHFOR®)

This means accurately identifying and characterising environmental migrants, which will have the knock-on effect of increasing awareness, as knowledge about environmental degradation and climate change can arm governments, migrants, and potential migrants against human security crises. Of course this will pose a number of administrative

challenges, so improving legal frameworks at the regional and multilateral level is another key priority in order to ensure effective responses to humanitarian crises. Policy and legal frameworks must address the problems posed by environmental change, meaning institutions and policies must be strengthened if they are to manage the migration linked to our changing environment. The level of future environmentally-induced migration depends, in part, on the approach

governments take to the issue and whether they adopt longer-term environmental and development policies. The time to address the dangerous effects of environmental change is now. This project and related activities with partners has laid the scientific basis for more informed policy and action and has prompted wider dialogue between policy

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makers, the scientific community and civil society. These and other actors are discussing how best to help those people who have been prompted to migrate by environmental concerns, and also those who may migrate in the future in the search for safe and sustainable existences. Future research and policy will benefit greatly from the kind of policy-oriented research in which EACH-FOR has played such a key role and research aimed at improving our understanding of these crucial issues must continue. ★

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At a glance

Full Project Title

Environmental Change and Forced Migration Scenarios (EACH-FOR)

Client

European Commission (EC)

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Project Partner

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Janos Bogardi has been the Director of the United Nations University – Institute for Environment and Human Security (UNU-EHS) since 2003. Simultaneously he is also Vice-Rector a.i. since May 2007. Prof. Bogardi was honoured to receive the title of 'Doctor Honoris Causa' from the Agricultural University of Warsaw, and the Technical University of Budapest. He was also awarded an honorary doctorate by the Nizhny Novgorod State University of Architecture and Civil Engineering (NNSUACE).

