“Advancing human security through knowledge-based approaches to reducing vulnerability and environmental risks“

UNITED NATIONS UNIVERSITY

UNU-EHS

Institute for Environment and Human Security

UNU-EHS

UNITED NATIONS UNIVERSITY

Institute for Environment and Human Security (UNU-EHS)

UNITED NATIONS UNIVERSITY
UNU-EHS
Institute for Environment and Human Security

UNU-EHS

Climate Change & Human Migration:

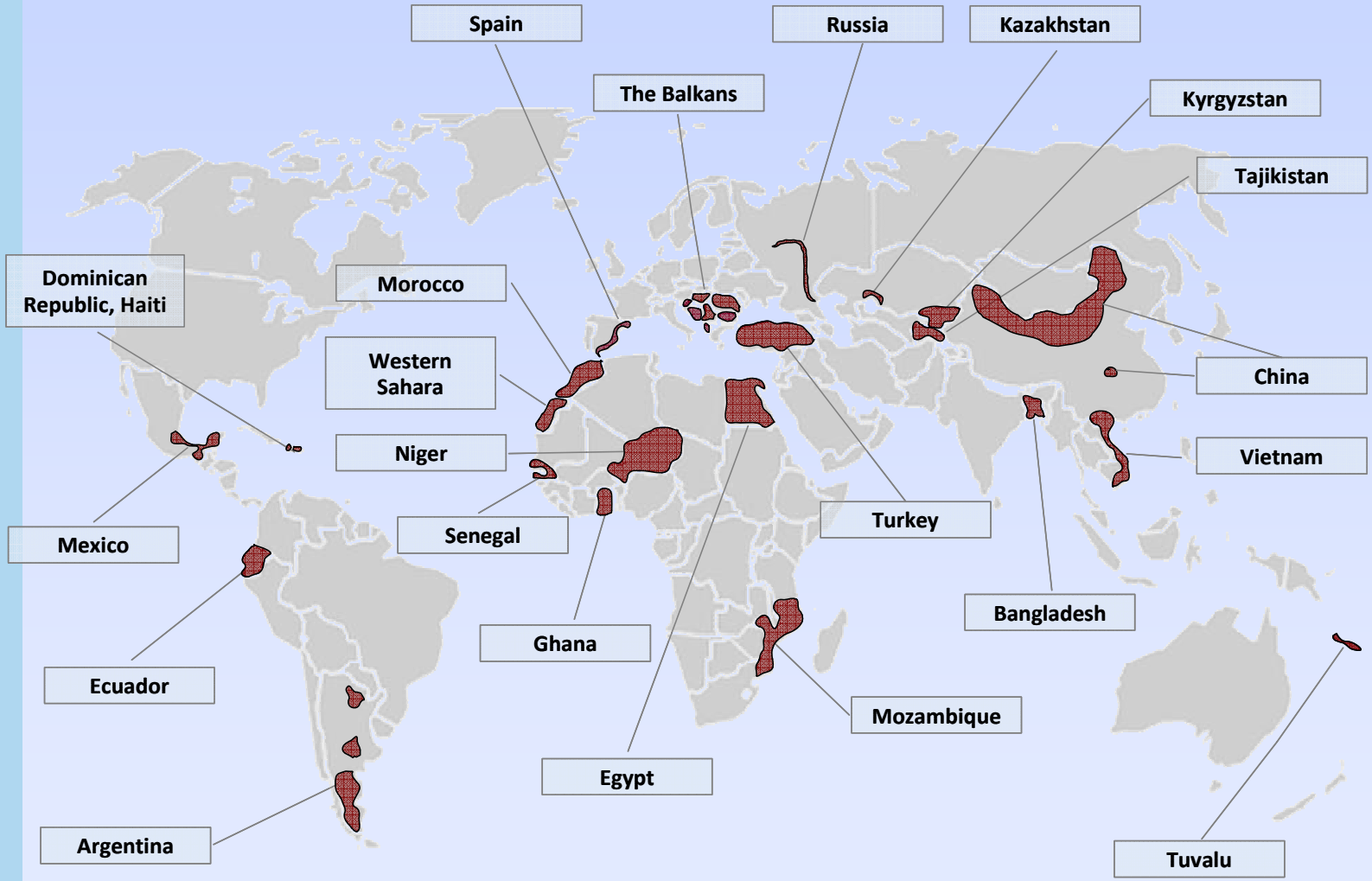
Current Evidence & the Role of the SBI Work Program & Cancun Adaptation Framework in filling gaps

Dr. Koko Warner
Head of Section, Environmental Migration, Social Vulnerability and Adaptation
Bonn, Germany

EACH-FOR: 1st global survey of environmental change and forced migration scenarios, DG Research (FP6 program)

UNITED NATIONS UNIVERSITY
UNU-EHS
Institute for Environment and Human Security

UNU-EHS



Definitions, data, dilemmas

UNITED NATIONS UNIVERSITY
UNU-EHS
Institute for Environment and Human Security

UNU-EHS

No widely agreed upon, measurable definition of what an environmental or climate –related migrant is.

- o refugee, migrant, displacee, forced migrant, flee-ant, emergency migrant, survival migrant, etc.
- o “refugee” has a legally specific meaning in the context of the 1951 Geneva Convention.
- o IOM useful working term “environmentally induced migration”
- o We still only have general understanding of how environment affects human movement.

Guiding Research Questions

UNITED NATIONS UNIVERSITY
UNU-EHS
Institute for Environment and Human Security

UNU-EHS

- **Definitions**: How should we define those who move for environmental reasons? (many different categories and definitions developed since 1980s) Is environmental migration inherently a form of forced displacement ?

- **Data**: How many will move? Who is likely to move? When, and where will people move?

- **Drivers**: To what extent can environmental factors be identified and shown to be a primary cause of movement?

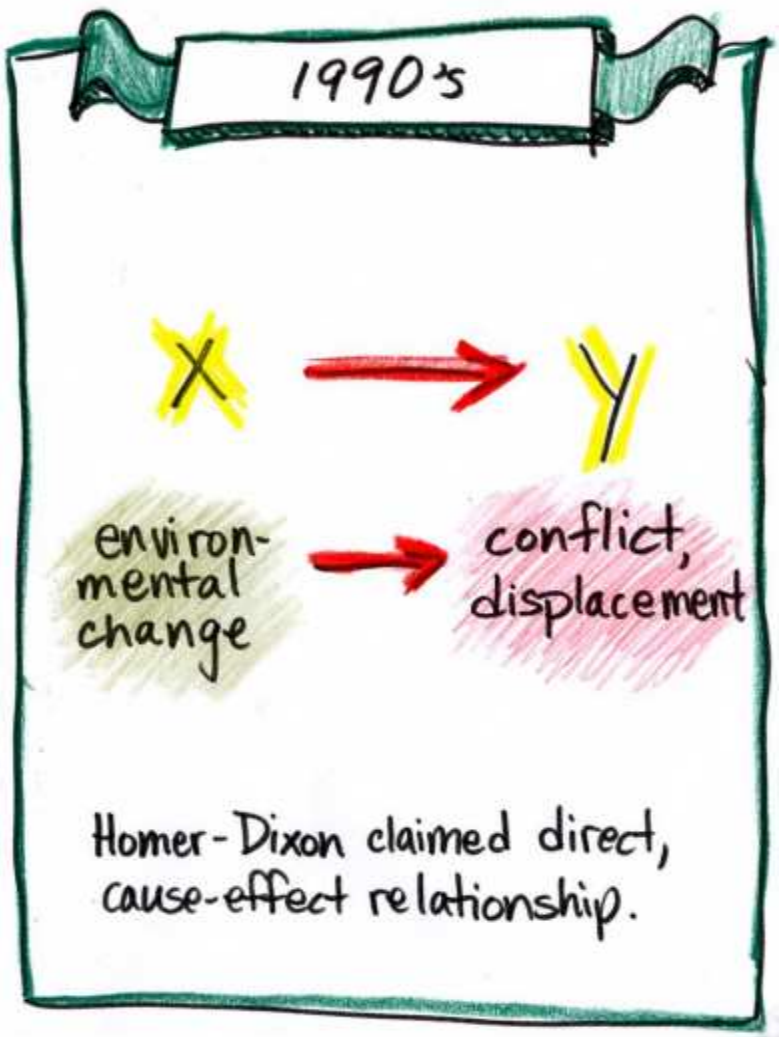
- **Policy responses**: Do those migrating or displaced for environmental reasons have special needs not met by existing institutional frameworks? How adequate are existing legal and normative frameworks?

Environmental change & migration: Thought Evolution

UNITED NATIONS UNIVERSITY
UNU-EHS
Institute for Environment and Human Security

UNU-EHS

- Early literature claimed direct, causal relationships
- Little consideration of household level, agency, intervening social factors, context
- Environmental wars did not materialize (no water wars, no waves of environmental „refugees“)
- Academics largely reject Homer-Dixon´s hypothesis
- Media and decision makers still thinking along these lines, however



UNITED NATIONS UNIVERSITY
UNU-EHS
Institute for Environment and Human Security

UNU-EHS

"In the long-term, this [changes in rainfall patterns and rising temperatures] will be a main driver of migration; but we haven't started thinking about it yet because its outside of what we have dealt with in the past. We are still stuck on the old drivers getting wider and worse."

Bill Swing, Director General of IOM
UNFCCC climate negotiations in Copenhagen (COP15)

2000's to present: Sceptics and Alarmists

Nothing new.

Environmentally induced migration today

Seasonal migration

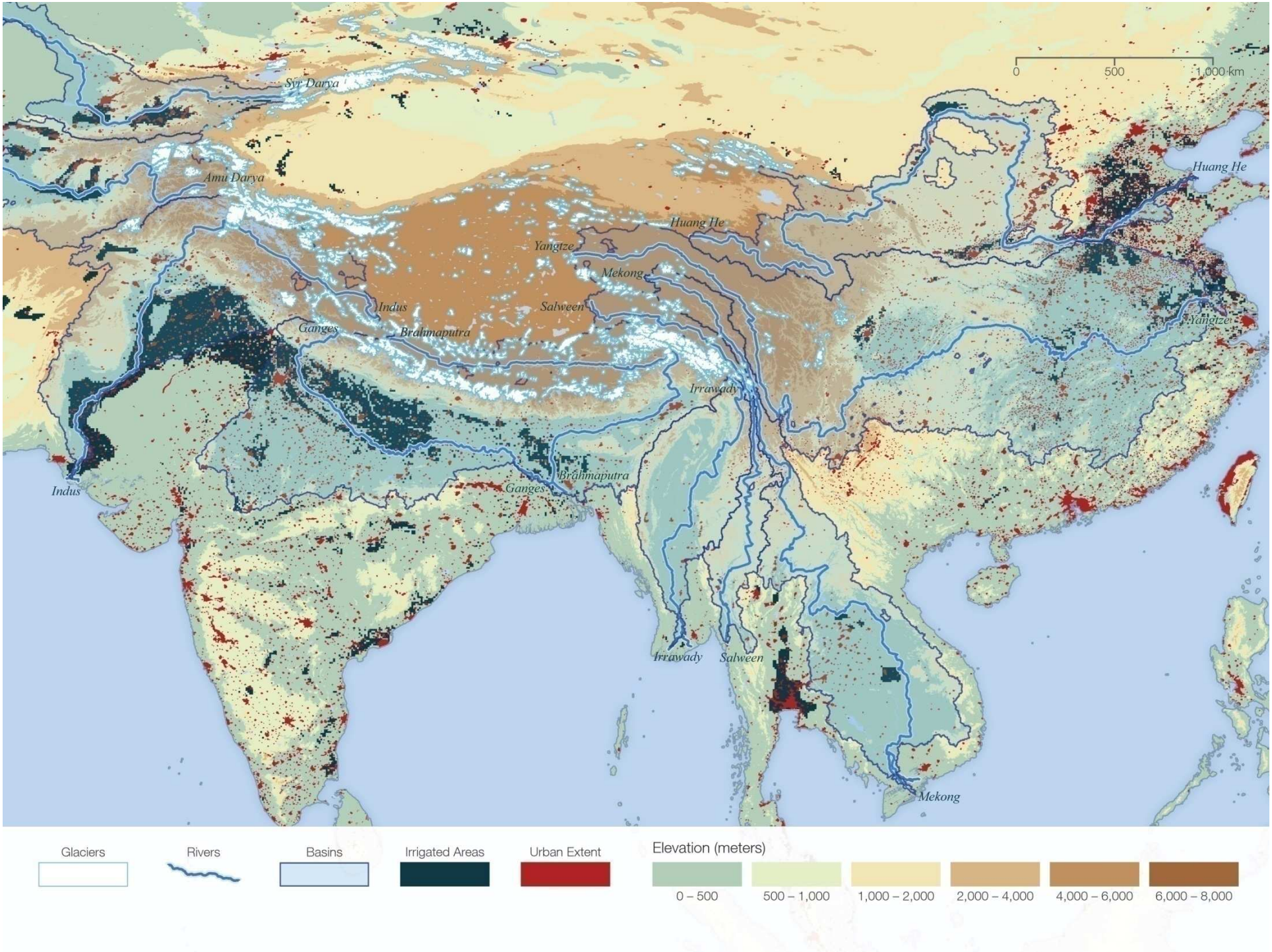
Seasonal migration already plays an important part in many families' struggle to deal with environmental change. This is likely to become even more common, as is the practice of groups migrating from one spot to the next in search of ecosystems that can still support rural livelihoods.

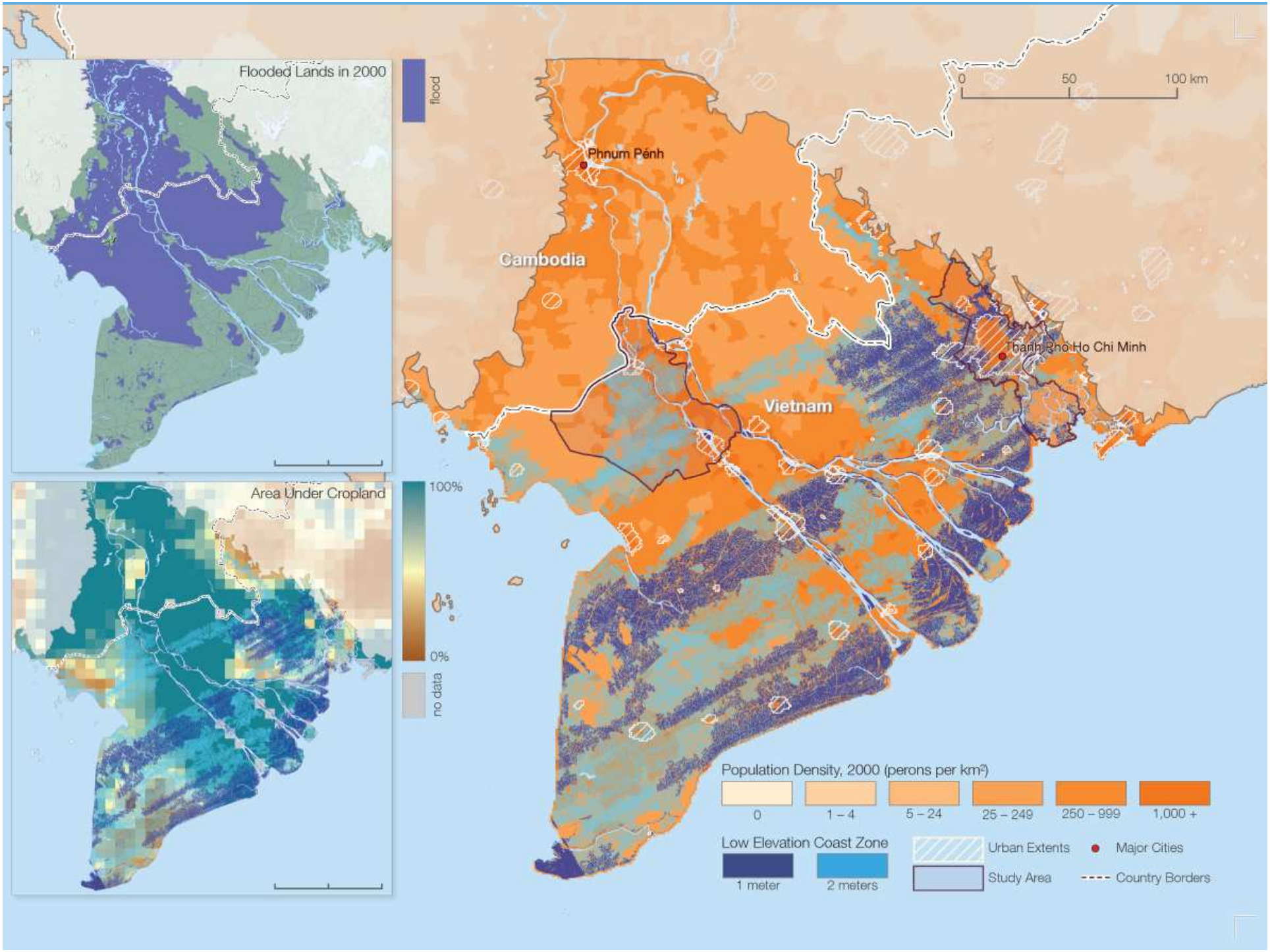
Disaster displacement

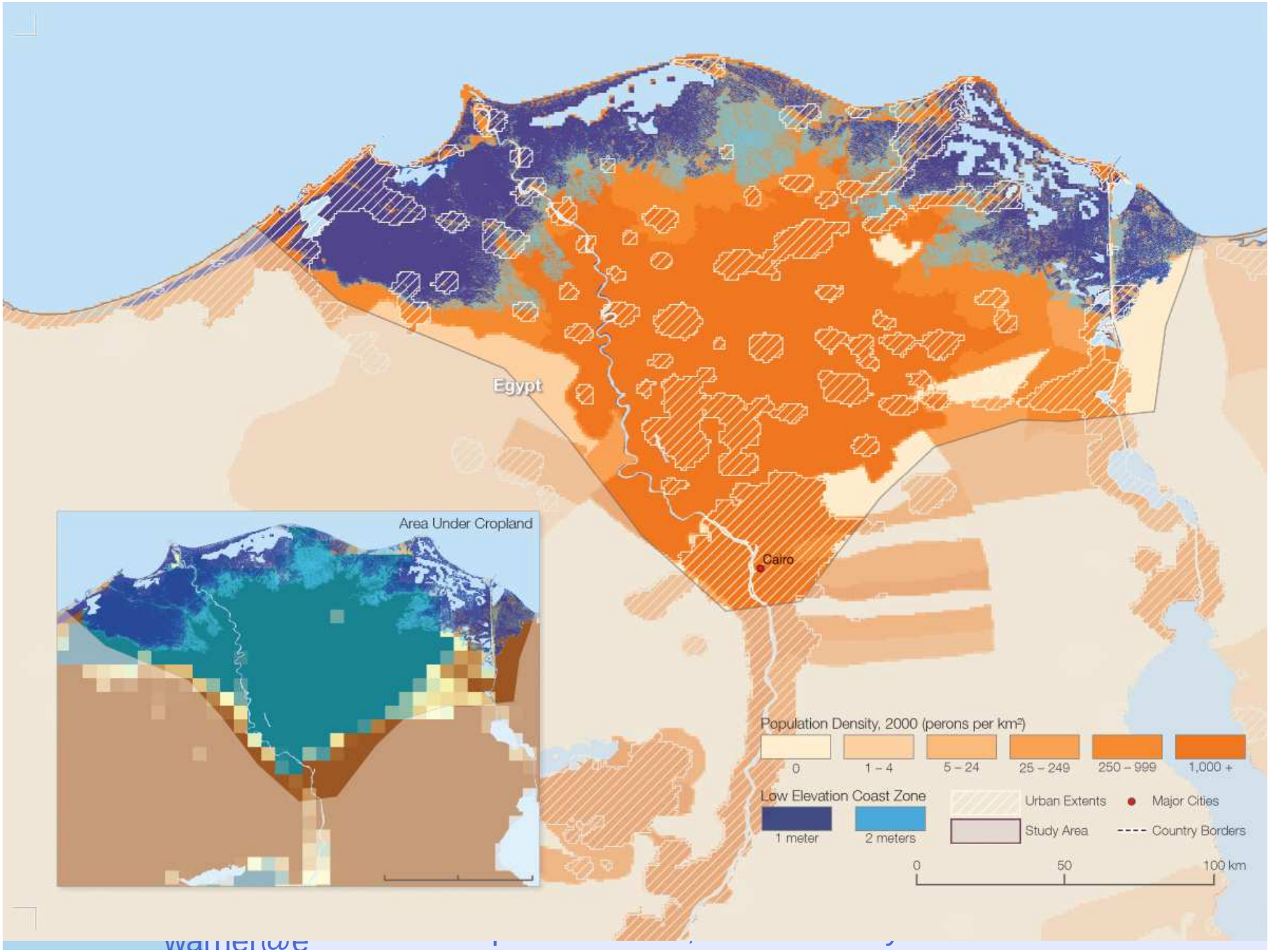
Disasters continue to be a major driver of shorter-term displacement and migration. As climate change increases the frequency and intensity of natural hazards such as cyclones, floods, and droughts, the number of temporarily displaced people will rise. This is especially true in countries that do not or cannot invest now in disaster risk reduction.

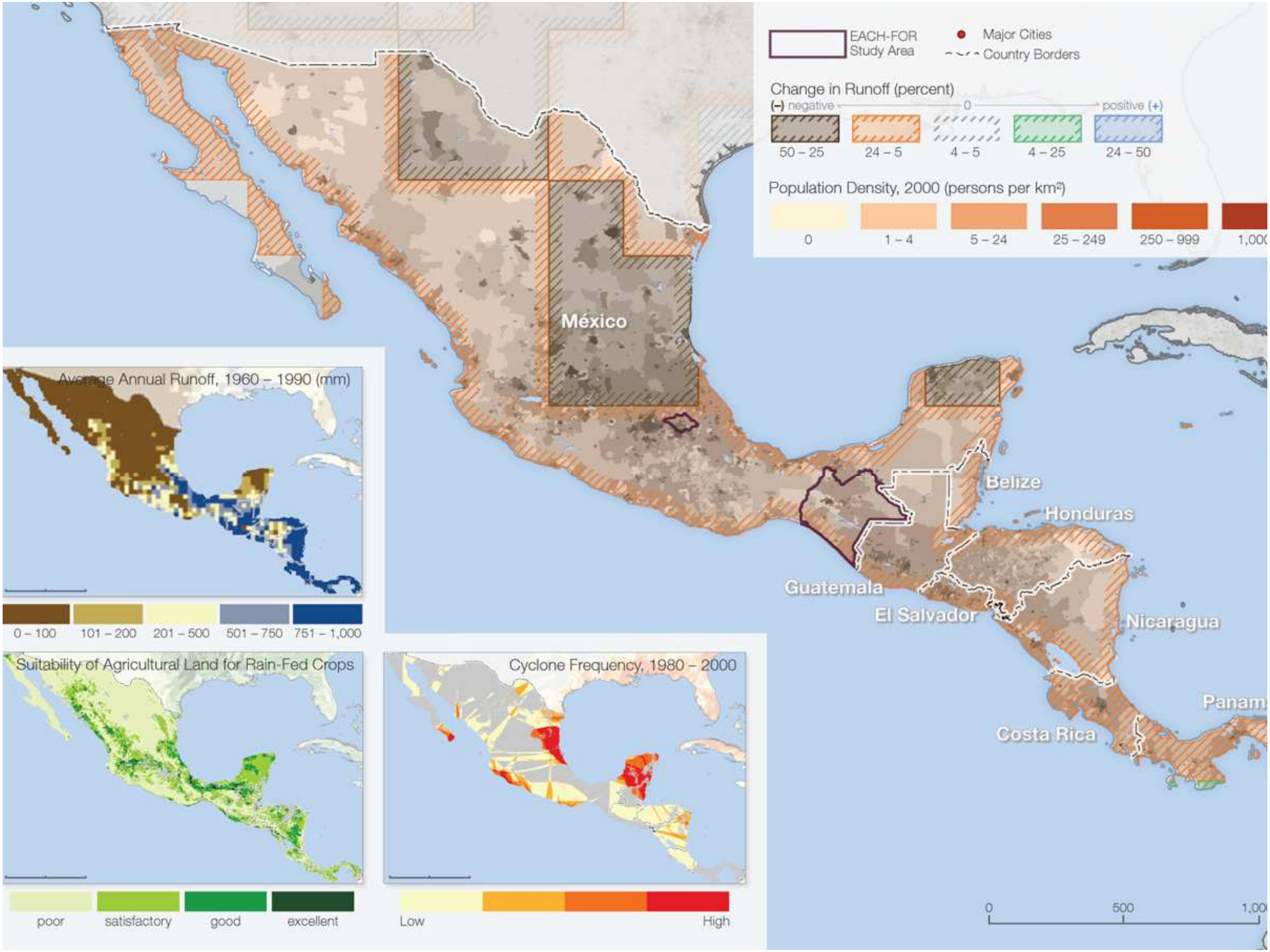
Migration and vulnerability

Many people are not able to flee far enough to adequately avoid the negative impacts of environmental change. Migration requires resources that the only a handful of people have. EACH-FOR case studies indicate that environmental migrants can find their destinations as precarious as the places they left behind.


0
500
1,000 km
Syr Darya
Amu Darya
Huang He
Yangtze
Mekong
Indus
Salween
Ganges
Brahmaputra
Irrawady
Huang He
Yangtze
Indus
Brahmaputra
Ganges
Irrawady
Salween
Mekong
Glaciers
Rivers
Basins
Irrigated Areas
Urban Extent
Elevation (meters)
0 – 500
500 – 1,000
1,000 – 2,000
2,000 – 4,000
4,000 – 6,000
6,000 – 8,000


Flooded Lands in 2000
flood
Area Under Cropland
100%
0%
no data
0
50
100 km
Phnum Pénh
Cambodia
Thanh Pho Ho Chi Minh
Vietnam
Population Density, 2000 (perons per km²)
0
1 – 4
5 – 24
25 – 249
250 – 999
1,000 +
Low Elevation Coast Zone
1 meter
2 meters
Urban Extents
Study Area
Major Cities
Country Borders


Egypt
Cairo
Area Under Cropland
Population Density, 2000 (perons per km²)
0
1 – 4
5 – 24
25 – 249
250 – 999
1,000 +
Low Elevation Coast Zone
1 meter
2 meters
Urban Extents
Major Cities
Study Area
Country Borders
0
50
100 km


EACH-FOR Study Area
Major Cities
Country Borders
Change in Runoff (percent)
(–) negative
0
positive (+)
50 – 25
24 – 5
4 – 5
4 – 25
24 – 50
Population Density, 2000 (persons per km²)
0
1 – 4
5 – 24
25 – 249
250 – 999
1,000
México
Belize
Honduras
Guatemala
El Salvador
Nicaragua
Costa Rica
Panam
Average Annual Runoff, 1960 – 1990 (mm)
0 – 100
101 – 200
201 – 500
501 – 750
751 – 1,000
Suitability of Agricultural Land for Rain-Fed Crops
poor
satisfactory
good
excellent
Cyclone Frequency, 1980 – 2000
Low
High
0
500
1,000

Climate change on population distribution impacts

UNITED NATIONS UNIVERSITY
UNU-EHS
Institute for Environment and Human Security

UNU-EHS

- Arctic Monitoring and Assessment Program says that Arctic temperatures in the past six years were the highest since measurements began in 1880.
- The AMAP report also said the melting of Arctic glaciers and ice caps, including Greenland's huge ice sheet, are projected to help raise global sea levels by 35 to 63 inches (90-160 centimeters) by the end of this century, though this estimate is highly uncertain.
- But just compare that to the IPCC´s 2007 projection of 7 to 23 inches (19-59 centimeters) which didn't consider the dynamics of ice caps in the Arctic and Antarctica.

5 tasks for national & international leadership

UNITED NATIONS UNIVERSITY
UNU-EHS
Institute for Environment and Human Security

UNU-EHS

1. **Support the best science to expand the knowledge base** on specific interactions – like desertification, rainfall variability, disaster occurrence, coastal erosion – with human mobility.
2. **Multiply adaptation alternatives—this is the most important point**. Where possible, help people stay through sustainable rural and urban development. Where necessary, help people move in safety and dignity
3. **Involve the diaspora in designing and funding adaptation strategies** that enable their home countries and communities cope with climate change.
4. **Promote disaster risk reduction and conflict mediation** strategies while strengthening humanitarian responses. Invest today in resilience building strategies designed to preempt uncontrolled crisis. Invest in humanitarian responses to natural hazards and conflict.
5. **Innovate in guiding principles, effective practices and institutional frameworks** to help governments in developing appropriate laws, policies and programs to address both internal and international migration resulting from climate change.

UNU-EHS

The decisions of leaders today will determine whether migration becomes a matter of choice amongst a range of adaptation options, or merely a matter of survival due to a collective failure to find alternatives.

Thank you.

UNITED NATIONS UNIVERSITY
UNU-EHS
Institute for Environment and Human Security

UNU-EHS

Dr. Koko Warner
Institute for Environment and Human Security (UNU-EHS)
Hermann-Ehlers-Str. 10
D-53113 Bonn, Germany
Phone: ++ 49 (0) 228 815-0226, Fax: ++ 49 (0) 228 815-0299
E-Mail: warner@ehs.unu.edu
www.ehs.unu.edu