



Migrants and transients in a climate of change

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Presentation available:

<http://luetz.com>

- 1. Research background**
2. Climate change + synthesis
3. PhD research contribution
4. Method + observations
5. Concluding discussion

PLANET **PREPARE**

2008 World Vision
Preparedness Study

Protect Development
Research Priorities
Empower Communities
Partner And Network
Advocate Justice And Change
Reinforce Disaster Defences
Educate Children





**Island of Torotsian,
Papua New Guinea**



**Island of Torotsian,
Papua New Guinea**



**Island of Torotsian,
Papua New Guinea**

Island of Matsungan, Papua New Guinea



Island Chief John Kela (right) standing on what he says was formerly dry ground.

Photo: Johannes Luetz

Chief Kela: “What will the future hold for our children and grandchildren?”

Labutali, Papua New Guinea



Photo: Johannes Luetz

Group of “climate change migrants”
who abandoned their coastal village
“because of rising sea levels.”

Photo: Johannes Luetz

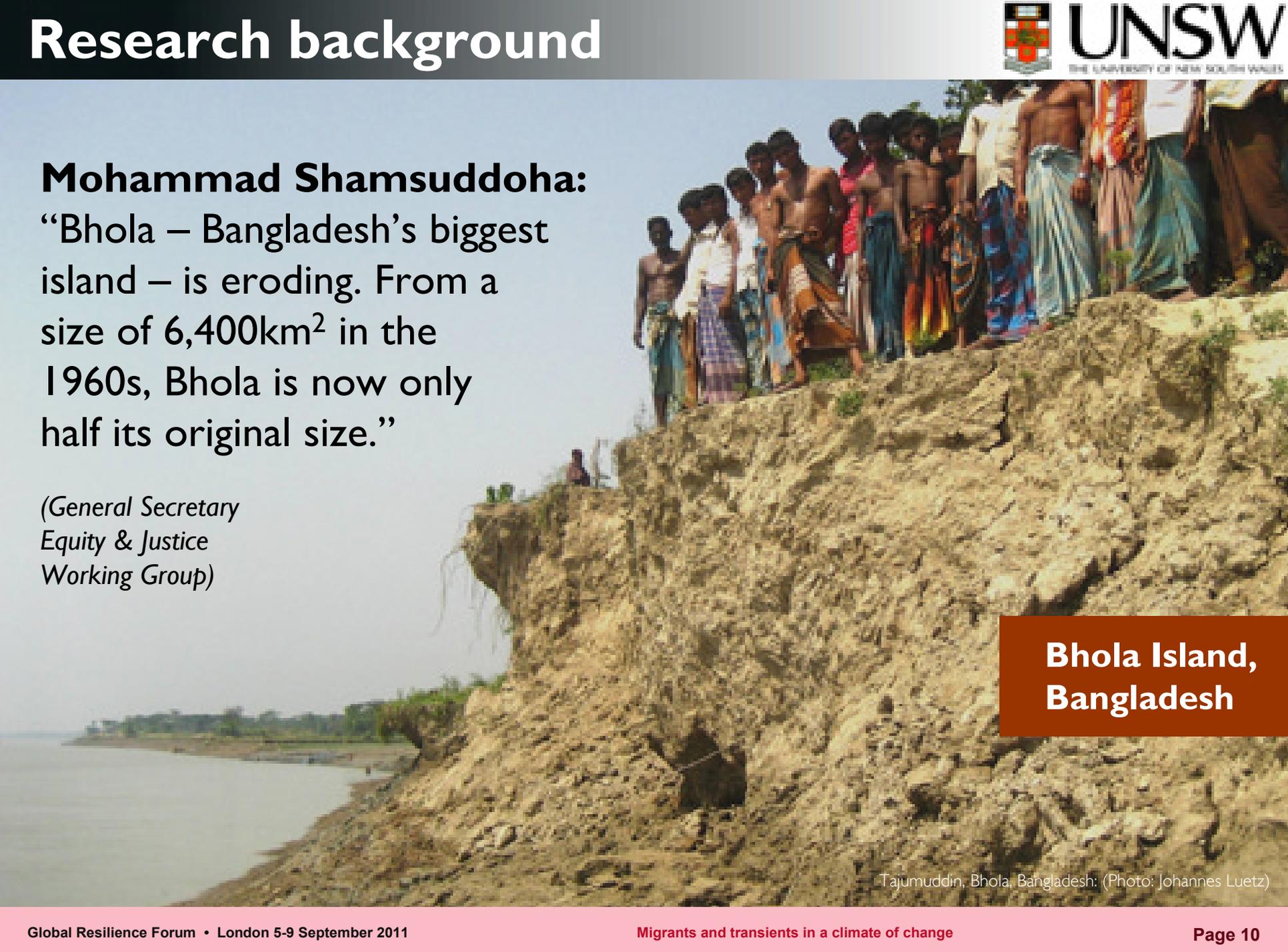


**Puwamo, Papua
New Guinea**

Albert Nai: “The bush is better than the beach!”
(At his new home with two of his grandchildren)

Mohammad Shamsuddoha:
“Bhola – Bangladesh’s biggest island – is eroding. From a size of 6,400km² in the 1960s, Bhola is now only half its original size.”

*(General Secretary
Equity & Justice
Working Group)*



**Bhola Island,
Bangladesh**

Tajumuddin, Bhola, Bangladesh: (Photo: Johannes Luetz)



Tajumuddin, Bhola, Bangladesh: (Photo: Johannes Luetz)

Bhola Island, Bangladesh

Abdul Mannan: “The place where I was born lies 5 kilometres out in the sea. I’ve already moved my home and family four times.” Community elder Abdul Mannan (centre) points out signs of erosion.



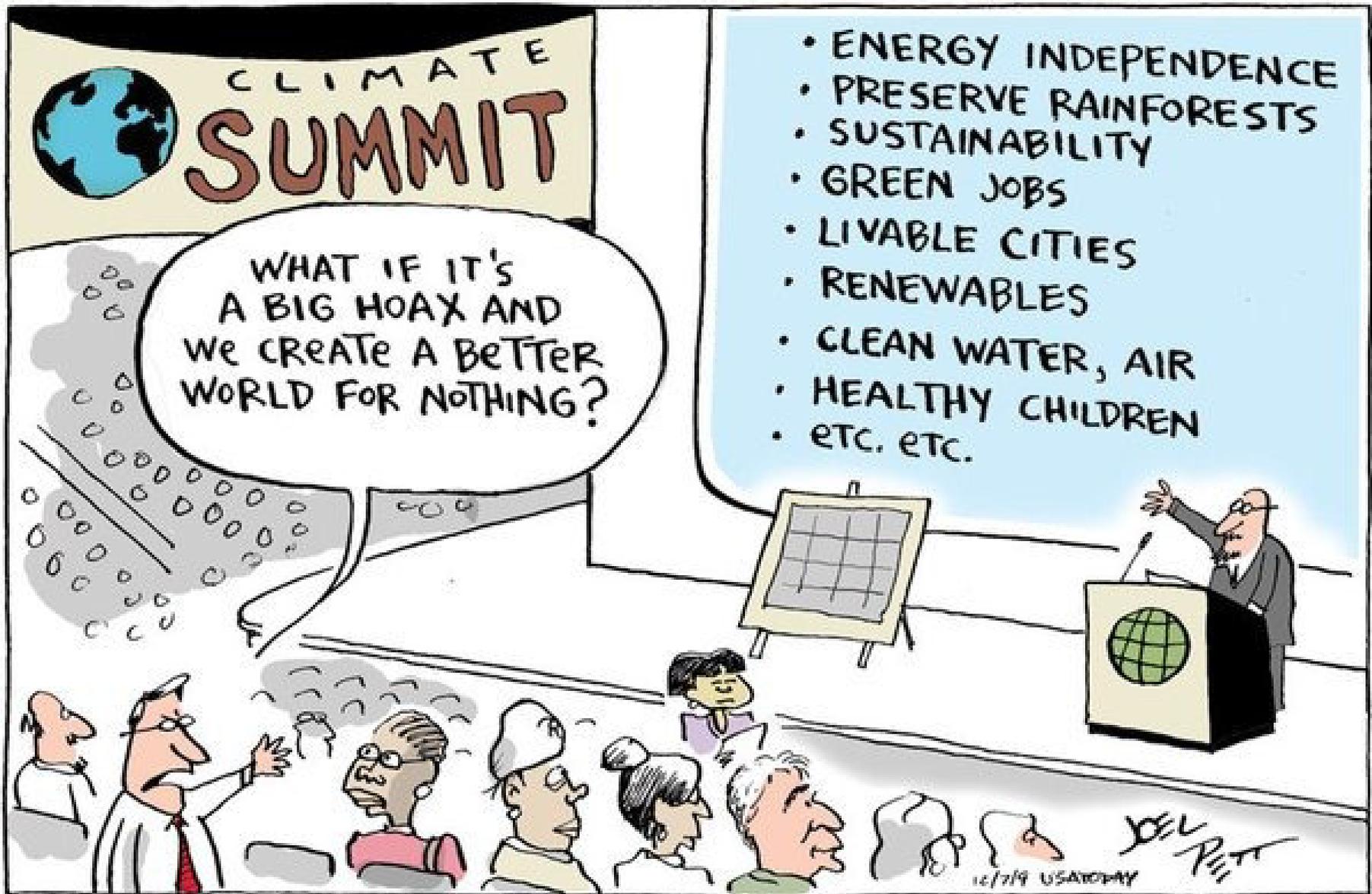
Abdul Mannan:

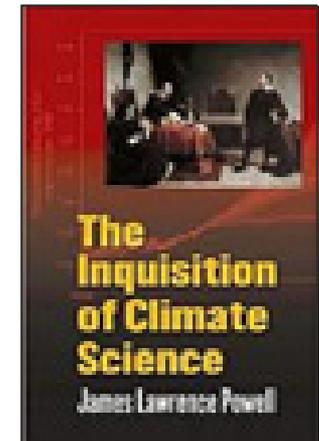
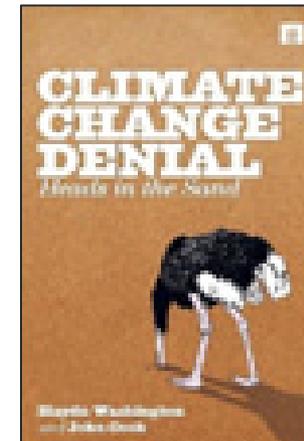
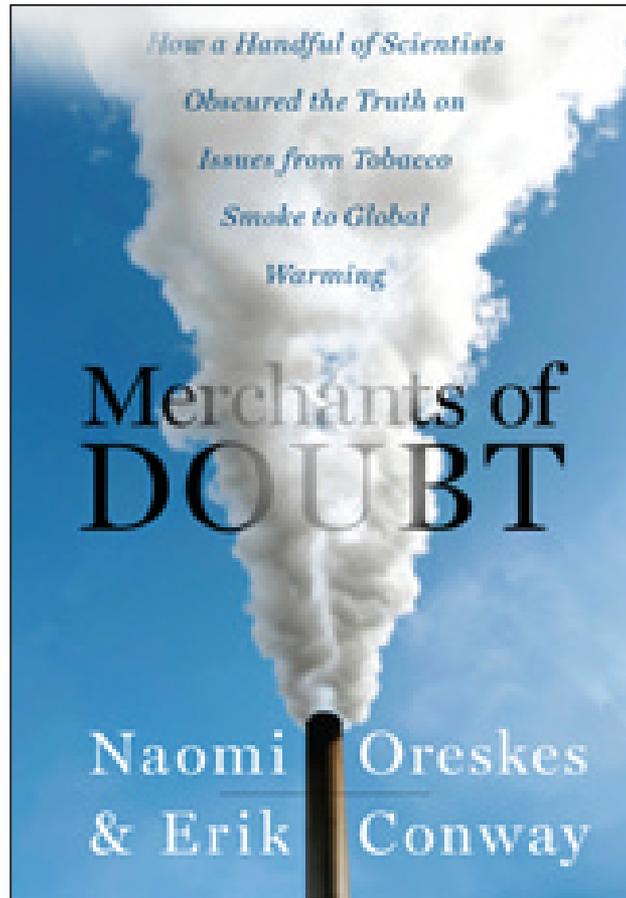
“People are constantly moving back. This family left last week. Only the toilet pit is left.”

**Bhola Island,
Bangladesh**

Tajumuddin, Bhola, Bangladesh: (Photo: Johannes Luetz)

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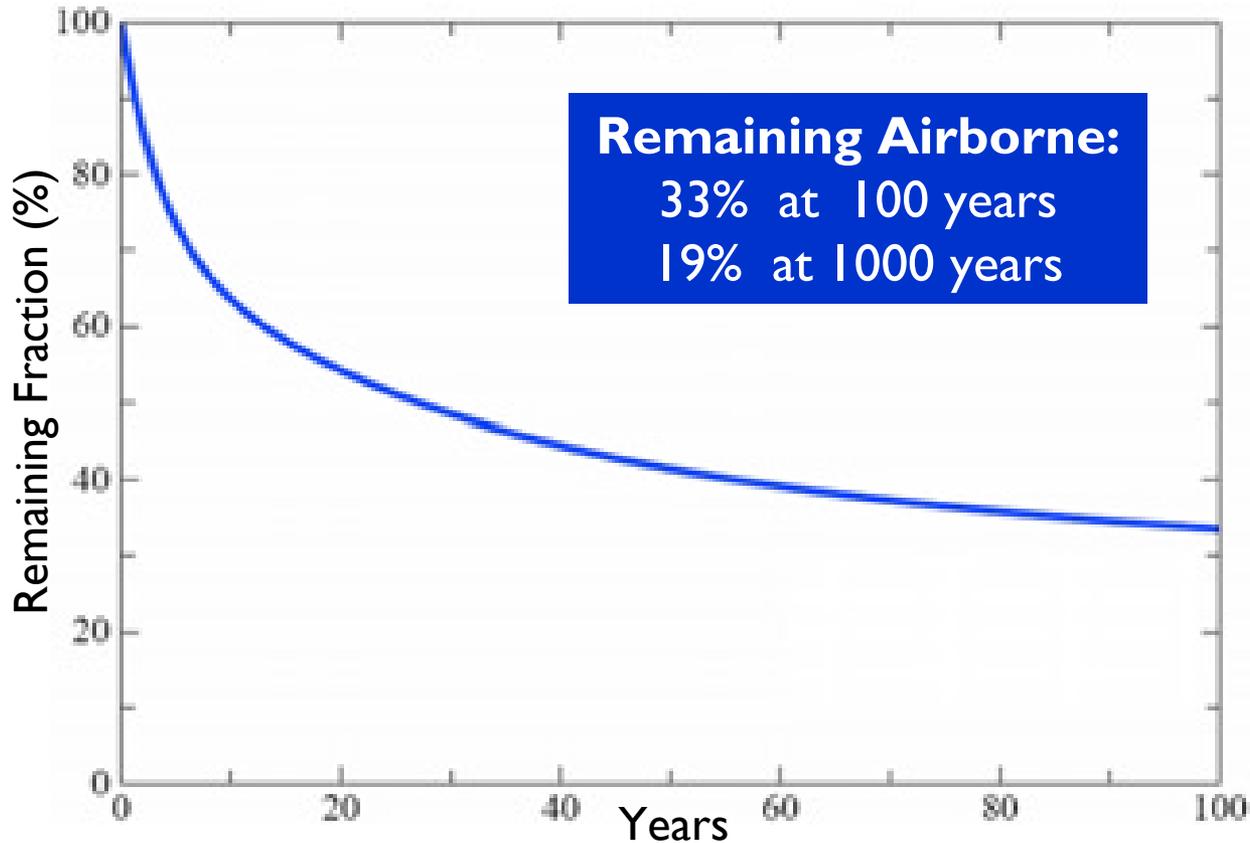




<http://www.merchantsofdoubt.org/>

<http://www.arts.unsw.edu.au/news-and-events/public-lecture-with-naomi-oreskes-645.html>

Slow decay of fossil fuel CO₂ emissions



The fraction of CO₂ remaining in the air, after emission by fossil fuel burning, declines rapidly at first, but 1/3 remains in the air after a century and 1/5 after a millennium.

(*Atmos. Chem. Phys.* **7**, 2287-2312, 2007).



<http://youtu.be/d0Je8ZkGYA8> OR
<http://tv.unsw.edu.au/video/hit-the-brakes>



Available resources:

- Audio files
- Presentation files

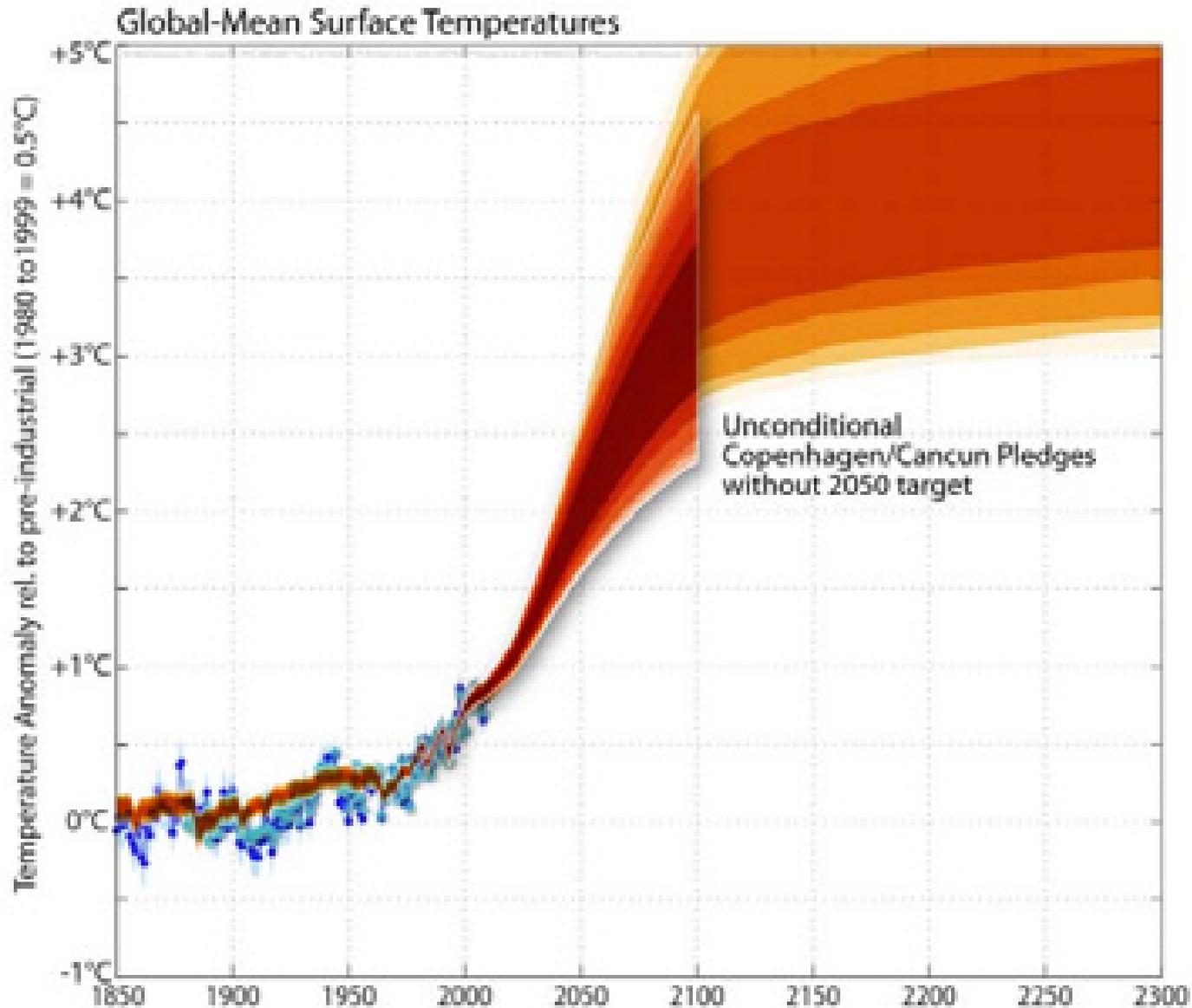
Conference

12-14 July 2011, Melbourne

FOUR DEGREES OR MORE? AUSTRALIA IN A HOT WORLD

www.fourdegrees2011.com.au

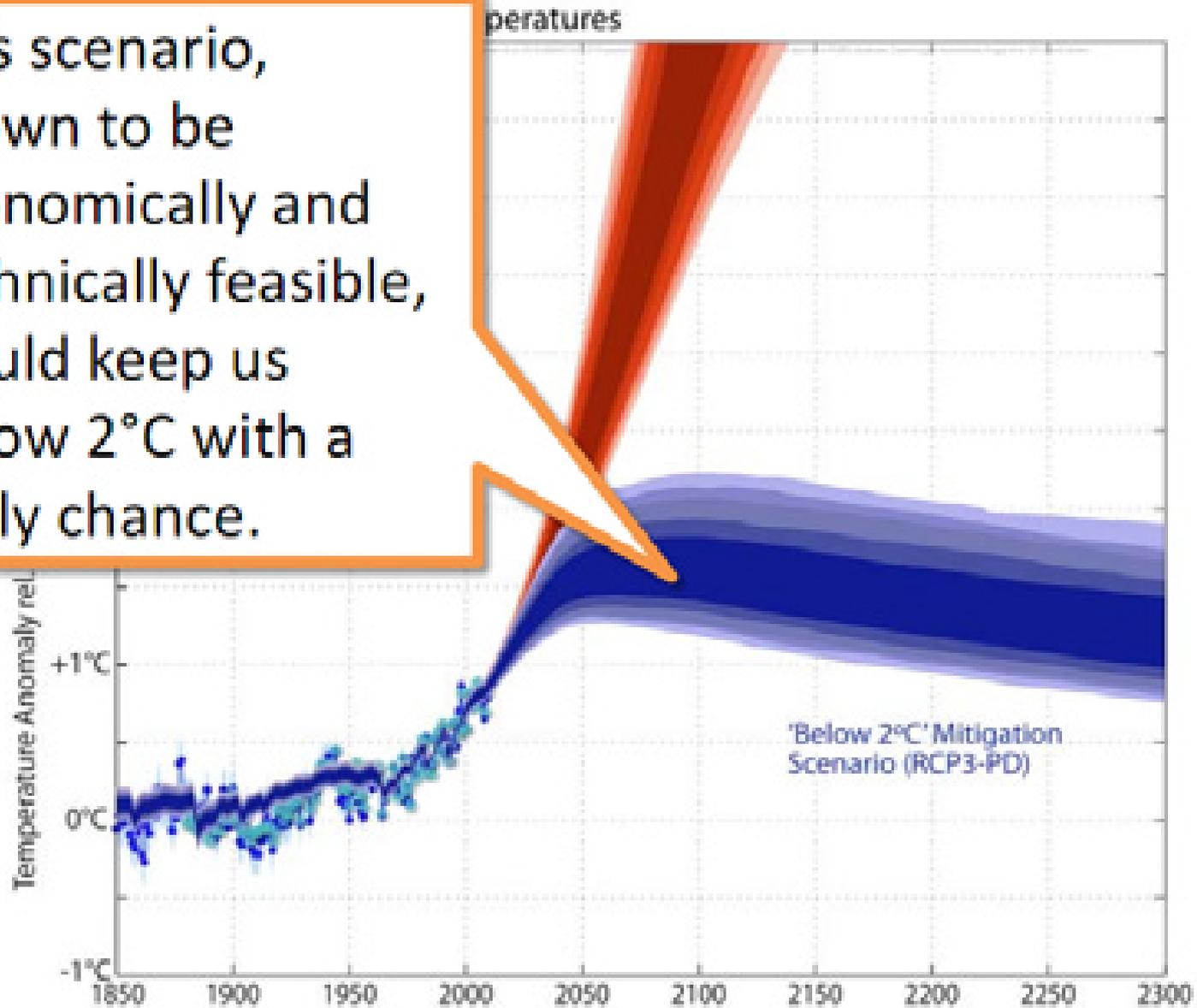
Copenhagen implemented



Based on: Rogelj et al., Nature, 2010

Source: Meinshausen 2011, presentation available:
<http://www.fourdegrees2011.com.au/presentations/>

This scenario, shown to be economically and technically feasible, would keep us below 2°C with a likely chance.



Source: Meinshausen 2011, presentation available:
<http://www.fourdegrees2011.com.au/presentations/>

File based on data from the IPCC Working Group III contribution to the Fourth Assessment Report (AR4) Working Group III contribution to the Fourth Assessment Report (AR4) Working Group III contribution to the Fourth Assessment Report (AR4)



Climate Adaptation Masterclass

NCCARF
National Climate Change Adaptation Research Framework

Friday 20 May 2011, Queensland Museum, Brisbane

The workshop
The event aims to build Australian understanding and capacity by providing researchers and decision-makers with the latest international thinking on climate change adaptation. The workshop will feature some of the world's leading climate change adaptation thinkers and practitioners.

Who should attend
Researchers, policy and decision makers, especially those in their early and mid careers.

Sessions and speakers

- Defining and assessing complexity**
Malin Falken, Swedish Environment Institute, Sweden (PAC)
- The process of scientific learning and scientific assessment in real world problems of global change**
Linda A. Levinson, Washington
Jon Barnes, University of Melbourne, Australia
Risk and Resilience Management
Maarten van Aalst, PBL Dutch Research Centre for Climate Change, Netherlands
Living Under Science and Local Knowledge
Thomas Hilborn, Oak Ridge National University, USA
- Bridging the science-policy interface**
Suzanne Hauser, Suzanne Hauser Research & Consulting, USA
- Recent research: including risk or uncertainty?**
Lars Ripstein, Swedish Environment Institute, Sweden
- Gender and climate change**
Maureen Fryden, Northumbria University, UK
- Preparing adaptation and implementation**
Michael Hilborn, James Cook University, Australia
- Adaptive management of water resources**
Torge Arntsen, University of Reading, UK (PAC)

Register now!
Places in the masterclass are strictly limited and available on a first-come basis. A registration fee of \$50 is payable at the time of booking. Reserve your place in the masterclass event at <http://register.unsw.edu.au/nccarf>

Available resources:

- Audio files
- Presentation files

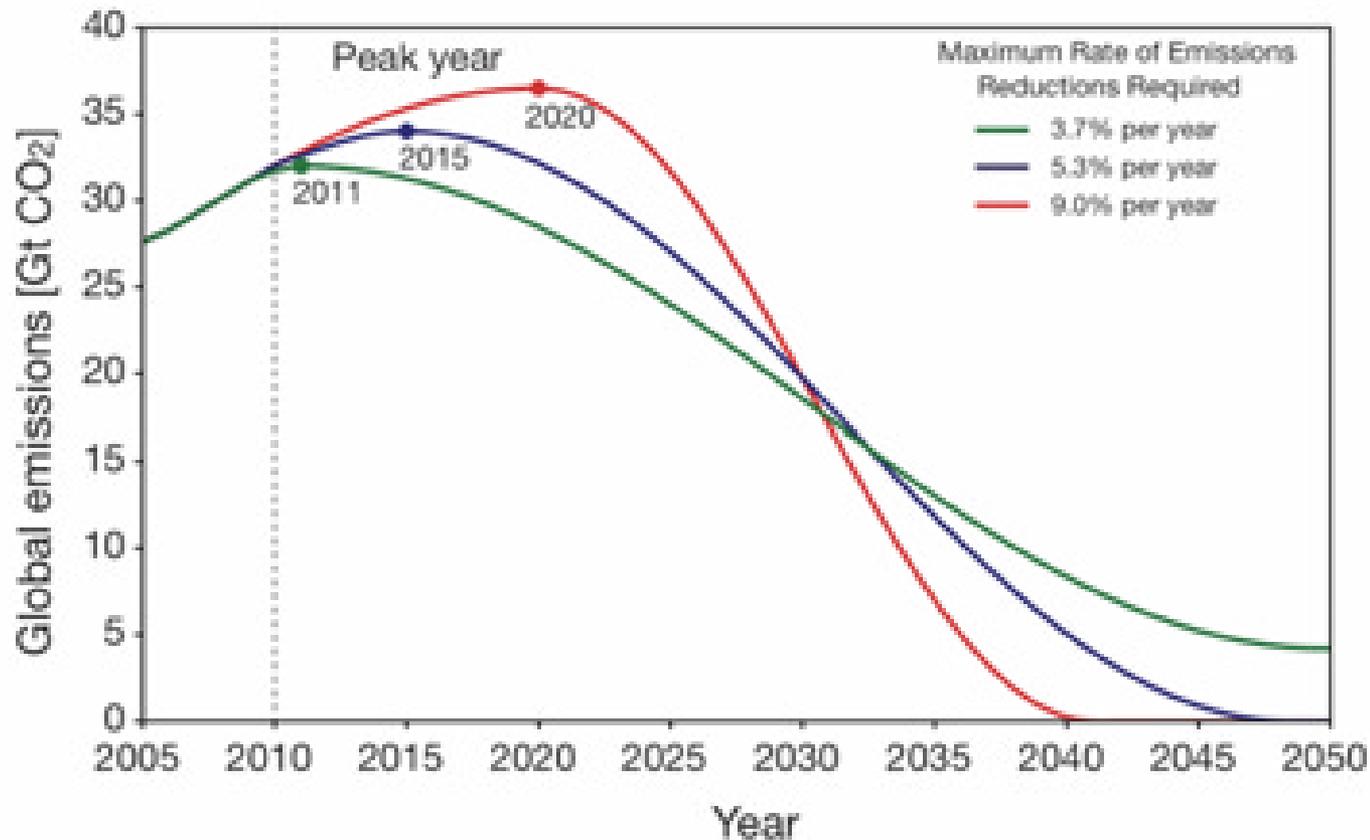
Masterclass

20 May 2011, Brisbane

FROM THEORY TO IMPLEMENTATION

<http://www.nccarf.edu.au/masterclass>

Exemplary emissions pathways which remain within 750Gt and leave a 67% chance of limiting global warming to 2°C

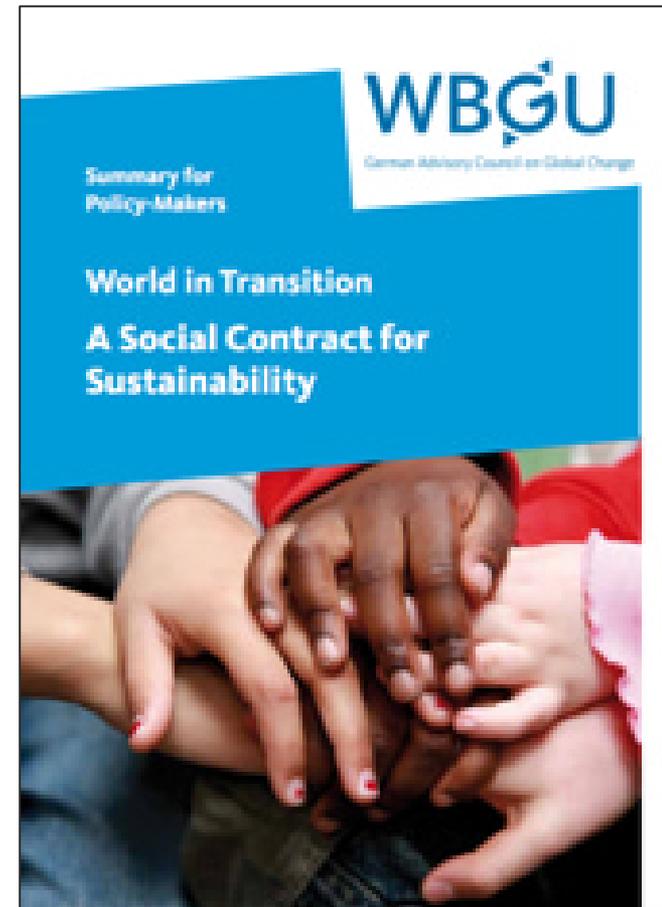


Solving the climate dilemma: The budget approach; WBGU Special Report 2009

World in Transition: Social Contract for Sustainability

Flagship Report 2011

<http://www.wbgu.de/en/home>



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<http://youtu.be/KBq2jNrD-yg> OR

<http://tv.unsw.edu.au/video/bolivia-leaving-the-land>

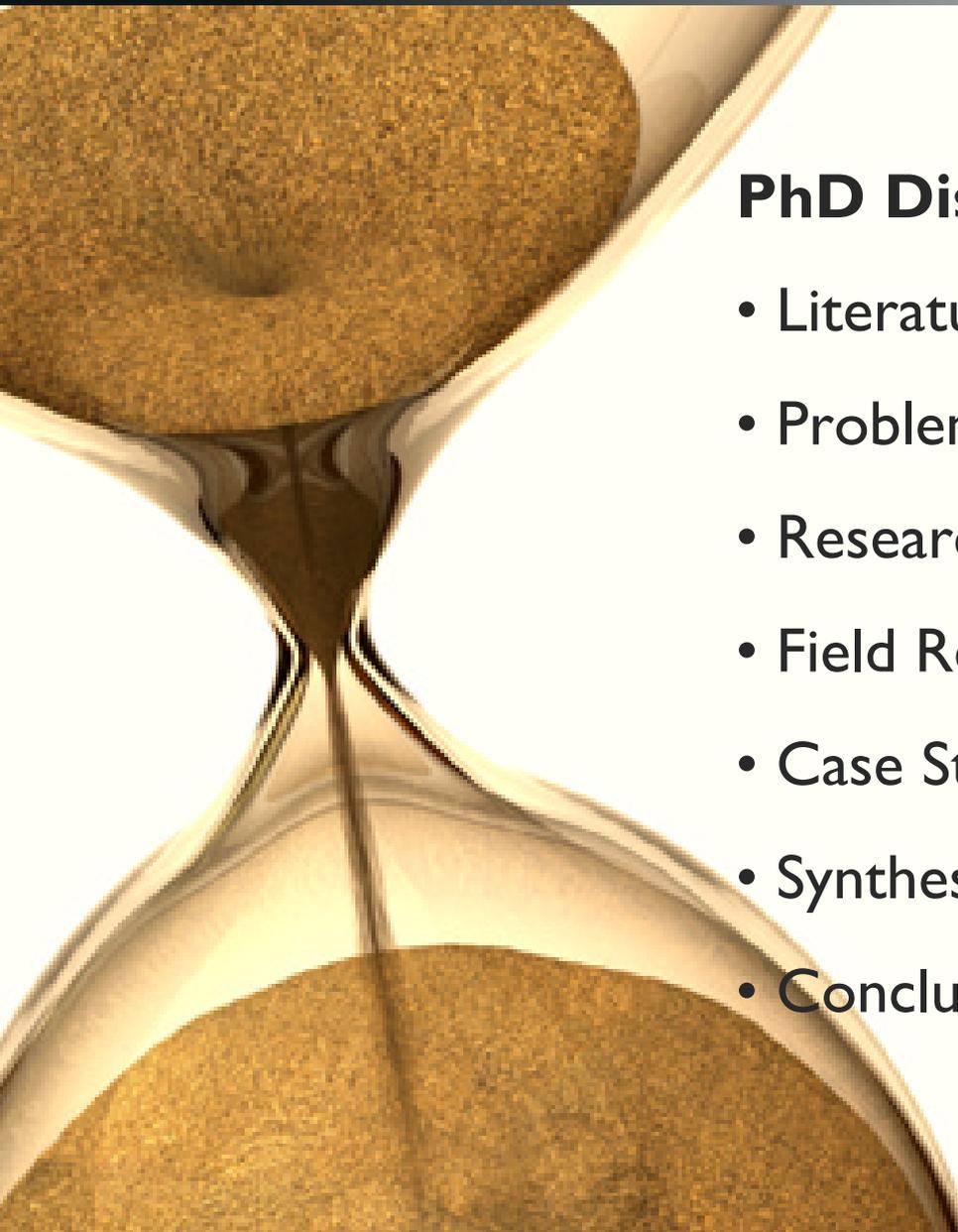
- **Attribution:** multi-causality, “disaggregation”?
- **Associational appropriateness:** best term?
- **Legal applicability:** what legal framework?

- ***Synthesis 1:***
There are no “environmental” and/or
“climate refugees”

- ***Synthesis 2:***
There *are* “environmental” and/or
“climate refugees”

- ***Synthesis 3:***
There will be more

Source	Projection	Timeframe
IPCC (2001)	150 million	2050
Myers (1995 and 2005)	200 million	2050
Myers (2006)	250 million	2050
Nicholls (2004)	50-200 million	2080
IOM (2009)	200 million	2050
Stern Review (2006)	150-200 million	2050
Christian Aid (2007)	1 billion	2050

A close-up, artistic photograph of an hourglass. The top bulb is filled with golden-brown sand, and a stream of sand is falling through the narrow neck into the bottom bulb. The lighting creates soft shadows and highlights the texture of the sand and the glass.

PhD Dissertation Structure

- Literature Review
- Problem Definition, Knowledge Gaps
- Research Method and Contribution
- Field Research
- Case Studies
- Synthesis, Discussion
- Conclusion and Recommendation



**At micro /
local-level
ascertain
preferred:**

- Terminologies
- Locations
- Solutions

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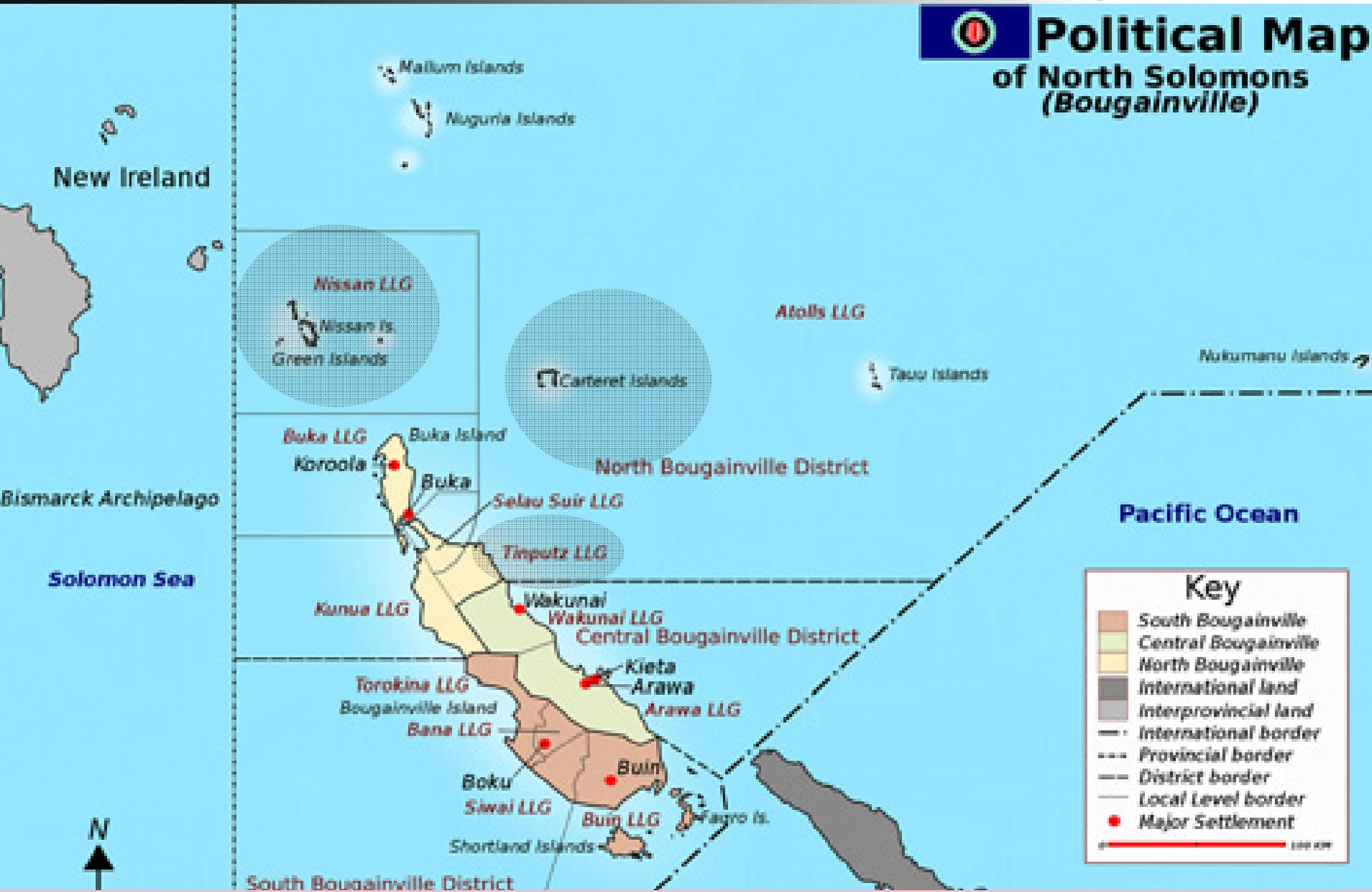
<http://www.vimeo.com/4177527>



There once was an island (trailer feature documentary)

<http://youtu.be/M7akwGUtGDw>

Political Map of North Solomons (Bougainville)





- Trial data collection
- Observe issues raised
- Fine-tune questionnaire





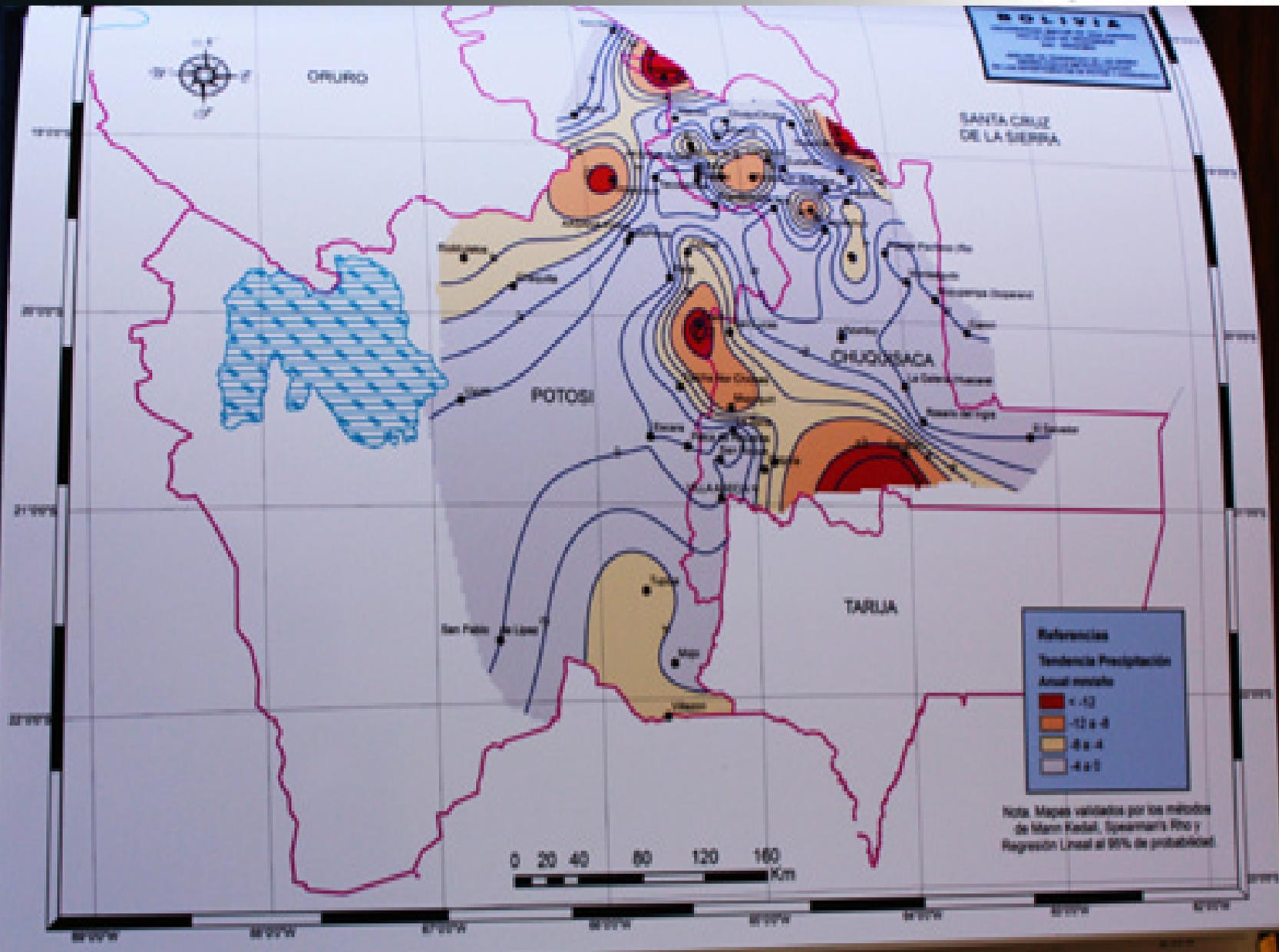
Question: Which environment or climate-related problems contributed to your decision to leave? How important was each factor? From the list below, please rate each factor as either “unimportant” OR “important” OR “very important”.

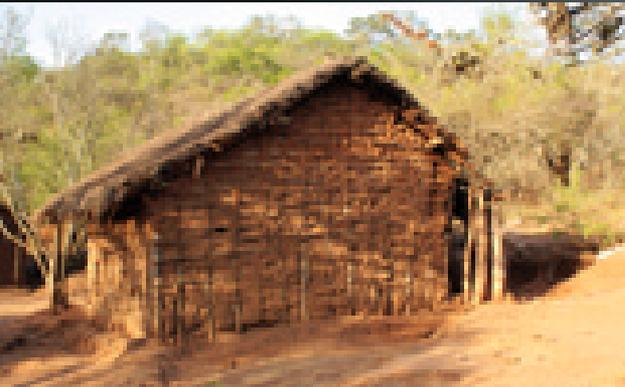
Reason	Unimportant	Important	Very important
poor drinking water			
insufficient drinking water			
poor / degraded soil			
erosion / land loss			
insect infestation/ vectors (eg mosquitoes)			
diseases / pests			
sudden natural disasters (eg wind storms)			
slow-onset disasters (eg droughts)			
rises in sea level			
dwindling agricultural yields			
other problem:			
other problem:			

Question: Which NON-environment or climate-related problems also contributed to your decision to leave? How important was each factor? From the list below, please rate each factor as either “unimportant” OR “important” OR “very important”.

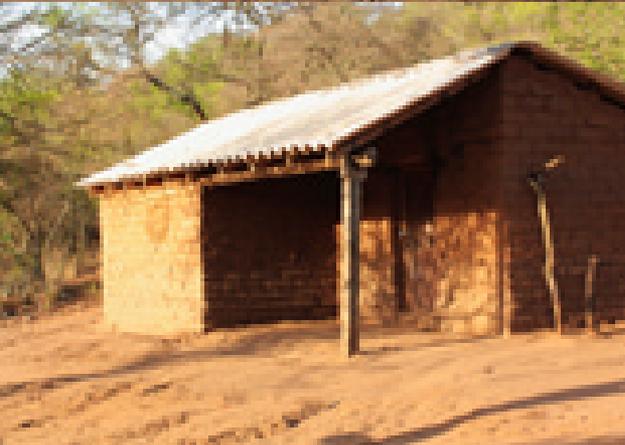
Reason	Unimportant	Important	Very important
poor drinking water			
insufficient drinking water			
poor / degraded soil			
erosion / land loss			
insect infestation/ vectors (eg mosquitoes)			
diseases / pests			
sudden natural disasters (eg wind storms)			
slow-onset disasters (eg droughts)			
rises in sea level			
dwindling agricultural yields			
other problem:			
other problem:			

Bolivia Case Study



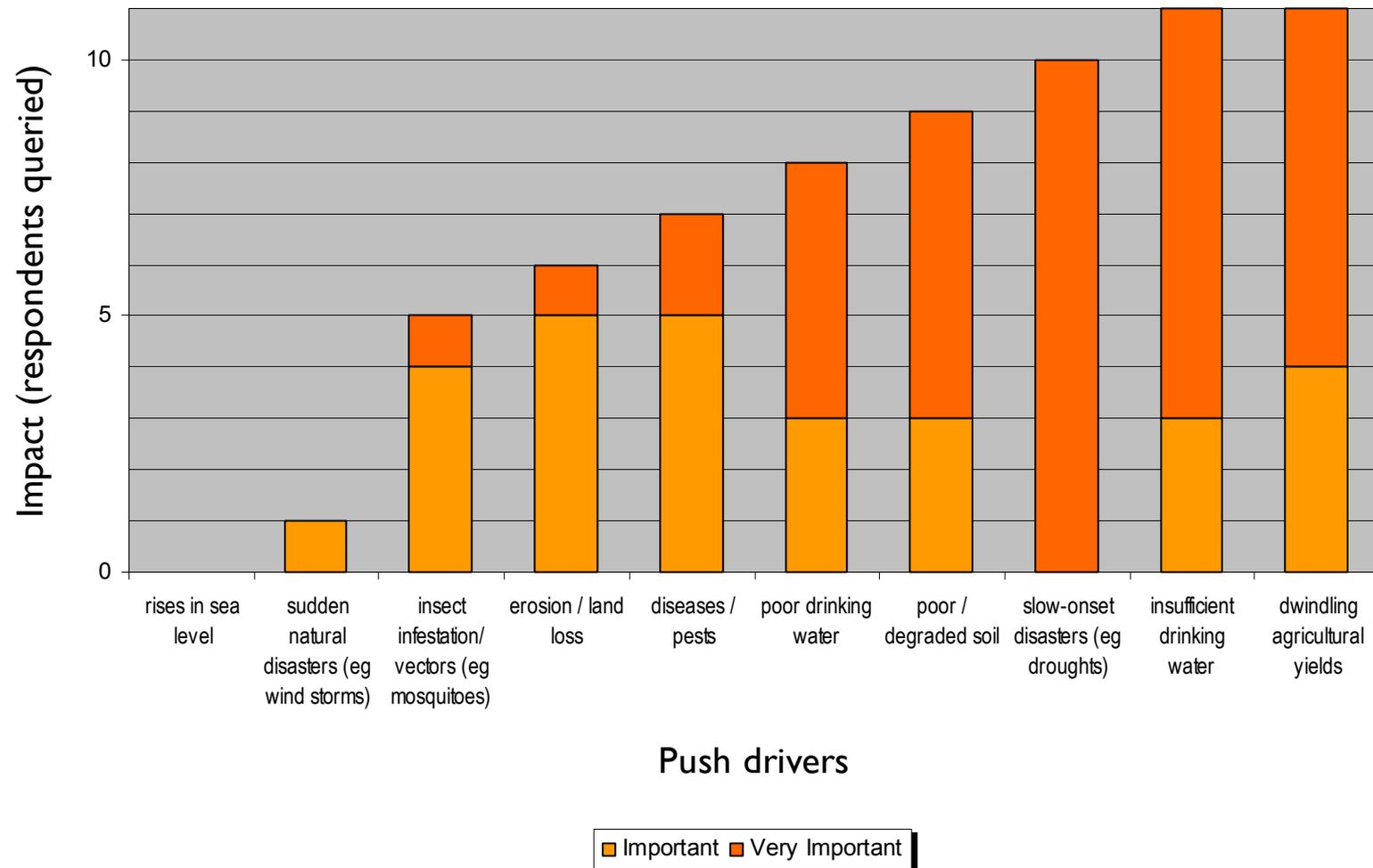


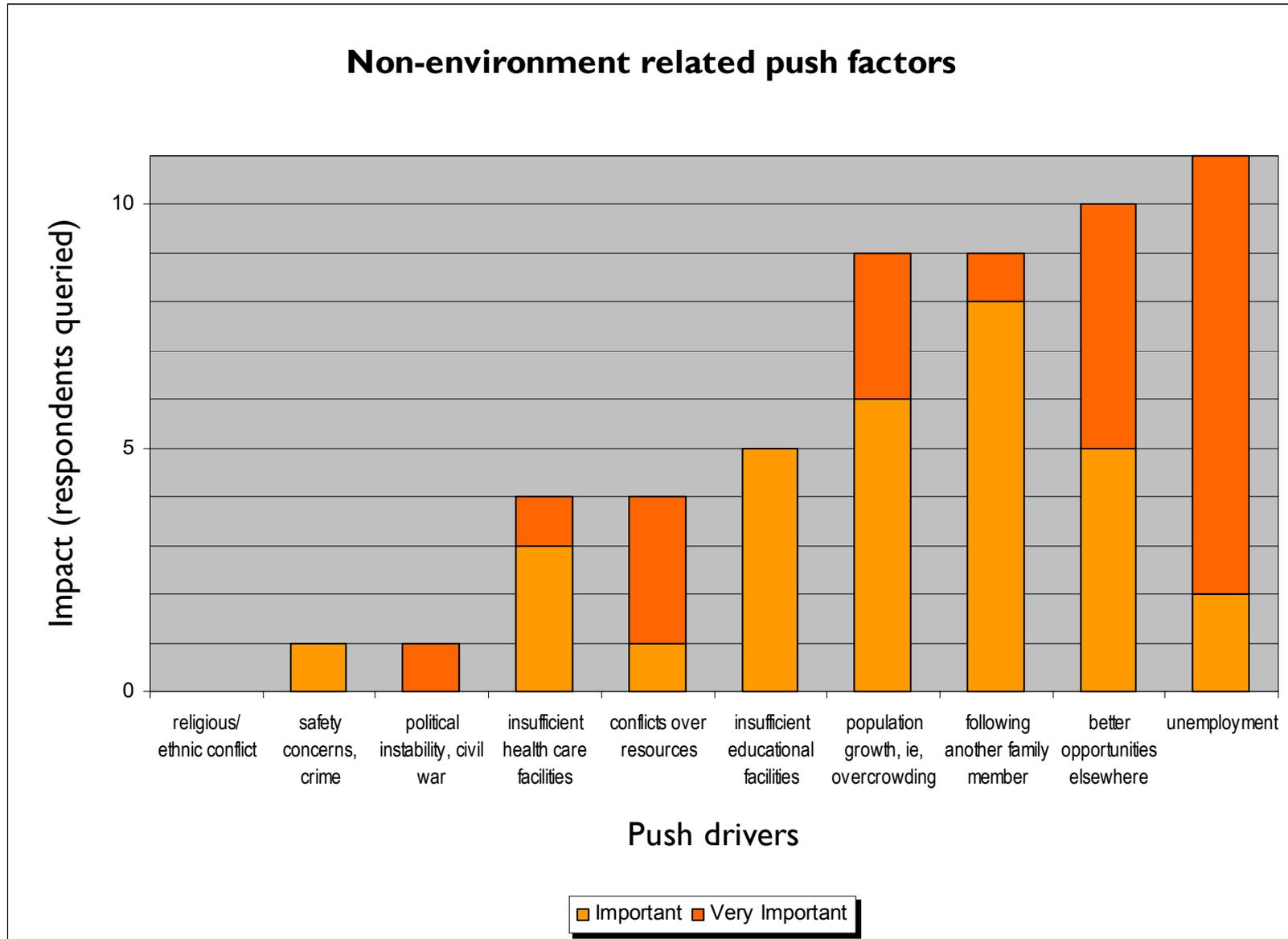
Abandoned houses





Environment related migration push factors







Environment and non-environment-related drivers reinforce each other



Environment and non-environment-related drivers reinforce each other

Question: What are your aspirations? From the list below, please rate the following possible aspiration as having a “very high priority” OR “high priority” OR “medium priority” OR “low priority” OR “very low priority”.

Aspirations of forced migrant communities	VHP ★★★★★	HP ★★★★☆	MP ★★★☆☆	LP ★★★☆☆	VLP ★☆☆☆☆
Employment/ making money					
Similar climate					
Same culture/ ethnicity					
Same language					
Same country					
Proximity "origin" community					
Better/ or higher education					
Better health care					
Reproductive/ family planning					
Moving together <i>with</i> family					
other aspiration/ pursuit:					
other aspiration/ pursuit:					

Aspirations of forced migrant communities	Ascribed importance	5-star rating scale
Employment/ making money	4,7	★★★★★
Proximity “origin” community	3,8	★★★★☆
Better/ or higher education	3,7	★★★★☆
Moving together <i>with</i> family	3,5	★★★★☆
Better health care	3,5	★★★★☆
Same culture/ ethnicity	3,1	★★★★☆
Same language	3,1	★★★★☆
Similar climate	2,4	★★★☆☆
Same country	2,3	★★★☆☆
Reproductive/ family planning	2,3	★★★☆☆

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**Adan Antenor:
Initiative and
Human agency**



**Dionicio Perez
Manuel: Youth
preparation**



Rosa Sanchez
Amador: Training,
Skills + Education

**Martina + Raúl:
Clandestine
Tree Planting**



**Gubercio Antenor:
Teaching Labour +
Child Rights**



MACRO LEVEL



MICRO LEVEL



Terminologies:

widespread rejection of “refugee” label among respondents as too “long lived” and devoid of hope and sense of human agency. More research needed on “transience”.



Locations:

pronounced preference for “in-region” (re)settlement



Solutions:

livelihood generation deemed key priority,
more research on the role of “transience”



Our Common Future:

“Humanity has the ability to make development sustainable to ensure that it meets the needs of the present without compromising the ability of future generations to meet their own needs..”

(Brundtland Report 1987, pp 24-25)

Jesus said, “Let the little children come to me, and do not hinder them, for the kingdom of heaven belongs to such as these.”

(The Gospel of Matthew 19:14, NIV)

Thank You!

PhD Sponsors:



PhD Supervisors:

A/ Prof John Merson,
Director Institute of Environmental Studies

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