

Media Launch

Bangkok, Thailand • 18 September 2008
Singapore • 19 September 2008

PLANET PREPARE

Photo: Paul Willows/NASA

Presentation available:

<http://luetz.com>

“Climate change is not just an environmental issue, as too many people still believe. It is an all-encompassing threat.”

—Kofi Annan, former UN Secretary-General

“ For tomorrow belongs to the people who **PREPARE** for it today. ”

–African Proverb

1. Climate Change
2. Climate Storms
3. Climate Preparedness



Megacities

Photo: Amio Ascension

1. “Urban Millennium”
2. 5 Billion people in cities by 2030
3. 12 Megacities in Asia by 2015



Photo: Andrea Dearborn

Mega-Challenges

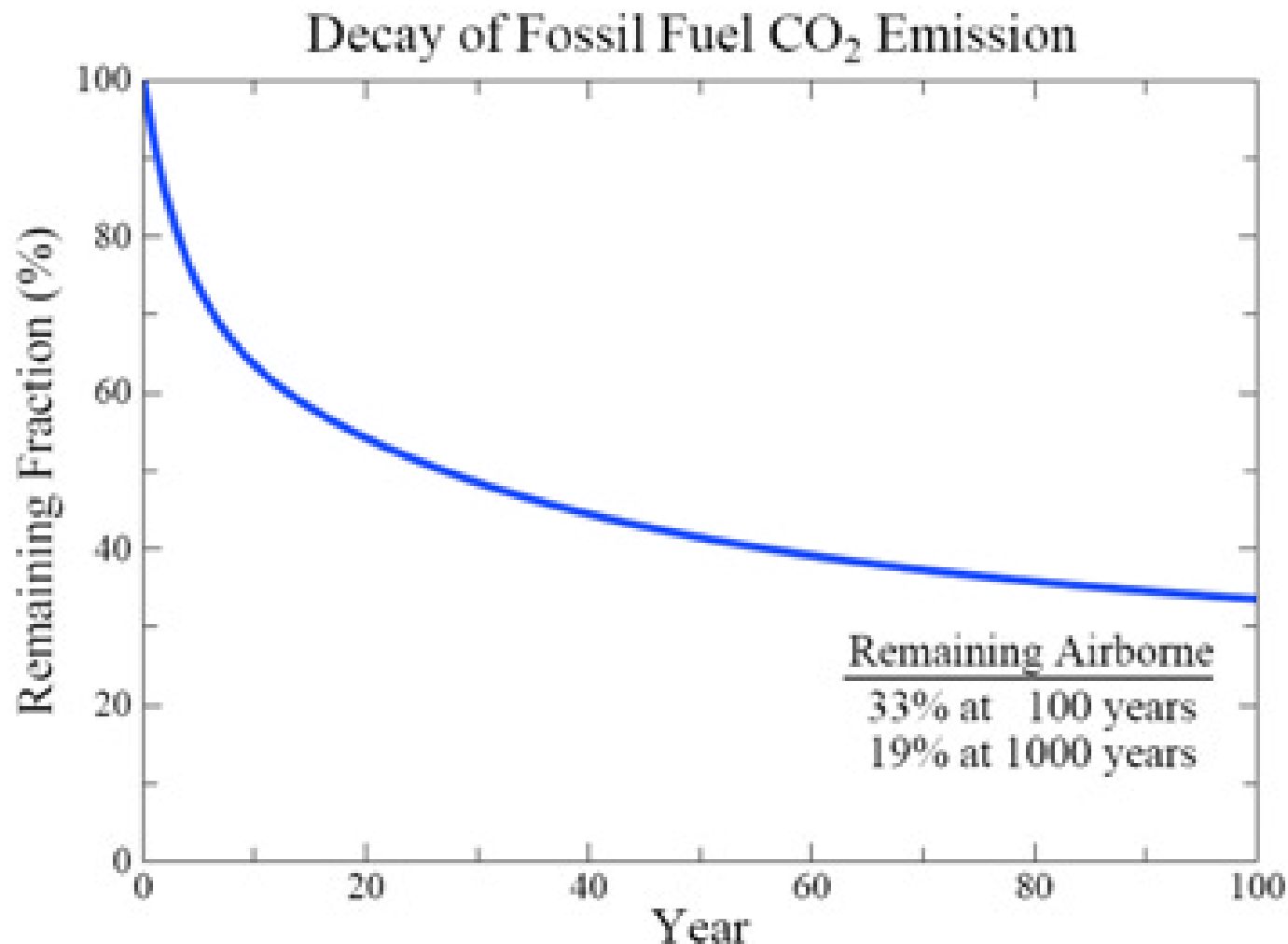
1. Coastward urbanisation: 50% of world pop < 100 km by 2030
2. Proliferation of slum settlements: 2 billion slum dwellers by 2030
3. Sinking cities (“over-development” and groundwater extraction)



Extreme Pollution

Photo: Clint Spencer

1. Cars increase in China (15x) and India (13x) within 30 years
2. Carbon Dioxide growth from 23 (1990) to 32 gigatonnes (2008)
3. Requirement: Decreases by 50-85% by 2050 (IPCC)
Projections: Increases by 51% by 2030 (EIA)



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).

“A level of per capita income comparable with that of the industrialised countries would, on today’s model, require a level of energy use beyond the world’s energy resource endowment and the absorptive capacity of the planet’s ecosystem.’ ... It is impossible to go on as now.”

—Michael Richardson, Institute of Southeast Asian Studies, synthesising the World Energy Outlook 2007 of the International Energy Agency, IEA



Poverty

Photo: Jacqueline M. Koch

1. **946 Billionaires (\$3.5 trillion) > Africa's GDP (\$2.2 trillion)**
[Share of world pop.: 0.0000143%]
2. **8.7 Million Millionaires (\$33.3 trillion) = 50% of world GDP**
[Share of world pop.: 0.13%]
3. **98% of climate disasters in developing world (262 million p.a.)**



Eco-Collapse

Photo: NATO/Landsat

1. 83% of mangroves destroyed in Irrawaddy Delta (1924-1999)
2. 73,000 square kilometres of forest burned-slashed-hacked p.a.
3. 20% of global greenhouse gas emissions from forest slashing



Photo: Abi Hardjatmo

- + More Urbanisation
- + More Vulnerability
- + More Pollution
- + More Disparity
- + More Degradation

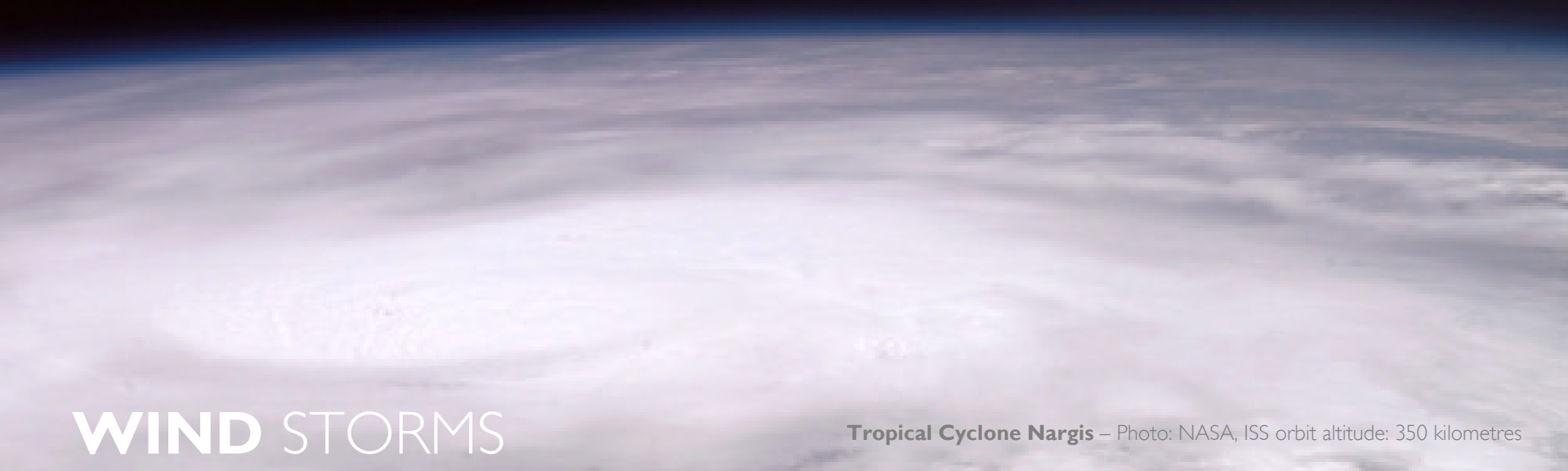
**= 21st Century Climate
Change Context**

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The number of Category 4 and 5 hurricanes has almost doubled in the last 30 years.



WIND STORMS

Tropical Cyclone Nargis – Photo: NASA, ISS orbit altitude: 350 kilometres

“As the oceans get warmer, storms get stronger ... A growing number of scientific studies are confirming that warmer water in the top layer of the ocean can drive more convection energy to fuel more powerful hurricanes.”

—Al Gore, Nobel Peace Prize Laureate 2007



POLE POSITION

Photo: Erlend Kvalsvik

There could be no more serious threat than for the world's most rapid warming – 0.5 degrees Celsius per decade – to occur in the region with the world's largest ice mass – Antarctica. “Antarctica and Greenland [hold] 98-99 percent of the world's freshwater ice.” Severe signs of melting are being observed in both places, and the UNEP has warned of “severe consequences.” (United Nations Environment Programme, World Environment Day 2007)



Sea Level Rise Potential:

1. Greenland: 7 metres
2. West Antarctic ice sheet: 6 metres
3. East Antarctic ice sheet: 50 metres

POLE POSITION

Photo: Jan Will

Tipping Points: “Ominous tipping points loom. West Antarctic and Greenland ice sheets are vulnerable to even small additional warming. These two-mile-thick behemoths respond slowly at first, but if disintegration gets well underway it will become unstoppable ... if emissions follow a business-as-usual scenario, sea level rise of at least two meters is likely this century. Hundreds of millions of people would become refugees. No stable shoreline would be reestablished in any time frame that humanity can conceive.”

—Dr. James Hansen, Director of the NASA Goddard Institute for Space Studies and Adjunct Professor at the Columbia University Earth Institute



PACIFIC ATLANTIS

Photo: Johannes Luetz

J. Kela: “What will the future hold for us?” Island chief John Kela (right) doesn't understand the science of climate change. But he sees that the ocean surrounding his island is rising.



Climate Refugee Potential:

100,000 people displaced p.a.

65 million (1 m)

92 million (3 m)

128 million (5 m)

Bhola Breakdown

Photo: Johannes Luetz

“Bhola – Bangladesh’s biggest island – is eroding at a phenomenal rate. From a size of 6,400 square kilometres in the 1960s, Bhola is now only half its original size.”

—Mohammad Shamsuddoha, General Secretary Equity and Justice Working Group



CYCLONE NARGIS

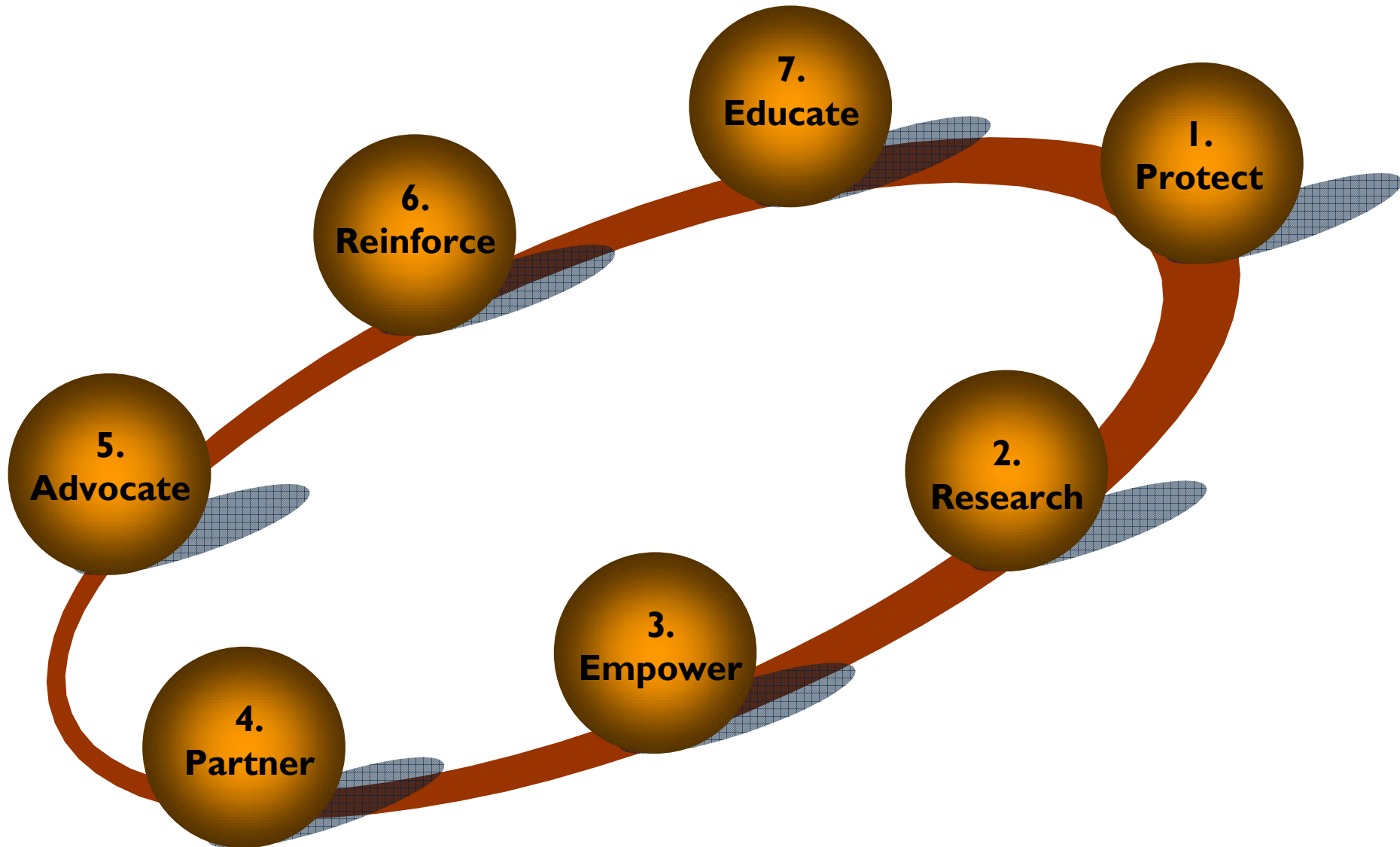
Photo: NASA/MODIS Rapid Response Team

“What we are witnessing is not an aberration, but rather a ‘curtain raiser’ on the future. These events are not abnormal; they’re what I call the ‘new normal.’ The number of recorded disasters has doubled from approximately 200 to over 400 per year over the past two decades. Nine of out every ten disasters are now climate related. Last year, my office at the UN issued an unprecedented 15 funding appeals for sudden natural disasters, five more than the previous annual record. 14 of them were climate-related.” —Sir John Holmes, Under-Secretary General for Humanitarian Affairs and Emergency Relief Coordinator

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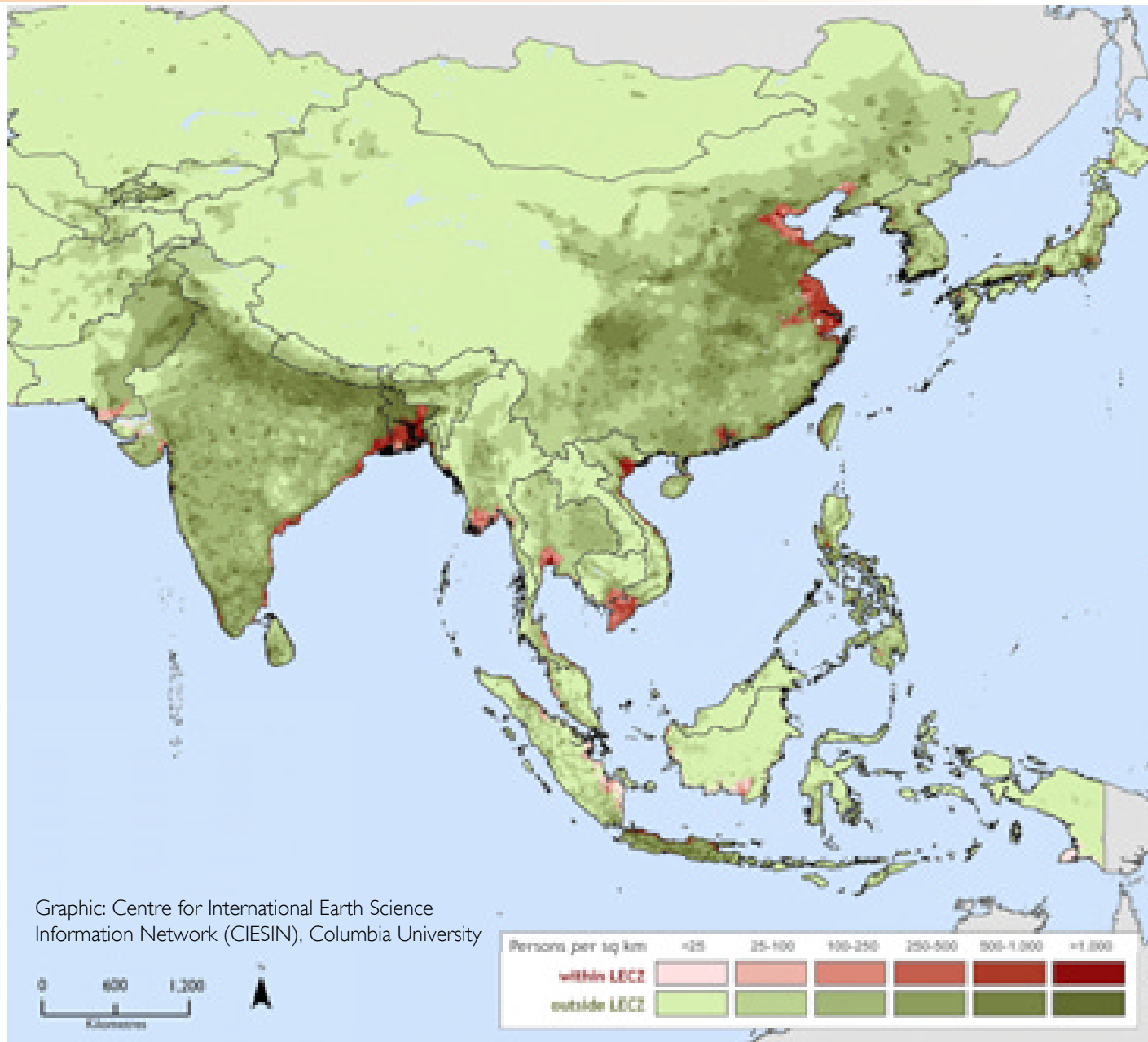


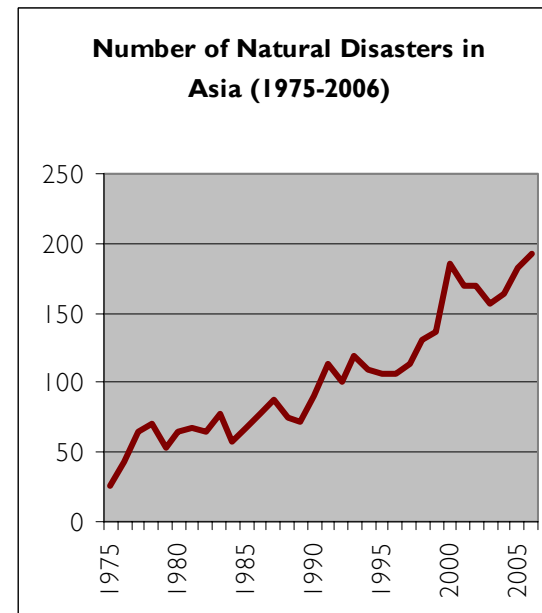
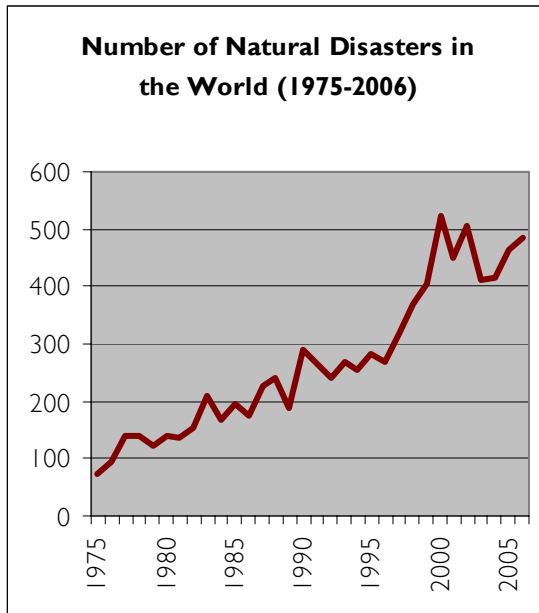
Protect

Photo: Hendro Suwito/Maida Erawani

1. Disasters destroy development
2. Preparedness protects progress
3. Climate change: potential to undo 50 years of human development

RESEARCH PRIORITIES





Natural Disasters Trend (1975-2006): EM-DAT International Disaster Database, Université Catholique de Louvain, Brussels, Belgium, is a joint project of the Centre for Research on the Epidemiology of Disasters (CRED) and USAID's Office of Foreign Disaster Assistance (OFDA).



Empowerment

Photo: Amio Ascension

1. Communities: “first responders”
2. Communities: intrinsically powerful and resourceful
3. Championing local level leadership



Photo: NASA

1. One Earth
2. One Atmosphere
3. One Chance



Photo: Johannes Luetz

1. “Climate Change Refugees”
2. Stop Deforestation
3. Start Reforestation, Afforestation





Natural Forests – Natural Ecosystems

Photos: Philip Gain

“Research indicates that a network of coastal defences, especially a belt of mangroves, is capable of absorbing 30 to 40 percent of the total force of a tsunami or typhoon and ensuing waves before they swirl over inhabited areas by the shore.”

—Mohammad Shamsuddoha, General Secretary Equity and Justice Working Group Bangladesh



Photo: Amio Ascension

1. Software and Hardware
2. Disaster shelters, flood defences, etc.
3. Microinsurance



Photo: Kit Shangpliang

1. School Safety
2. Disaster risk education
3. Societal transformation

Protect Development

Research Priorities

Empower Communities

Partner And Network

Advocate Justice And Change

Reinforce Disaster Defences

Educate Children



Photo: Paul Willows/NASA

“Thank you!”

In the last 30 minutes of this presentation,

more than 1.8 million barrels of oil were "consumed", the majority was burned and absorbed by the Earth's thin atmosphere (87 million barrels are consumed daily).

—International Energy Agency (IEA)

In the last 30 minutes of this presentation,

more than 22 million cubic metres of meltwater from the ice sheets in Greenland and Antarctica flowed into the oceans (392 cubic kilometres annually)

—From the Publication

The Future Oceans – Warming Up, Rising High, Turning Sour

In the last 30 minutes of this presentation,

more than 1.8 million metric tonnes of Carbon Dioxide were emitted into the atmosphere (87.7 million metric tonnes daily, 32 billion metric tonnes annually)

—International Energy Agency

In the last 30 minutes of this presentation,

*more than 4 square kilometres of forest were cut down,
slashed or burned (200 square kilometres daily, 73,000
square kilometres annually)*

—2007/2008 UN Human Development Report

In the last 30 minutes of this presentation,

*6 people in Bangladesh lost their homes due to river erosion
(274 daily, 100,000 annually)*

*—Mohammad Shamsuddoha, General
Secretary Equity and Justice Working Group Bangladesh*

In the last 30 minutes of this presentation,

More than 14,100 worldwide were affected by natural disasters

—EM-DAT Disasters Database Query

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Photo: Paul Willows/NASA

“Thank you!”