Climate Change
a Question of Human Rights

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International Environment Forum (IEF)
http://iefworld.org
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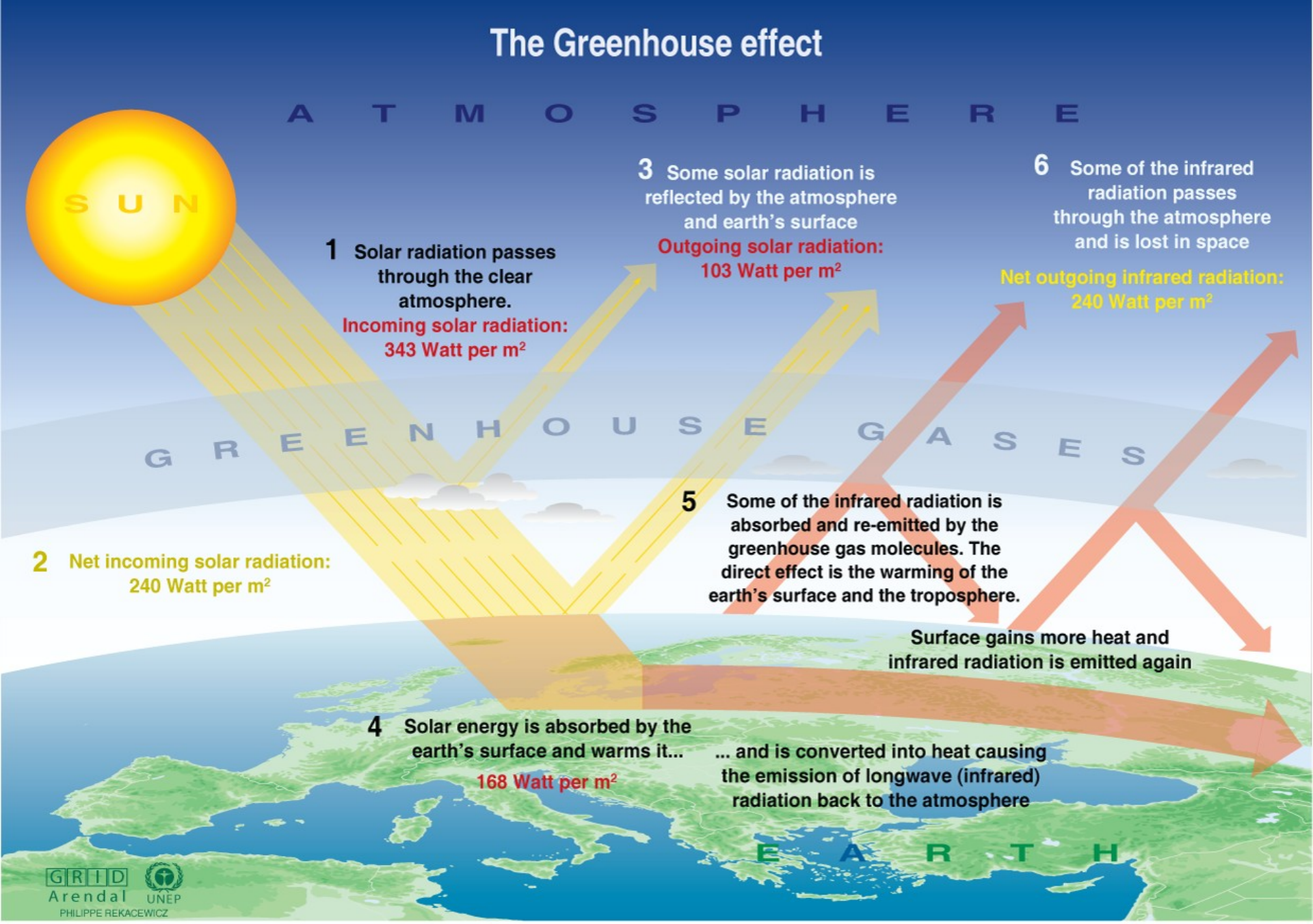
In a Globalized World, Humanity is One

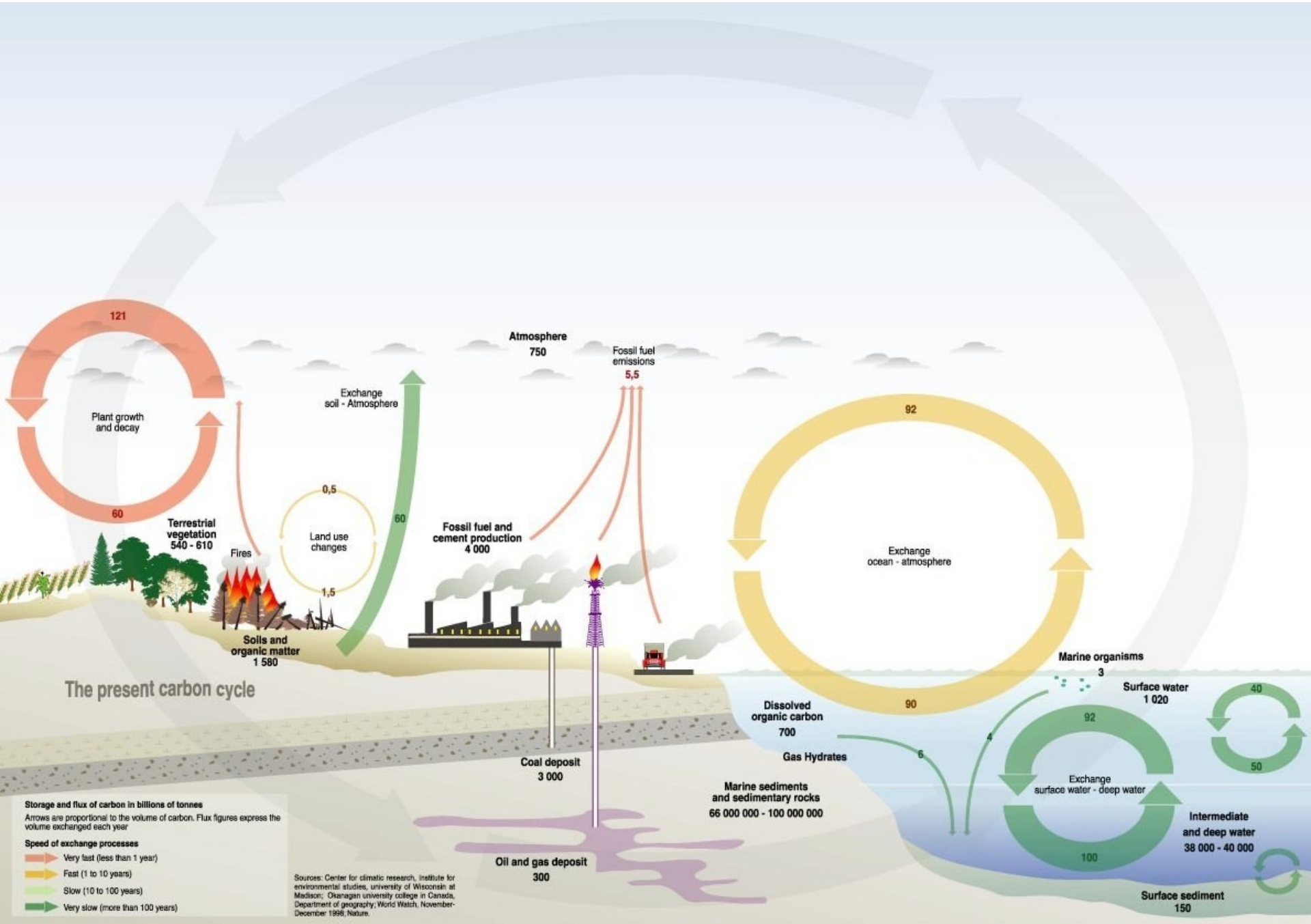
- Climate change cannot be separated from the challenges of economic globalization, energy and resource depletion, poverty reduction, social imbalances and security
- Each problem interacts with the others in complex ways, impacting human society
- Climate change is aggravating fundamental ethical issues of human rights

The Greenhouse effect



Sources: Okanagan university college in Canada, Department of geography, University of Oxford, school of geography; United States Environmental Protection Agency (EPA), Washington; Climate change 1995, The science of climate change, contribution of working group 1 to the second assessment report of the intergovernmental panel on climate change, UNEP and WMO, Cambridge university press, 1996.

Carbon Cycle



Atmospheric CO_2 Concentration

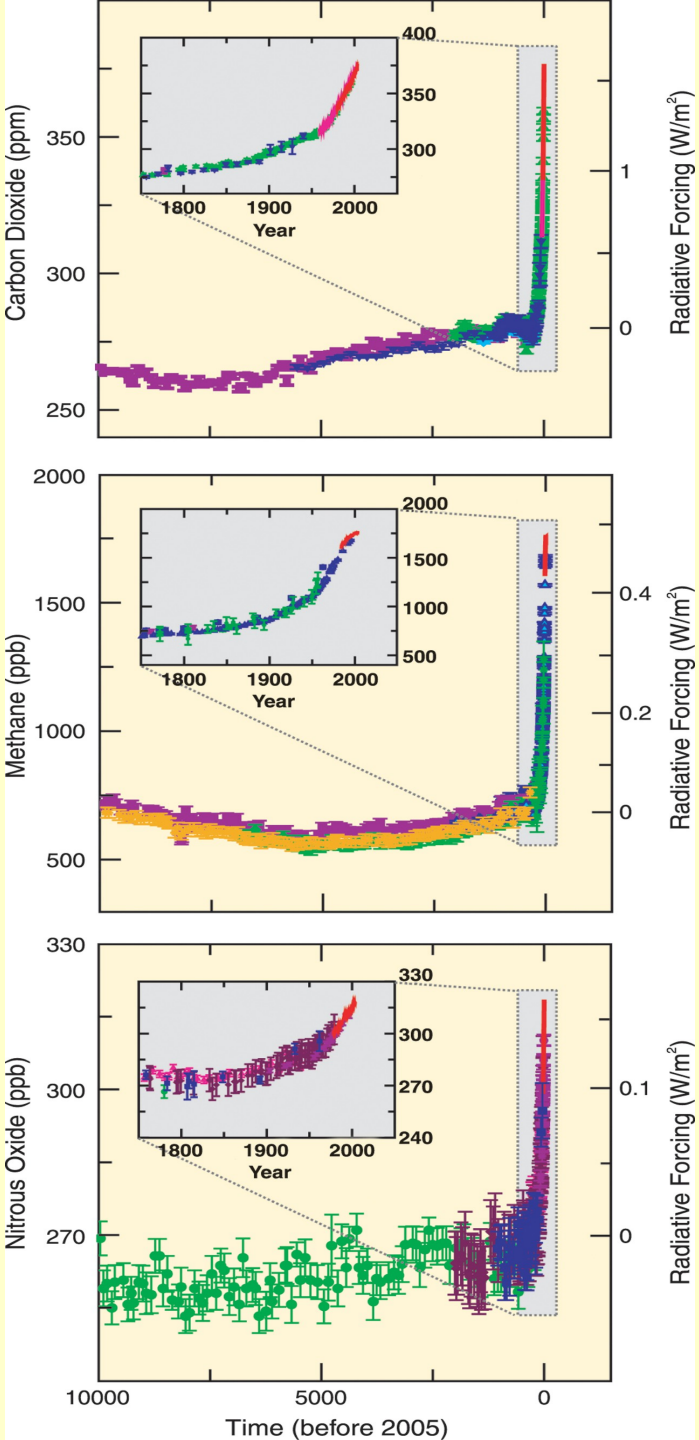
- Present CO_2 concentration reached **400** ppm in 2013, 40% above pre-industrial levels
- Highest in at least 2 million years
- Growth rate increasing, now **1.9** ppm/yr
- To prevent dangerous climate change, the concentration should stay below 350 ppm

Changes in greenhouse gas concentrations

CO_2

Methane

Nitrous oxides



IPCC 2007

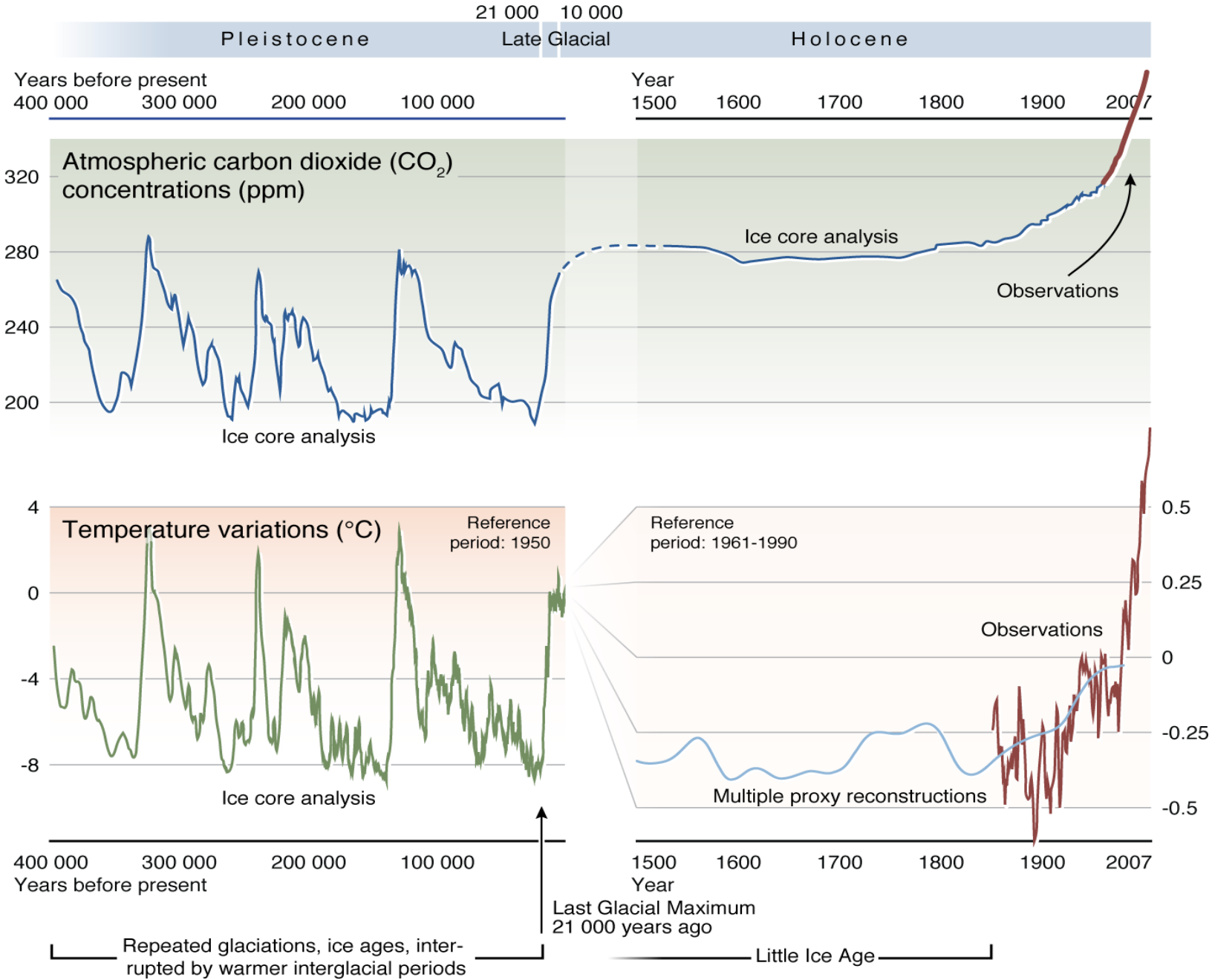
Carbon emissions

- Carbon emissions from fossil fuel combustion and cement production were 8.7 Gt in 2008, 41% higher than 1990
- Fossil fuel emissions expected to rise to 12-18 Gt/yr by 2050 (2-3 times level in 2000)
- Total past emissions 500 billion tonnes carbon
- Expect to emit another 500 billion tonnes next 30 years
- Must stay below 1 trillion tonnes to avoid < 2°C rise

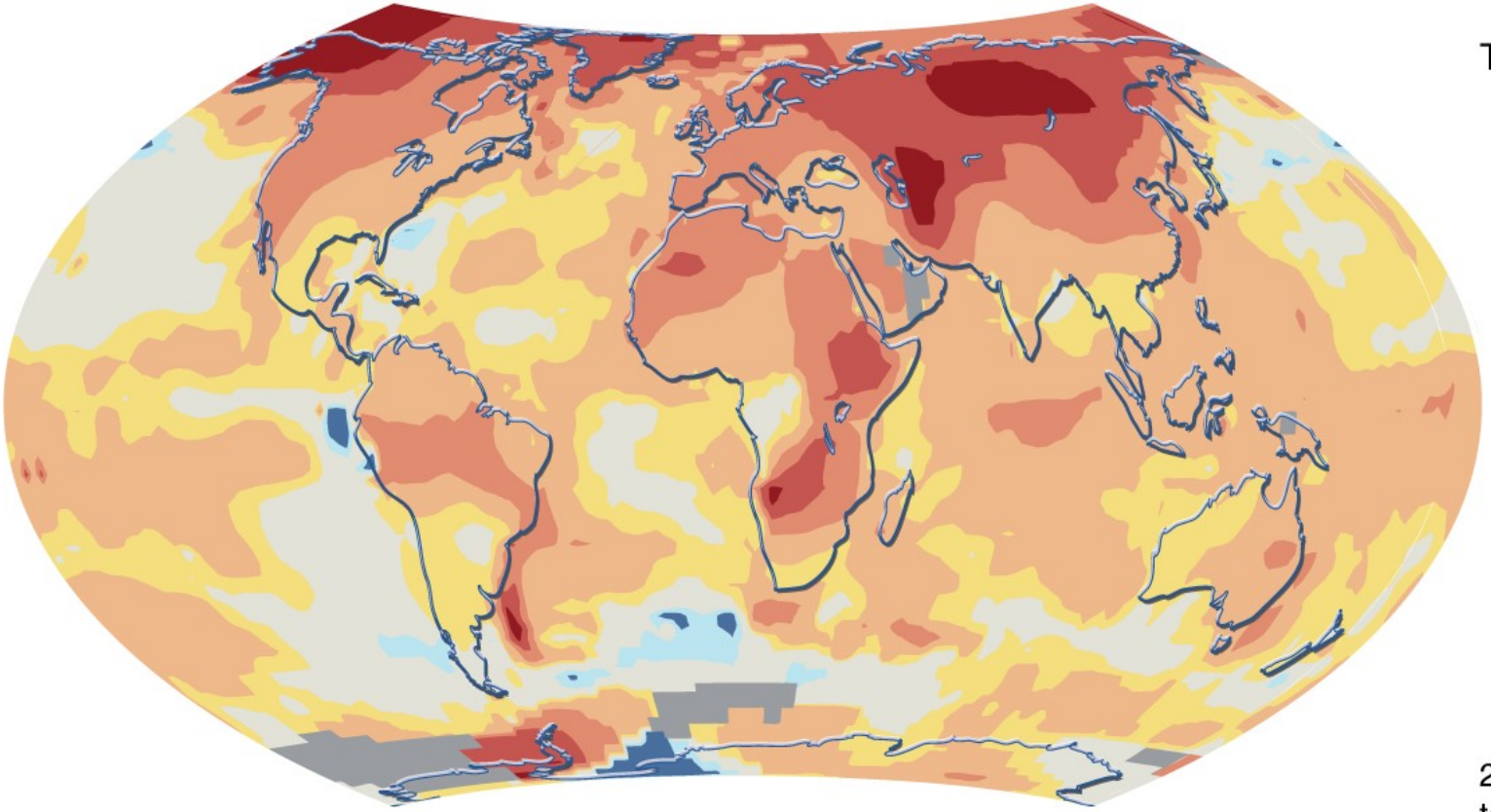
We are all responsible for climate change

- Everyone benefiting from the burning of fossil fuels is at fault
- Everyone involved in land clearing or benefiting from land use changes is a contributor
- How much we are responsible depends on our country of residence, lifestyle and consumption patterns, with the rich most responsible
- The poor will be the greatest victims of climate change, while contributing the least to the problem
- This is an ethical human rights dilemma

Carbon dioxide and temperature



Temperature increase last 50 years



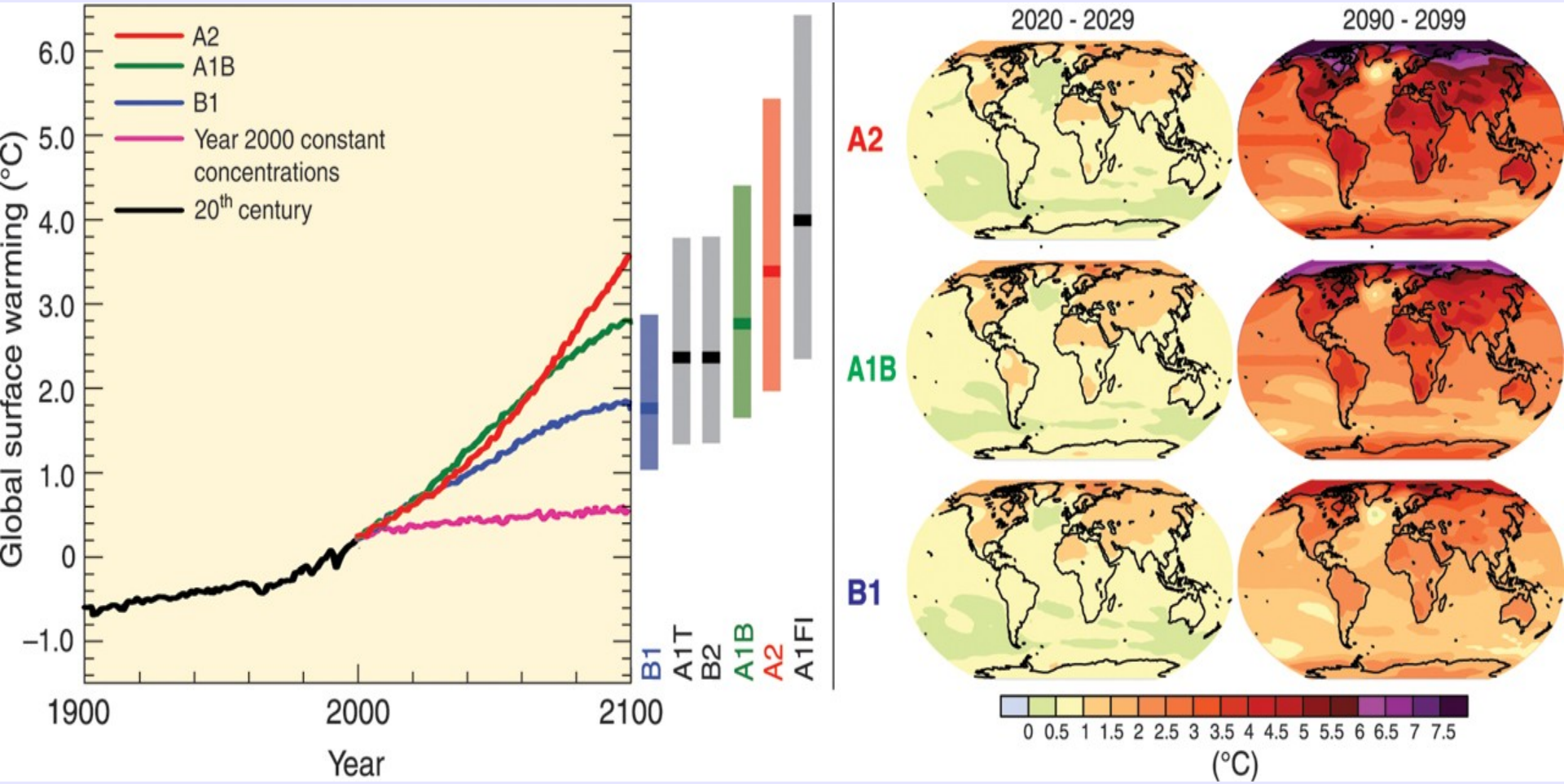
Signs of Climate Change

- Many species are changing their latitudinal and altitudinal distributions in response to rising temperatures

- The last 12 years have seen 11 of the warmest years ever recorded

What the models say

IPCC 2007



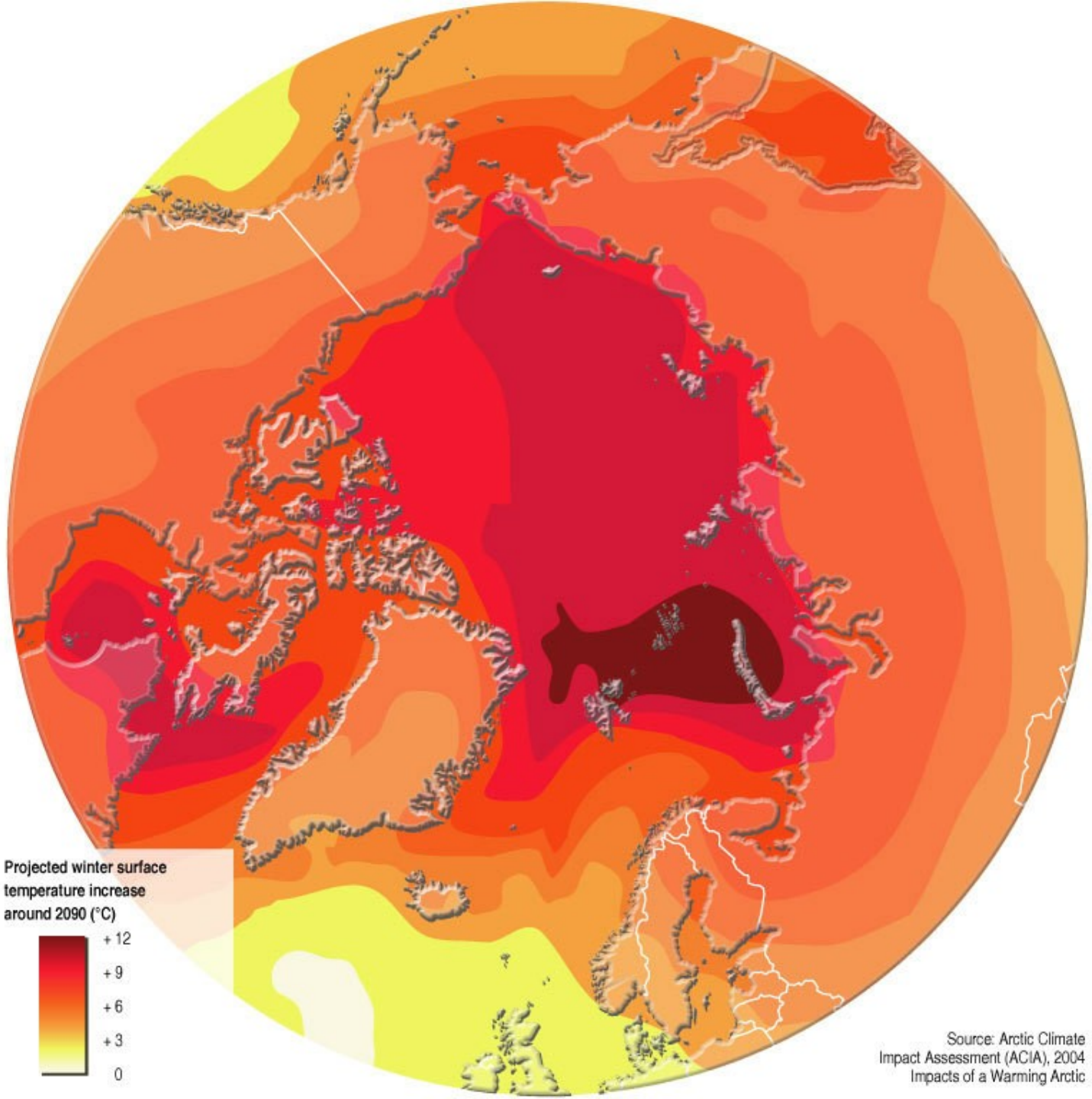
Polar areas are changing fastest

- Half of the permafrost in the Arctic is expected to melt by 2050 and 90% before 2100, releasing methane
- The permanent ice in the Arctic Ocean is melting rapidly; North-West Passage opened in 2008; worst melting ever in 2012; now mostly thin first- year ice; permanent ice in the Arctic Ocean may be gone by 2015-2030
- Greenland glaciers have doubled their rate of flow in the last few years
- Melting of the West Antarctic ice sheet is accelerating; Pine Island Glacier passed tipping point 1996, could add 26-52 cm sea level rise by 2100

Arctic Methane

- Warming temperatures in the Arctic are releasing methane from permafrost and hydrates under the sea
- Plumes of gas a kilometer in diameter have been observed in the East Siberian Sea
- The release of 50 gigatonnes of methane over a decade will bring forward the date of a global 2°C increase by 15-35 years
- The resulting impacts from flooding, sea level rise, damage to agriculture and human health will cost $60 trillion (the size of the global economy in 2012)

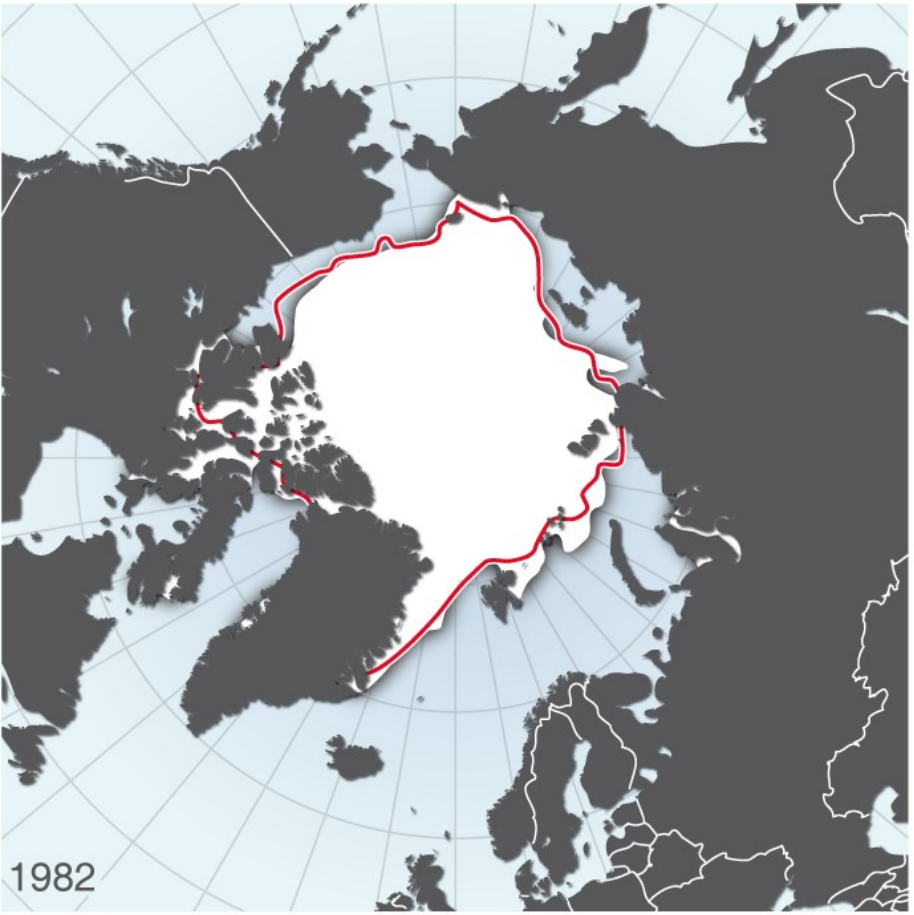
Arctic Temperature Scenario 2090



Arctic Sea Ice September 1982 and 2008

20,000 km^3

8,000 km^3



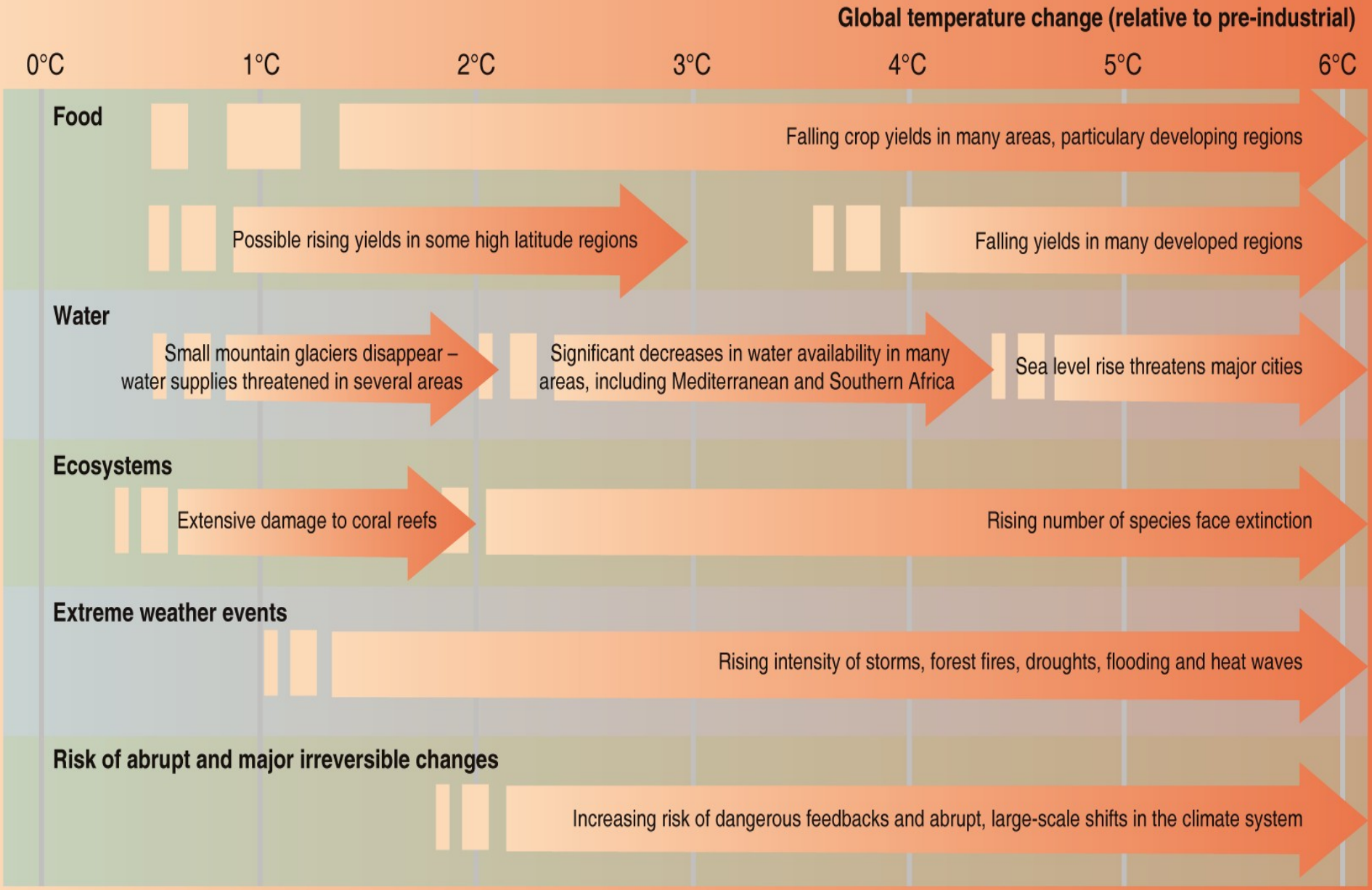
Median minimum extent of ice cover (1979-2000)

There is little time left to act

- Global temperatures have already risen 0.76°C and will probably rise a further 3°, or even up to 4.5-5° by 2100
- Oceans have stored 80% of heat added to climate system since 1961, but this could reverse
- Recent surge in CO_2 levels from 5% less uptake by sinks

We may soon be approaching a tipping point where runaway climate change would be catastrophic

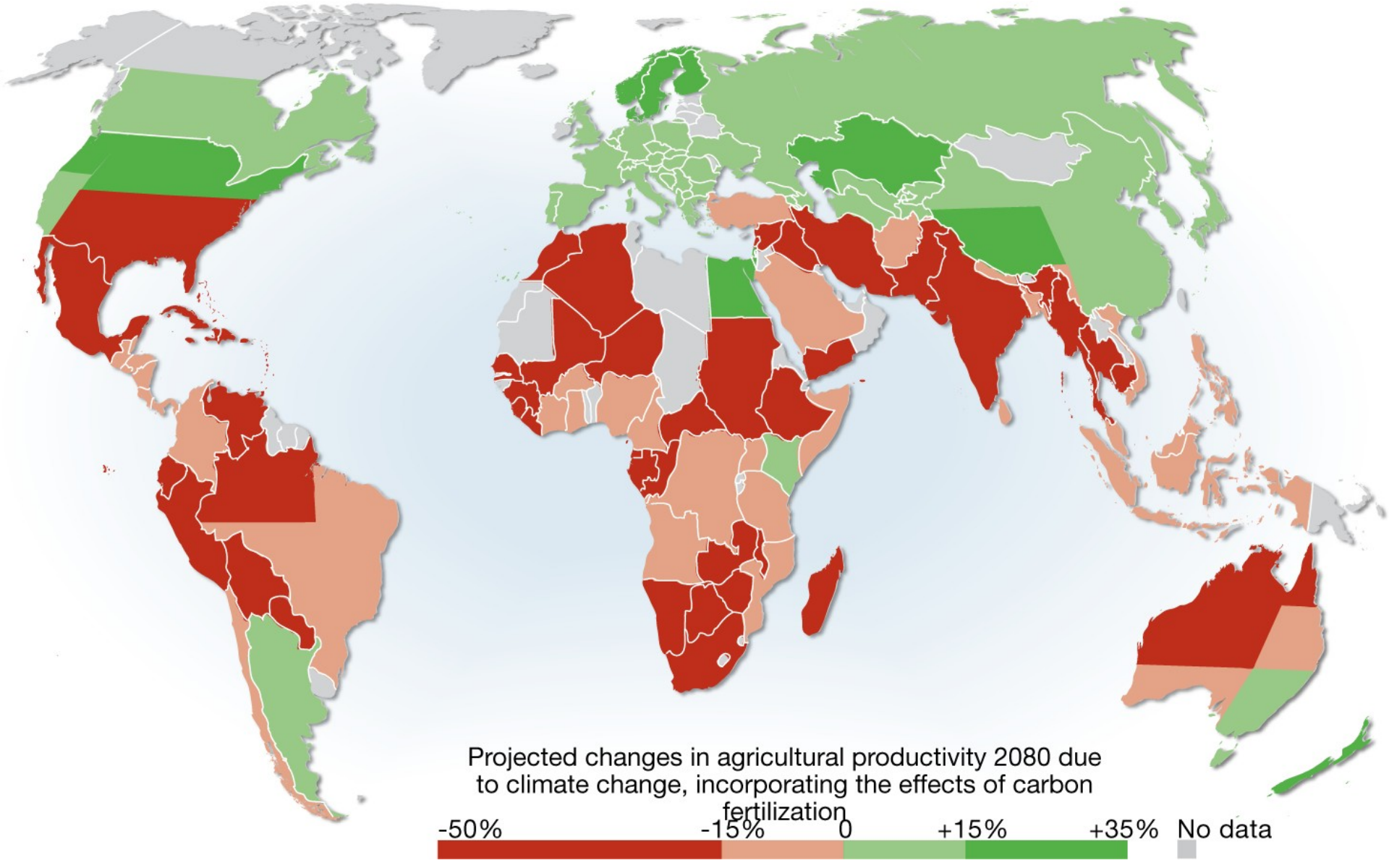
Projected impact of climate change



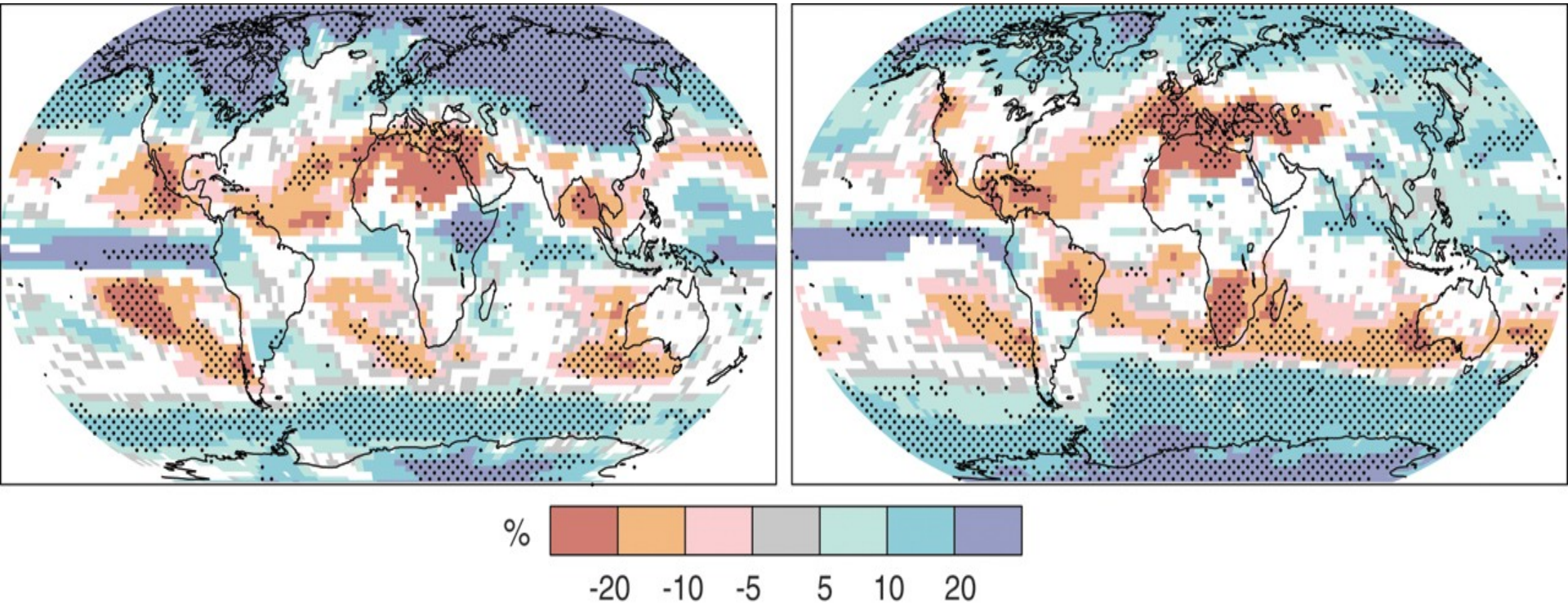
SOURCE: Stern Review

IAASTD/Ketill Berger, UNEP/GRID-Arendal

Agricultural Productivity 2080



Predicted changes in precipitation



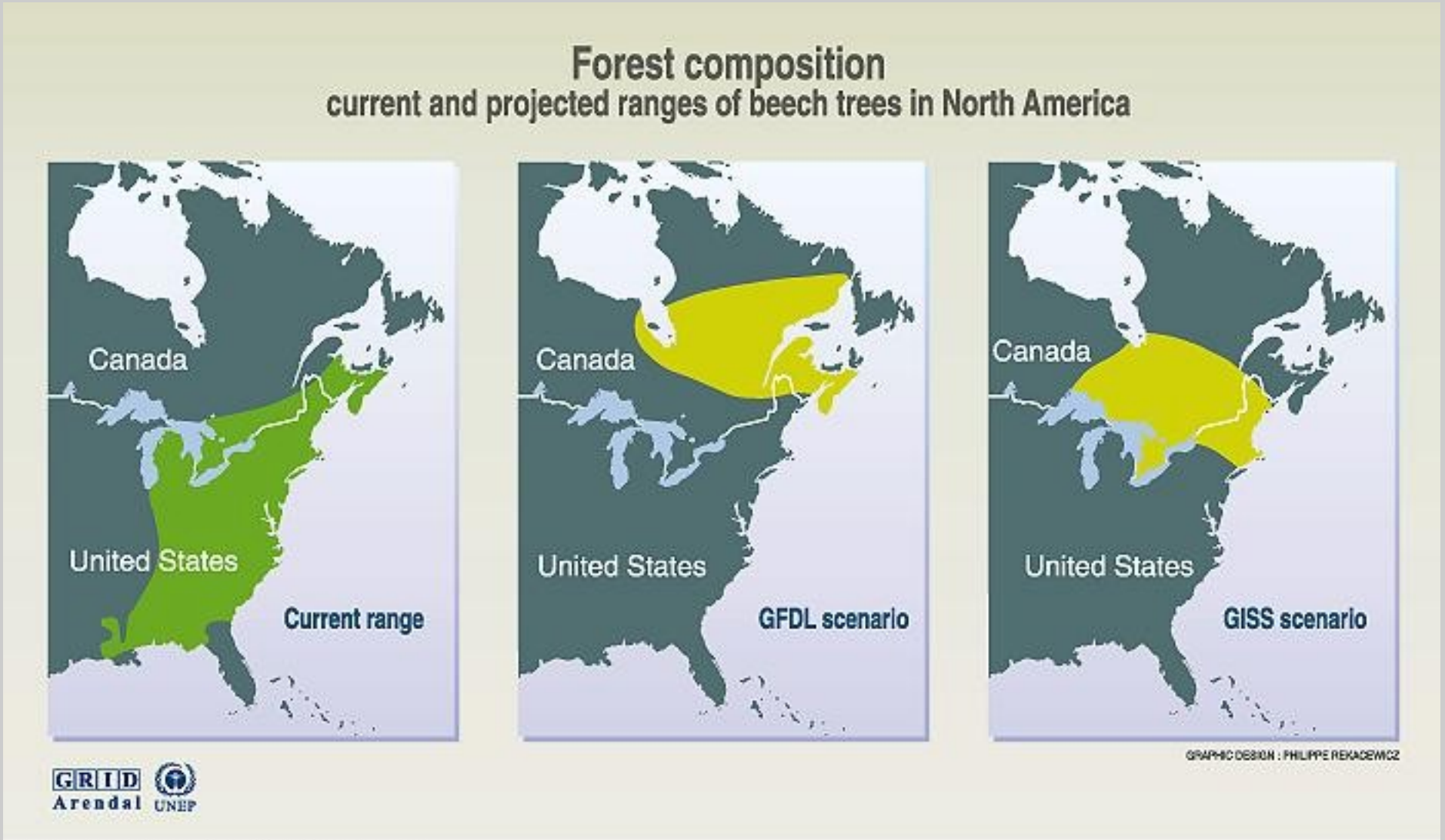
December-February

June-August

Percent change 1900-1999 to 2000-2099

IPCC 2007

Biodiversity Impacts



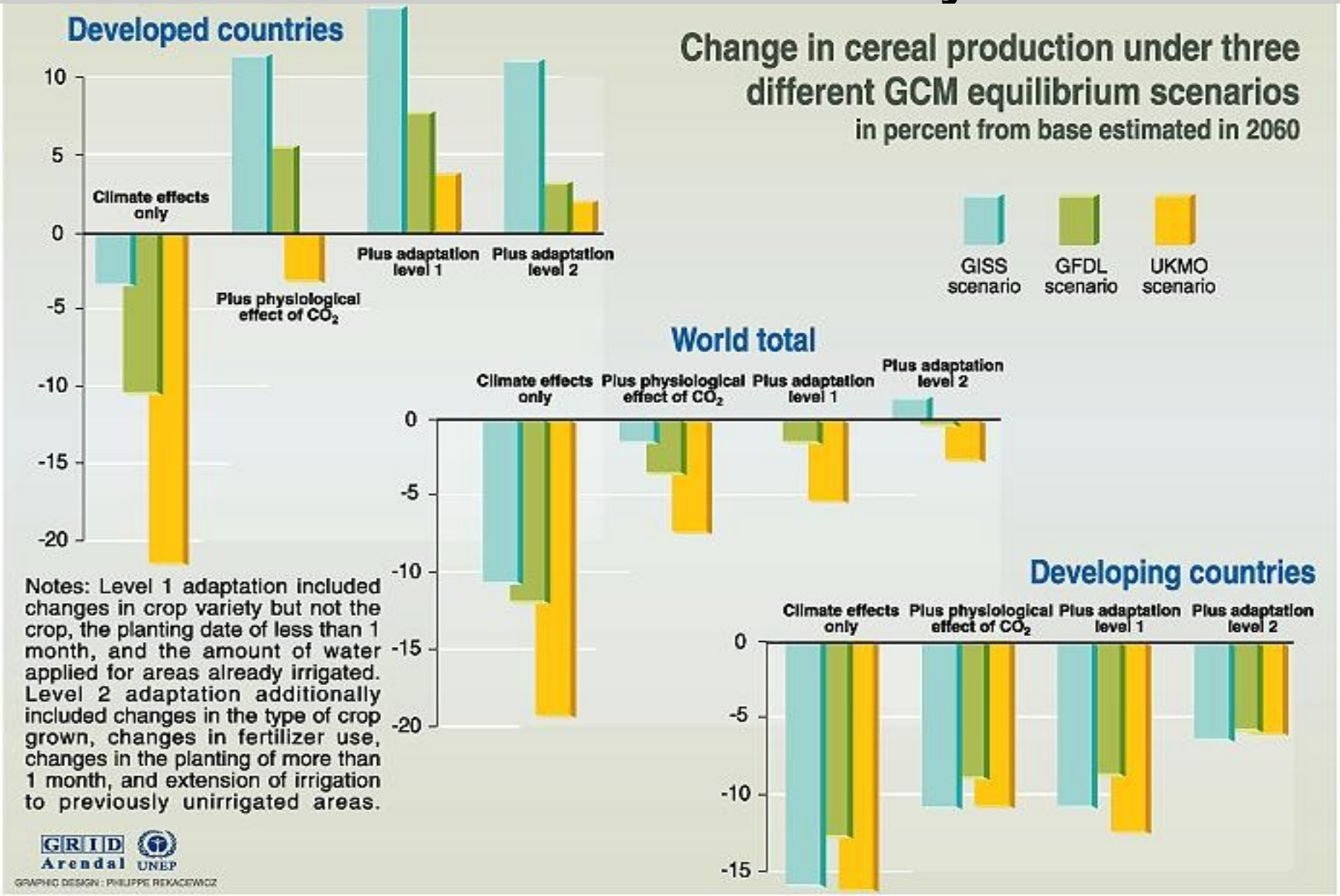
The most vulnerable areas risking catastrophic collapse this century

- Arctic Ocean and Greenland ice sheet
- Amazon rain forest
- Northern boreal forests
- Collapse of West African monsoon
- Erratic Indian summer monsoon

Human Impacts of Climate Change

- Increased damage from extreme weather events: floods, droughts, cyclones
- Less winter snowfall, melting glaciers, water shortages
- Changing conditions for agriculture and forestry, shifting fish stocks
- Sea level rise, flooding low-lying areas and islands
- Millions of environmental refugees (500m-1b)
- Greatest impact on the poor

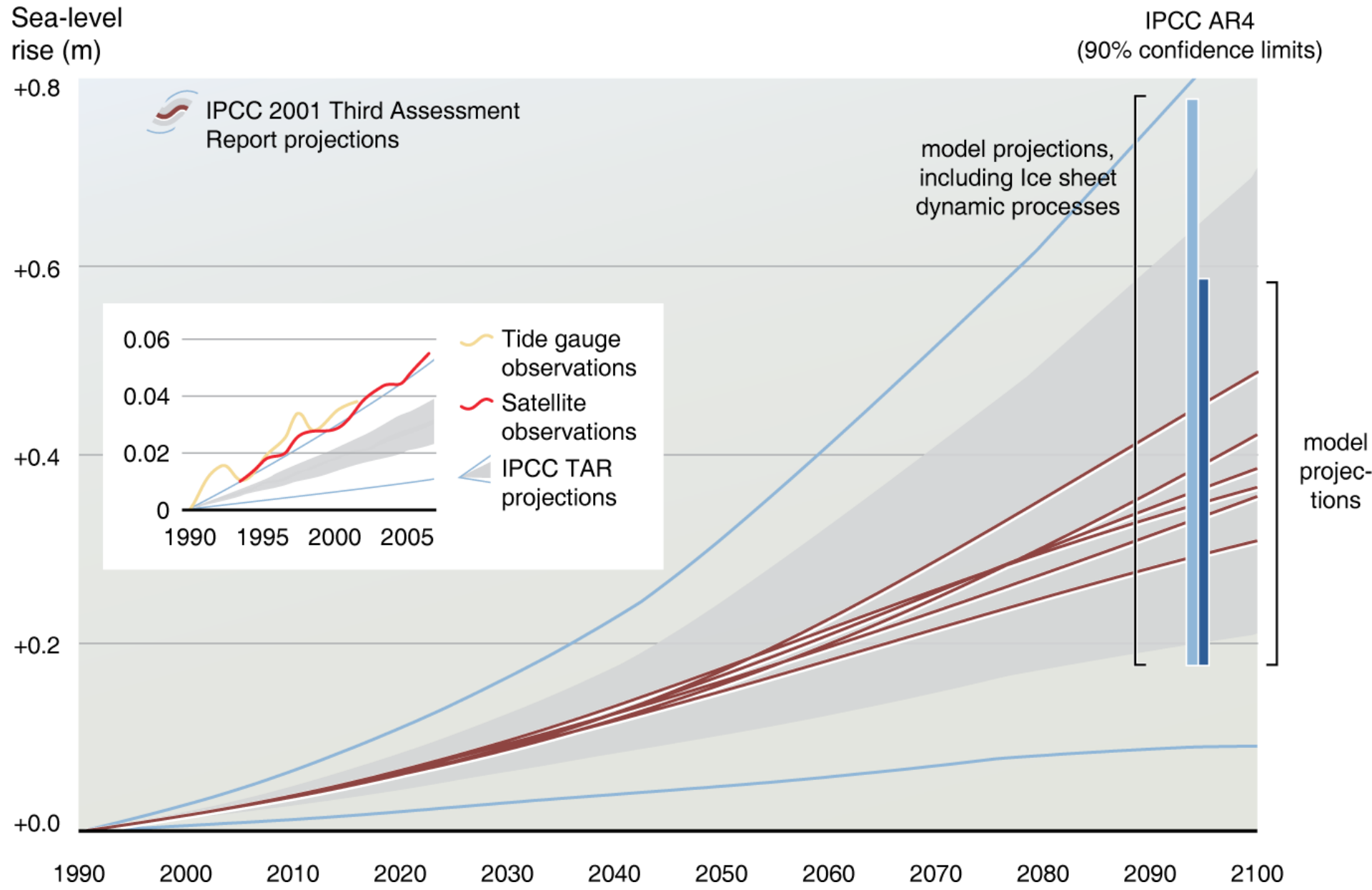
Food Insecurity



Source: Climate change 1995, Impacts, adaptations and mitigation of climate change: scientific-technical analyses, contribution of working group 2 to the second assessment report of the intergovernmental panel on climate change, UNEP and WMO, Cambridge press university, 1996.

Projected sea level rise to 2100

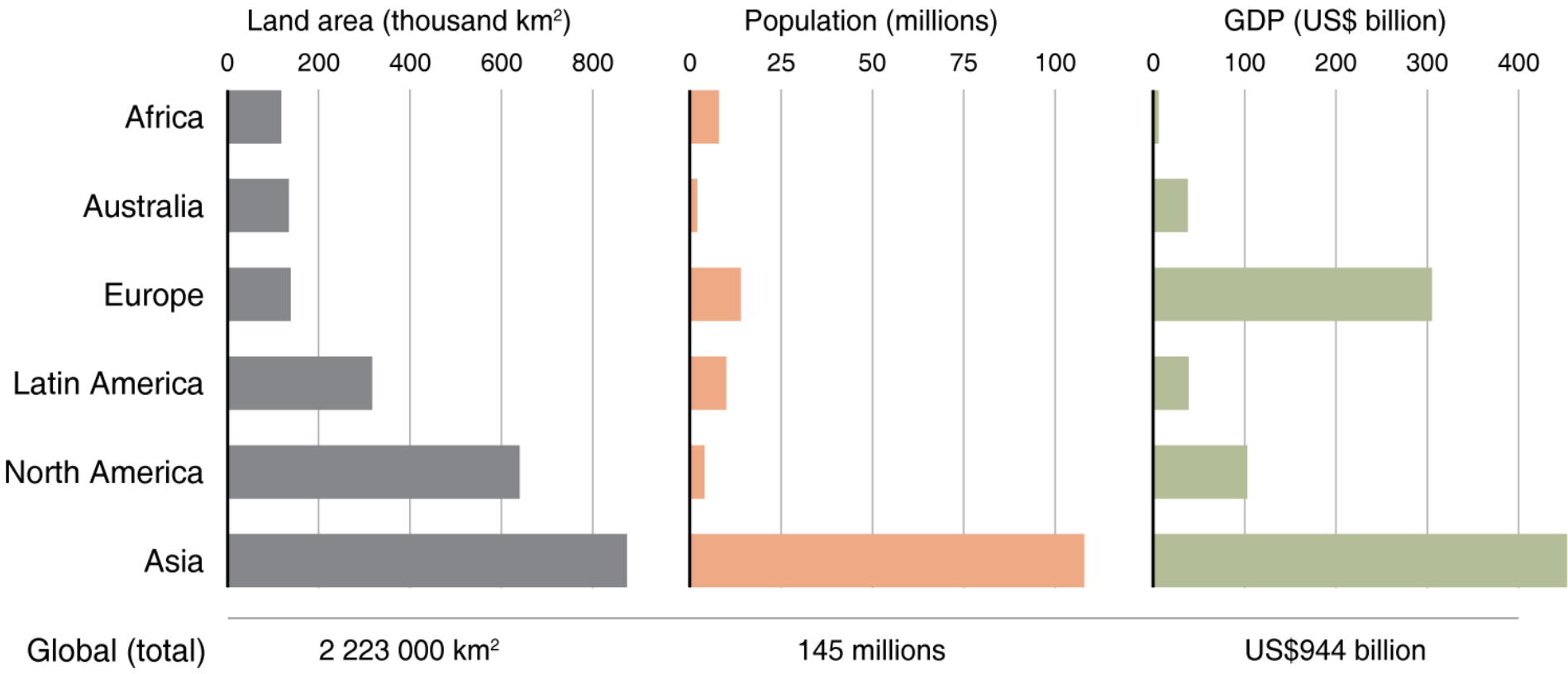
(IPCC 2007)



Accelerating sea level rise

- Present estimate 80cm to 2m by 2100 and continuing for several meters
- This would displace 130 million people living within 1 m of mean sea level
- In Europe, 13 million people displaced and $600b in lost property

Effects of 1m Sea Level Rise



If you lived on a coral island
What would you do if the sea level rose?

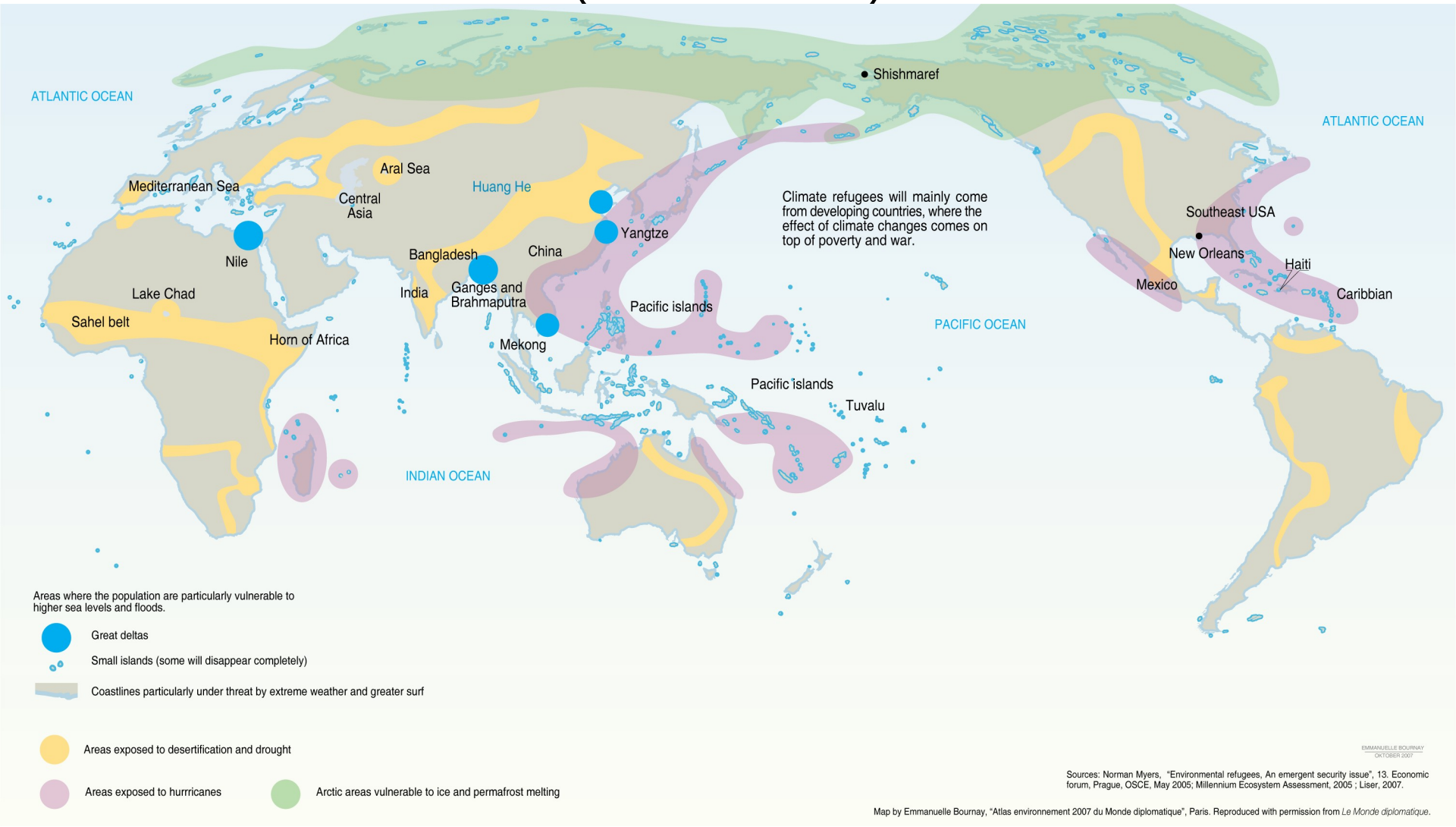
Carrie Bow Cay, Belize, Research Station of the Smithsonian Institution

Tuvalu is already being flooded

(BBC News)

Predicted Climate Refugees 2100

(IAASTD 2008)



Sources: Norman Myers, "Environmental refugees, An emergent security issue", 13. Economic forum, Prague, OSCE, May 2005; Millennium Ecosystem Assessment, 2005 ; Liser, 2007.

Threat to Security

- If climate change goes unchecked, its effects will be catastrophic “on the level of nuclear war”.

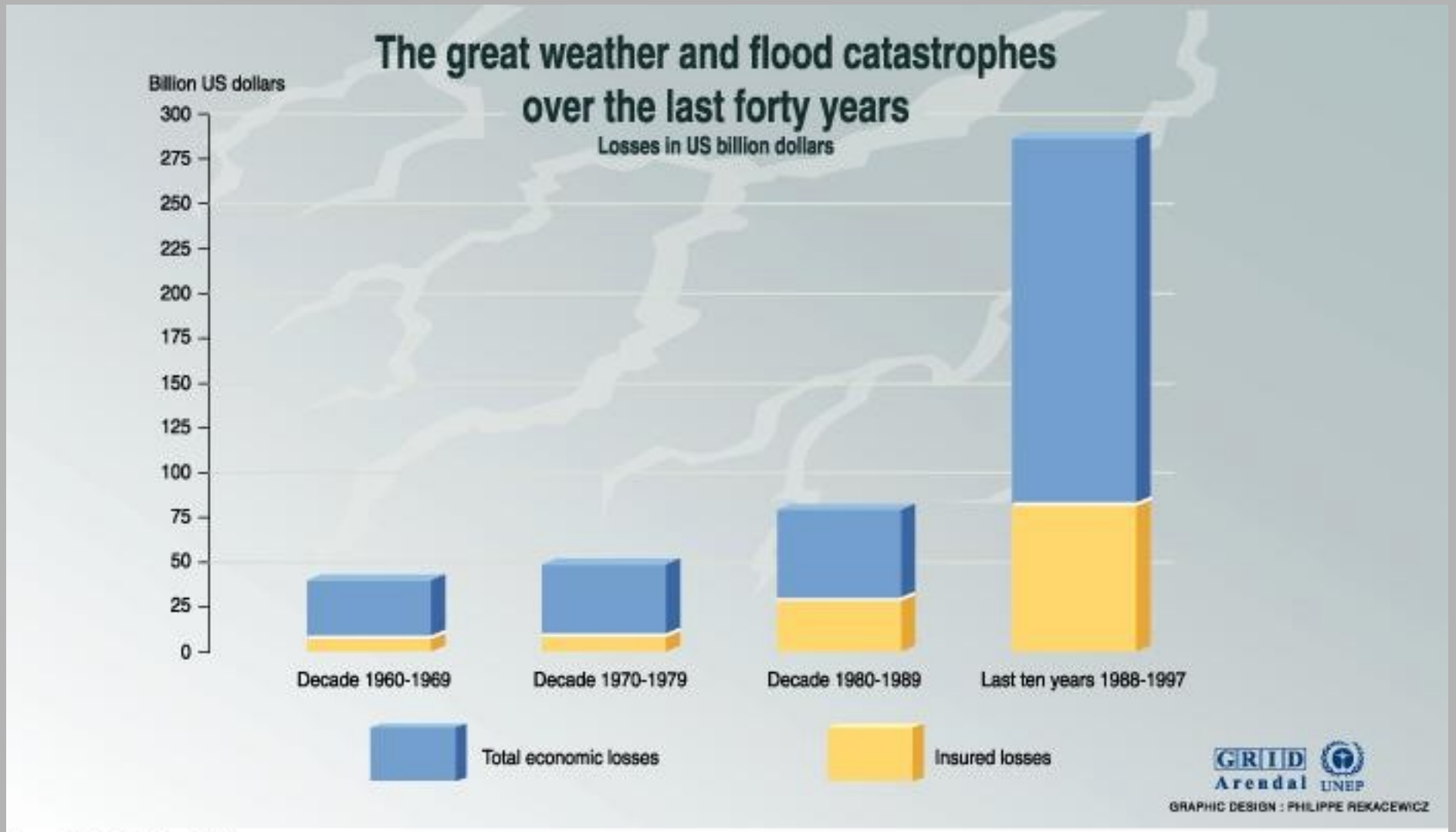
- falls in available resources and economic vitality
- increased stress on their armed forces
- greater instability in regions of strategic import
- increases in ethnic rivalries
- a widening gap between rich and poor.

International Institute for Strategic Studies, *Strategic Survey 2007* (September 2007)

A 'perfect storm' by 2030

- UK Chief Scientist (19 March 2009): the world faces a 'perfect storm' of problems in 2030 as food, energy and water shortages interact with climate change to produce public unrest, cross-border conflicts and mass migrations

Economic impact of natural disasters linked to global warming



Source: Munich Re Group, 1999.

High cost of natural disasters

- A decade ago, the reinsurance industry estimated that disasters related to climate change could cost $130 billion annually within 10 years
- Economic damages from weather-related disasters hit $204 billion in 2005, reflecting the high number of disasters affecting built-up areas.
- Natural and human-caused disasters cost $226 billion in 2010 and $350 billion in 2011, according to Swiss Re, even before hurricane Sandy.

Effect on the economy

- The Stern Report estimated the annual cost of uncontrolled climate change at more than $660 billion (5 to 20% of global GDP, as compared to 1% for control measures for greenhouse gases).
- Climate change represents the greatest market failure in human history

The double economic challenge

"On current trends, ...humanity will need twice as much energy as it uses today within 35 years.... Produce too little energy, say the economists, and there will be price hikes and a financial crash unlike any the world has ever known, with possible resource wars, depression and famine. Produce the wrong sort of energy, say the climate scientists, and we will have more droughts, floods, rising seas and worldwide economic disaster with runaway global warming.

John Vidal in *The Guardian Weekly*, 9-15 February 2007, Energy supplement, p. 3

We shall probably do both at the same time

Climate Change requires international collaboration

- We all cause the problem, and will be the victims
- Planetary problem, common but differentiated responsibility
- Major ethical issue: rich can afford to adapt, refuse to mitigate; the poor suffer the consequences
- The rich are violating the human rights of the poor

Governments have failed to control greenhouse gases

- UN Framework Convention on Climate Change (Rio, 1992) call for controls
- Kyoto Protocol on reduction of greenhouse gases – return emissions to 1990 levels by 2012

- China and India have doubled CO_2 production since 1990, US +20%, Australia +40%

Climate Change Conference

Copenhagen, December 2009

Failure in Copenhagen

- Kyoto Protocol was intended to demonstrate that the countries that caused the problem would respect their commitments to take action first (not solve climate change)
- They proved they were not trustworthy
- Some countries intentionally blocked progress
- In the end, the most powerful made a deal among themselves, but failed to agree on binding reductions in CO_2 emissions
- Failure of intergovernmental machinery; failure to consider common interest
- A system founded on national sovereignty cannot address urgent global problems effectively

Addiction to fossil energy

- Industrial economy depends on cheap energy
- Transportation, communications, trade, agriculture, urbanization, consumer lifestyle all depend on abundant energy
- Energy demand is rising rapidly and the fossil fuel supply is shrinking

- A fossil-fuel-based civilization is unsustainable

Fossil fuels and climate change

- The accepted limit for global warming without significant damage to the planet is 2°C, and this is probably too high
- The estimated remaining capacity of the atmosphere to absorb carbon without going past this limit is 565 gigatons of CO_2, which may be reached in 16 years
- Proven oil, coal and gas reserves total 2,795 gigatons (not counting unconventional sources)
- To prevent catastrophic climate change, 80% of proven reserves need to be taken off asset accounts and left in the ground

The energy transition is possible

- Wind, tidal and wave turbines; photovoltaic panels; hydroelectricity; geothermal energy can be scaled up today to meet 100% of energy needs
- Conversion to renewables will reduce demand by 32%
- Battery-electric and hydrogen fuel cell vehicles
- Technologies combined and coordinated over a global grid
- Fossil fuels can be phased out in 20-40 years
- No nuclear, carbon capture or biofuels

Jacobson and DeLucchi 2009

Ways forward

Harness all available sources of energy on the surface of the planet (UN estimated investment required $20 trillion over 2 decades)

Reduce environmental impact to sustainable limits

Accelerate the transition to reduce the shock

Create global governance mechanisms to manage this global challenge

Share the cost, effort and benefits globally with equity and justice

Moral and ethical challenge

Mitigation of climate change... asks profound moral and ethical questions of our generation. In the face of clear evidence that inaction will hurt millions of people and consign them to lives of poverty and vulnerability, can we justify inaction? No civilized community adhering to even the most rudimentary ethical standards would answer that question in the affirmative, especially one that lacked neither the technology nor the financial resources to act decisively.

UNDP Human Development Report 2007/2008, p. 68

Unity is an essential prerequisite

The effort can begin only when the concept of the oneness of humanity has been wholeheartedly embraced by those in whose hands the responsibility for decision making rests, and when the related principles are propagated through both educational systems and the media of mass communication.

(*The Prosperity of Humankind*, Bahá'í International Community, Office of Public Information, Haifa)

Sustainability - an ethical concept

As trustees or stewards of the planet's resources and biodiversity, we must:

- ensure sustainability and equity of resource use into distant future
- consider the environmental consequences of development activities
- temper our actions with moderation and humility
- value nature in more than economic terms
- understand the natural world and its role in humanity's collective development both material and spiritual

(based on Bahá'í International Community, *Valuing Spirituality in Development.* 1998)

Sustainability - fundamental responsibility

Sustainable environmental management must come to be seen not as a discretionary commitment mankind can weigh against other competing interests, but rather as a fundamental responsibility that must be shouldered, a pre-requisite for spiritual development as well as the individual's physical survival.

(based on Bahá'í International Community, *Valuing Spirituality in Development.* 1998)

MITIGATION

Removing the causes of climate change is called mitigation, which basically involves reducing the release of greenhouse gases such as carbon dioxide from the burning of fossil fuels and the destruction of natural vegetation, methane from livestock, natural gas and decaying vegetation, and nitrogen oxides from fertilizers and fuel combustion. These in turn result from our consumption of the goods and services of material civilization as it has developed over the past two centuries. The rich and industrialized countries have caused most of the problem.

Climate change requires moderation in material civilization

The civilization, so often vaunted by the learned exponents of arts and sciences, will, if allowed to overleap the bounds of moderation, bring great evil upon men.... The day is approaching when its flame will devour the cities...

Bahá'u'lláh (1817-1892)

Climate change is driven by our consumer culture

- Materialism's gospel of human betterment produced today's consumer culture pursuing ephemeral goals
- For the small minority of people who can afford them, the benefits it offers are immediate, and the rationale unapologetic
- The breakdown of traditional morality has led to the triumph of animal impulse, as instinctive and blind as appetite
- Selfishness becomes a prized commercial resource; falsehood reinvents itself as public information; greed, lust, indolence, pride - even violence - acquire not merely broad acceptance but social and economic value
- Yet material comforts and acquisitions have been drained of meaning

(based on Baha'i International Community, *One Common Faith*, 2005)

SOLIDARITY

Since the body of humankind is one and indivisible, each member of the race is born into the world as a trust of the whole.

(The Prosperity of Humankind, Bahá'í International Community, Office of Public Information, Haifa, 1995)

PRINCIPLES FOR INTERNATIONAL ACTION

- Fundamental importance of trust
- Need to acknowledge priority of common interest
- Consultative mechanism in which all seek best outcome
- A just balance of conflicting interests, with compromise or compensation, respecting human rights

We need new economic models that

- further a dynamic, just and thriving social order
- are strongly altruistic and cooperative in nature
- provide meaningful employment
- help to eradicate poverty in the world

(Bahá'í International Community, *Valuing Spirituality in Development: Initial Considerations Regarding the Creation of Spiritually Based Indicators for Development.* 1998)

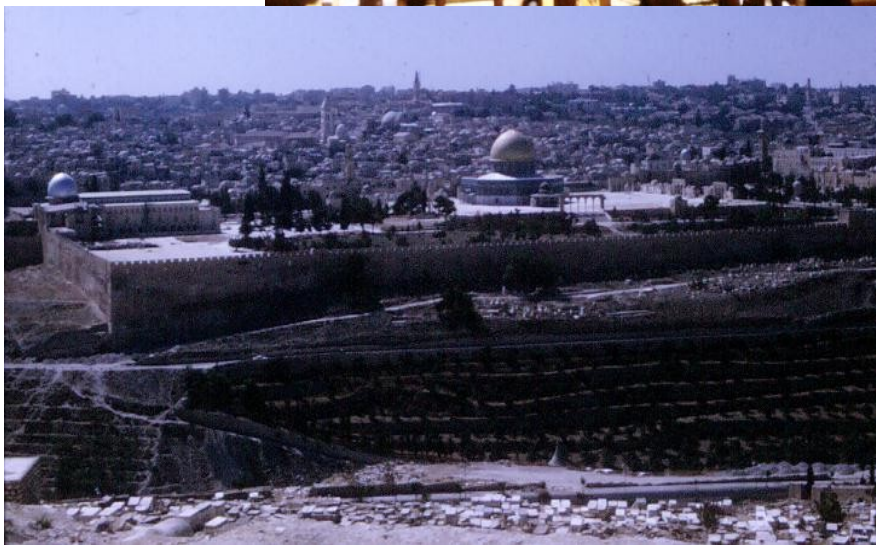
Only such a system will give the right signals for challenges like climate change and will respect everyone's human rights

Faith-based Action Plans for Climate Change

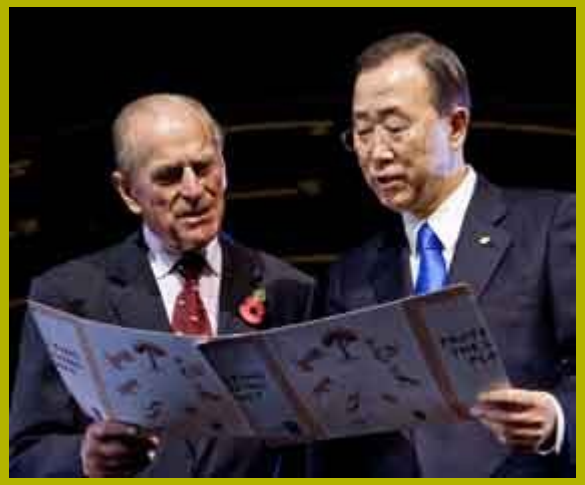
- The Alliance of Religions and Conservation (ARC) and UNDP invited the major religions to prepare seven-year action plans on climate change and the natural environment
- These were presented at an event on 2-4 November 2009 at Windsor Castle co-hosted by the UN Secretary-General and Prince Philip

see http://www.arcworld.org/ and http://www.windsor2009.org/

Bahá'í
Buddhist
Christian
Daoist
Hindu
Jewish
Moslem
Shinto
Sikh



The Windsor Celebration



Bahá'í International Community

Seven Year Plan of Action on Climate Change

http://iefworld.org/bicccap.html

BIC Action Plan on Climate Change

The crucial need facing humanity is to find a unifying vision of the nature and purpose of human life. An understanding of humanity's relationship to the natural environment is an integral part of this vision.

UN Human Rights Council

- Social Forum on Climate Change and Human Rights 2011
- Acknowledged significant impacts of climate change on human rights
- Particular impact on the poor
- Climate migrants risk discrimination
- Need to educate receiving communities


Climate change may be the common threat that forces governments to work together in their collective interest
Addressing climate change is essential to protect human rights