Special Program for Journalists

UN Preparatory Meetings on Climate Change

Vienna, Austria

August 27-29, 2007

By

Eduardo Reyes

World Bank Host Country Committee Chairman

Latin America Region (Panama)

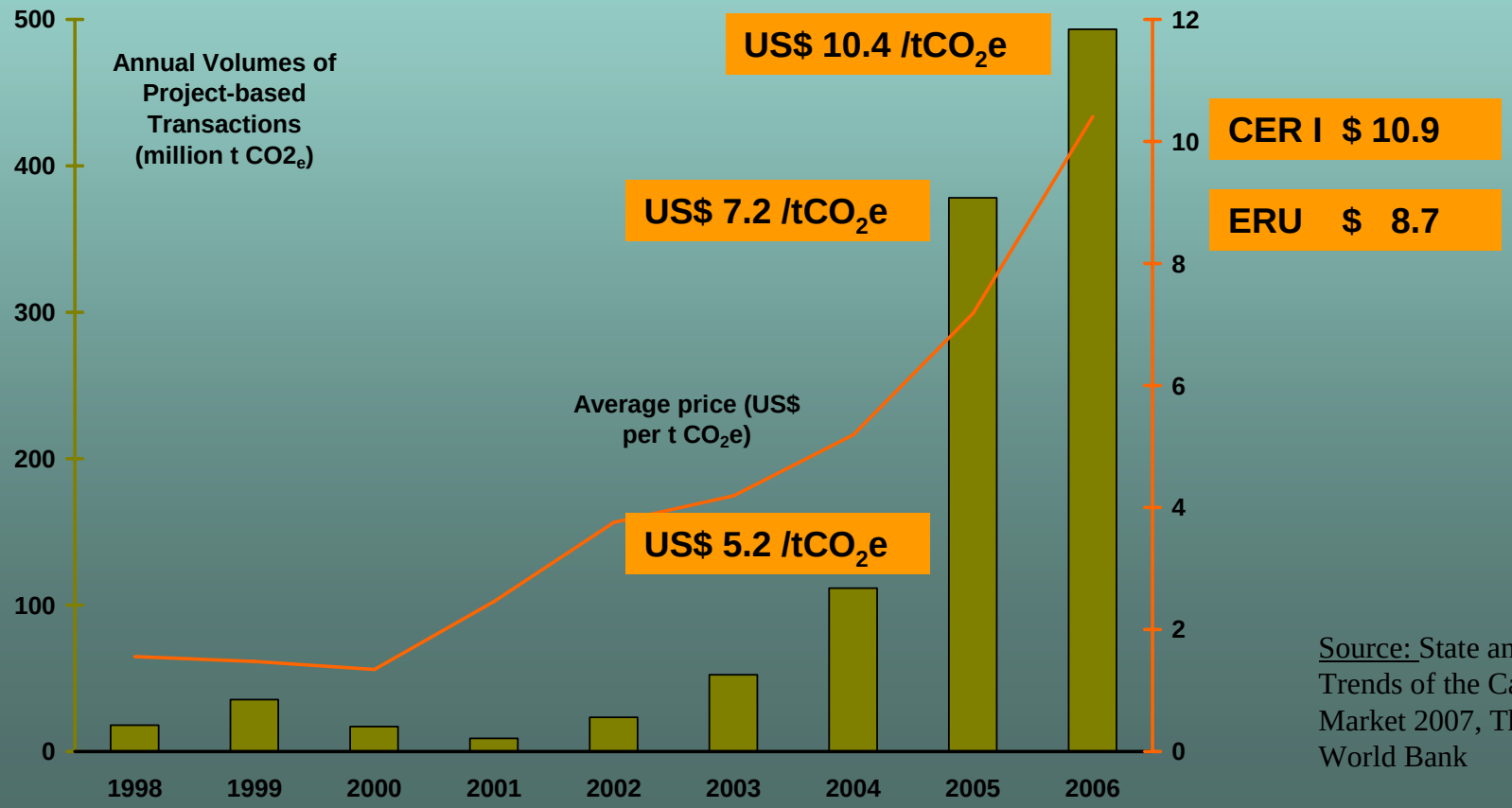
Latest Market Evolution

Carbon is mainly a financial trading market

- US$30 billion in 2006 (US$11 billion 2005), mainly from EUA trading
- Market value arises from trading: sale, re-sale for hedging, arbitrage + compliance

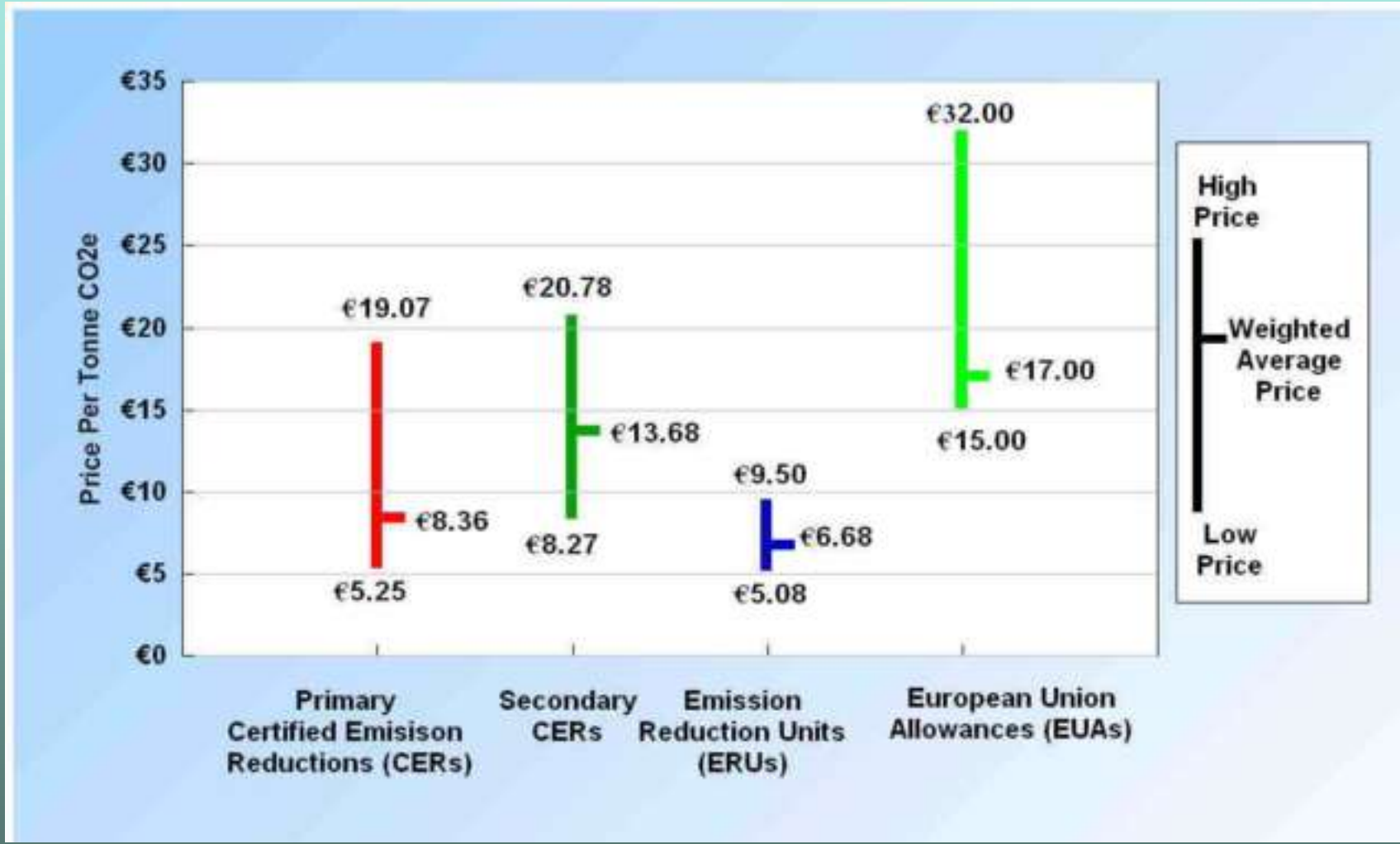
Project-based market still growing

- Higher volumes and prices in 2006: CDM and JI doubled in value
- Biggest Primary CER Sellers: China (61%) and India (12%)



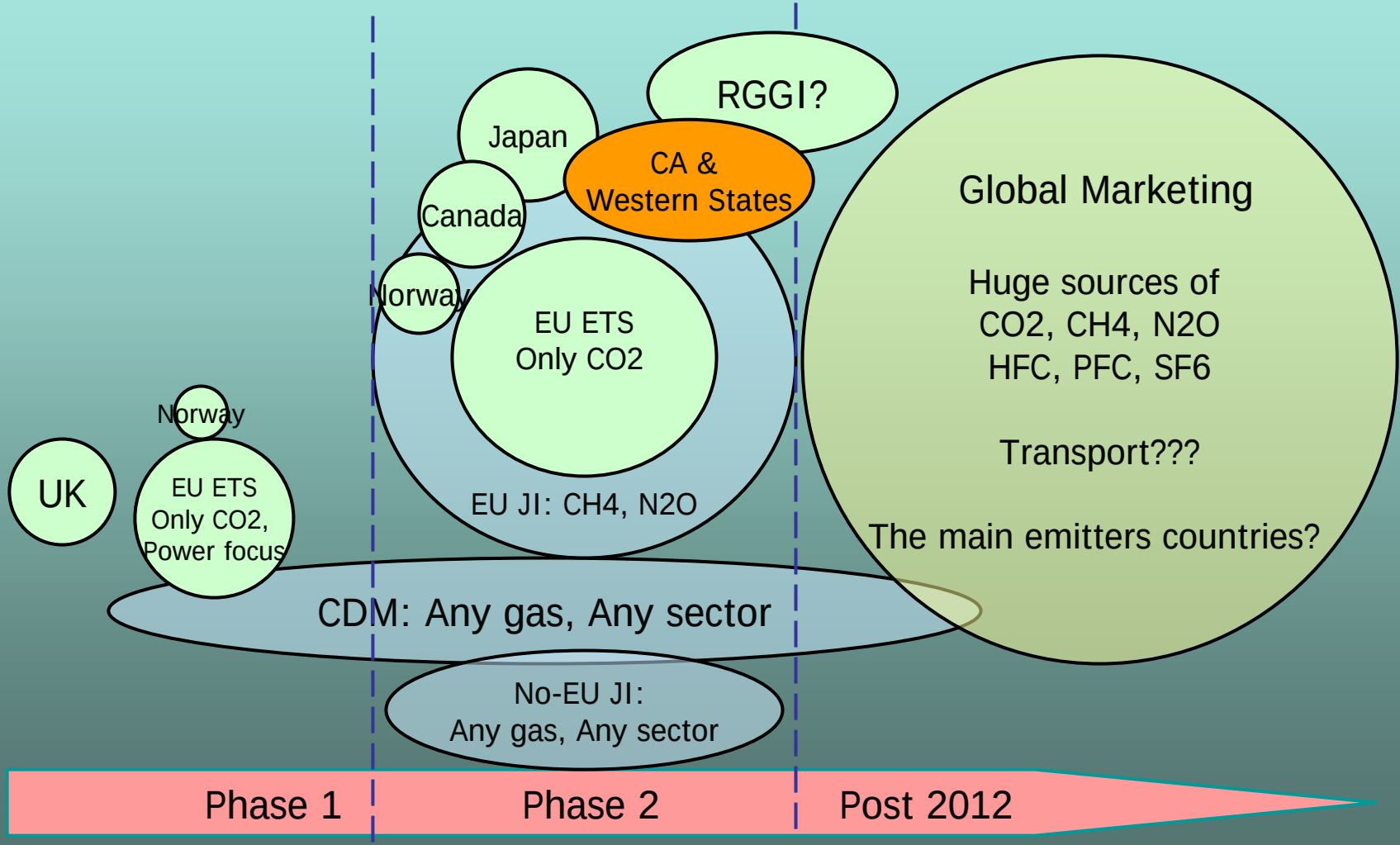
Source: State and Trends of the Carbon Market 2007, The World Bank

Market Prices (2006)

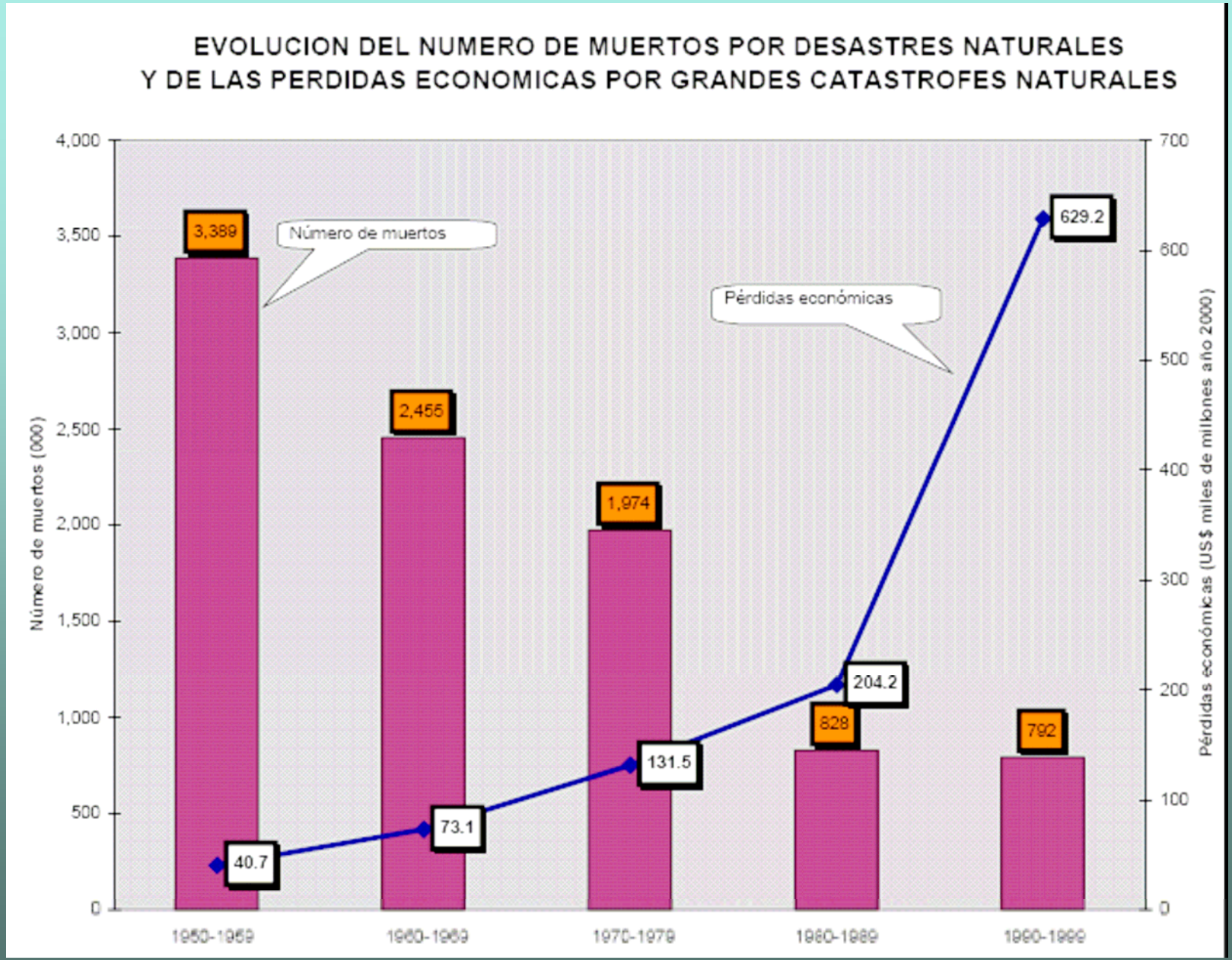


Fuente: Banco Mundial, 2007

Evolution of Carbon Market




For Every complex problem
there is always a solution that
is SIMPLE,
EASY TO UNDERSTAND
and
COMPLETELY WRONG
H.L. Mencken said (American Newspaperman)



Fuente: CPRED –Munich Re Group referido en CEPAL- Naciones Unidas , Vulnerabilidad y Medio Ambiente

Losses from the Six Main Catasthrophic Natural Events in 2005

Dates	Place	Event	Human Losses	Economic Losses-millons USD	Insurances payments-millons USD
24/Jul – 05/Ago	India	Floods	1,150	5,000	770
25-30/Ago	USA	Katrina Hurricane	1,322	126,000	60,000
20-24/Sept	USA	Rita Hurricane	10	16,000	11,000
2-5/Oct	Central America	Stan Hurricane	840	3,000	100
8/Oct	Pakistan India	Earthquake	88,000	5,200	-
19-24/Oct	Mex.-USA-Caribbean	Wilma Hurricane	42	18,000	10,500

Fuente: Munich Re Group 2006. Referido en: http://www.semarnat.gob.mx/queessemarnat/cambioclimatico/Documents/enac/sintesis/070110%20HENAC.2.VYA_compl.pdf

Policies that provide a real or implicit price of carbon can create incentives for producers and consumers to invest in low-GHG products, technologies and processes

- Carbon prices between 20-80 US$/tCO2 by 2030 and 30-155 US$/tCO2 by 2050 are consistent with stabilization at 550 ppm CO2-eq2 by 2100
- Studies that take into consideration induced technological change get lower prices: 5-65 US$/tCO2 by 2030 and 15-130 US$/tCO2 by 2050
- A real or implicit price of carbon of 20 to 50 US$/tCO2 could lead to a power generation sector with low-GHG emissions and make many end-use sector options attractive

Source: IPCC Working Group III. Fourth Assessment Report Presentation

Actual Scenario of Negotiations

- Kioto expires 2012
- USA and Australia still out
- Responsibility is measured most directly in terms of emissions, and it should surprise no one that history's greatest economic power is also the world's largest greenhouse gas emitter.
- Without the United States and Australia , the protocol encompasses only about one third of global emissions. global emissions in 2012 would still be 30 percent higher than in 1997, when Kyoto was negotiated.
- Today, 25 countries account for 85 percent of global emissions (as well as 70 percent of global population and 85 percent of global GDP)
- Politically, it is imperative that all major economies be on board.
- Japan wont take more commitments unless others big emitters be on board.
- USA wants some developing countries get some 2/3 cuts by 2030
- Curbing greenhouse gas emissions to current level alone will cost some $210 billion annually by 2030
- EU looking for 20% or more GHG reduction by 2020?
- Developing countries do not want commitments, so far.
- One pathway, to be sure is charted by Kioto, (binding emissions target with emissions trading)

What does US$ 50/ tCO2eq mean?

- Crude oil: ~US$ 25/ barrel
- Gasoline: ~12 ct/ litre (50 ct/gallon)
- Electricity:
  - from coal fired plant: ~5 ct/kWh
  - from gas fired plant: ~1.5 ct/kWh

Source: IPCC Working Group III. Fourth Assessment Report Presentation

In Spring 2000 world population estimates reached 6 billion; that is 6 thousand million. The distribution of the earth's population is shown in this map.
India, China and Japan appear large on the map because they have large populations.
Panama, Namibia and Guinea-Bissau have small populations so are barely visible on the map.
Population is very weakly related to land area. However, Sudan which is geographically the largest country in Africa, has a smaller population than Nigeria, Egypt, Ethiopia, Democratic Republic of Congo, South Africa and Tanzania.
Note: Many of the maps' subjects relate to people, so this map serves as a good reference map for comparison with many other maps.

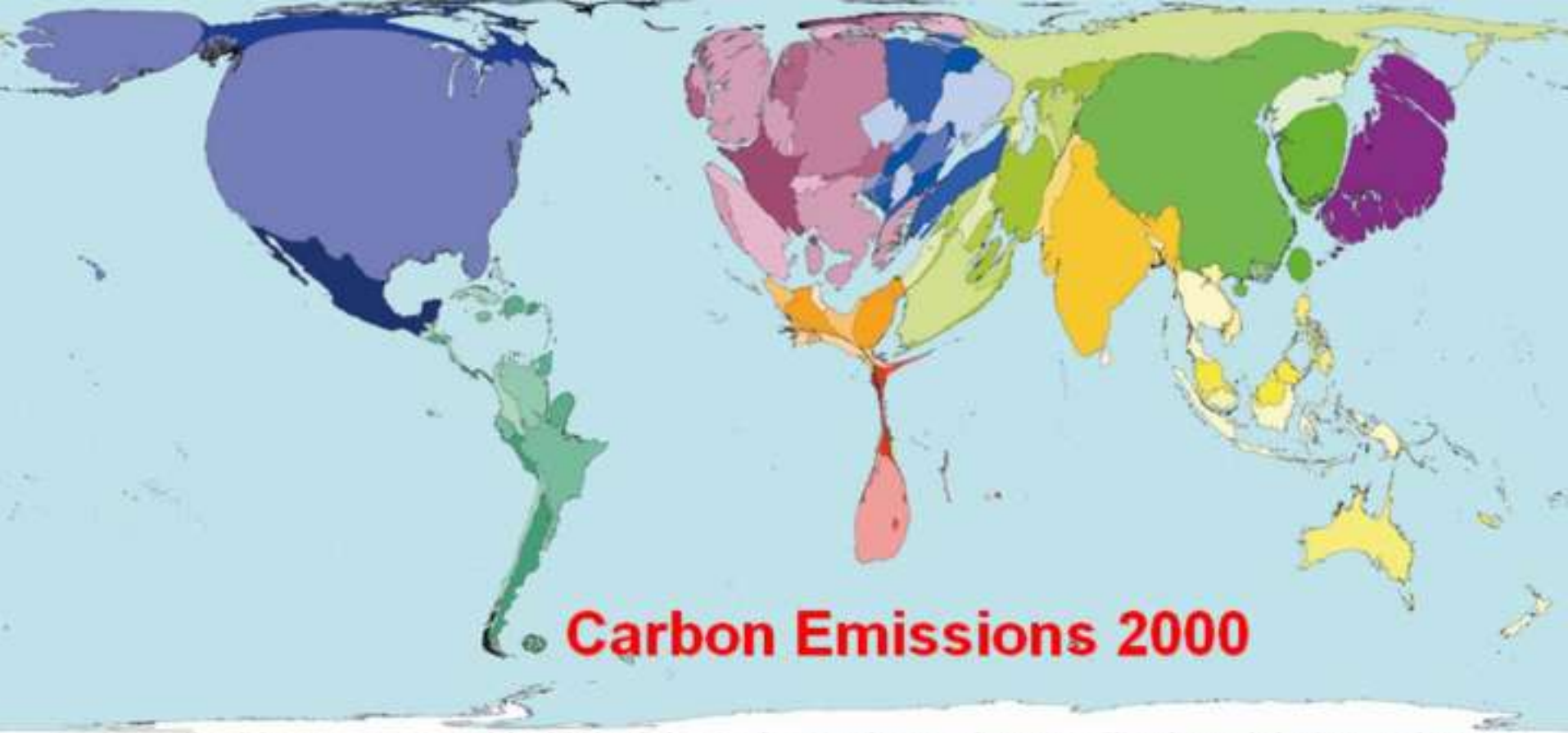
►►► The size of each territory shows the relative proportion of the world's population living there.

Each year the fuel equivalent of 11 567 000 000 000 kilograms of oil is used around the world. Fuel includes gas, coal, oil, nuclear, wood, and other materials. As one kilogram of these materials produces a different amount of energy, more useful comparisons can be drawn by comparing power. This is done by measuring power as what one kilogram of oil could produce, which is 4 kilowatt hours.

Worldwide fuel consumption averages 1853 kilograms of oil equivalent per person per year. The highest per person fuel users (in Luxembourg) use almost a hundred times more fuel per person than the lowest fuel users (in Bangladesh).

►►► Territory size is proportional to the percentage of world fuel usage that occurs there.

Source: www.worldmapper.org

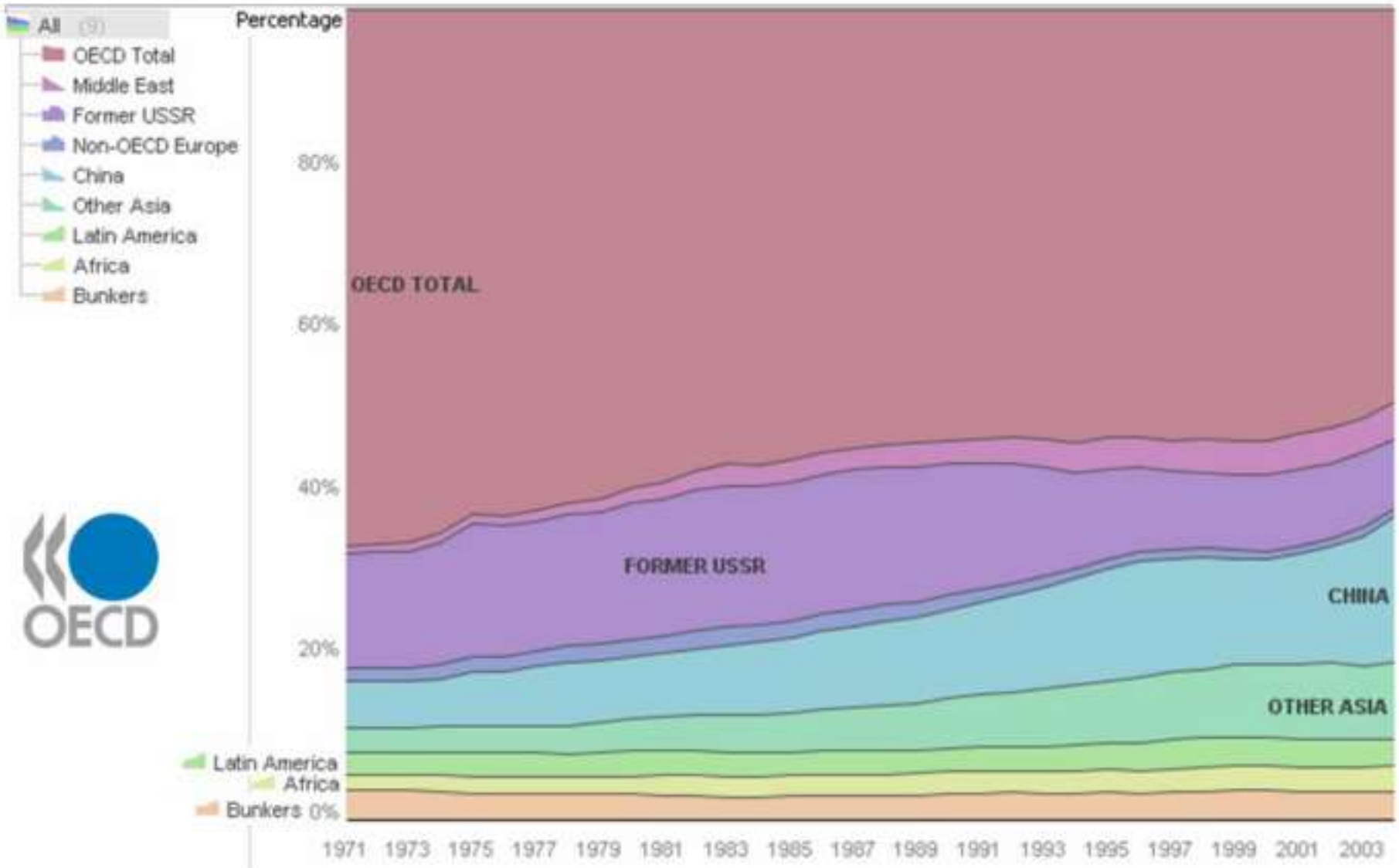


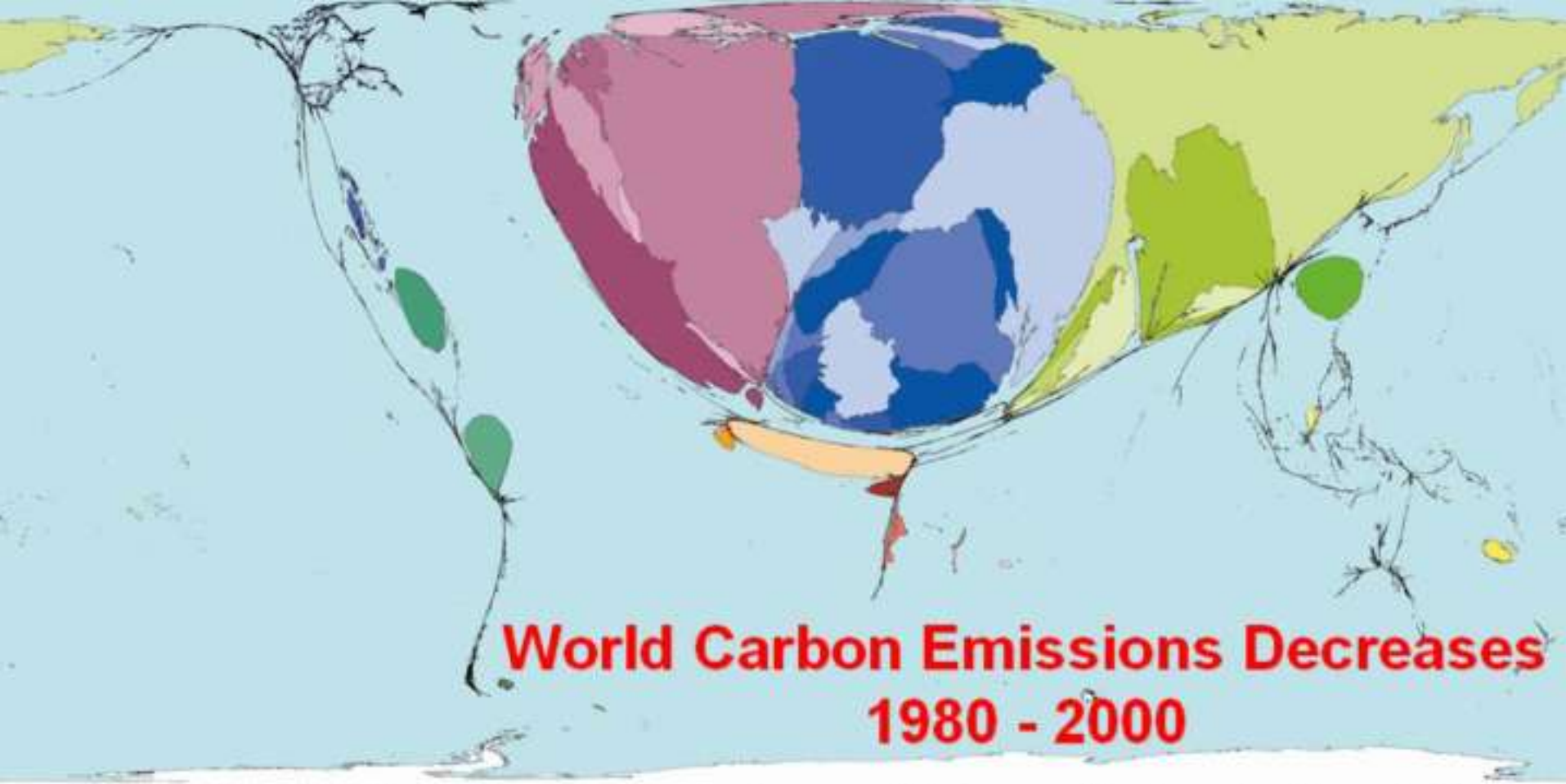
Carbon dioxide causes roughly 60% of the 'enhanced greenhouse effect' or global warming resulting from certain gases emitted by human activities.
In 2000 there were almost 23 billion tonnes of carbon dioxide emitted worldwide. Of this, 28% came from North American territories; 0.09% came from Central African territories.
Emissions of carbon dioxide vary hugely between places, due to differences in lifestyle and ways of producing energy.
Whilst people living in 66 territories emitted less than 1 tonne per person in 2000; more than 10 tonnes per person were emitted by people living in the highest polluting 21 territories that year.

►►► Territory size shows the proportion of carbon dioxide emissions in 2000 that were directly from there.

Source: www.worldmapper.org

8.2.1. Graph 1. World CO2 emissions from energy use, by region, Million tonnes



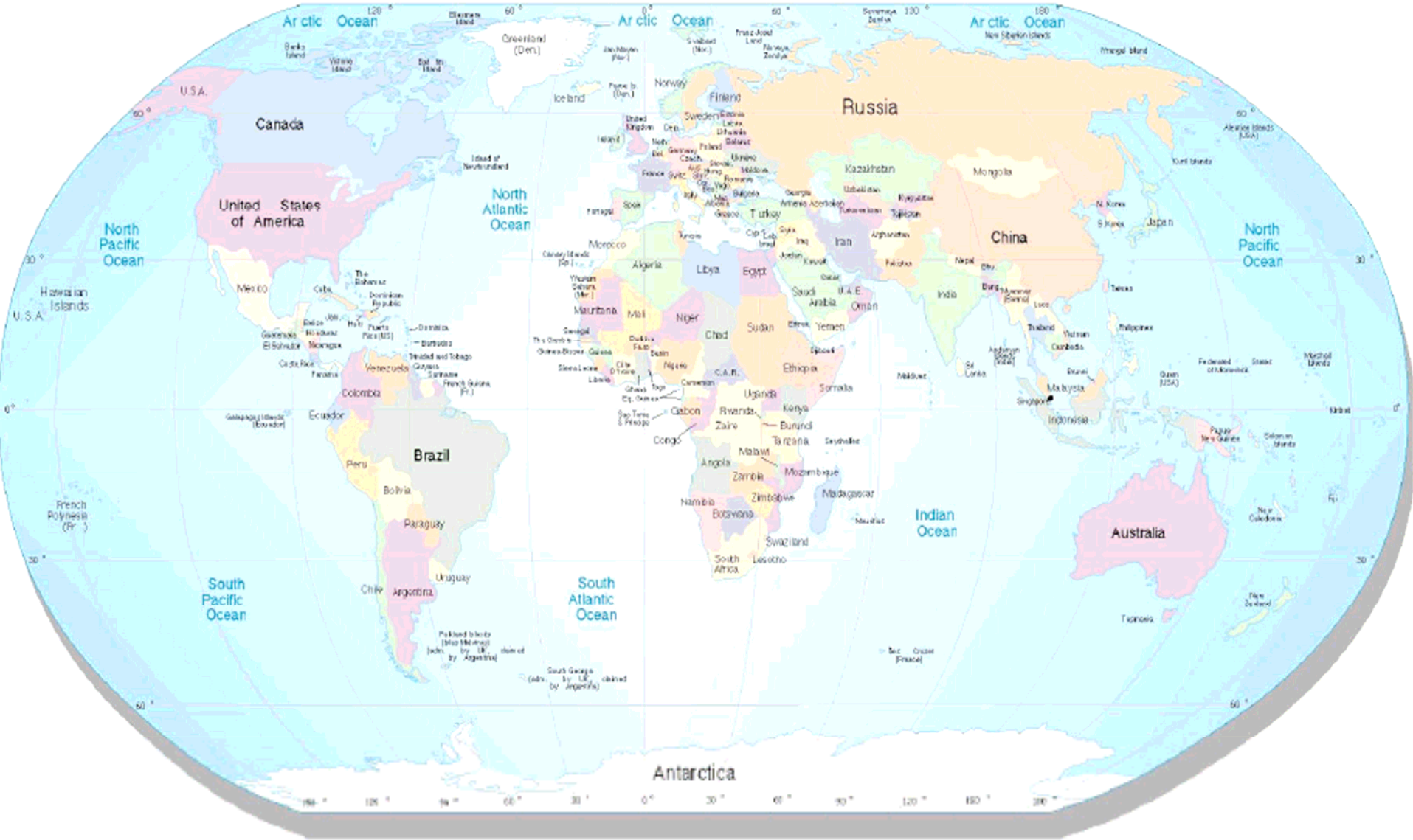


Between 1980 and 2000, roughly 58 territories decreased their annual carbon dioxide emissions. Together these territories reduced annual emissions by 1.9 billion tonnes; carbon emission increases from other territories were 3.5 times greater than this decrease.
Almost half of the decrease was in territories formerly in the Union of Soviet Socialist Republics, followed by Germany at 15%, Poland at 8%, and France at 6%. Decline in industrial production and factory closure contributed to some decreases. Nevertheless, the Russian Federation emitted the third largest quantity of carbon dioxide in 2000.

►►► Territory size shows the proportion of all territory level decreases in carbon dioxide emissions between 1980 and 2000, that occurred there.

Source: www.worldmapper.org

World Map


Arctic Ocean
Arctic Ocean
Arctic Ocean
Greenland (Den.)
Iceland
Norway
Finland
Sweden
Russia
U.S.A.
Canada
United States of America
North Atlantic Ocean
Kazakhstan
Mongolia
China
North Pacific Ocean
North Pacific Ocean
Japan
Hawaiian Islands
U.S.A.
Morocco
Algeria
Libya
Egypt
Iran
Turkey
Saudi Arabia
U.A.E.
Oman
India
Mauritania
Mali
Niger
Chad
Sudan
Yemen
Ethiopia
Somalia
Nigeria
C.A.R.
Cameroon
Uganda
Kenya
Rwanda
Burundi
Zaire
Congo
Gabon
Tanzania
Angola
Malawi
Zambia
Mozambique
Zimbabwe
Namibia
Botswana
Madagascar
South Africa
Swaziland
Lesotho
Indian Ocean
Australia
Mexico
Cuba
Venezuela
Colombia
Ecuador
Peru
Brazil
Bolivia
Paraguay
Chile
Argentina
Uruguay
South Pacific Ocean
South Atlantic Ocean
French Polynesia
Antarctica

Future Climate Change Impacts

► Europe

► Increased risk of inland flash floods (very high confidence)

► More frequent coastal flooding and increased erosion due to storms and sea-level rise (very high confidence)

► South: More health-threatening heat waves and wildfires, reduced water availability and hydropower potential, endangered crop production, reduced summer tourism

► Central and East: More health-threatening heat waves, reduced summer rainfall, reduced forest productivity, more peatland fires

► North: Initial mixed effects, including benefits such as reduced heating demand, increased crop yields, and increased forest growth; as climate change continues, negative impacts likely to outweigh benefits

Future Climate Change Impacts

► Intensified water security problems in southern and eastern Australia and parts of New Zealand, by 2030

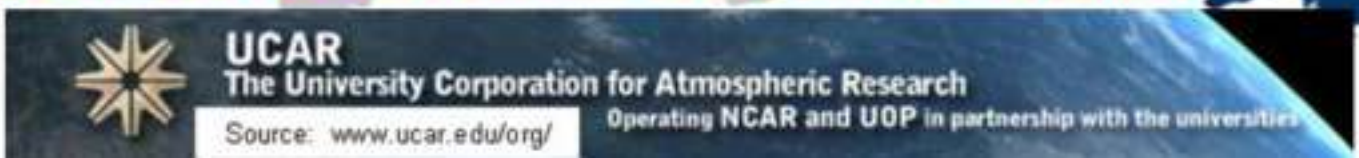
► Further loss of biodiversity in ecologically rich sites, by 2020 (very high confidence)

► Increased risk from sea-level rise, more-severe and more-frequent storms, and coastal flooding in the Cairns region and southeast Queensland (Australia), Northland to Bay of Plenty (New Zealand), and other coastal communities with ongoing development and population growth, by 2050 (very high confidence)

► Some initial benefits in western and southern New Zealand, such as longer growing seasons, less frost, and increased rainfall

► Decreased yields from agriculture and forestry by 2030, due to increased drought and fire, in much of southern and eastern Australia and parts of eastern New Zealand

► Australia and New Zealand



Future Climate Change Impacts

► Polar regions

► Thinning and reduced extent of glaciers and ice sheets

► Deeper seasonal thawing of permafrost

► Detrimental effects on migratory birds, mammals, higher predators, and other species, due to changes in natural ecosystems

► Changes in the extent of Arctic sea ice and permafrost

► Negative impacts on Arctic society: infrastructure (such as roads, buildings and utility lines) and traditional ways of life

► Positive impacts on Arctic society: reduced heating costs and more navigable sea routes (medium confidence)

Future Climate Change Impacts

► North America

► Western mountains: decreased snowpack, more winter flooding, and reduced summer flows (very high confidence)

► Increasing impacts on forests due to pests, diseases, and fire, with an extended period of high fire risk and large increases in area burned (very high confidence)

► In early decades of the century, during moderate climate change, 5–20% increase in total agricultural yields, with important regional variations; major challenges for crops with limited access to water or those near the warm end of their suitable range

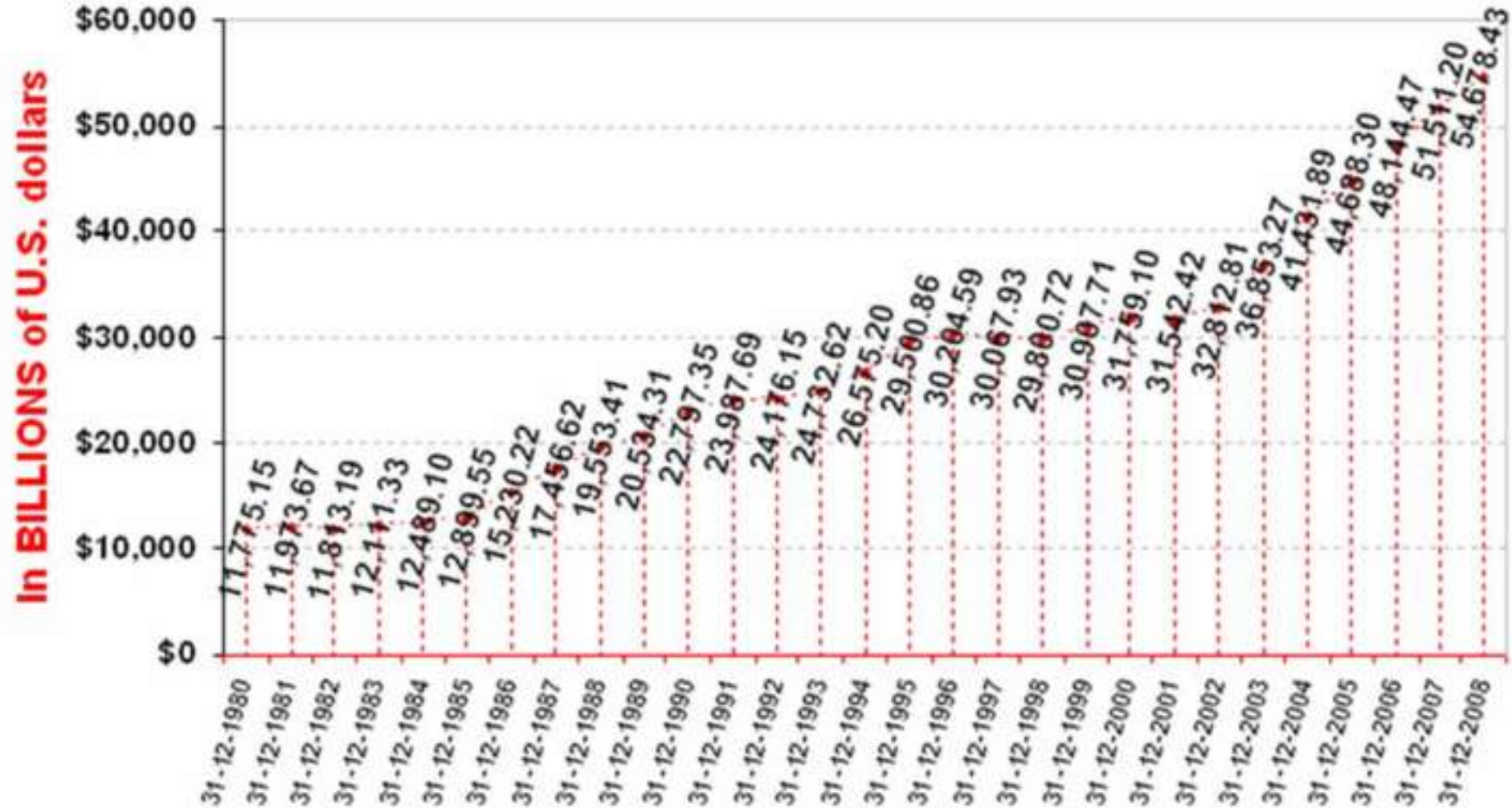
► Increased intensity, duration, and number of heat waves in cities historically prone to them; the elderly, whose proportion of the U.S. population is increasing, are most at risk (very high confidence)

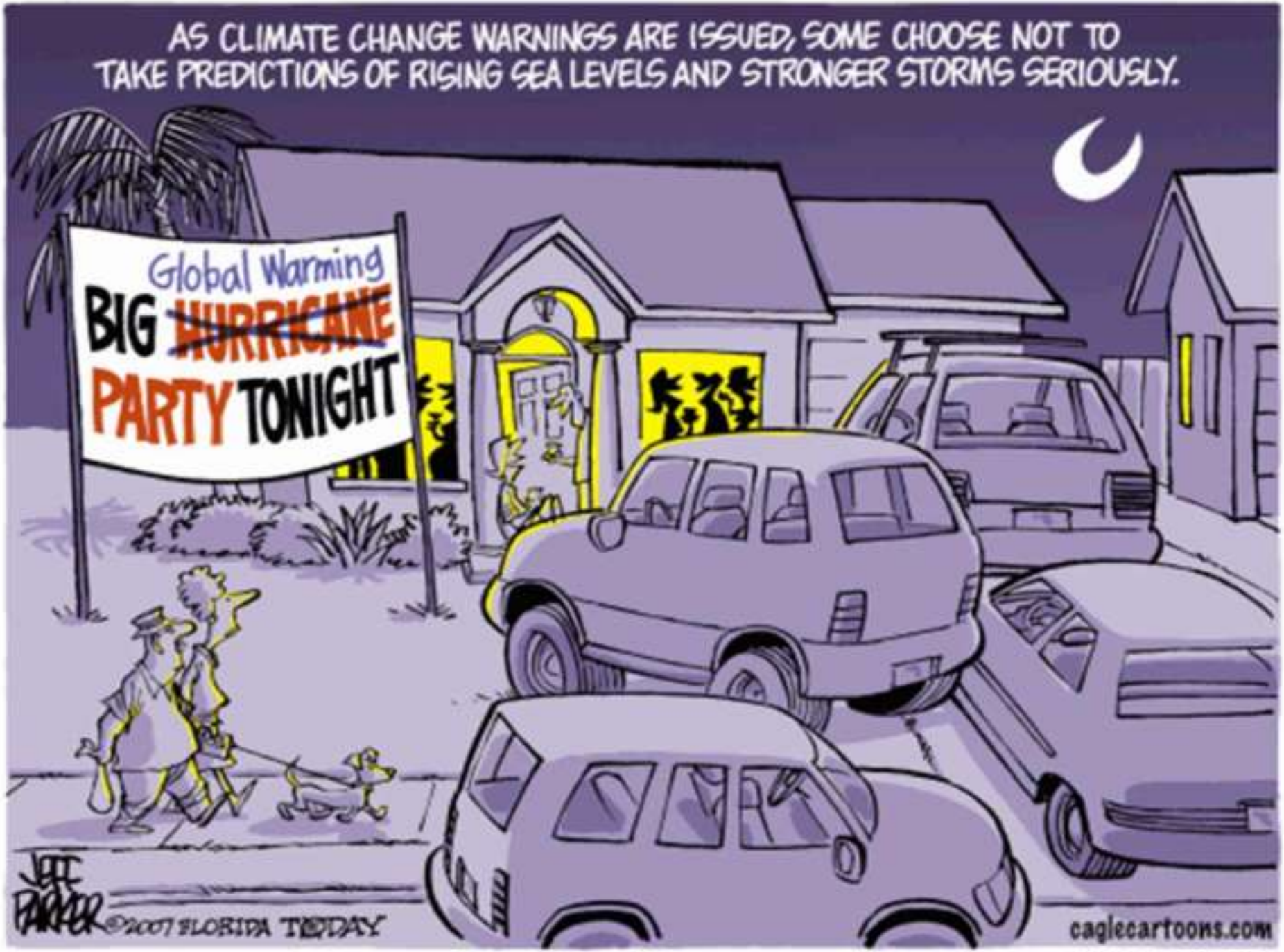
► Coastal areas: increased stress on people and property, due to climate change impacts interacting with development and pollution (very high confidence)

International Monetary Fund

IMF - WORLD GDP - GROSS DOMESTIC PRODUCT

in billions of U.S. dollars




AS CLIMATE CHANGE WARNINGS ARE ISSUED, SOME CHOOSE NOT TO TAKE PREDICTIONS OF RISING SEA LEVELS AND STRONGER STORMS SERIOUSLY.
Global Warming
BIG ~~HURRICANE~~
PARTY TONIGHT
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THANKS
Eduardo Reyes
Panama
National Environmental Authority
Deputy Administrator General
WB Host Country Committe Chairman
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INAC
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Grupo Parques Nacionales Panamá
autoridad nacional del ambiente
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ANCON
Fundación Natura