



General Environmental Indicators:

South & Central America

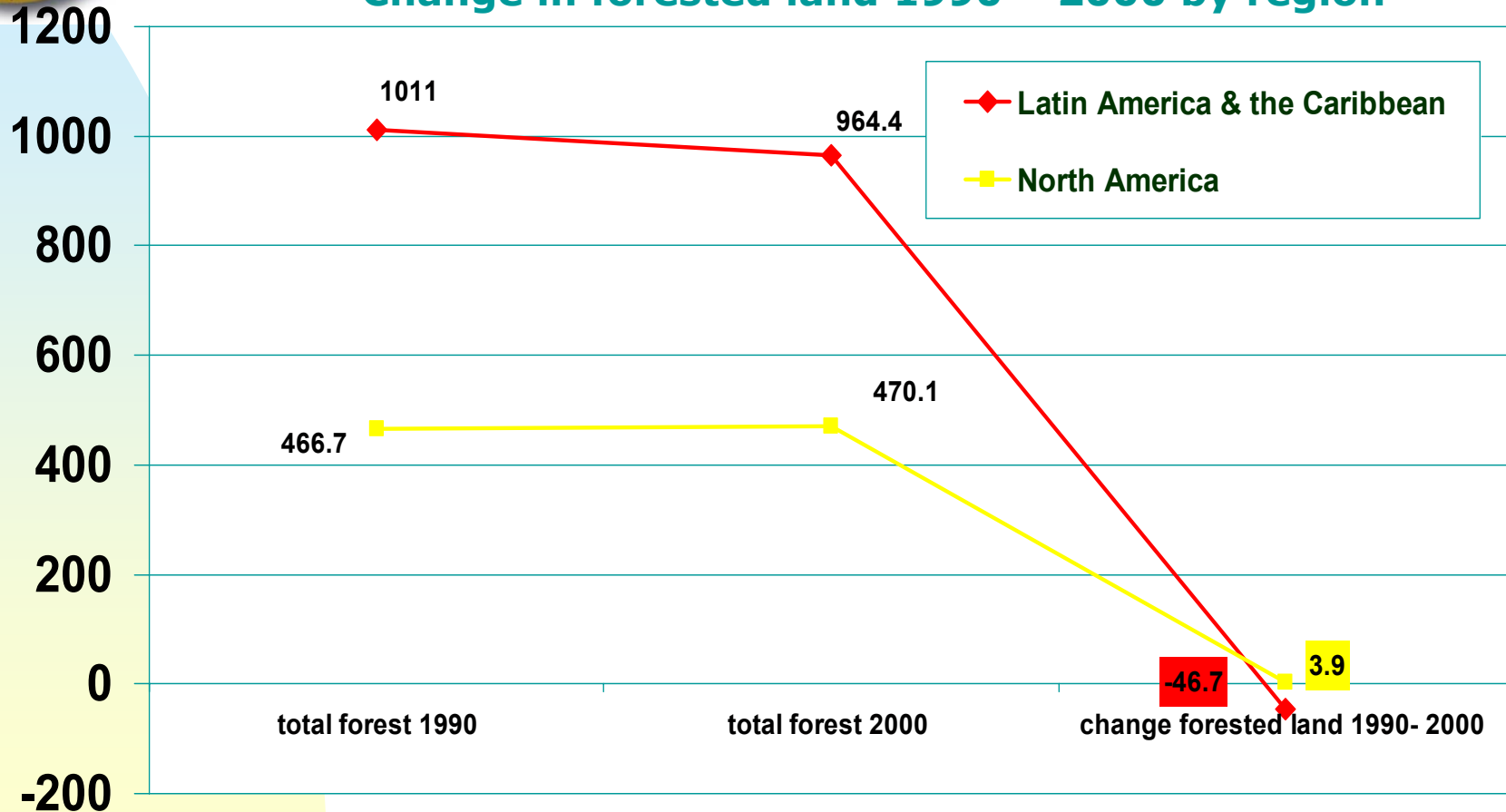
- **April 2007**



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Deforestation

Change in forested land 1990 – 2000 by region



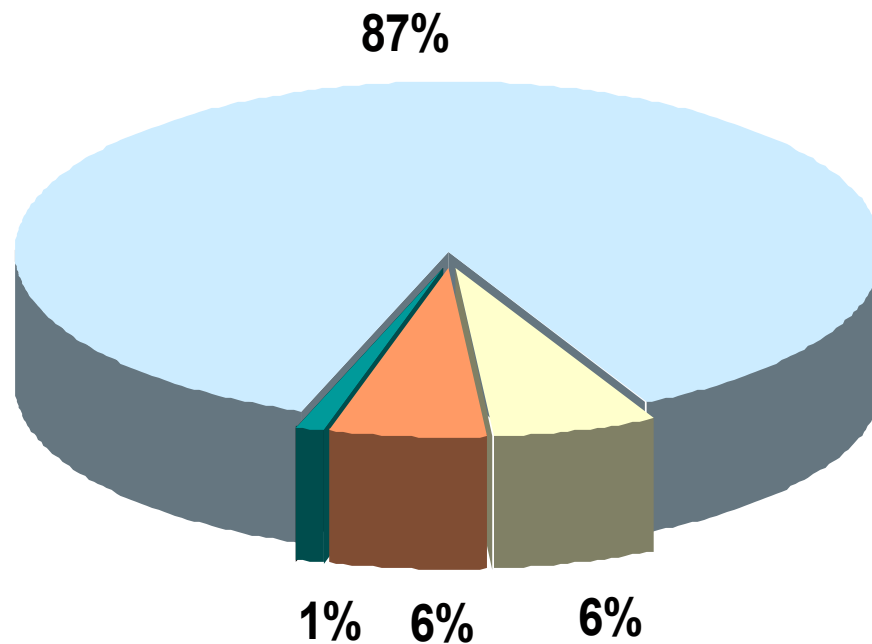
Total land Latin America 2017.8 millions hectares



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Land degradation in South America

- None
- Light
- Medium
- Strong
- Extreme

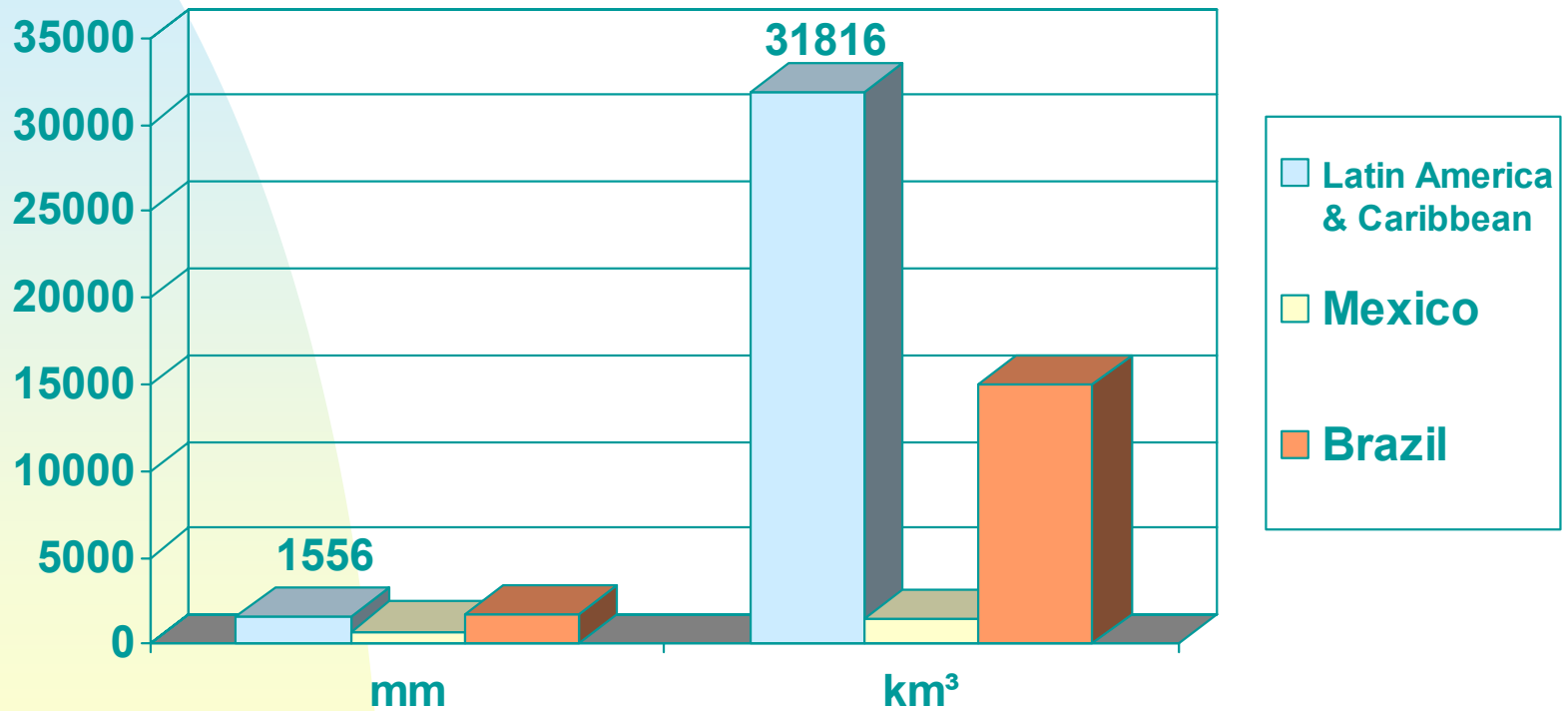




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Fresh Water

Regional distribution of internal renewable water resources

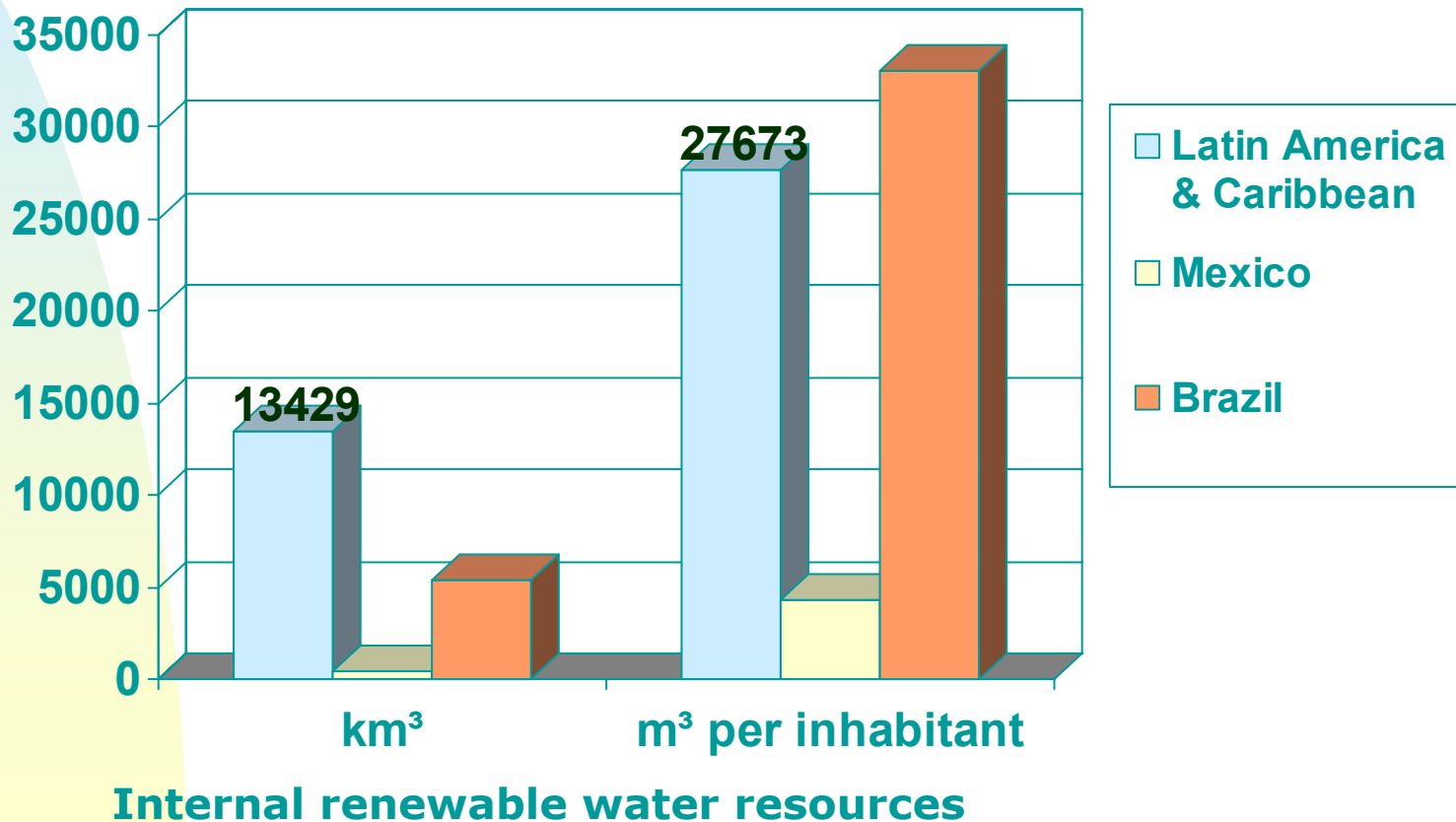


Annual precipitation



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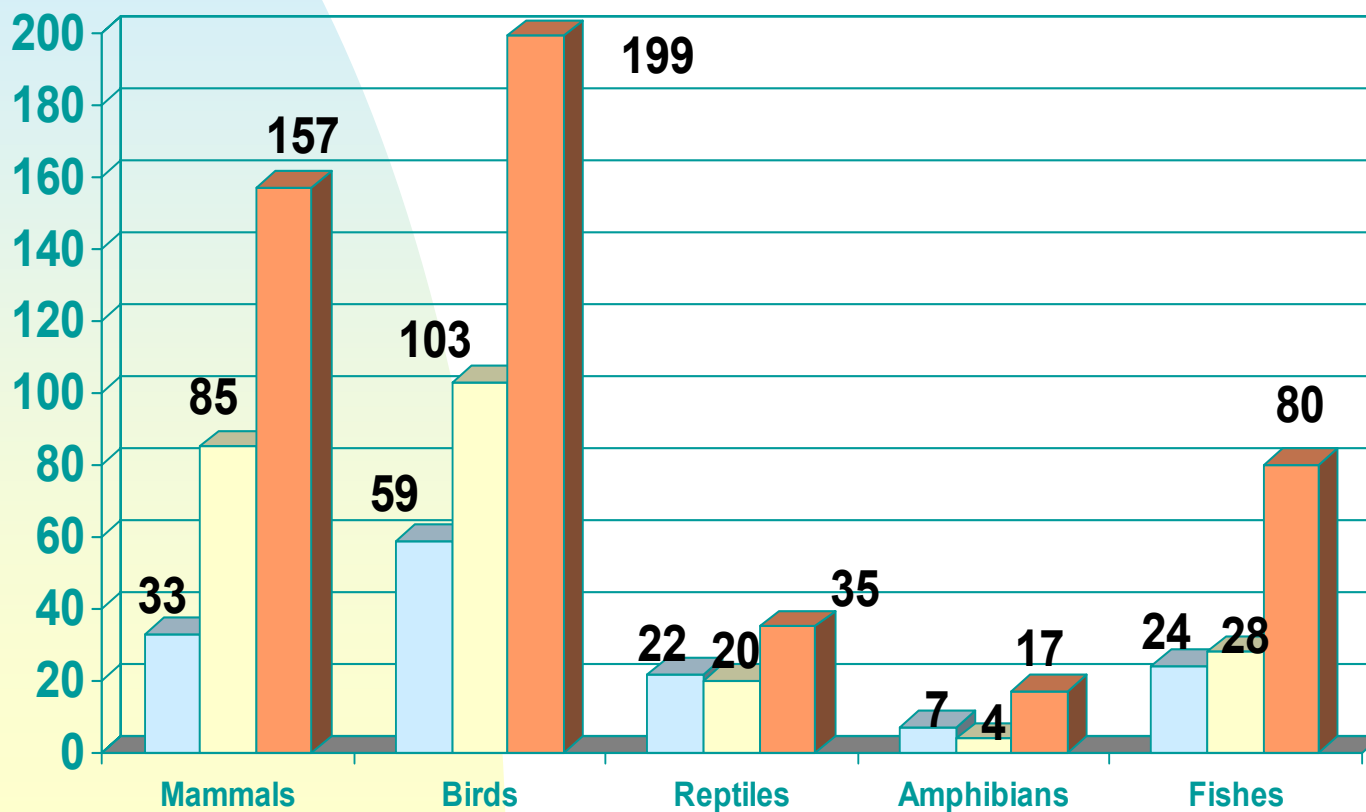
Regional distribution of internal renewable water resources (continued)





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Numbers of threatened vertebrates: Latin America and the Caribbean

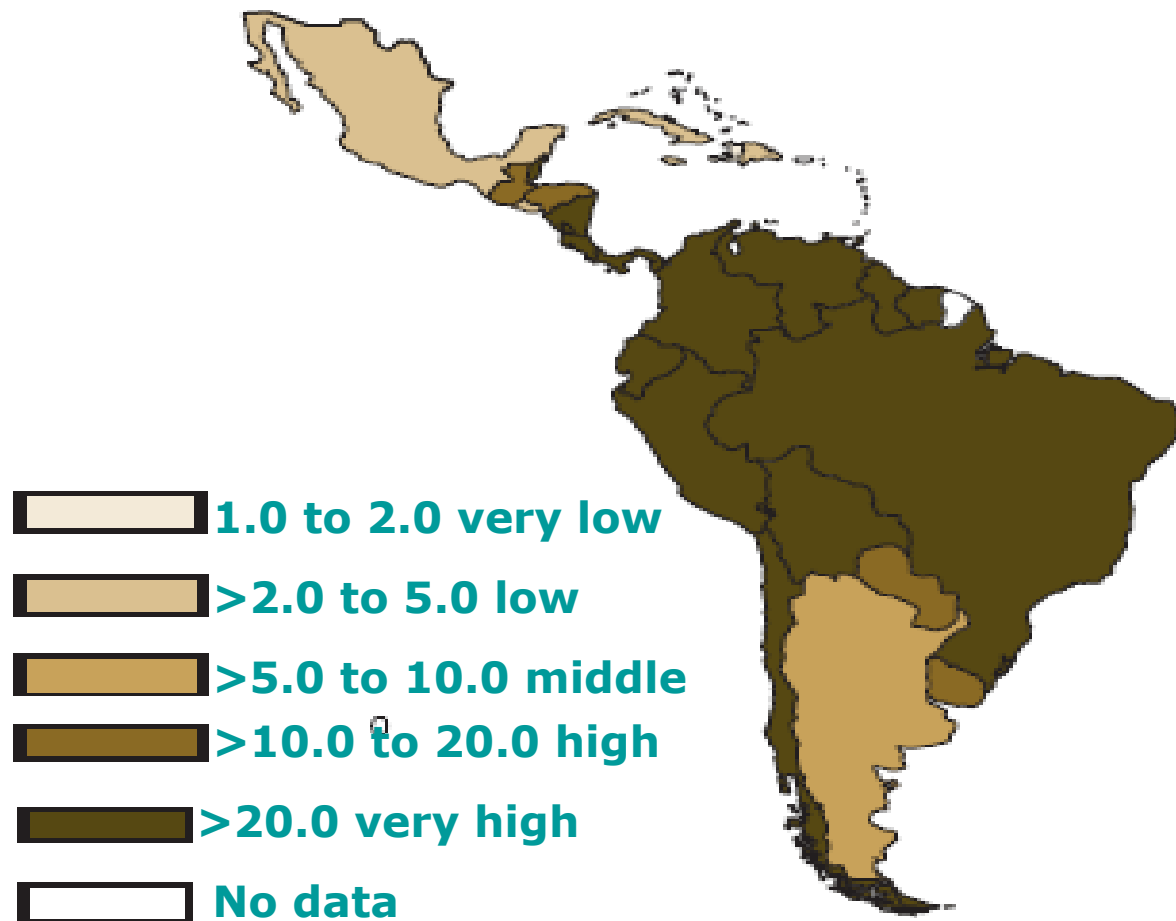


- Critically endangered
- Endangered
- Vulnerable



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Total water availability in 2000 (1000m³ per capita/year)





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Biodiversity

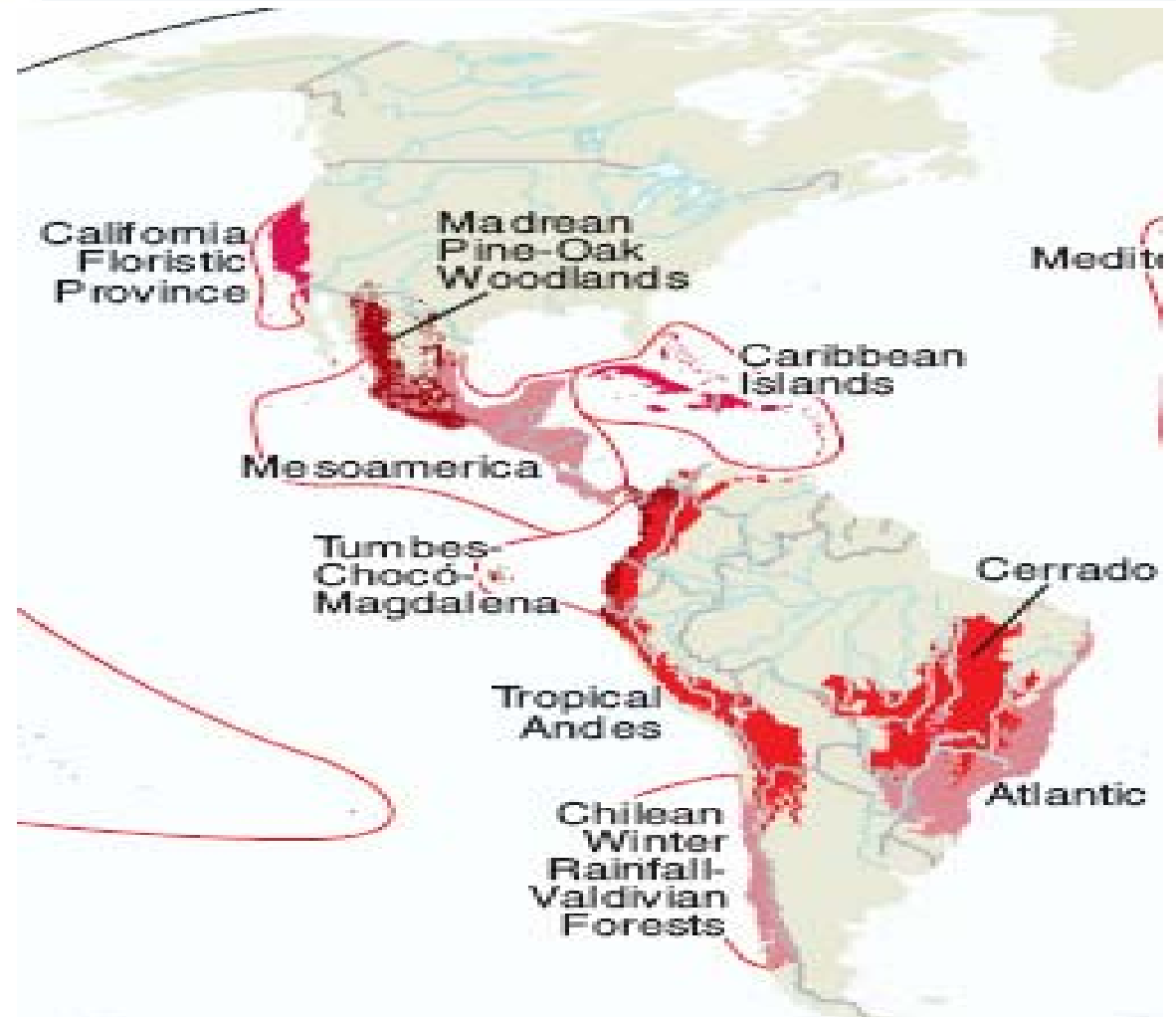
Globally threatened vertebrate species by region

	<i>Mammals</i>	<i>Birds</i>	<i>Reptiles</i>	<i>Amphibians</i>	<i>Fishes</i>	<i>Total</i>
Africa	294	217	47	17	148	723
Asia and the Pacific	526	523	106	67	247	1 469
Europe	82	54	31	10	83	260
Latin America and Caribbean	275	361	77	28	132	873
North America	51	50	27	24	117	269



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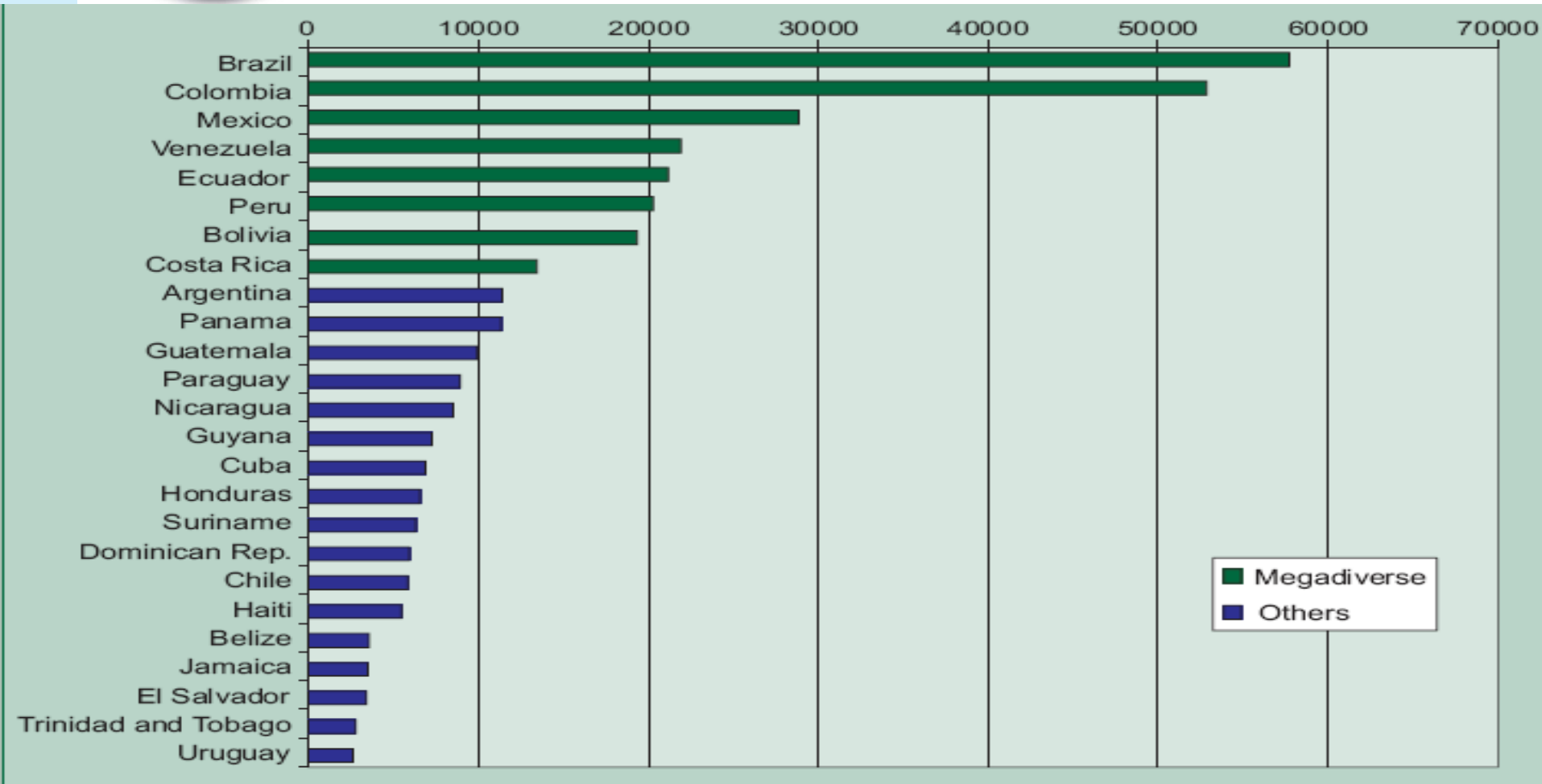
Map of Biodiversity Hotspots










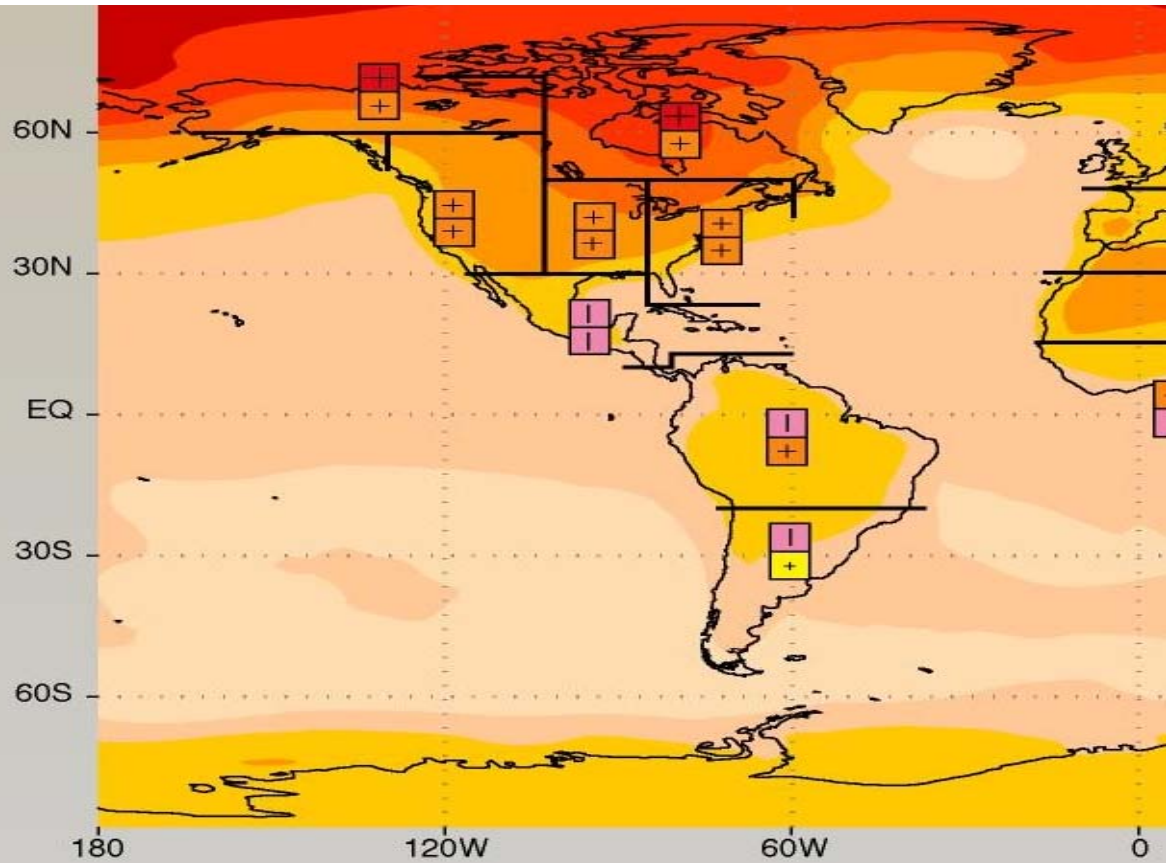
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Biodiversity in Latin America and the Caribbean (number of flora and vertebrate fauna species)



Climate change

-  Much greater than average warming
-  Greater than average warming
-  Less than average warming
-  Inconsistent magnitude of warming
-  Cooling



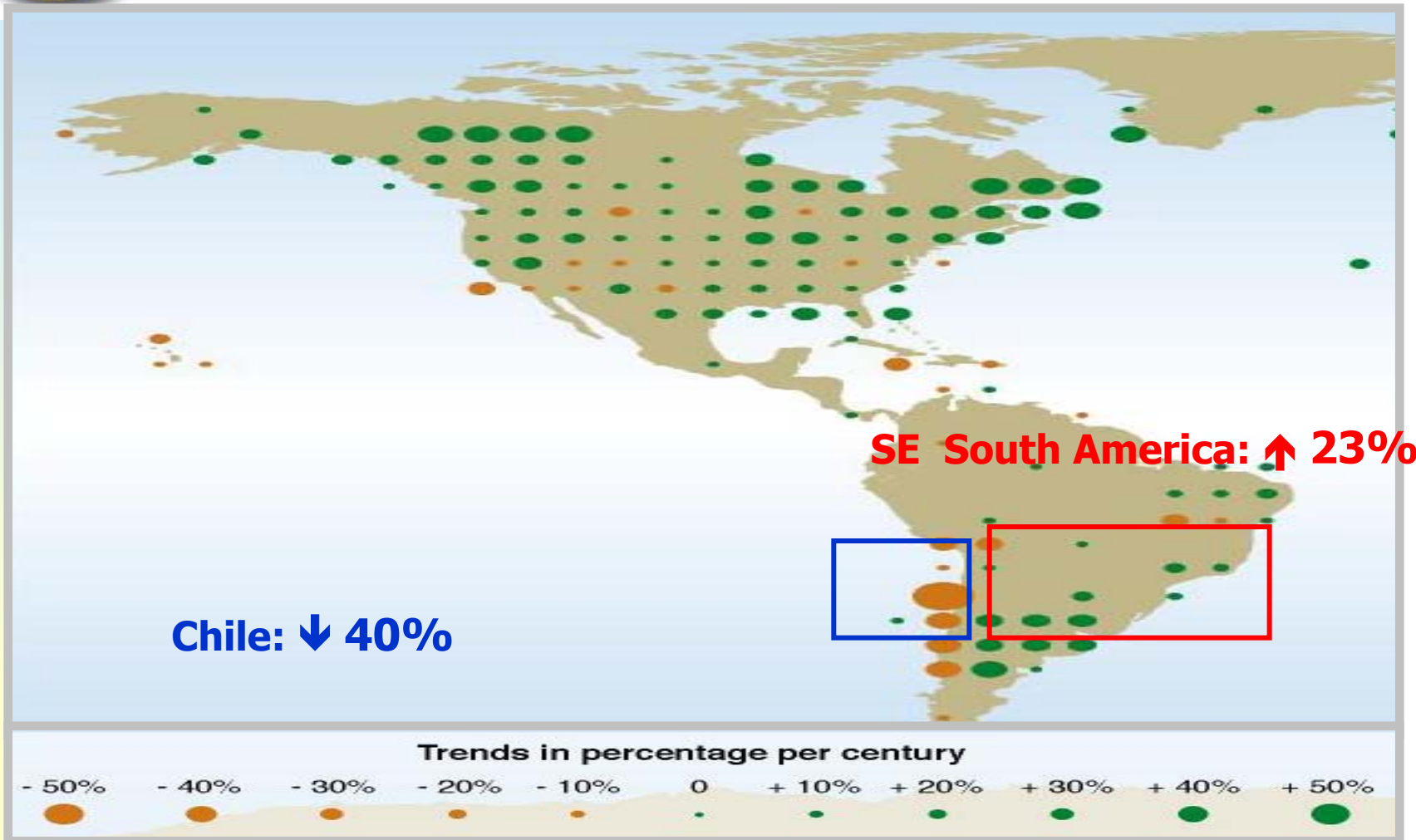
Change in global mean temperature (°C)





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Annual precipitation trends 1900-2000





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Trans Boundary Water Resources Management Proposed and under Execution Projects

Technical Cooperation

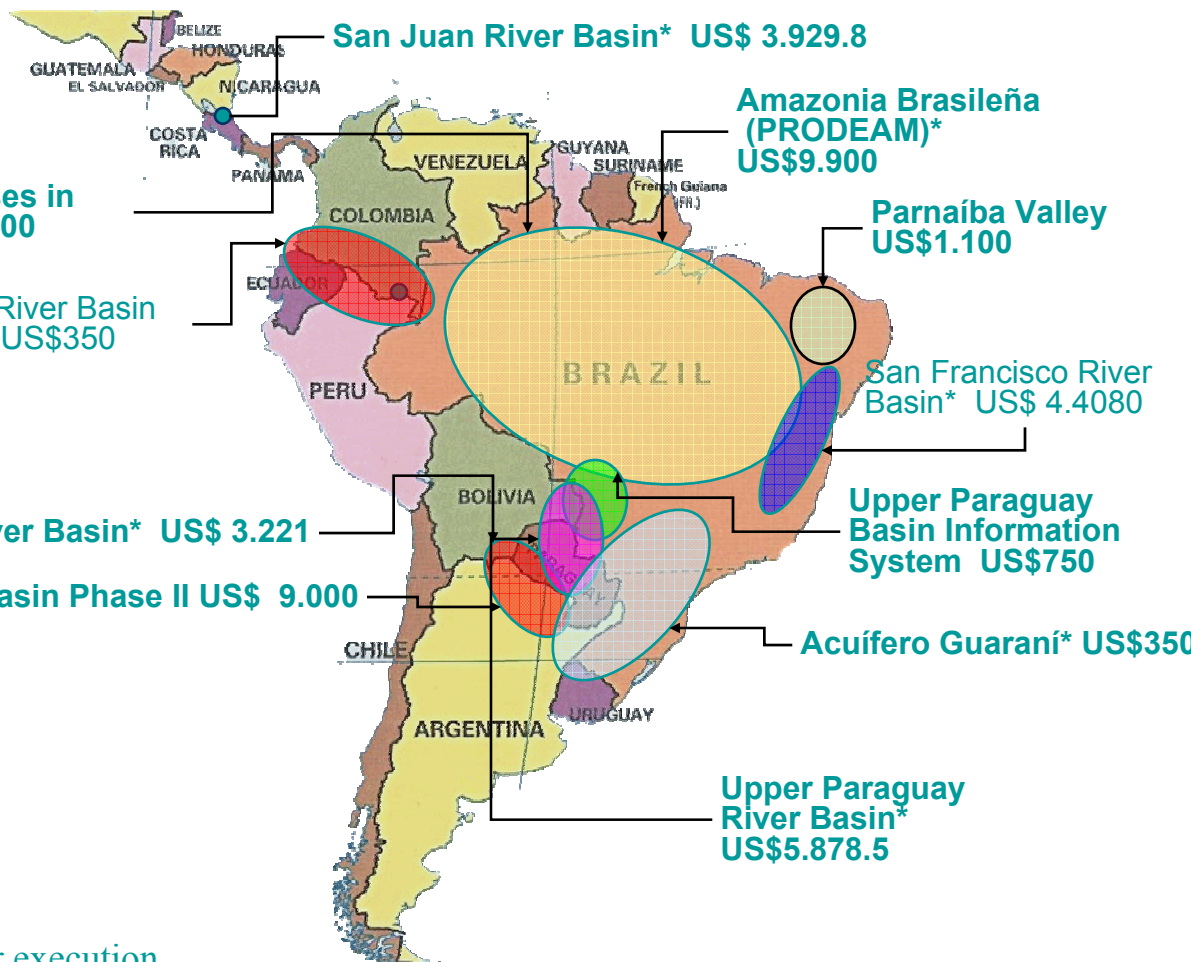
Water Resources in
Brazil* US\$ 9.900

Putumayo River Basin
(Block B) * US\$350

Bermejo River Basin* US\$ 3.221

Bermejo River Basin Phase II US\$ 9.000

* Under execution

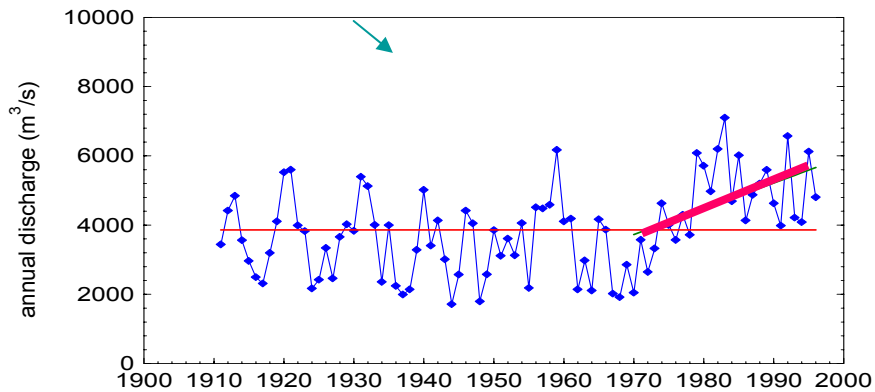




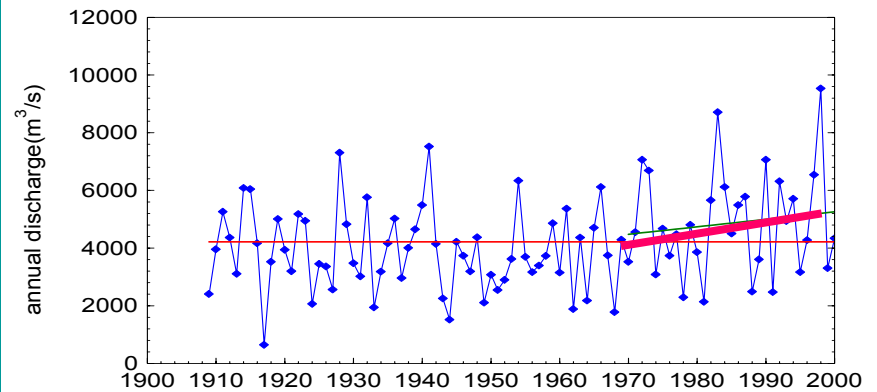
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Changes in river discharges Rio de la Plata basin

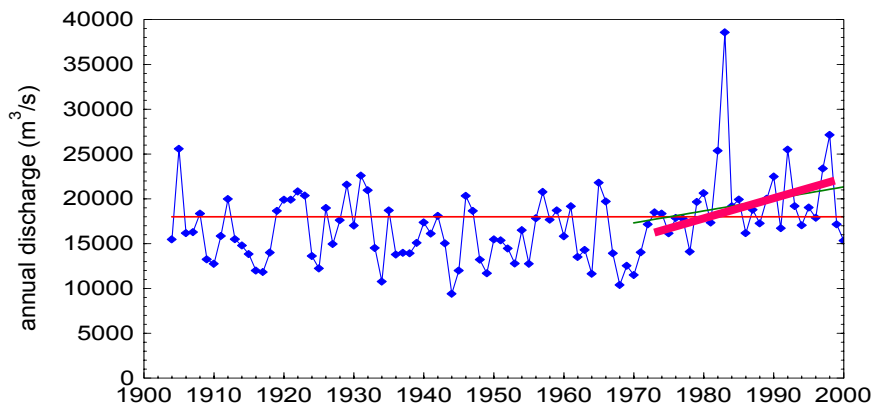
Paraguay River - Puerto Bermejo



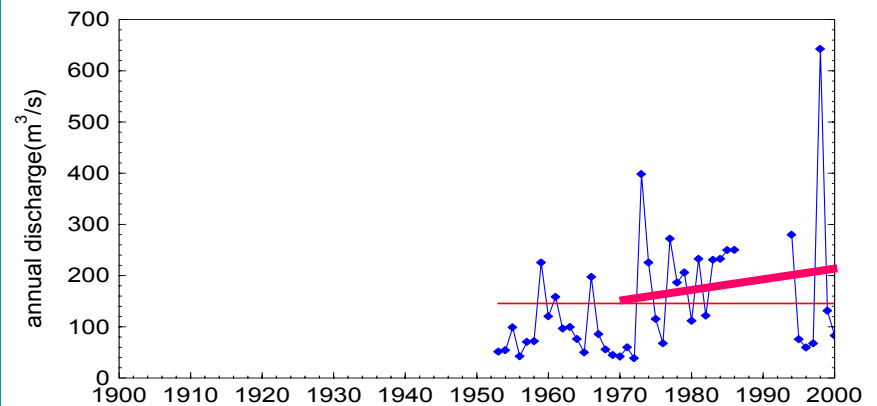
Uruguay River- Paso de los Libres



Paraná River - Corrientes



Salado River - RP 70



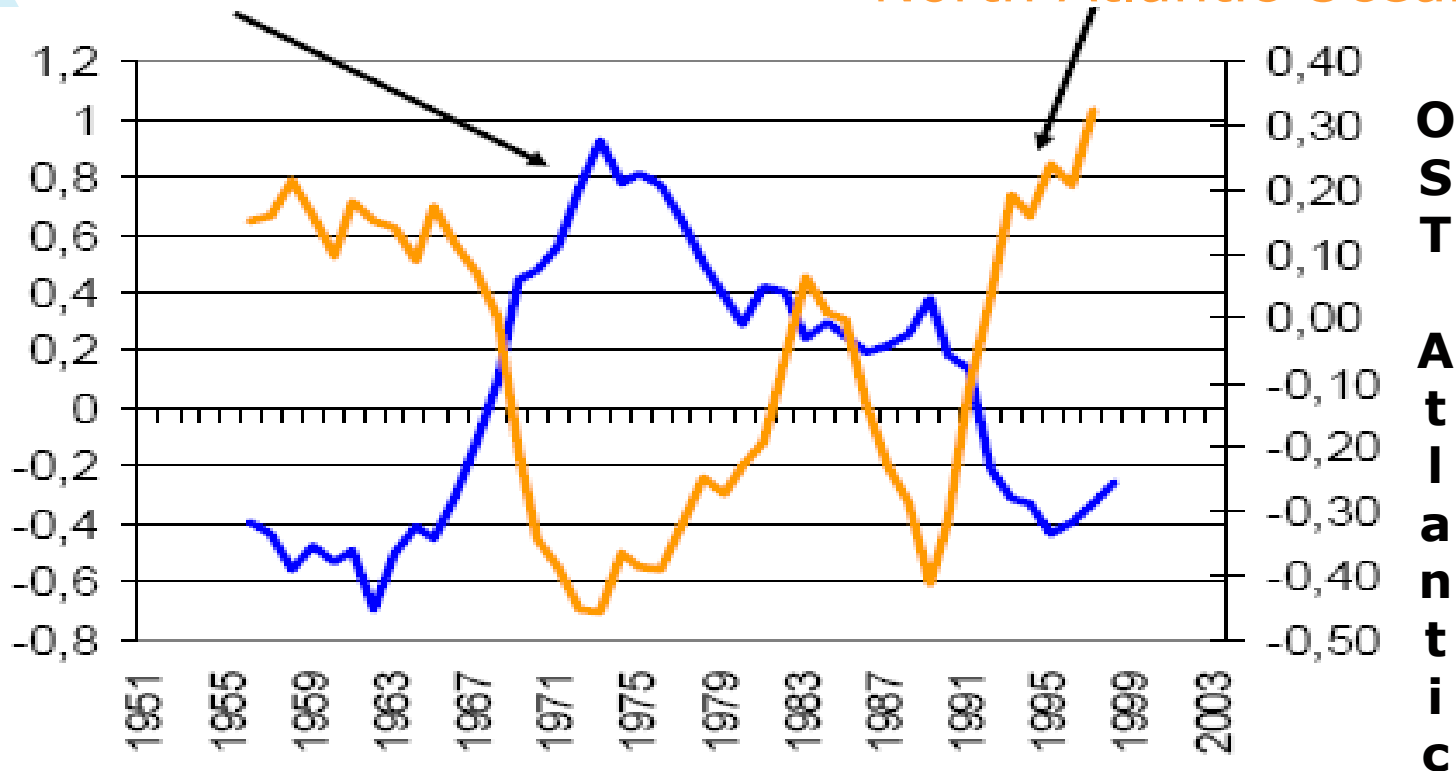


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Minimum volume

Temperature of
North Atlantic Ocean

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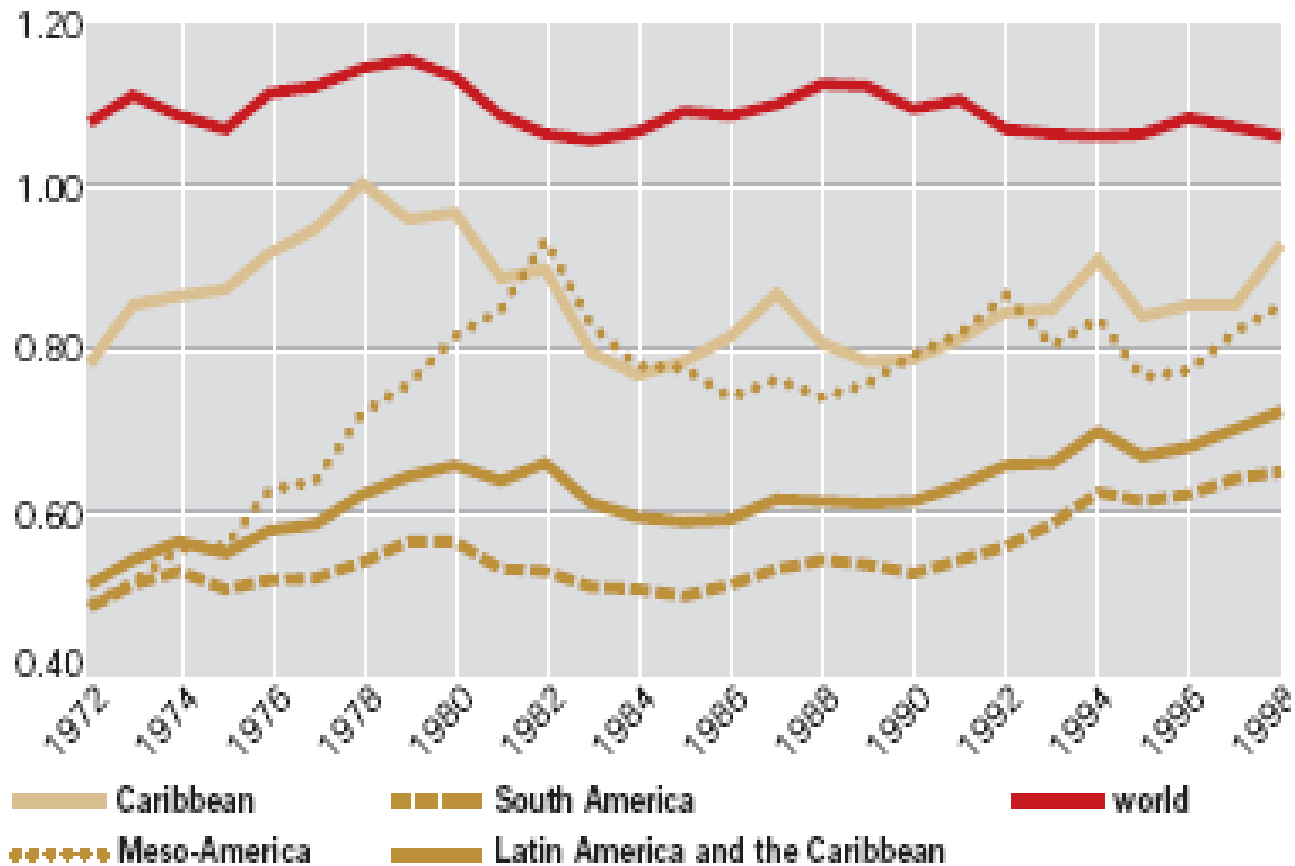
Ocean Surface Temperature (OST)



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Air Pollution: CO₂ emissions (tons carbon per capita/year)

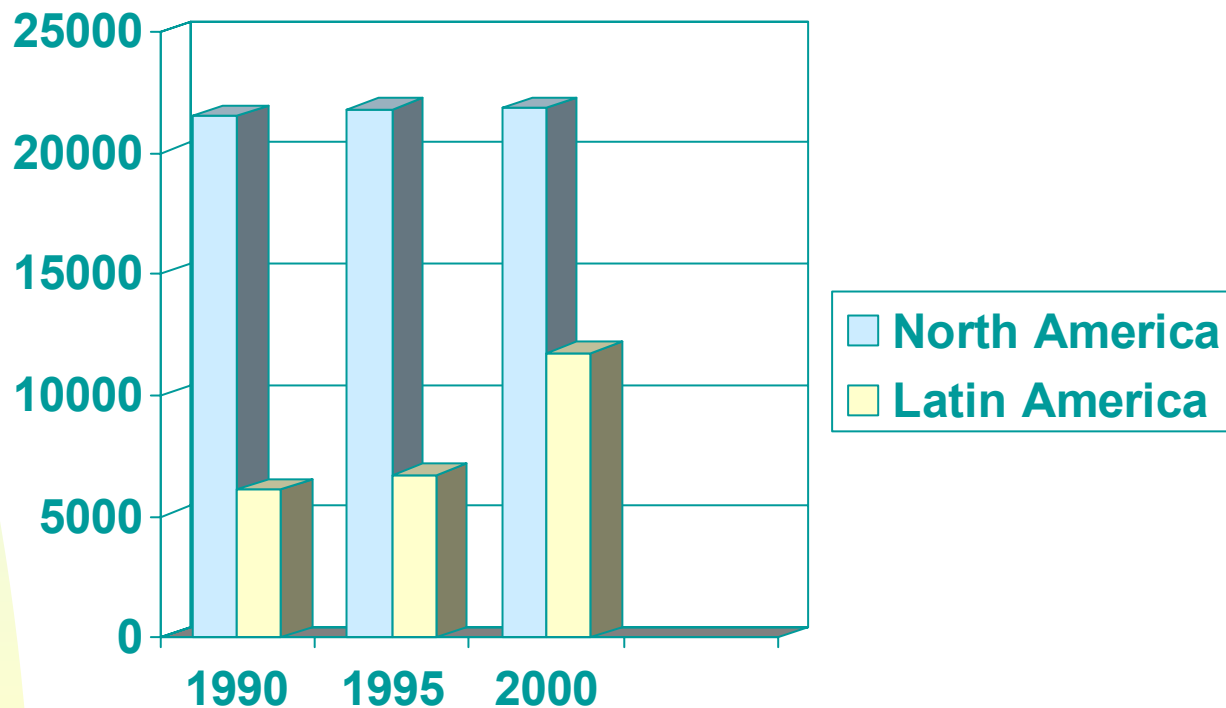
Average industrial carbon emission in Latin America & the Caribbean in 1998 was 0.73 tons/year, compared to the global average of 1.06 tons





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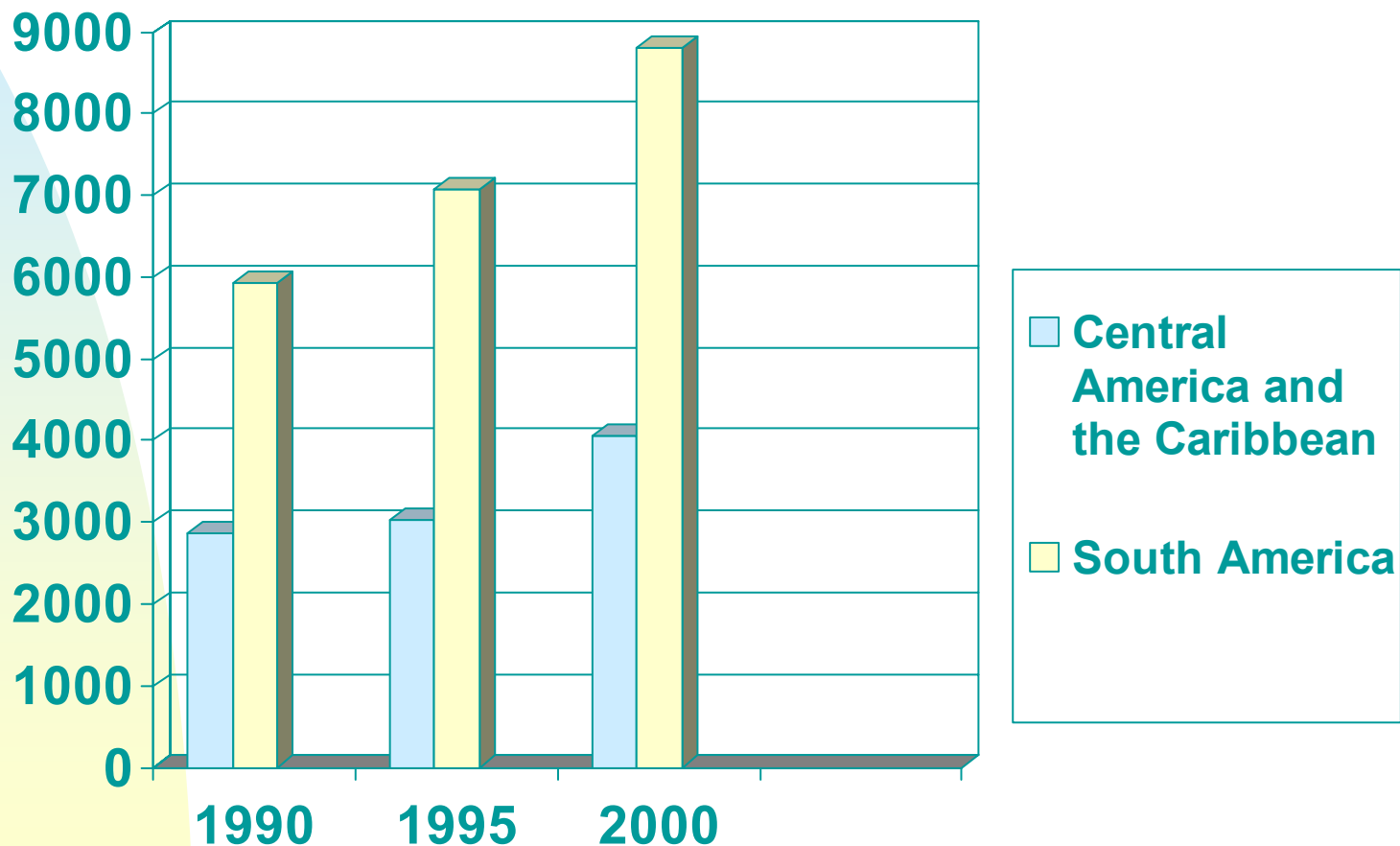
Air Pollution: NO₂ Emissions (metric tons)





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Air Pollution: Sox emissions (thousand metric tons)





Chemicals

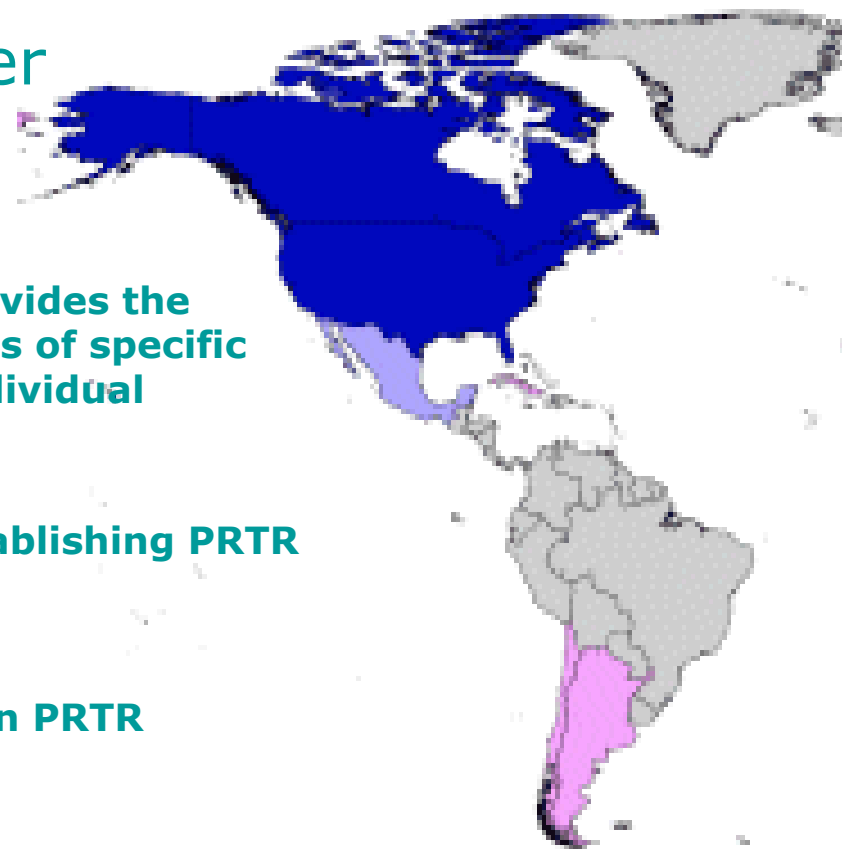
Pollutant Release and Transfer Register (PRTR)

Country has operating PRTR that provides the public with access to data on releases of specific substances to air, water and land individual facilities

Country has taken steps toward establishing PRTR

Country has demonstrated interest in PRTR

No activity





Chemicals

Principal pollutants and industries that produce them

Textile

- ❖ Sodium hypochlorite
- ❖ Solids in suspension
- ❖ Sulfuric anhydride
- ❖ Organic material
- ❖ Textile mud

Iron Industry

- ❖ Metal dust
- ❖ Salty dregs
- ❖ Nitrogen oxide
- ❖ Sulfur dioxide
- ❖ Particles in suspension
- ❖ Metal ashes
- ❖ Lead
- ❖ Barium

Pharmaceutical Industry

- ❖ Benzene organic composed
- ❖ Cyanides
- ❖ Disinfectants
- ❖ Scents



Principal pollutants and industries that produce them (continued)

Agronutritional

- ❖ Oil
- ❖ Conservatives
- ❖ Organic material
- ❖ Fats

Beverages

- ❖ Ammoniac
- ❖ Carbonic anhydride
- ❖ Heavy metals
- ❖ Carbonic anhydride

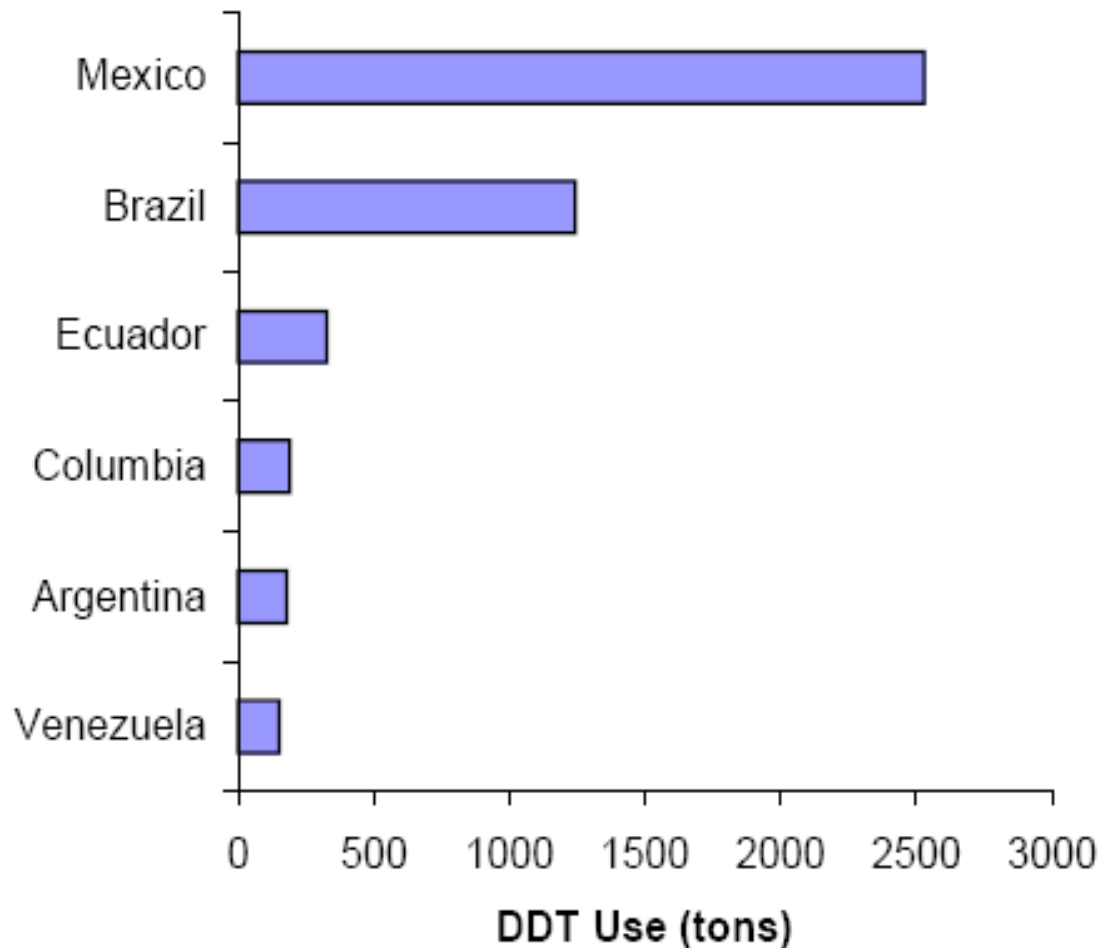
Oils and soap

- ❖ Fat acids
- ❖ Oil emulsions
- ❖ Phosphorus
- ❖ Nitrogen



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DDT use in malaria prevention programs in some Latin American countries 1993-1994





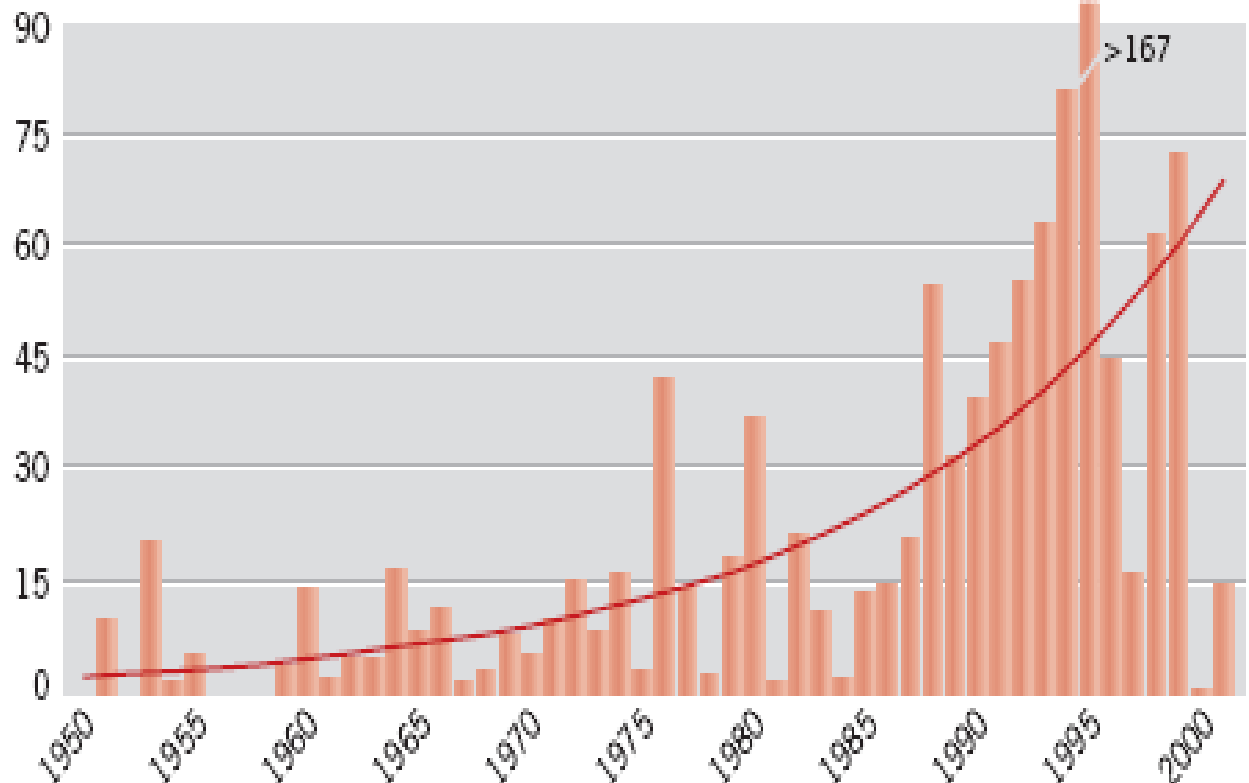
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Natural Disasters

In comparison with the 1960s, economic losses during the 1990s increased by a factor of almost nine.

The costliest disaster was hurricane Katrina (2005) which cost US\$ 125 Billions.

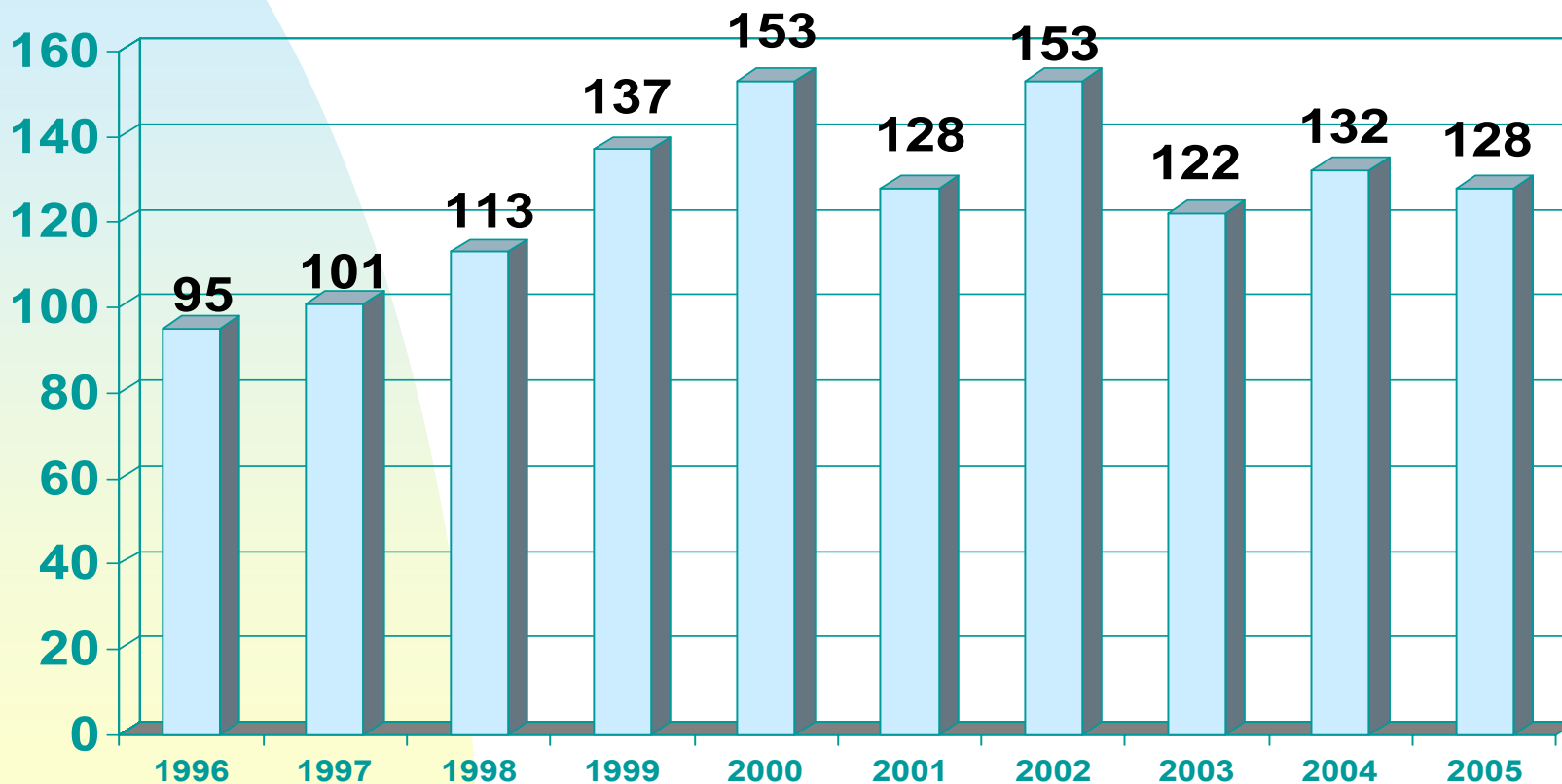
Economic costs of global great natural disasters (US\$ billion), 1950–2000





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Reported disasters, by year in the American hemisphere



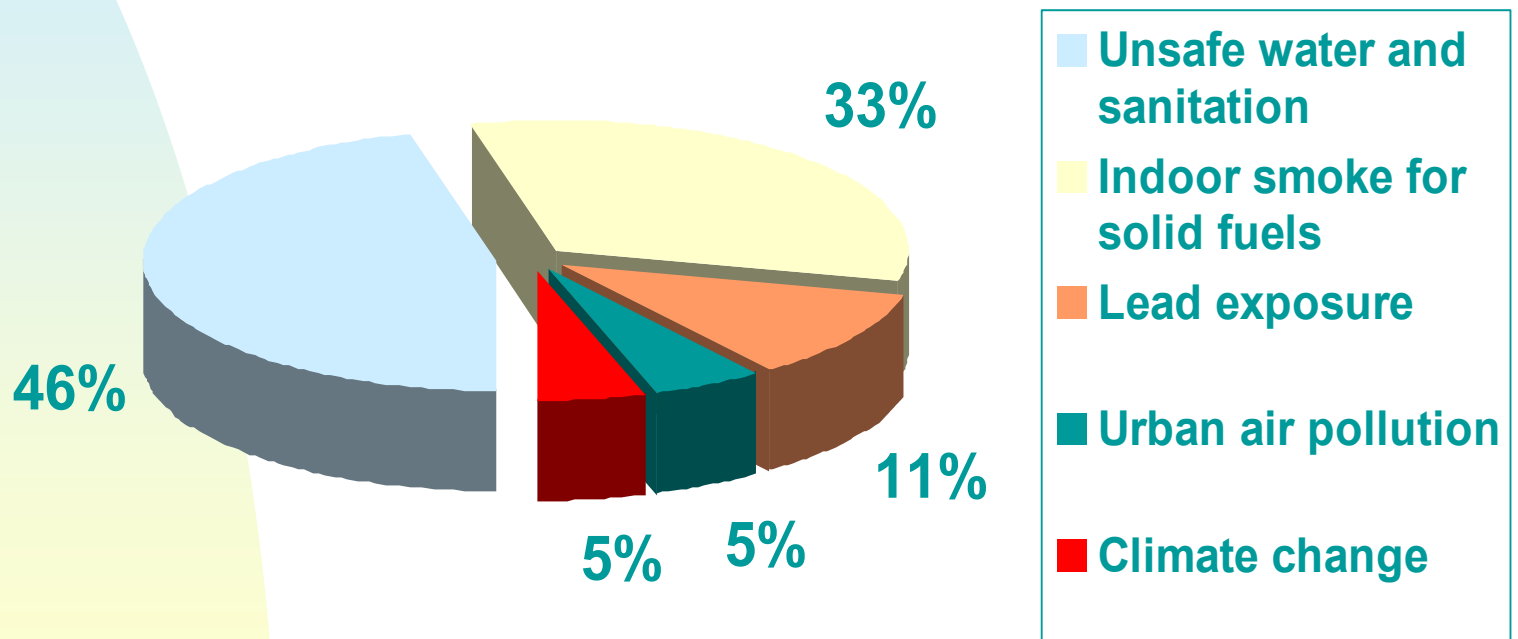
World disasters report 2006 by "The International Federation Of Red Cross and Red Crescent Societies"



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Environmental Health

The Disability – Adjustment Life Year (DALY)

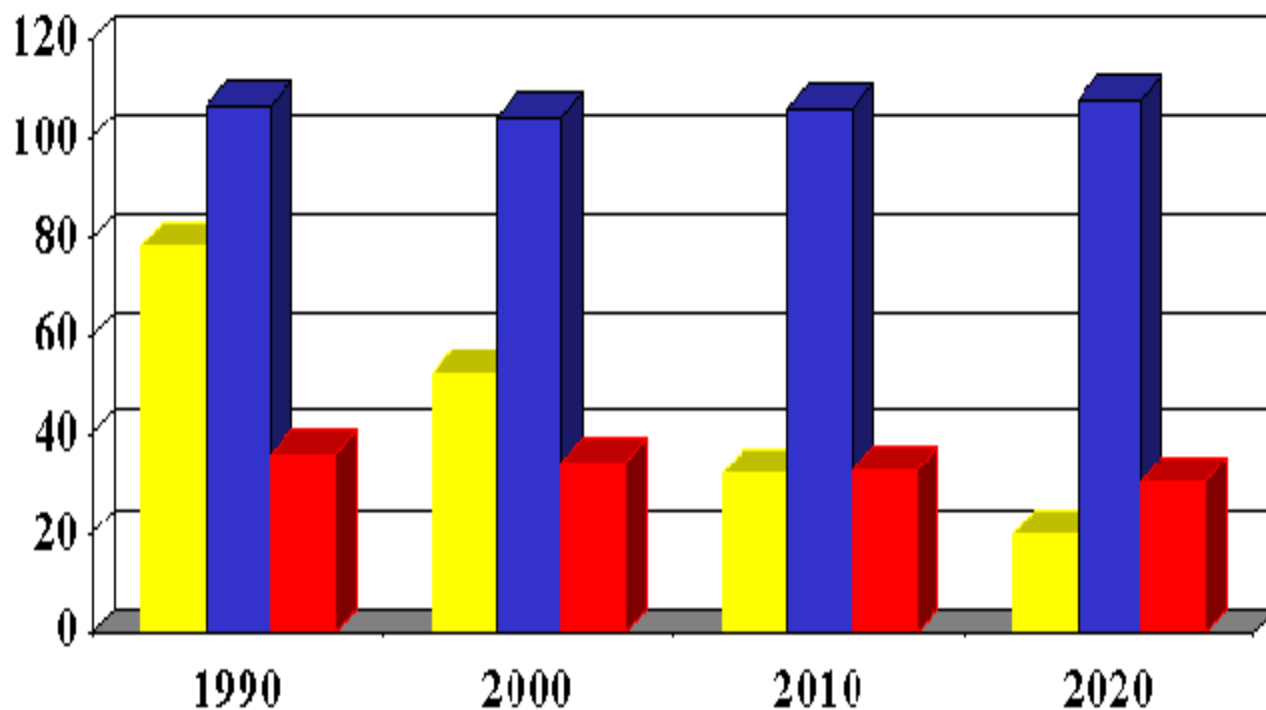


Is a statistical measure of the human cost of sickness in terms of number of healthy years lost due to illness and disability



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Disability Adjusted Life Years (DALY's) for Latin America and the Caribbean

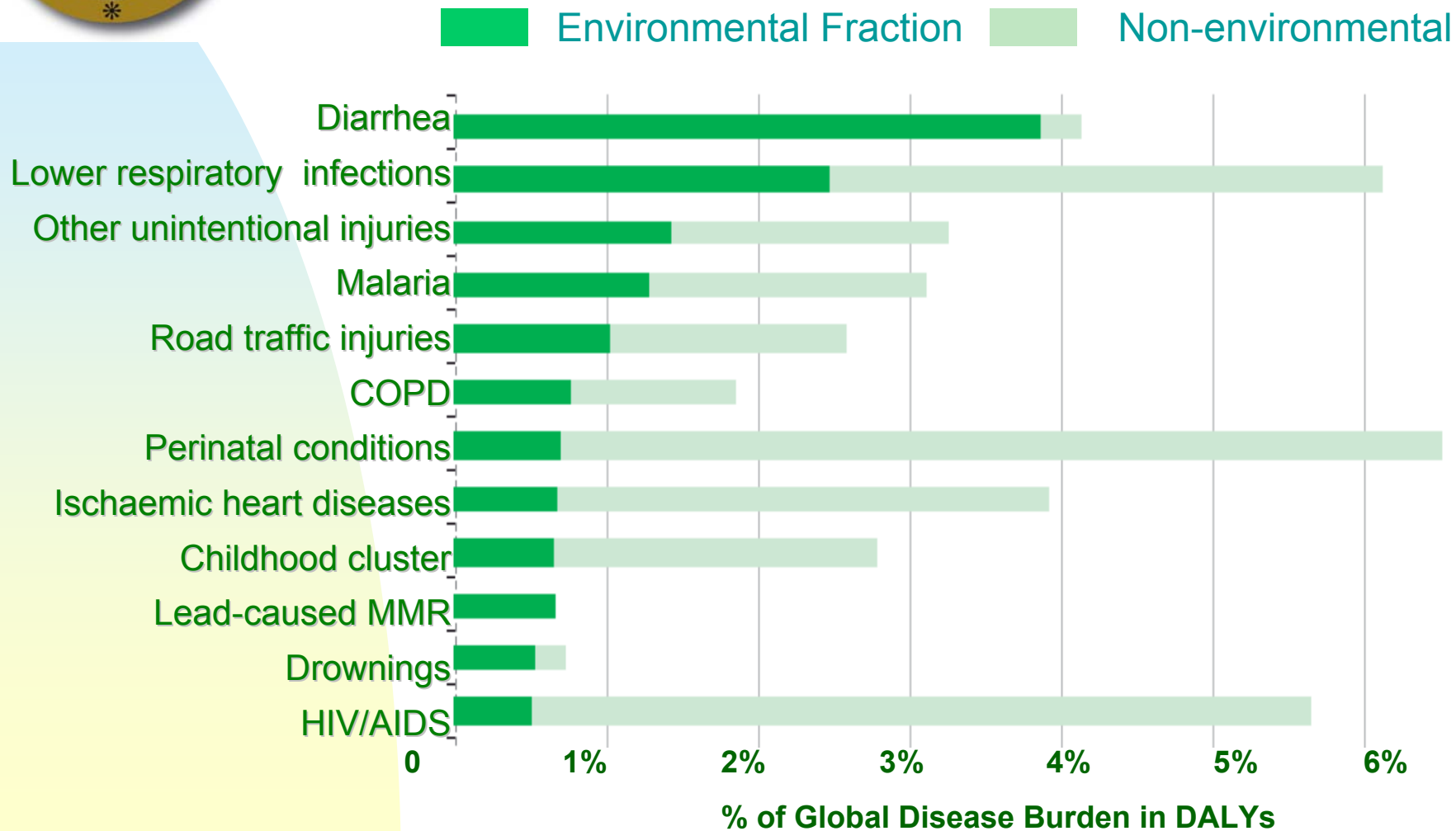


- Communicable Diseases, Malnutrition & Reproductive Health
- Non-Communicable Diseases
- Injuries



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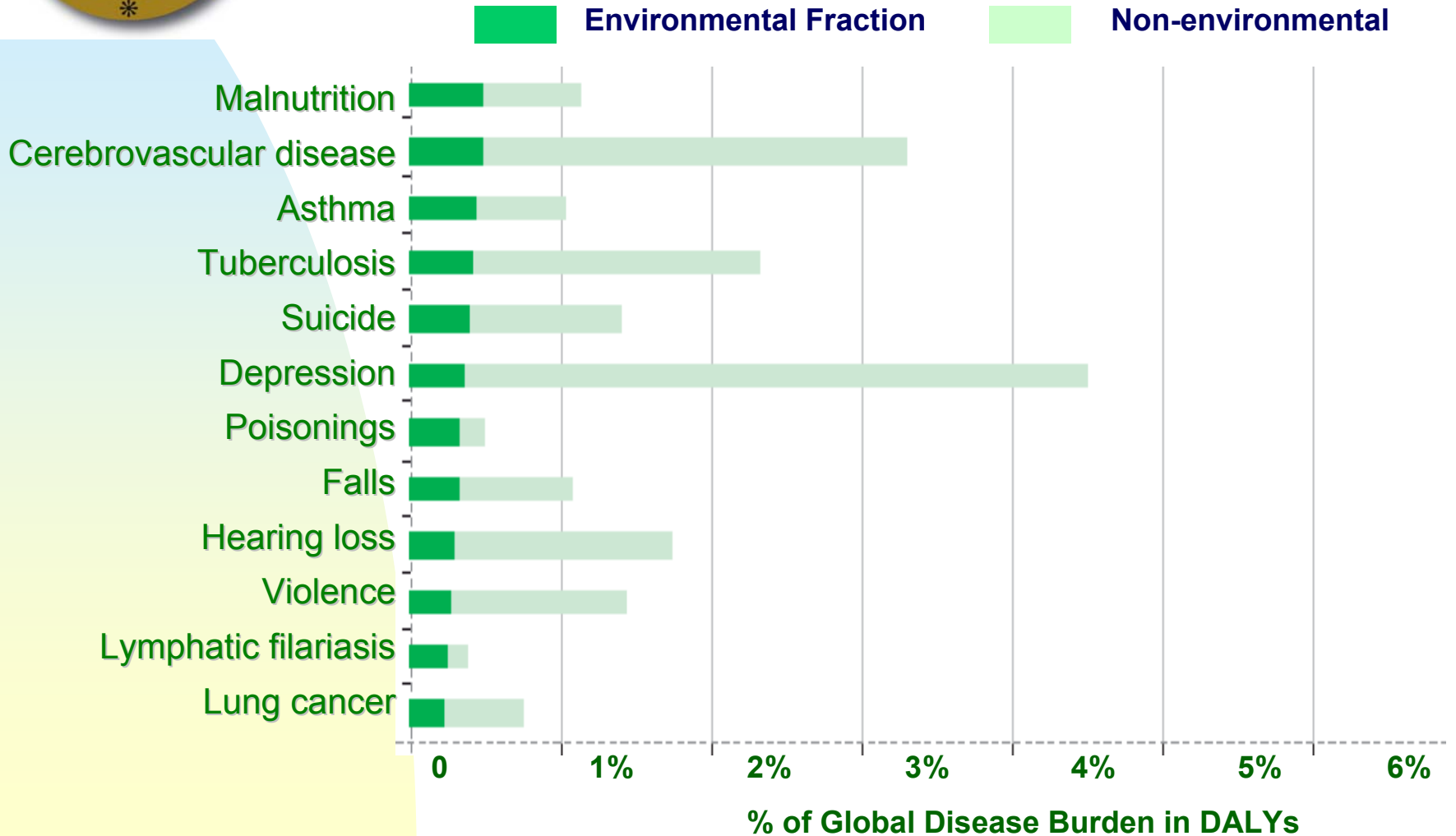
Diseases with Largest Environmental Contributions





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Diseases with largest environmental contributions



Interaction between Health and Environment



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**Intermediate
Determinants** **Health
Outcomes**

Structural Determinants

- Social**
Employment, Education, Violence,
Demographic change
- Economic**
Income Level, Distribution, Poverty
and Globalization
- Political**
Democratization, Governance,
Transparency, Accountability,
Legislation and Human rights
- Environmental**
Resource depletion, Climate change,
Vulnerability and Pollution
- Technological**
Information Access and Innovation
and Development
- Human Biology**
Genetic Make-up, Natural Immunity

Health System
Financing, Human and Material Resources, Coverage,
Organization, Provision

**Poor Living
Conditions**

**Environmental
Risks and
Hazards**

**Life
Changes Style &
Behavioral**

**Life Expectancy
Morbidity
Mortality**

