

SIMPOSIO REGIONAL OPS/OMS

"Agua y Saneamiento en la Agenda 2030: La Ruta para el Desarrollo Sostenible"

Cartagena, Colombia

18-20 Agosto 2016

Cambios climáticos

Daniel F. Buss

Advisor, Global Environmental Changes



**Pan American
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Organization**



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**World Health
Organization**
Americas

“The causes of the causes” – means of production and consumption

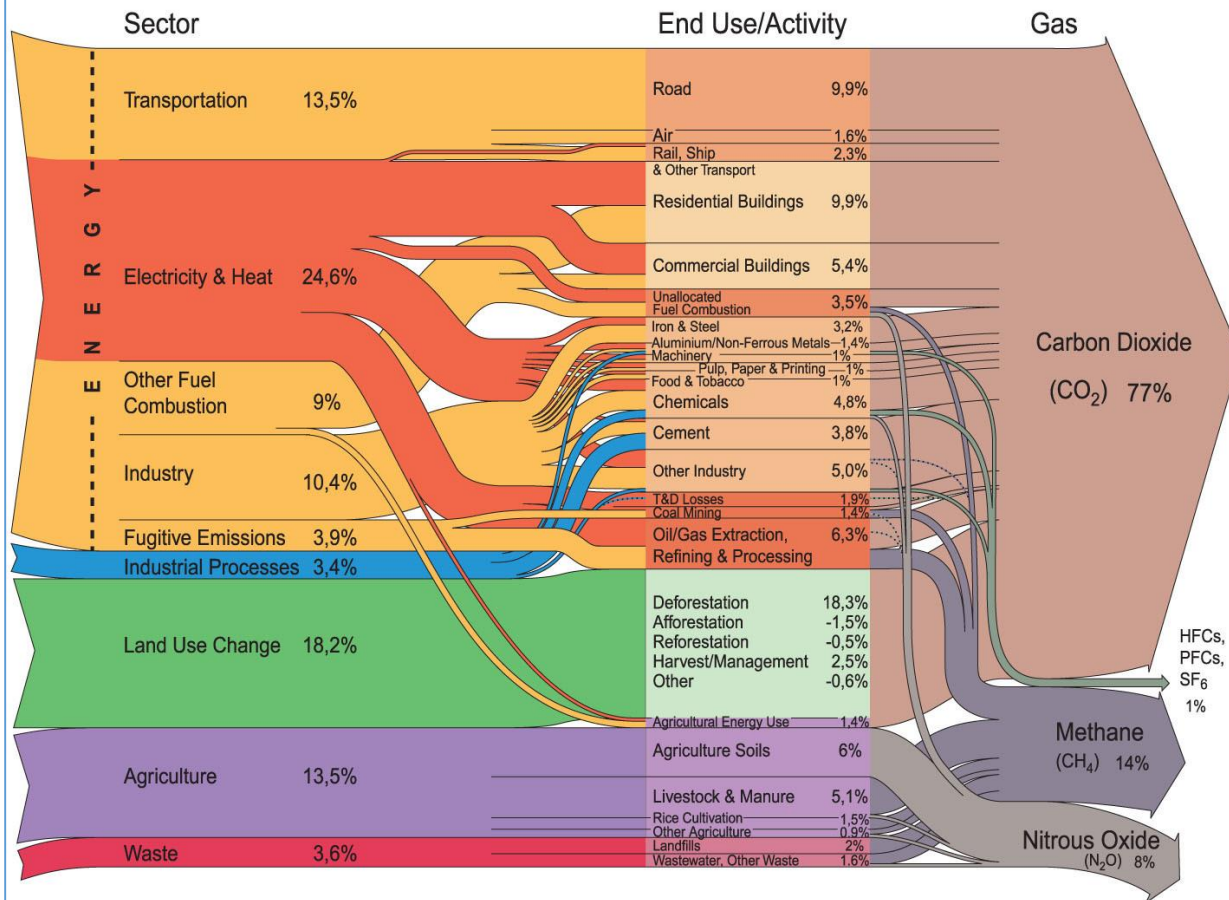


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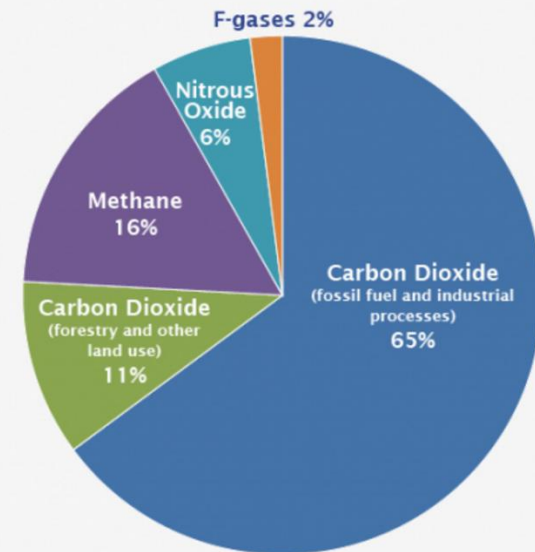
World Greenhouse gas emissions by sector



All data is for 2000. All calculations are based on CO₂ equivalents, using 100-year global warming potentials from the IPCC (1996), based on a total global estimate of 41 755 MtCO₂ equivalent. Land use change includes both emissions and absorptions. Dotted lines represent flows of less than 0.1% percent of total GHG emissions.

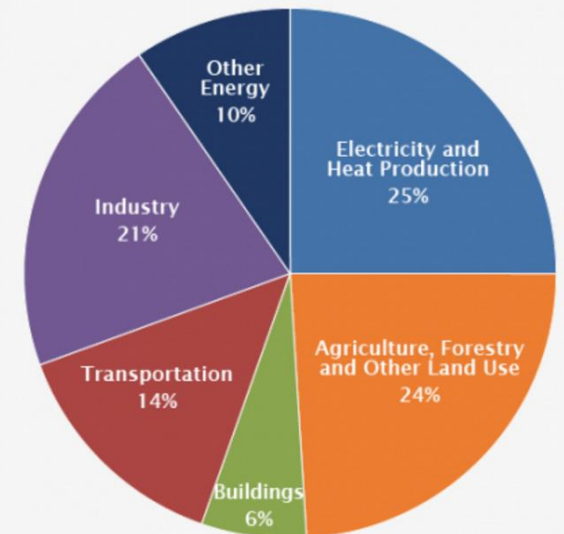
Source: World Resources Institute, Climate Analysis Indicator Tool (CAIT), Navigating the Numbers: Greenhouse Gas Data and International Climate Policy, December 2005; Intergovernmental Panel on Climate Change, 1996 (data for 2000).

Global Greenhouse Gas Emissions by Gas



Source: [IPCC \(2014\)](#) ^{Exit} based on global emissions from 2010. Details about the sources included in these estimates can be found in the [Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change](#). ^{Exit}

Global Greenhouse Gas Emissions by Economic Sector



Source: [IPCC \(2014\)](#); ^{Exit} based on global emissions from 2010. Details about the sources included in these estimates can be found in the [Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change](#). ^{Exit}

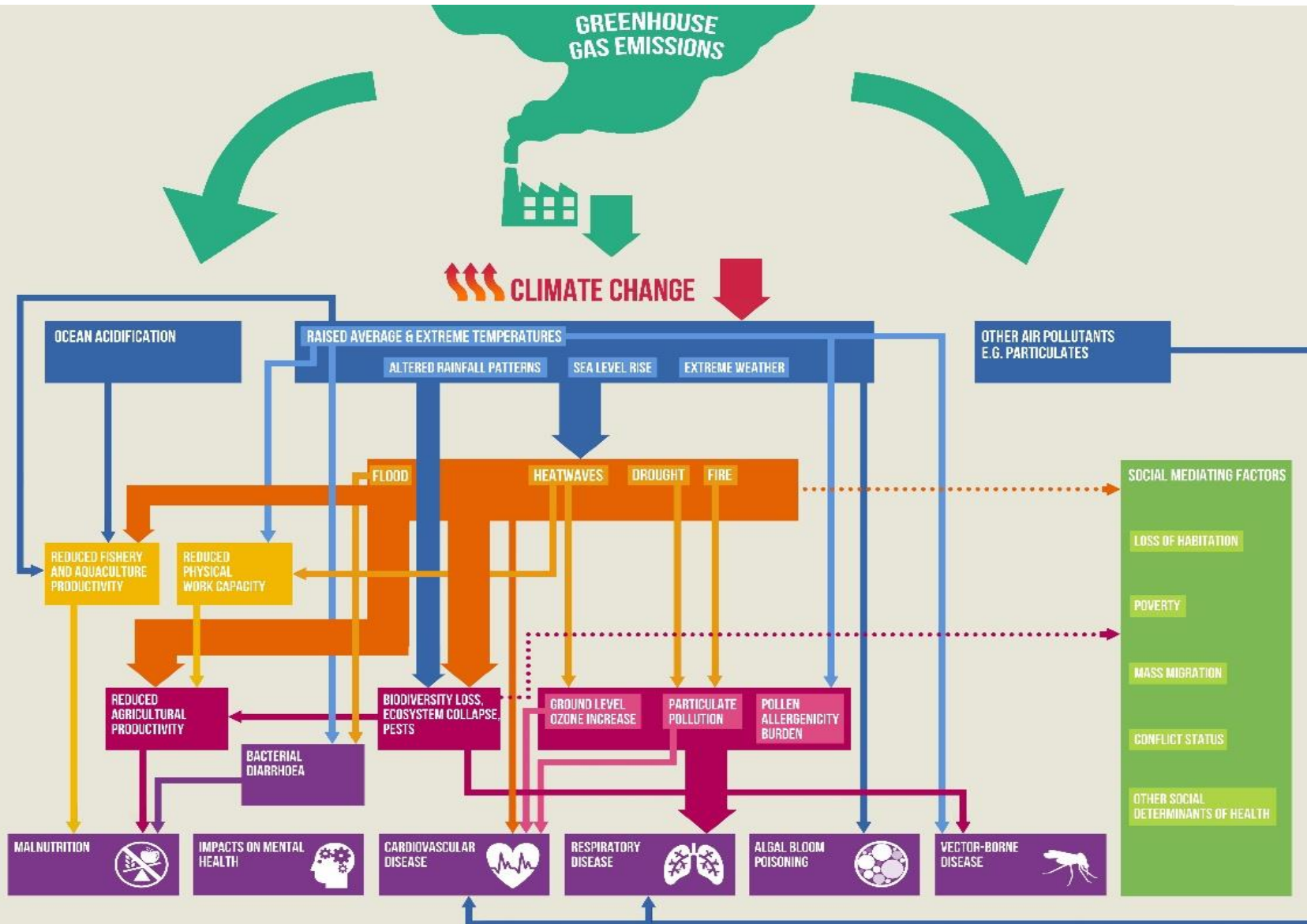
Health and climate change



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Health and climate change: policy responses to protect public health

Hick Watts, MA, Prof W Neil Adger, PhD, Paolo Agnoletti, PhD, Jason Blackstock, PhD, Prof Peter Byass, PhD, Wenjia Cai, PhD, Sarah Chaytor, MA, Tim Colbourne, PhD, Prof Mat Collins, PhD, Adam Cooper, PhD, Prof Peter M Cox, PhD, Joanna Depledge, PhD, Paul Drummond, MSc, Prof Paul Ekins, PhD, Victor Galaz, PhD, Delta Grace, PhD, Prof Hilary Graham, PhD, Prof Michael Grubb, PhD, Prof Andy Haines, FMedSci, Ian Hamilton, PhD, Alasdair Hunter, PhD, Xujia Jiang, PhD, Houxian Li, PhD, Ilan Kelman, PhD, Lu Liang, PhD, Melissa Lett, MSc, Prof Robert Lowe, PhD, Prof Yong Luo, PhD, Prof Georgina Mason, DPhil, Prof Mark Maslin, PhD, Maria Nilsson, PhD, Prof Tadj Oreszczyn, PhD, Steve Pye, MSc, Tara Quinn, PhD, My Svendsdotter, MSc, Sergey Vonevsky, PhD, Koko Warner, PhD, Prof Bing Xu, PhD, Jun Yang, PhD, Yongyuan Yin, PhD, Chaoqing Yu, PhD, Prof Qiang Zhang, PhD, Prof Peng Gong, PhD, Prof Hugh Montgomery, MD, Prof Anthony Costello, FMedSci

THE LANCET

Volume 373 Number 9676 Pages 1619-1734 May 16-22, 2009 www.thelancet.com

"Climate change is the biggest global health threat of the 21st century."

See The Lancet Commissions page 1693

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 Compensation for brain drain from developing countries See page 1685
 Amnesia from cancer trials? See page 1672
 RECORDS: Risks in brain for chronic hepatitis after total knee arthroplasty See page 1673
 TACT: sequential docetaxel as adjuvant chemotherapy for early breast cancer See page 1682
 Management of health effects of climate change See page 1693

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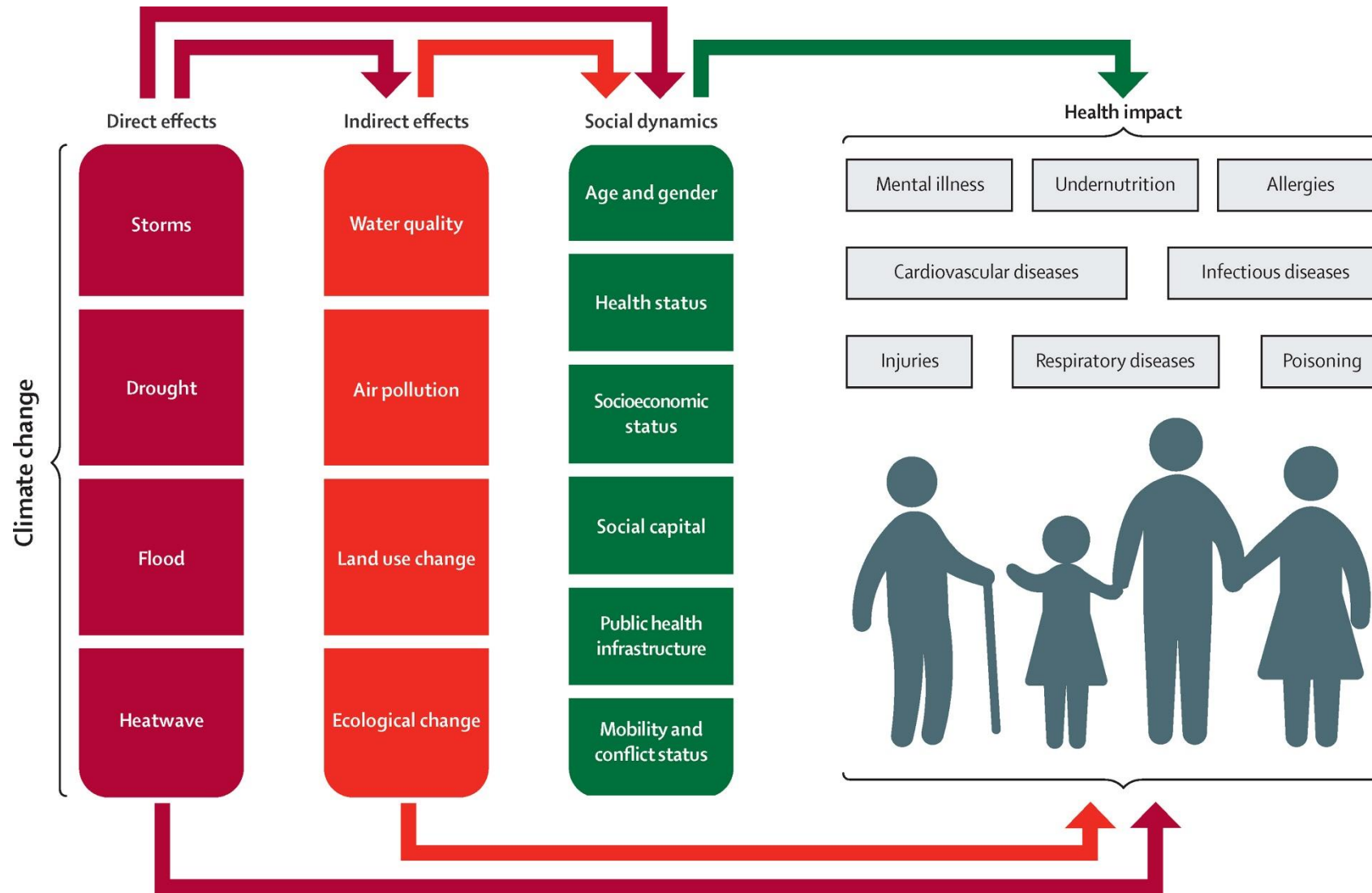
Health and climate change



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Health and climate change



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In the next five years, governments must:

- 1) ***Invest in climate change and public health research, monitoring and surveillance***
- 2) ***Rapid phase-out of coal-fired plants to protect cardiovascular and respiratory health***
- 3) ***Scale-up financing and implementing climate resilient health systems***
- 4) ***Encourage a transition to cities that support and promote lifestyles which are healthy for the individual and for the planet***, including highly energy efficient buildings; providing ease of low-cost active transportation; and increasing access to green spaces. Such measures improve adaptive capacity, whilst also reducing urban pollution, greenhouse gas emissions, and rates of cardiovascular disease, cancer, obesity, diabetes, mental illness and respiratory disease.

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Health and climate change: policy responses to protect public health

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“Achieving a decarbonized global economy and securing the public health benefits it offers is no longer primarily a technical or economic question – it is now a political one”

UNFCCC: The “Paris Agreement”



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Agreed unanimously by 195 countries

180 signatures* (175 in the opening day)

22 ratifications* (8 from the Region of the Americas: Barbados, Belize, Grenada, Guyana, Peru, St Kitts & Nevis, St Lucia, St Vincent & the Grenadines)

*Status at 17-Aug-2016

→ Ratifications account in total for 1.08% of the total global greenhouse gas emissions (need at least 55 Parties accounting in total for at least 55% of global emissions to enter into force)

Preamble clearly show health + climate change link

1. Tackling the root causes of climate change, by reducing emissions → health benefits
2. Health is a precondition and an outcome of ALL Sustainable Development Goals

Some important messages to consider:

Health sector: only 3-5% of budget goes to prevention, the rest is dedicated mainly to treatment/response

Outcomes from joint activities with other sectors, especially regarding infrastructure (cities, transportation, energy...)

Focus on interventions that will address multiple health outcomes (+ outcomes in other sectors) and measure them with the SDG indicators

Local level will have a key role (e.g. forum of mayors)

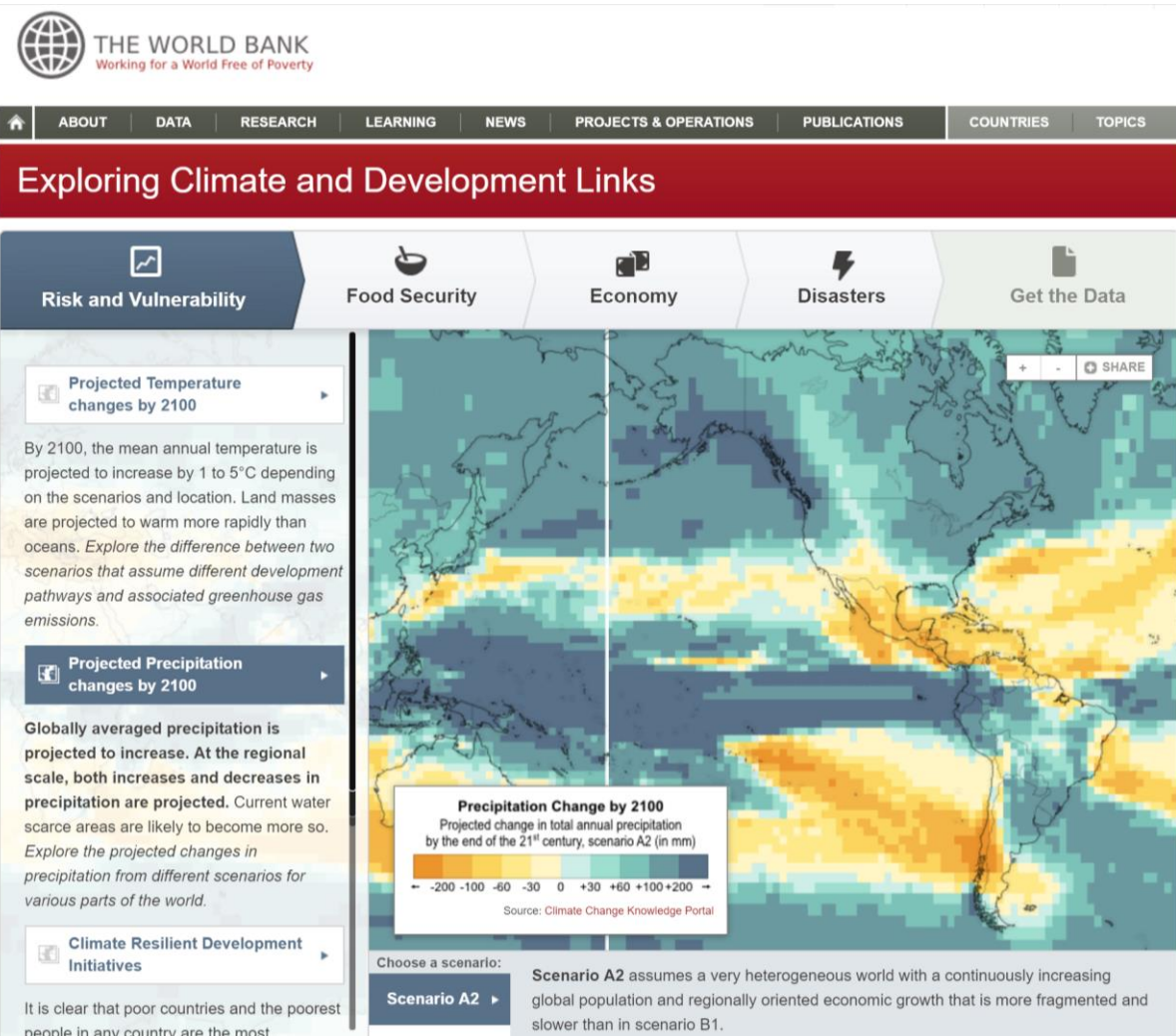
Effects of climate change: changes in precipitation pattern



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Floods

- ↑Landslides
- ↑Some water-borne diseases
- ↑Displacements



<http://sdwebx.worldbank.org/climateportal/>

Droughts

- ↓Food production
- ↓Water resources
- ↓Water quality
- ↑Displacements

Effects of climate change: extreme events

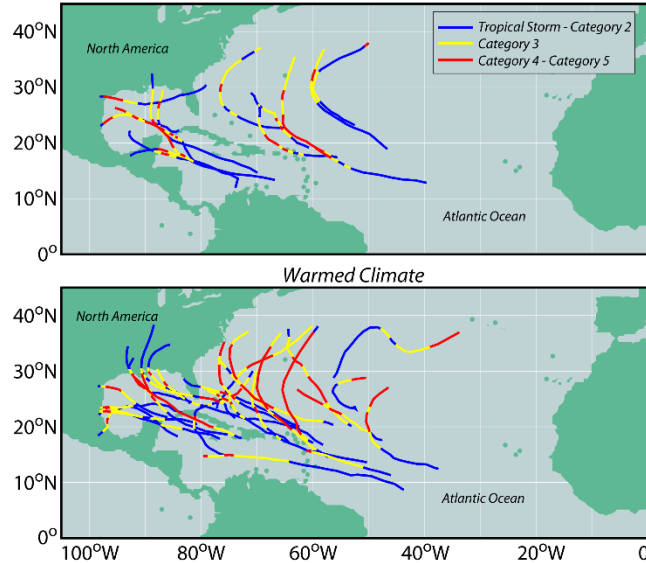


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Modeled Category 4 & 5 Hurricane Tracks
Present Climate



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SHARE **REPORT**

Modeled Impact of Anthropogenic Warming on the Frequency of Intense Atlantic Hurricanes

Morris A. Bender^{1,2}, Thomas R. Knutson¹, Robert E. Tuleya², Joseph J. Sirutis¹, Gabriel A. Vecchi¹, Stephen T. Garner¹, Isaac M. Held¹

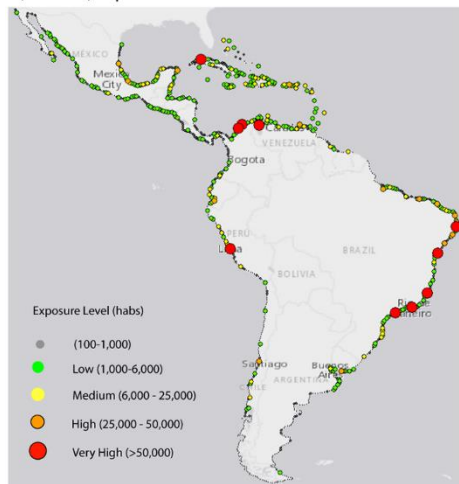
+ Author Affiliations
*To whom correspondence should be addressed. E-mail: Morris.Bender@noaa.gov

Science 22 Jan 2010;
Vol. 327, Issue 5964, pp. 454-458
DOI: 10.1126/science.1180568



Effects of climate change: sea-level rise

a) RCP4.5, Pop. 2090



b) [RCP8.5] - [RCP4.5]



c) [RCP4.5, Pop. 2090] - [RCP4.5, Pop. 2011]



An estimate of up to 4 million inhabitants to be displaced due to sea-level rise in LAC by 2090 (RCP8.5)

Reguero BG, Losada IJ, Díaz-Simal P, Méndez FJ, Beck MW (2015) Effects of Climate Change on Exposure to Coastal Flooding in Latin America and the Caribbean. PLoS ONE 10(7): e0133409. doi:10.1371/journal.pone.0133409
<http://journals.plos.org/plosone/article?id=info:doi/10.1371/journal.pone.0133409>

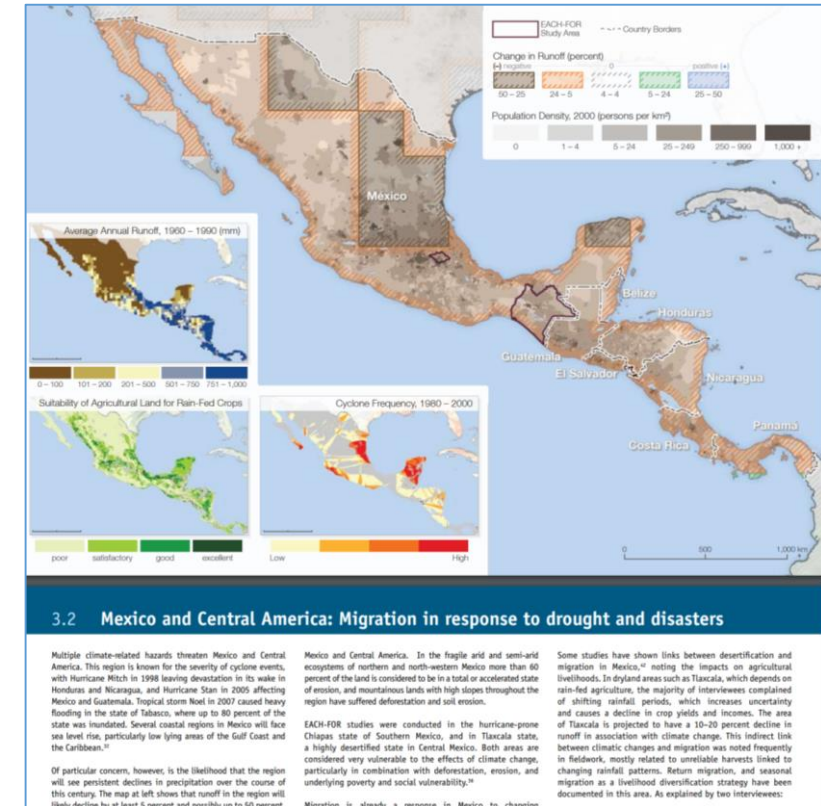
Climate-related disasters: adaptation and mitigation



Nearly 7 in 10 hospitals in Latin America and the Caribbean are located in disaster-prone areas.

SMART Hospitals are both Safe and Green. PAHO toolkit
<http://www.paho.org/disasters/index.php>

With the changing climate, more disasters are expected in the region



Mapping climate-related displacements in the Americas

Climate change mitigation: green urban spaces

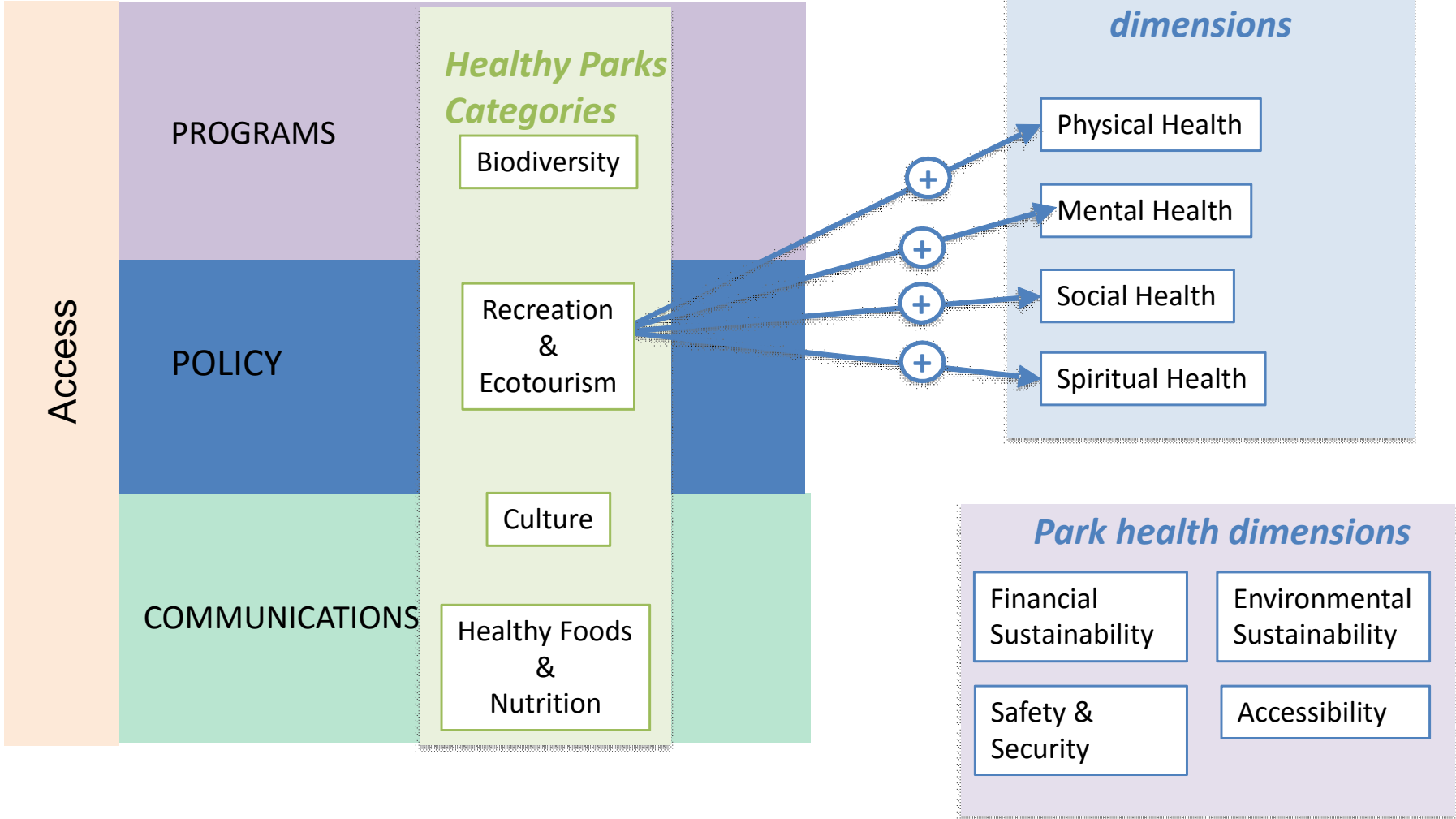


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Healthy Parks Tool



Health and climate change: Education



The screenshot shows the VCPH website interface. At the top, there are logos for the Pan American Health Organization, World Health Organization (Regional Office for the Americas), and the Virtual Campus for Public Health. Below the logos is a navigation menu with items like 'VCPH Portal', 'What is the Campus?', 'Virtual Classroom', 'Open Resources', 'Virtual Experiences', 'Virtual Clinic', 'PAHO', and 'WHO'. The main content area features a course titled 'Curso de Autoaprendizaje Cambio Climático y Salud' with a colorful graphic of people and a globe. To the left, there are several informational boxes: 'Bienvenida' (Welcome), 'Mesa de Ayuda' (Help Desk), and 'El CVSP en las Redes Sociales' (CVSP on Social Networks). To the right, there are sections for 'Search forums', 'Upcoming events', and 'Recent activity'.

<https://mooc.campusvirtualesp.org/course/>



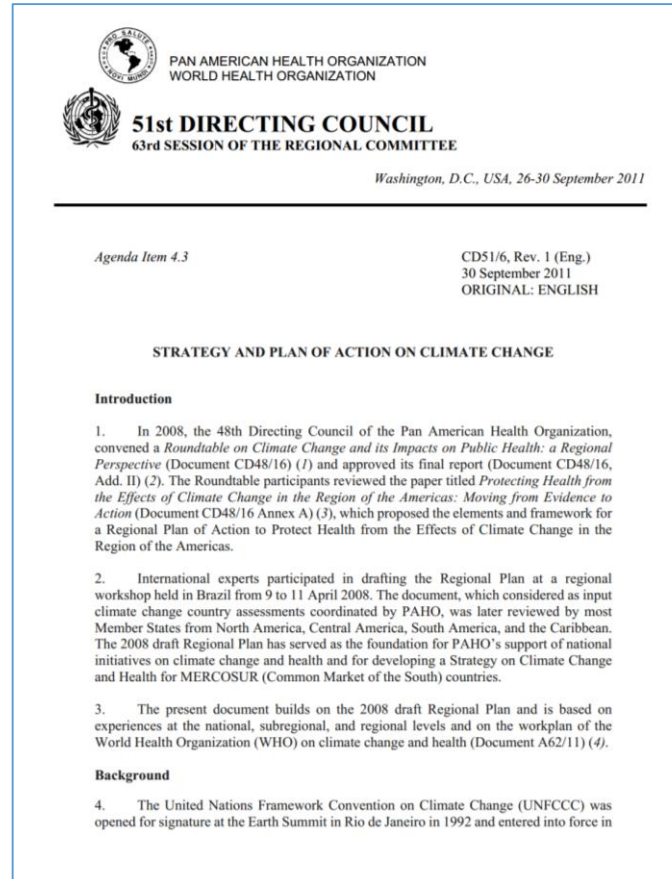
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Adaptation and mitigation: a long way to go...



The image shows the cover page of a document from the Pan American Health Organization (PAHO) and World Health Organization (WHO). It features the logos of both organizations at the top left. The text reads: 'PAN AMERICAN HEALTH ORGANIZATION WORLD HEALTH ORGANIZATION', '51st DIRECTING COUNCIL 63rd SESSION OF THE REGIONAL COMMITTEE', and 'Washington, D.C., USA, 26-30 September 2011'. Below this, it lists 'Agenda Item 4.3' and 'CD51/6, Rev. 1 (Eng.) 30 September 2011 ORIGINAL: ENGLISH'. The main title is 'STRATEGY AND PLAN OF ACTION ON CLIMATE CHANGE'. Under 'Introduction', there are four numbered points: 1. In 2008, the 48th Directing Council of the Pan American Health Organization, convened a Roundtable on Climate Change and its Impacts on Public Health: a Regional Perspective (Document CD48/16) (1) and approved its final report (Document CD48/16, Add. II) (2). The Roundtable participants reviewed the paper titled Protecting Health from the Effects of Climate Change in the Region of the Americas: Moving from Evidence to Action (Document CD48/16 Annex A) (3), which proposed the elements and framework for a Regional Plan of Action to Protect Health from the Effects of Climate Change in the Region of the Americas. 2. International experts participated in drafting the Regional Plan at a regional workshop held in Brazil from 9 to 11 April 2008. The document, which considered as input climate change country assessments coordinated by PAHO, was later reviewed by most Member States from North America, Central America, South America, and the Caribbean. The 2008 draft Regional Plan has served as the foundation for PAHO's support of national initiatives on climate change and health and for developing a Strategy on Climate Change and Health for MERCOSUR (Common Market of the South) countries. 3. The present document builds on the 2008 draft Regional Plan and is based on experiences at the national, subregional, and regional levels and on the workplan of the World Health Organization (WHO) on climate change and health (Document A62/11) (4). Under 'Background', there is one numbered point: 4. The United Nations Framework Convention on Climate Change (UNFCCC) was opened for signature at the Earth Summit in Rio de Janeiro in 1992 and entered into force in

Challenges: from 189 national climate change adaptation plans, only 15% explicitly mention health

Opportunities: PAHO can be the first WHO Region to have a plan on Climate Change, incorporating both the SDGs and the Paris Agreement

Health in the Americas 2017: Section devoted to Climate change