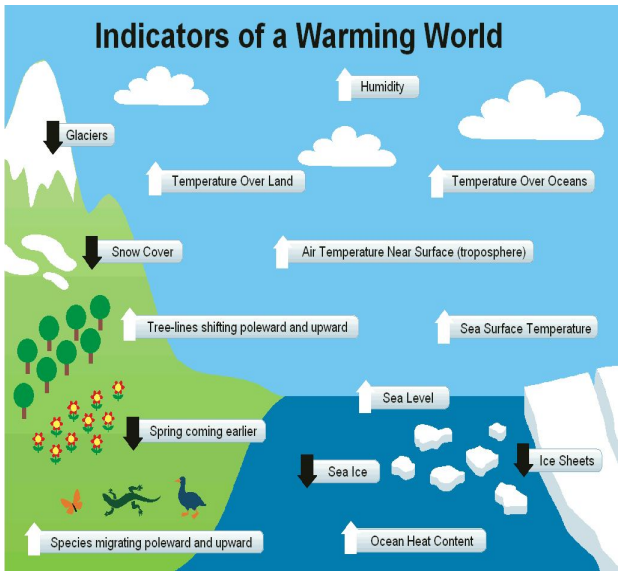
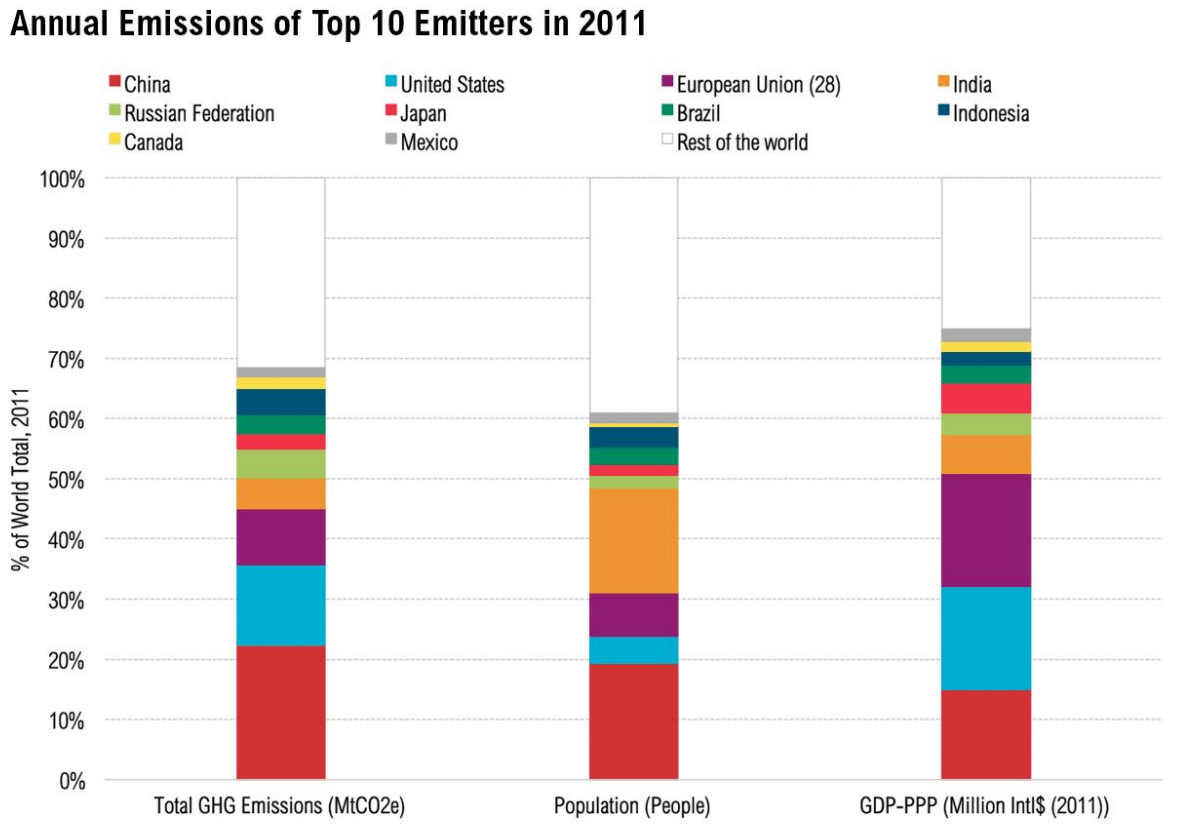


Climate Change

There is a very strong consensus in the scientific community that climate change is caused and exacerbated by human activity. The impacts have been and will continue to be devastating, more so if we do not take action to decrease the emission of greenhouse gases (GHGs).

Key greenhouse gases emitted by human activities:

- **Carbon dioxide (CO2)** - Fossil fuel use and land use
- **Methane (CH4)** - Agricultural activities, waste management, and energy use
- **Nitrous oxide (N2O)** - Agricultural activities, such as fertilizer use
- **Fluorinated gases (F-gases)** - Industrial processes, refrigeration, and the use of a variety of consumer products contribute to emissions of F-gases, which include hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF6).



http://bit.ly/11SMpjA

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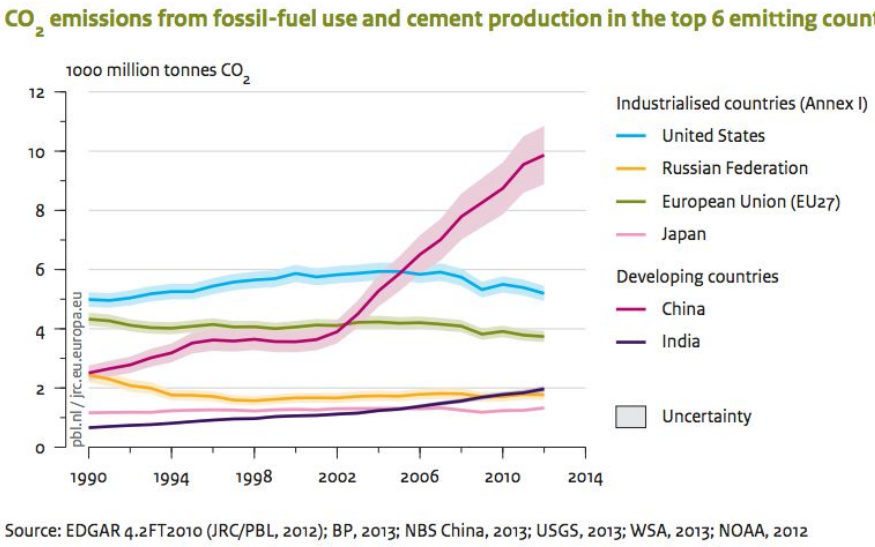

IMPACTS:

- Reduced water holding capacity of the atmosphere, greater variability in streamflow resulting in decreased water supply, and decreasing water levels
- Decreased food security: drought, desertification and decrease in agricultural production due to soil erosion, over-extraction of groundwater, the buildup of pesticides and herbicides; IPCC projects a 50% loss in rain-fed agricultural yields from 2000 to 2020 in Africa.
- Rising ocean levels and loss of land
  Secretary General report "Climate Change and its possible security implications" addressed the possible outcome of statelessness from rising sea levels
- Ocean acidification (known as climate change's evil twin)
  - According to UNESCO, Current carbon dioxide emissions could make the oceans 150% more acidic by 2100
  - According to the Conference on Sustainable Development, 2.6 billion people currently rely on fisheries for a main part of their daily nutrition.
- Increase in frequency and severity of natural disasters
- Salinization and depletion of freshwater sources from agriculture: irrigation already makes up 90% of global freshwater use.
- Disease: warmer, wetter climates are lovely for bacteria and insects!
- Extinction and loss of biodiversity: although fossil records from previous warming periods have shown an increase in the number of species on Earth, the current rate of extinction is unprecedented

Mission Statement: To provide leadership and encourage partnership in caring for the environment by inspiring, informing, and enabling nations and peoples to improve their quality of life without compromising that of future generations."

Mandate: "To be the leading global environmental authority that sets the global environmental agenda, that promotes the coherent implementation of the environmental dimensions of sustainable development within the United Nations system and that serves as an authoritative advocate for the global environment."

4 components:

1. UN Environmental Assembly (all Member States)

⇐Ms. Oyuun Sanjaasürengiin (Mongolia), President

2. Secretariat
3. Environment Fund (all voluntary contributions)
4. Committee of Permanent Representatives

KEY FACTS:

- Headquarters in Nairobi, Kenya
- Reports directly to UNGA/ECOSOC
- Secretariats for the *Convention on International Trade of Endangered Species of Wild Flora and Fauna, Convention on Migratory Species of Wild Animals, Convention on Persistent Organic Pollutants, Framework Convention on Climate Change, Convention on Desertification, Regional Seas Convention, Rotterdam Convention on Informed Consent*
- 1987 Montreal Protocol of the Vienna Convention for the Protection of the Ozone Layer--hailed as the most successful international environmental policy EVER

UNEP timeline

1972 – UNEP established after UN Conference on the Human Environment Stockholm Assembly adopted ***Resolution 2997*** on December 15
Created the:

- UNEP Governing Council, composed of 58 nations, responsible for assessing the state of the global environment, establishing UNEP's programme priorities, and approving budget;

- the UNEP Secretariat, with its headquarters in Nairobi, Kenya, headed by an Executive Director, with the rank of UN Under-Secretary-General; and

- a voluntary Environment Fund to finance UNEP's environmental initiatives, to be supplemented by trust funds and funds allocated by the UN regular budget.

1988 – The World Meteorological Organization and UNEP established the Intergovernmental Panel on Climate Change (IPCC) to assess information related to human induced climate change
1992 – *Framework Convention on Climate Change* (UNFCCC) established
1997 – Signing of the *Kyoto Protocol* by the members of the UNFCCC ***(US does not ratify)***
2000 – *Millennium Declaration*: environmental sustainability becomes MDG
2001 – *Third IPCC Assessment Report* details the extent of human-induced global warming
2005 – *Kyoto Protocol* enters into force
2011--Canada withdraws from Kyoto Protocol

2012 – **UNGA approves expanding the Governing Council from 58 rotating members to universal membership of the 193 UN member states. The new body is named the UN Environment Assembly of the UNEP**
Release of the medium term strategy plan (2014-2017)

- **Main goal: to decrease carbon emissions** globally and promote the use of sustainable technologies in order to improve and maintain the state of the world's environments

2013--Intergovernmental Panel on Climate Change, fifth assessment, says climate scientists are 95 percent certain that "human influence has been **the dominant cause**" of global climate change.

2014

- UNEP introduced major plans for a blue-green economy in SIDS
- UNEP budget increase approved by the Secretary-General
- **JUNE – FIRST SESSION OF UNEA**
- **DECEMBER -- Lima Declaration: draft language for new legally-binding treaty**

Climate Change Technology Transfers

What is CC technology?

Mitigation technology can be applied in the process of minimizing GHG emissions (UNDP)

- Solar, wind, geothermal, hydropower
- Hybrid/electric cars

Adaptation technology can be applied in adapting to climate variability and change (UNDP)

- Design & planning of infrastructure
- Water management
- Desalination

What are CC tech transfers?

"the flows of know-how, experience and equipment for mitigating and adapting to climate change among different stakeholders such as governments, private sector entities, financial institutions, non-governmental organizations and research/education institutions" (IPCCC)

3 main ways technologies developed in one country make it to another country:

Trade, e.g. energy company in SVG buys wind mills from US to install them on the island.

FDI, e.g. German company invests in new solar panel manufacturer in India.

Licensing, e.g. a Chinese company buys the rights to produce a product used in desalination from Israeli company

So…what's the problem?

"Green" products are expensive and trade assumes technical capacity of the receiving country leaves little for independence. FDI depends on political stability, economic growth, and technological capacity of developing countries. Licensing is expensive!

Also...technological products are heavily protected by the TRIPS agreement. What's that, you ask? It's the...

Agreement on Trade-Related aspects of Intellectual Property rightS

(thats the only way I could get the acronym to work out) and it is the ***most important and powerful multilateral instrument for the globalization of IP laws***.

- Sets minimum standards for IP regulation
- Specifies enforcement procedures, remedies, and dispute resolution
- Ratification is COMPULSORY for WTO members

TRIPS was lobbied for mostly by the US and other developed states to protect their technological industries. Stronger IP regulation has benefitted both developed and middle income states, creating safer environments for companies to produce and share technologies. However, least developed countries now have an even harder time acquiring technologies. FDI is already weak in these countries and LDCs play marginal roles in the market for high tech goods. License-based strategies to acquire technology to compliment or replace FDI are ineffective for lack of technological and legal capabilities of LDCs.

UN Framework for CC technology transfers

Special Climate Change Fund

Created in 2001 to address the specific needs of developing countries under the UNFCCC
Adaptation is the main priority, but the fund can be used to support technology transfer and capacity building.
Administrated by the World Bank and the GEF

UNEP Technology Mechanism

Established 2010 by Cancun Agreements (UNFCCC)
1. Climate Technology Centre and Network
   - 20 members total (companies, universities, etc.)
   - Budget: $ 32.4 million

2. Technology Executive Committee

Global Environment Facility *Poznan Strategic Program on Technology Transfer*

1. Technology Needs Assessment--done by states
2. Pilot projects--developed & financed by GEF
3. Events & publications by the GEF
4. Support through CTCN, PPPs, TNAs, and a Supporting Institution for Tech Transfer

World Bank Green & International Finance Corporation Bonds Program

Fixed income, liquid financial instruments used to raise funds dedicated climate change mitigation and adaptation--like government bonds that investors can buy and be guaranteed a profit.
Since 2008, $8 billion in green bonds issued by the WB and $3.7 billion issued by IFC

2011 UN Conference on the Least Developed Countries *Istanbul Programme of Action*

Proposed a Technology Bank and a Science, Technology, and Innovation (STI) mechanism (include a Patents Bank that might get around some of the provisions of the TRIPS agreement)
However, this part of the draft language for a new treaty was in Option 1 of 3, where 2 and 3 address technology transfers minimally or not at all.

Open Working Group for SDGs--2014 Proposal

Goal 17.8: fully operationalize the technology bank and science, technology and innovation capacity building (STICB) mechanism for LDCs by 2017 and enhance the use of enabling technology, in particular information and communications technology