### Climate Change: Implementing the Paris Agreement

#### Xavier Labandeira

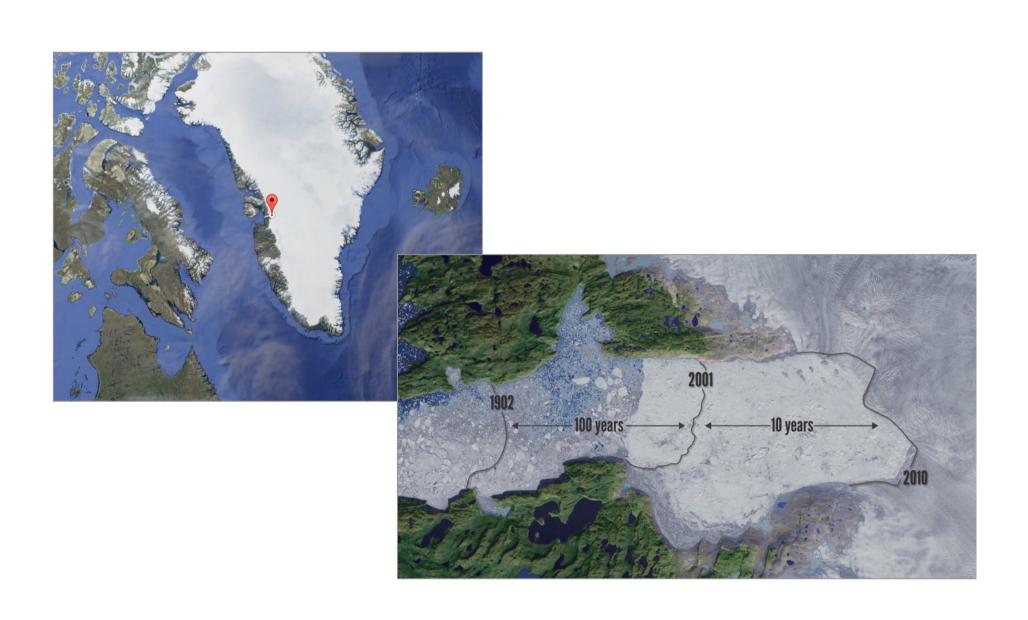
University of Vigo and Economics for Energy

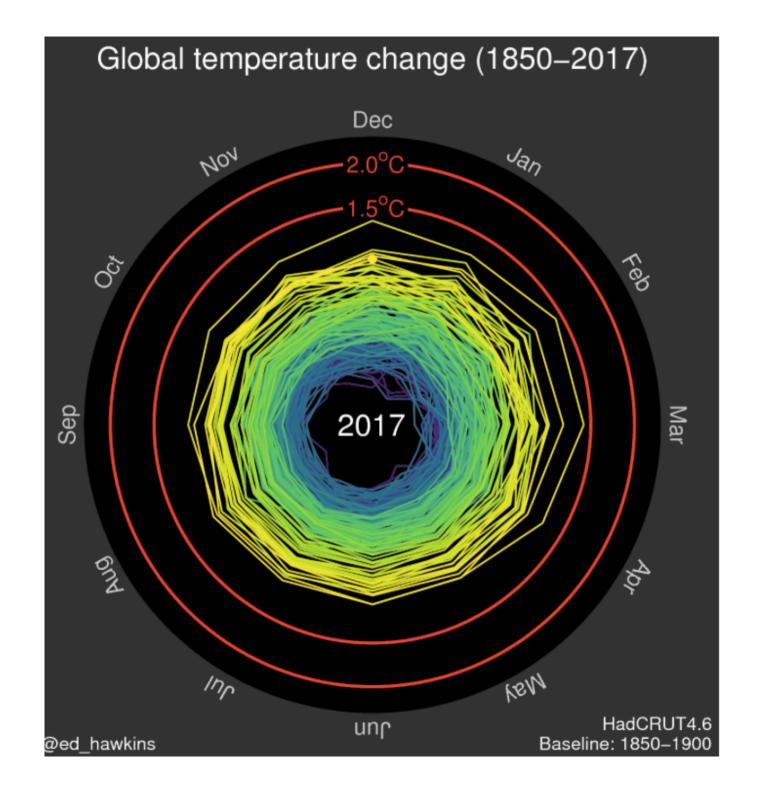
Postgraduate Think-tank
XIX Seminario Anual de Investigación CIES
Lima, 5 November 2018

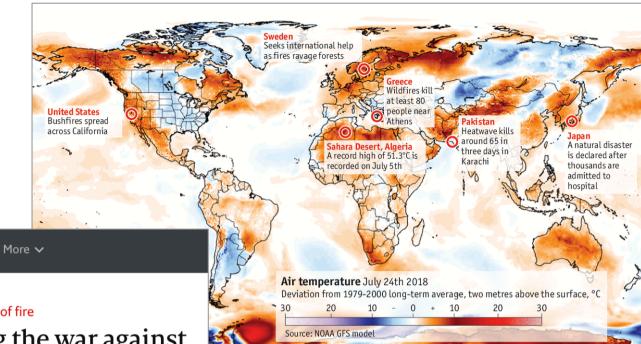
economics for energy



Chasing Ice, 2012







Current edition

The Economist

In the line of fire

# The world is losing the war against climate change

Rising energy demand means use of fossil fuels is heading in the wrong direction



The Economist, 28 julio 2018 (Heat is causing problems across the world)

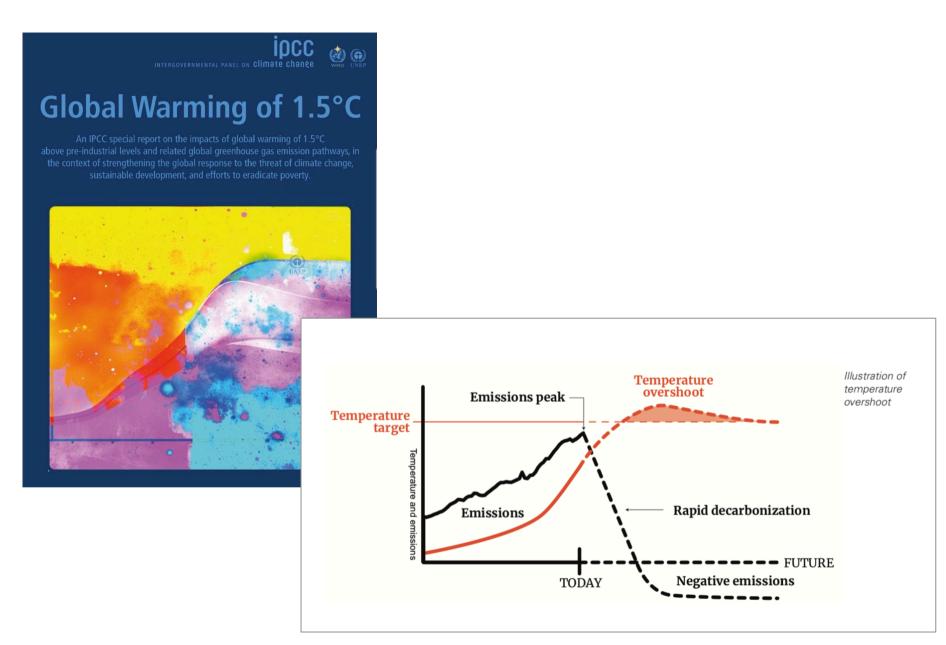
The Economist, 2 agosto 2018

### **Climate Change**

- Scientific foundations
  - The knowns and unknowns
- Impacts and Adaptation
- Constraints for mitigation
  - Global problem
    - "Free riding"
    - Equity aspects
  - Intergenerational issues

#### **Tackling Climate Change**

- UN setting: FCCC, IPCC
- Paris Agreement
  - Overall objective: 2°C, or 1.5°C
  - Bottom up: NDCs + flexibility
    - National objectives
    - Mitigation policies
    - Side payments?



#### **Mitigation**

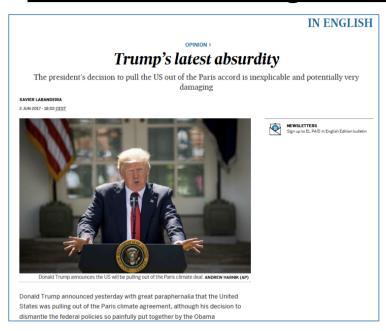
- Mostly energy-related
  - Suppy: decarbonized sources
  - Demand: energy efficiency
- But not only: land-use, cement, etc.
- Important role of public policies:
  - Planning, conventional regulation, prices.
  - Promoting clean technologies
- Distributional impacts, competition…

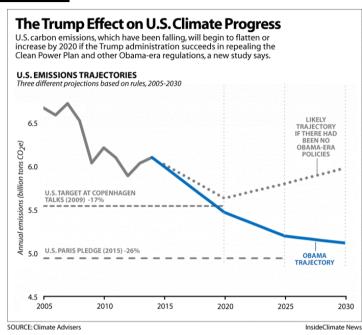
### **EU Climate Policy**

- In place since the early 1990s
- Growing in ambition: -40% GHG for 2030 wrt 1990, -45% (EC suggestion); -55% (European Parliament, October 2018)
- Carbon prices in the core of the system (EU ETS)
- Supplemented (affected?) by energy efficiency and renewable policies
- Significant constraints: competitiveness concerns, internal discrepancies...
- A prototype for the world?



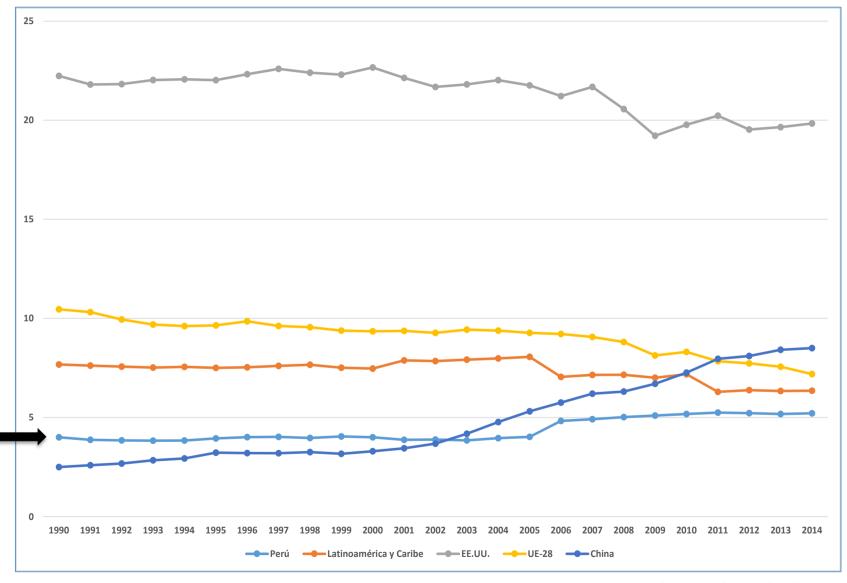
#### **Shadows and light in the U.S**



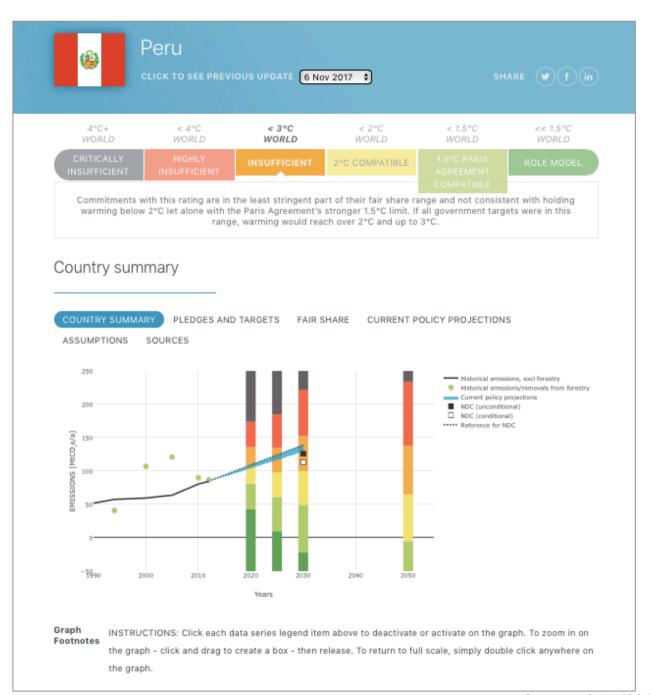




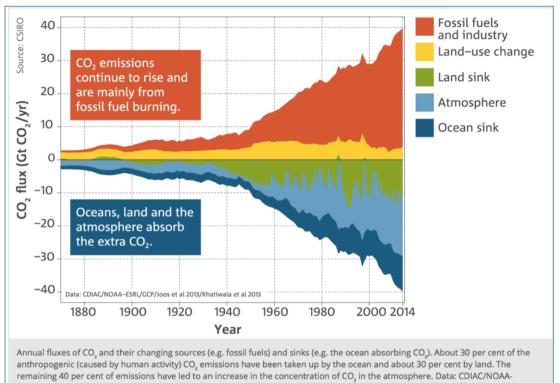
#### **Energy-related CO<sub>2</sub> emissions**



Source: CAIT (2018)

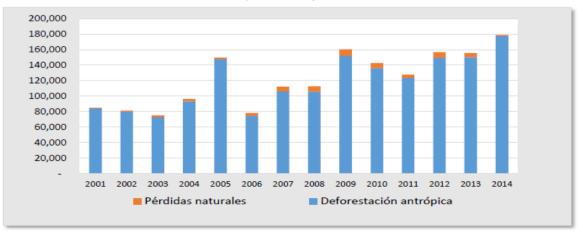


Source: CAT (2017)



ESRL/GCP/Joos et al., 2013 and Khatiwala et al., 2013. @CSIRO

#### Deforestation, Peru



Source: Environment Ministry (2015)

#### **Discussion**

- Effectiveness of the Paris Agreement: 2°C, 1.5°C
- Has EU climate policy been useful in global terms?
- Should the EU go ahead without the US (and China)?
- What are the key priorities for Peru in mitigation?
  - Land use
  - Energy: more efficiency plus wind?
  - Carbon prices?

## **Thanks**

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