

## **Good Economics for warmer times**

Massachusetts Institute of Technology

Esther Duflo



## US 'under no circumstances' will pay climate reparations, Kerry says

Reuters

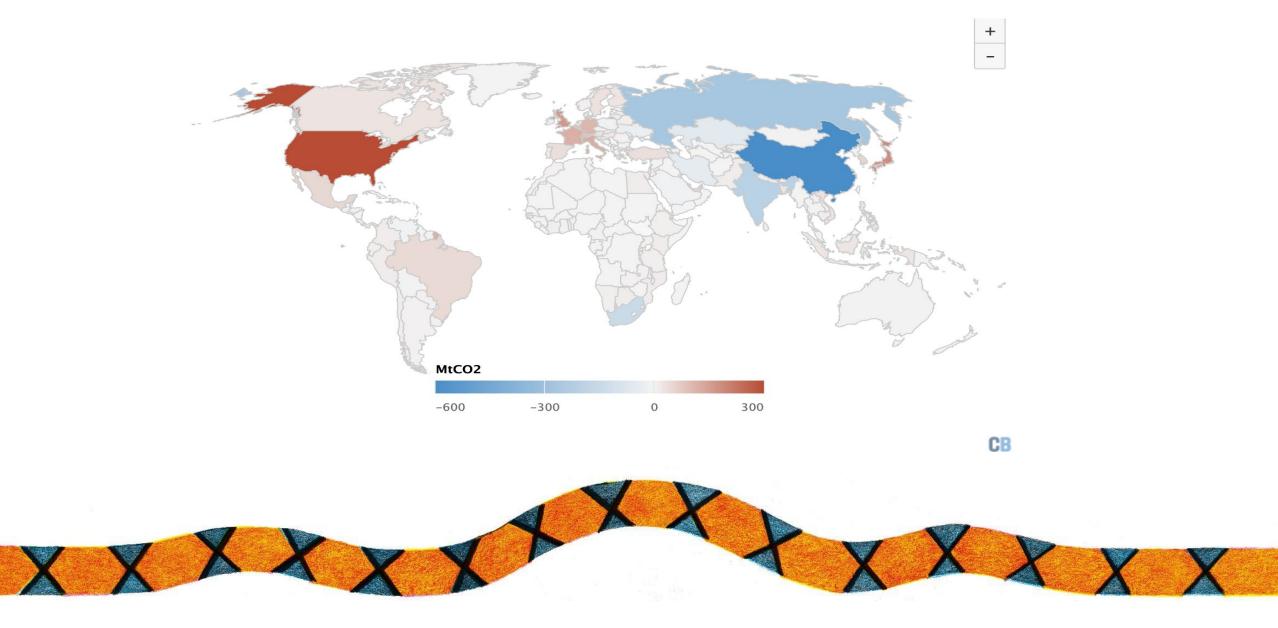
July 13, 2023 1:15 PM EDT · Updated 4 months ago





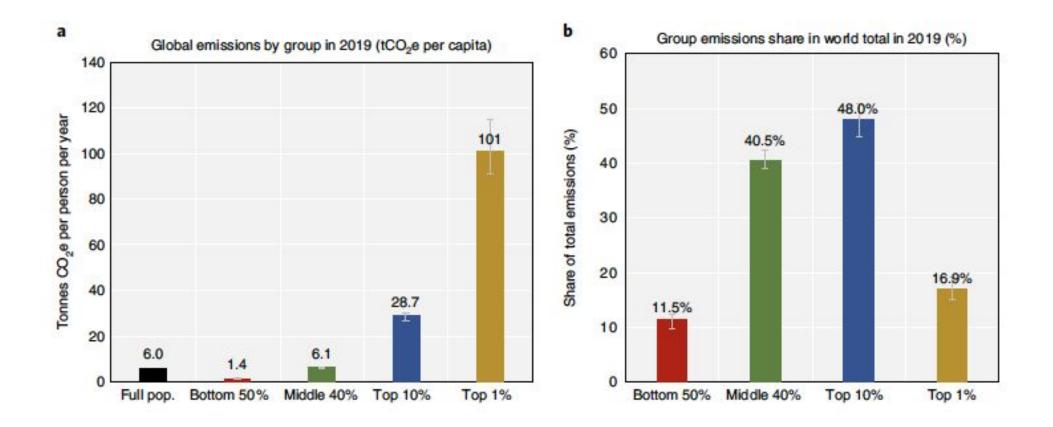
 It is not about past responsibility only.
The emissions responsible for climate change are mainly due to **the current behavior** of rich citizen, most of which are in rich countries

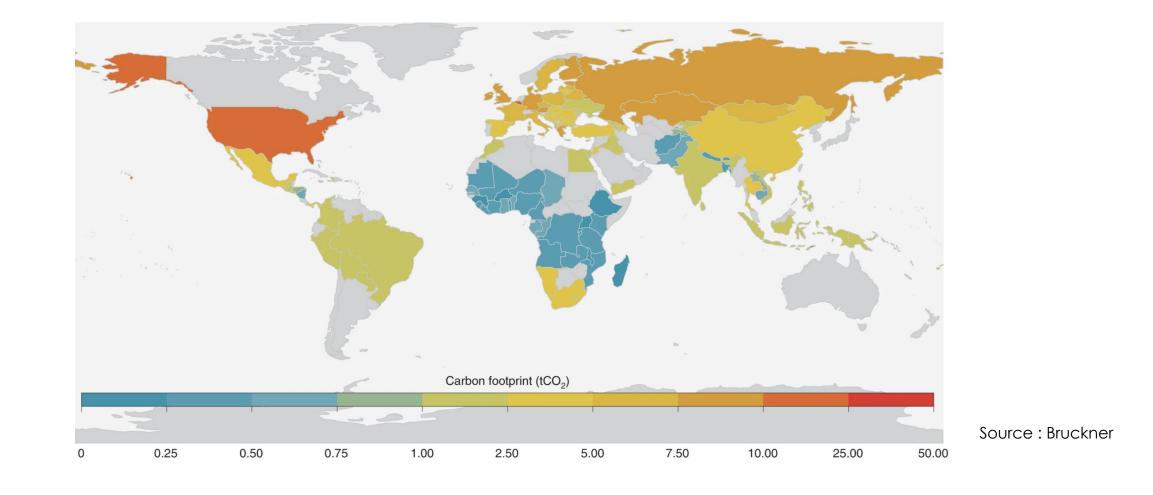




China and India are net CO2 exporter, USA huge importer

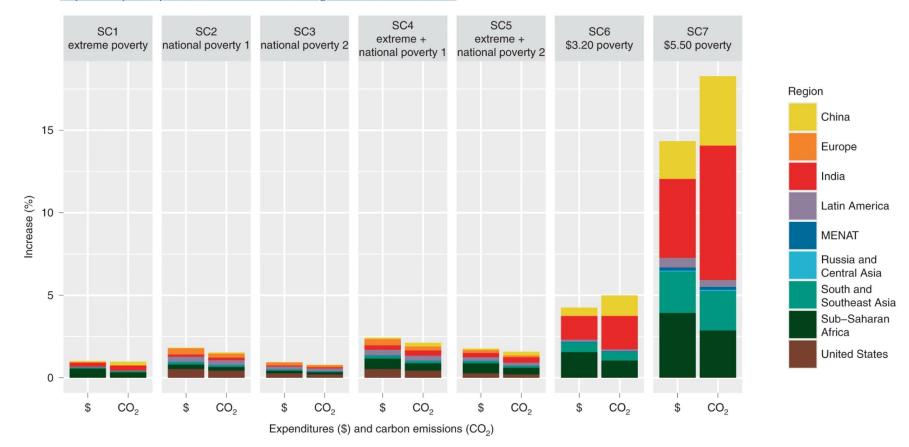
## Chancel: The 10-50 rule: 10% of the highest polluters worldwide are responsible for almost 50% of global emission.







Bruckner find similar results : High polluters mainly live in rich countries



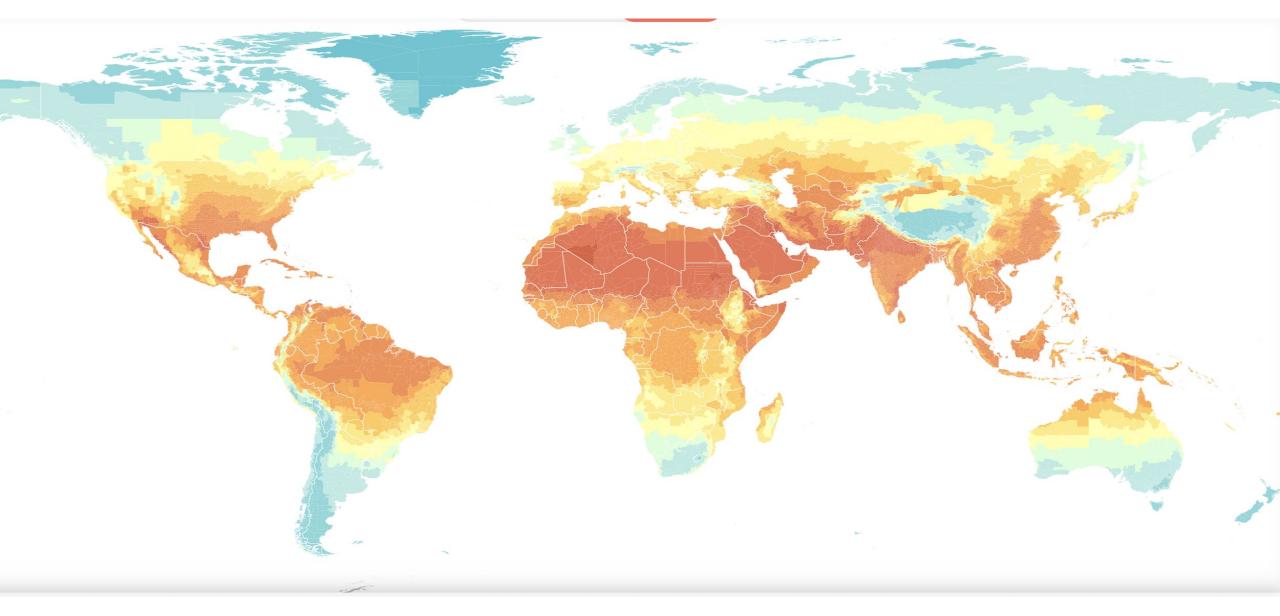
From: Impacts of poverty alleviation on national and global carbon emissions

n de na verse de la construcción de na construcción de na condensa de la dense de la construcción de la constru La construcción de la construcción d

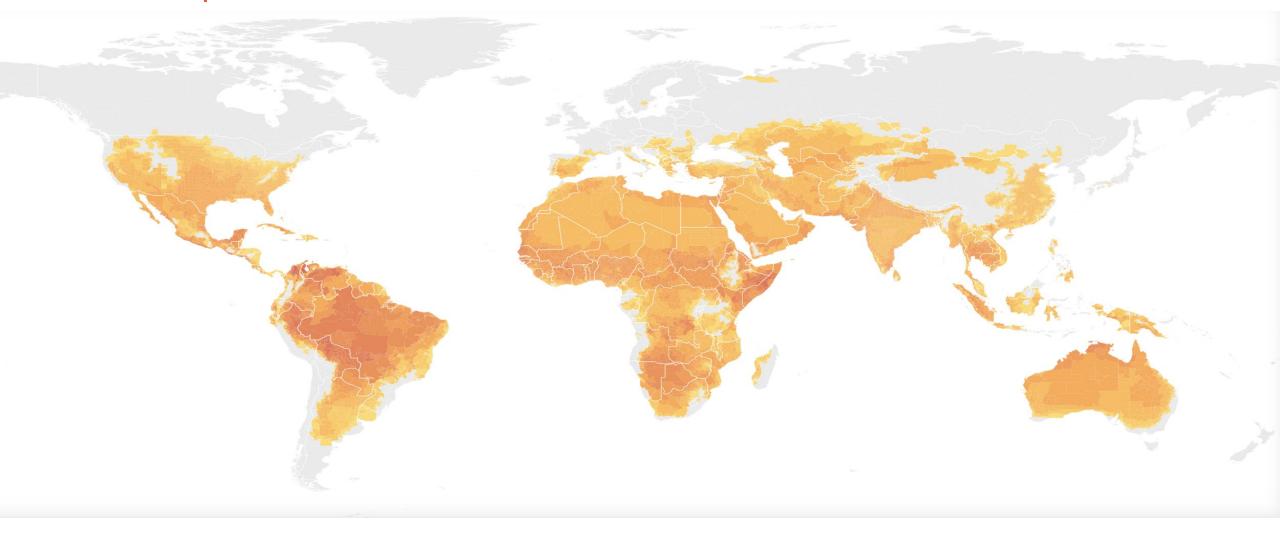
### Eradicating extreme poverty would increase emissions by only 2%

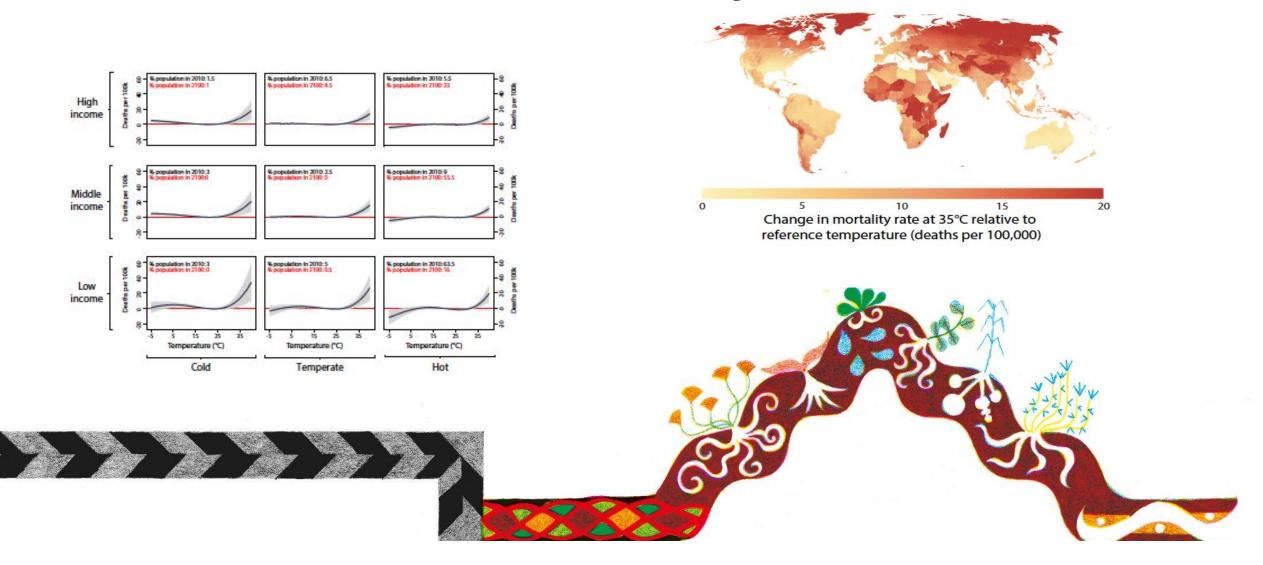
## 2. The Costs of Climate change are going to be felt in the poorer part of the world

## Poorer countries tend to be in warmer places



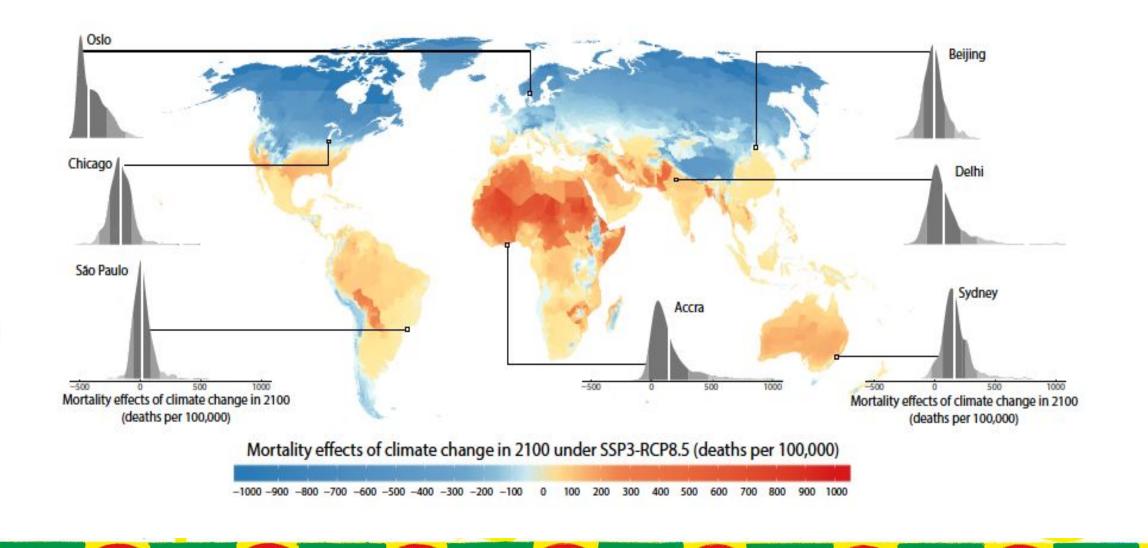
## By, 2050 most of the places that get many hot days are in poor countries





### Damages of a given hot day depend on income and history

D

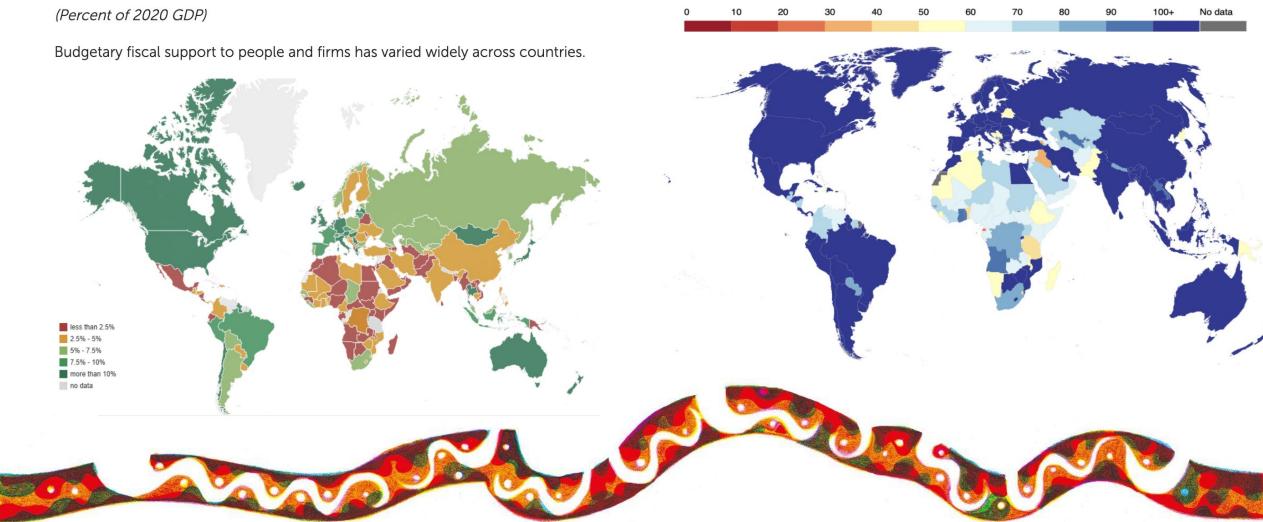


3. This makes for thorny political issue: first order, in the next many years, the problems are going to be in the South but the principal margins of action are in the North. Have we displayed a great capacity to deal with this.



#### Additional Spending and Forgone Revenue in Response to the COVID-19 Pandemic

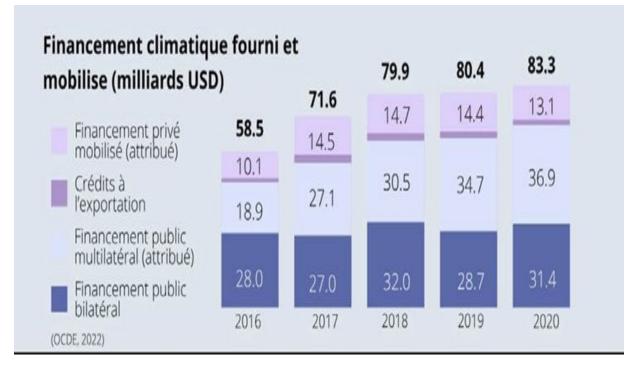
#### Secured Vaccines and/or Expected Vaccine Supply (% of Total Population)

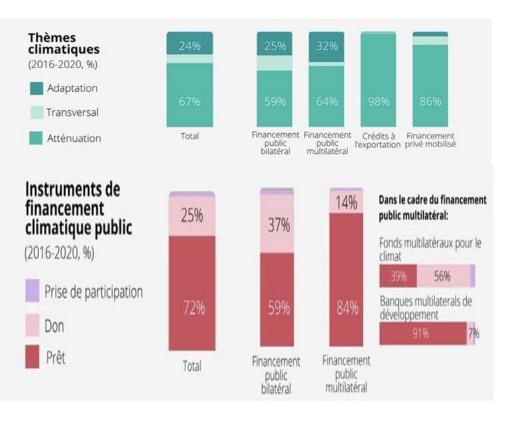


COVID experience suggests that we are not good at sharing problems

# A somewhat unfair characterization of where we are after many COP....

- Not enough money flowing towards LMIC
  - Commitments are too weak
  - Are not even carried out ... or renewed
  - The 100 billion pledge was never fulfilled.
  - Much too little of the money is spent on **adaptation**
  - COP27 and reparation funds, comes without financing
  - On November 6, 2023, basic agreement for a fund hosted by the World Bank (as "interim trustee"). The agreement encourage **but does not oblige** all countries to contribute to the fund.
- Reliance on technological solutions to continue with an intact lifestyle, but fueled in a carbon-neutral way.
- Reliance on private commitments (ESG investment to fund ).





Source: OCDE

Des engagements qui n'ont jamais atteints

## We cannot tackle climate change without tackling redistribution across countries

## No adapation funds means less mitigation

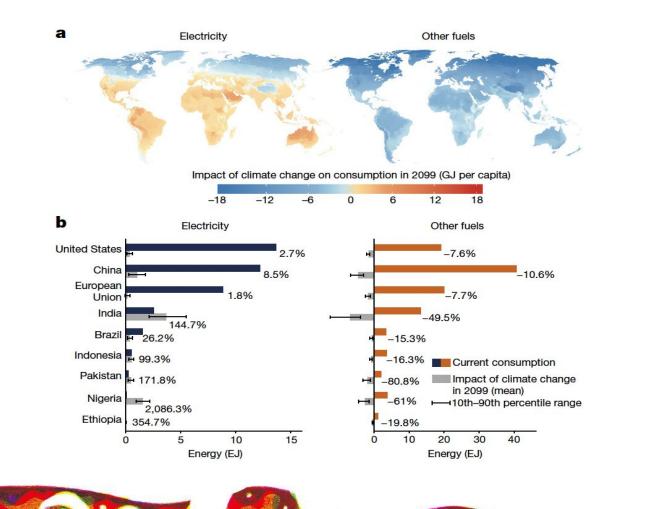
 In the absence of funds for adaptation, becoming richer as fast as possible is the only path many countries see to protect themselves.

 Energy needs are enormous to face hotter temperatures, so developing the energy that is the cheapest today will remain a priority

• It has been the official position of India, a key player.

 From now until 20100, it is estimated that the middle income countries will need LOTS of energy to adapt to climage change

 It will be vital to acccess energy has quickly and cheaply as possible.



### Countries will need (cheap) energy to adapt to climate change

#### The New York Times

## Ecuador Tried to Curb Drilling and Protect the Amazon. The Opposite Happened.

A novel idea to leave the country's vast oil reserves in the ground fizzled for lack of international support. Now, struggling under painful debt, the government wants to expand drilling in the rainforest.

## FINANCIAL TIMES

#### India criticised over coal at Cop26 - but real villain was climate injustice Hannah Ellis-Petersen in Delhi

Experts say country's watering down of fossil fuel pledge reflected its lack of choices

### For emerging markets, a clear dilemna

## We cannot tackle climate change without tackling redistribution within countries





The world need to **commit** now to a mechanism to raise money for a fund (like the I&d fund), **exclusively destined to low income countries**.

- 1. Fair (nationally and internationally)
- 2. Permanent
- 3. And ideally provide some incentives along the way.



Taking the Carlton et al. estimate of **\$37 dollars of damage per ton from loss of life** (most or all of which will be in poor countries)

Adding up the consumption emissions from consumption in US and Europe, we get a total of about 14 billion tons per year, which amounts to imposing an annual mortality cost of **518 billion dollars on poor countries.** 

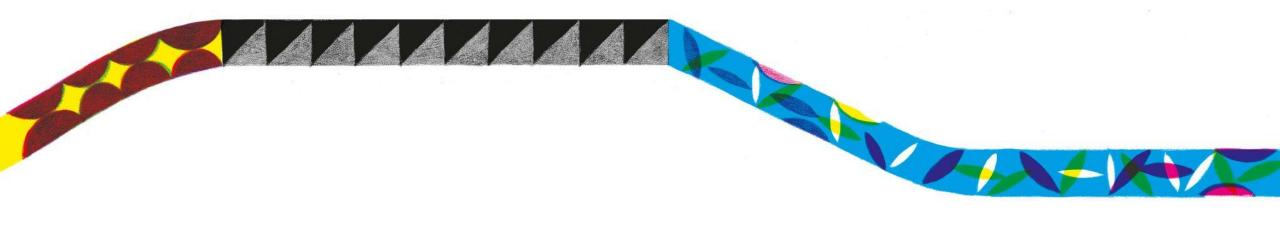
(US foreign aid is **56 milliards de dollars)**.





Step 1: how much money is needed.

- Scenarios to consider :
  - 500 billions dollars a year (CO2 damages due to extra death)
  - 100 billions dollars a year (previous commitments).



- A number of options have been discussed
  - Fossil fuel extraction levy
  - Air passenger /ticket levy
  - IMO carbon levy (international shipping)
  - Tax on windfall fossil fuel levy
  - Other tax instruments not directly related to GHC emissions.
    - Financial transaction tax
    - Tax on stock byback.
    - Wealth tax or income tax on richest individuals.



### Step 2: how to raise it.

### MINIMUM TAX ON CORPORATIONS

- In October 2021, 137 countries and jurisdictions agreed to implement a major reform of the international corporate tax system, i.e., a global minimum tax of 15% on the profits of large multinational companies.
- Pillar 2 Minimum 15% global tax on large corporation (>750 million in turnover). If a german company pays only 10% on its profits paid in Singapore, Germany collects the extra 5% on this profit

EU-TAX OBSERVATORY PROPOSAL OF 2% wealth tax of the 3,000 richest people worldwide



Two realistic proposal: add to the 15% minimum international income tax

## Pillar 2, multilateral (no carve out)

Base: 205 billions euros Add 3%: 318 billion euros Add 5%: 431 billions euros **Pillar 2, EU only** Base 98 billion euros Add 5%: 184 billion



How much would increase in corporate tax raise (first round estimates, from EU tax observatory)

#### Table 5.3

Revenue potential of a minimum tax of 2% on the wealth on billionaires in 2023 (billions of US\$)

Region	Number of billionaires	Total wealth (\$B)	Average wealth (SB)	Personal tax currently paid	Tax paid with 2% wealth tax (\$8)	Revenue of 2% minimum wealth tax (\$B)		
Europe	499	2,418	4.8	6.0	48.4	42.3		
North America	835	4,822	5.8	24.1	96.4	72.3		
East Asia	838	3,446	4.1	8.6	68.9 19.8	60.3		
South & South-East Asia	260	991	3.8	2.5		17.3		
Latin America	105	419	4.0	1.0	8.4	7.3		
Sub-Saharan Africa	11	52	4.7	0.1	1.0			
Middle-East & North Africa	75	182	2.4	0.5	3.6	3.2		
Russia & Central Asia	133	586	4.4	1.5	11.7	10.3		
Total	2,756	12,916	4.7	- 44	258	214		

Source: EU tax observatory, report of 10-/23/2023

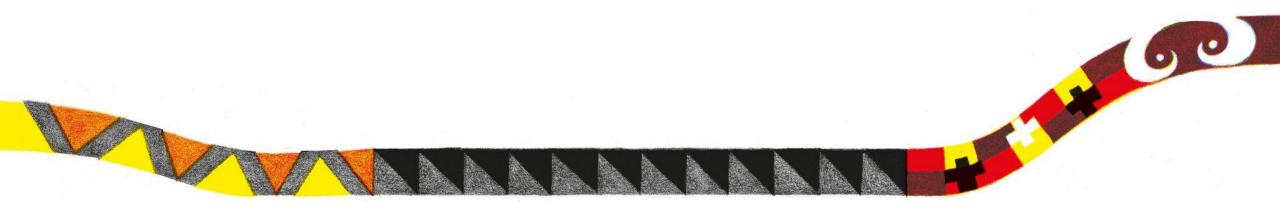
An international wealth tax of 2% on the 3,000 richest people in the world would raise 214 extra billions (204 excluding Russia)

- The OECD itself may not pass. It requires congress approvals in all countries and there are some countries (which shall remained un-named...) where it is not likely to be feasible.
  - So far no countries has implemented it.
- In the original proposal, countries that enforce the tax keep it, which gives them an incentive to pass it/enforce it. Here it would be assigned to the fund. In effect each country would be collecting taxes on behalf of the common good.
  - What if a country is already above 18% or decides to go to 18% for themselves. Do they add 3% for the world?
- There is no explicit connection to GHG emissions.



### Foreseeable issues

- Eu tax observatory shows that this can be done unilaterally by Europe (or really any country or group of countries), and to avoid giving an unfair advantage to the US (or Chinese) companies, their sales can be taxed in Europe
- Obviously, that is a form of tariff, which many economists do not like.
- But so is the IRA in the US.



- This is already the cases with contributions to the IMF, etc which are not ulletparticularly elective either.
- There is tremendous amount of public support for a global wealth tax on ulletmillionaires (Fabre, Douenne, Mattauch, October 2023) [above 67% in all countries, out of which about a third should be pooled to go to poor countries)

Figure 3: Percent of global wealth tax that should finance low-income countries (mean). (Question 37)

Preferred share of global tax for low-income (in %)

Issue 2: Levying taxes for other people

Europe

33

France

United Kinad

Germany

Spain

Figure 4: Relative support for various global policies (percentage of *somewhat* or *strong support*, after excluding *indifferent* answers). (Questions 44 and 45; See Figure A25 for the absolute support.)

	Unit	United States				in United	
Payments from high-income countries to compensate low-income countries for climate damages	55	71	72	70	79	70	
High-income countries funding renewable energy in low-income countries		82	82	82	85	81	
High-income countries contributing \$100 billion per year to help low-income countries adapt to climate change	60	76	77	79	79	71	
Cancellation of low-income countries' public debt	46	53	53	43	62	61	
Democratise international institutions (UN, IMF) by making a country's voting right proportional to its population	58	71	69	69	78	72	
Removing tariffs on imports from low-income countries	62	73	58	73	80	83	
A minimum wage in all countries at 50% of local median wage	63	80	80	78	81	83	
Fight tax evasion by creating a global financial register to record ownership of all assets	62	87	90	86	91	87	
A maximum wealth limit of \$10 billion (US) / €100 million (Eu) for each human	46	62	58	62	65	67	
National tax on millionaires funding public services	73	85	81	87	89	88	
Global tax on millionaires funding low-income countries	69	84	84	84	87	83	

Fabre, Douenne, Mattacuh, 2023

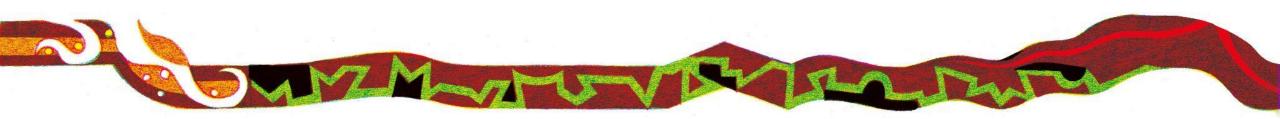
- Once we have better accounting of carbon footprint of companies, their tax rates can be adjusted to reflect it.
  - Large oil companies can be taxed more.
  - Compagnies that improve their carbon footprint would see their liability reduced.



### Issue 3: No connection to climate change

- Piketty proposal: it goes to poor countries, as compensations, as a function of how much money they have, no question asked
  - Legitimate questions on whether that will help the poor citizens

- Other extreme: the World Bank (or the UN, or whoever), gets it and administers it at a fund. It starts making grants or loans
  - This is what is currently being proposed for the L&R funds, and it is not popular with poor countries.



Step 3: how to spend it-Governance

- Damages: Social protection & reconstruction
  - Automatic transfers to households triggered by climate events.
  - Dercon et al. Advanced funds seems to help a lot
  - Automatic block grants for repairs (national insurance style)
- Energy Access & leapfrogging
  - Grants not loans for clean energy projects
- DIV-style financing for climate related projects (adaptation and mitigation), from innovation to scale.
  - Open proposals for stage financing of innovations
  - Independent panels to judge proposals.



My proposal: 3 pillars

## Conclusion: There **may** be a margin for action... Stay tuned.