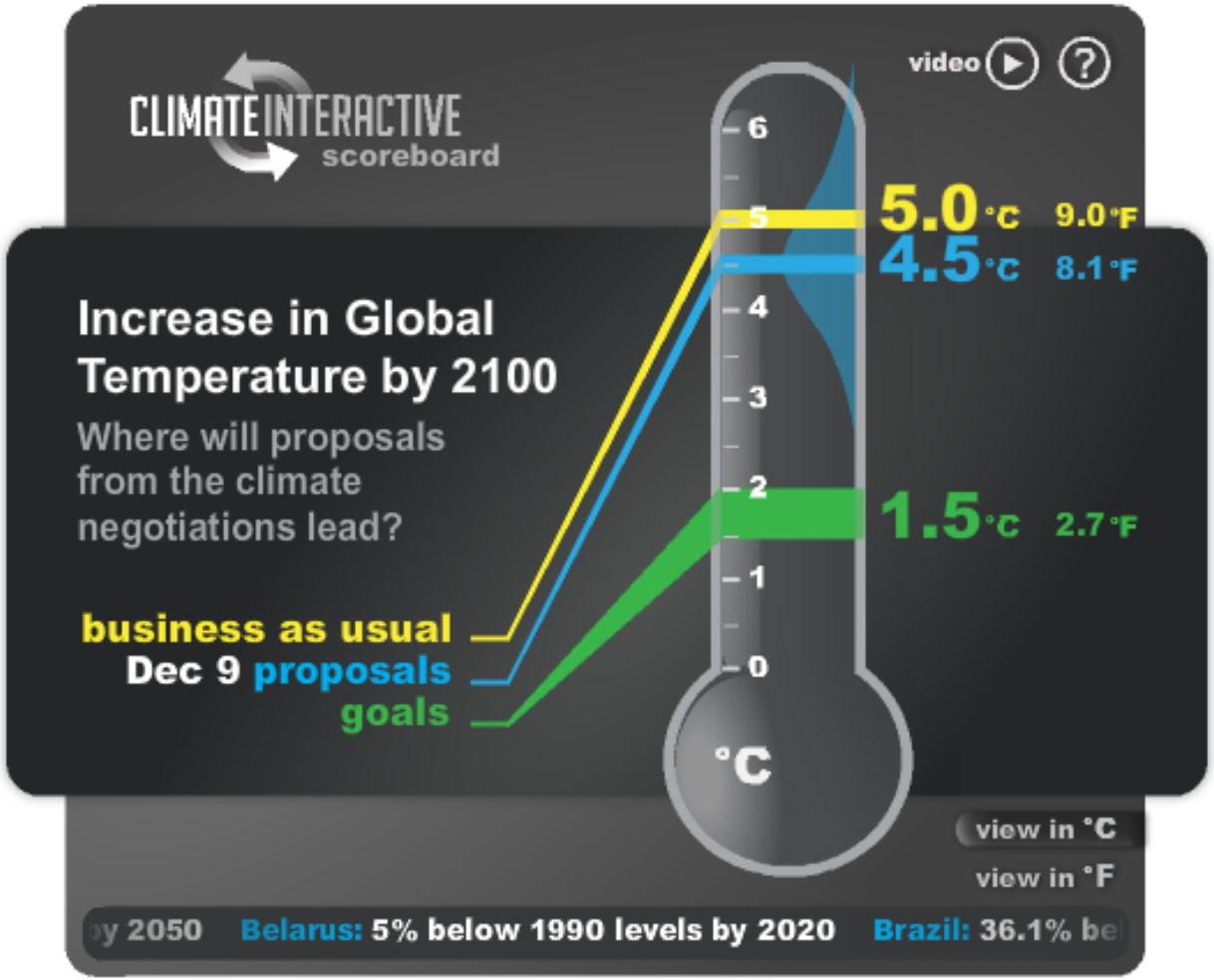
Hvorfor er det så vanskelig å få til en klimaavtale som monner?

Steinar Andresen (FNI)

Bjart Holtsmark (SSB)

Ole Røgeberg (Frisch)

Hvordan ligger vi an?



Necessary factors for a functioning climate treaty

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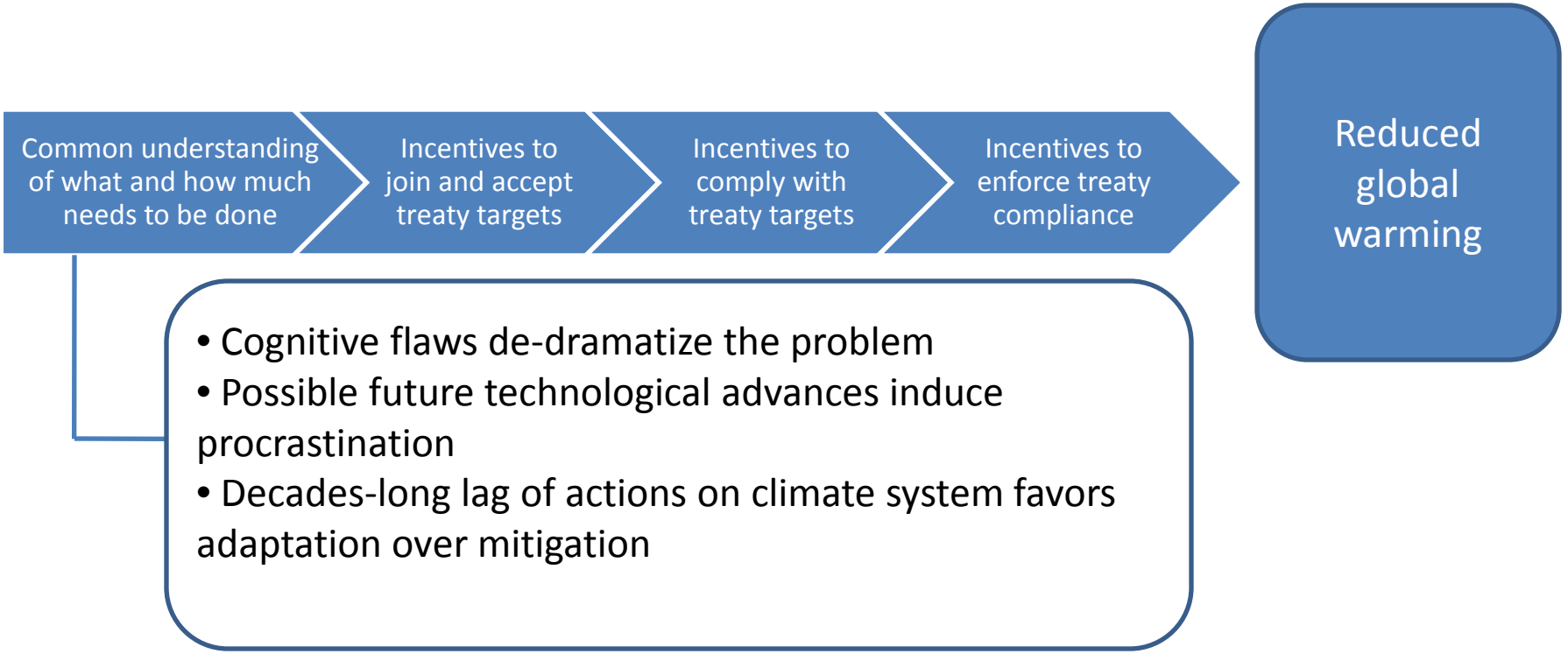
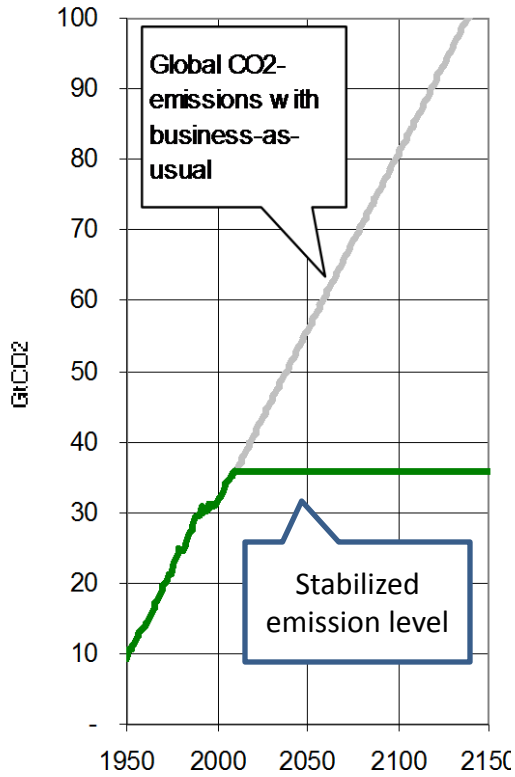
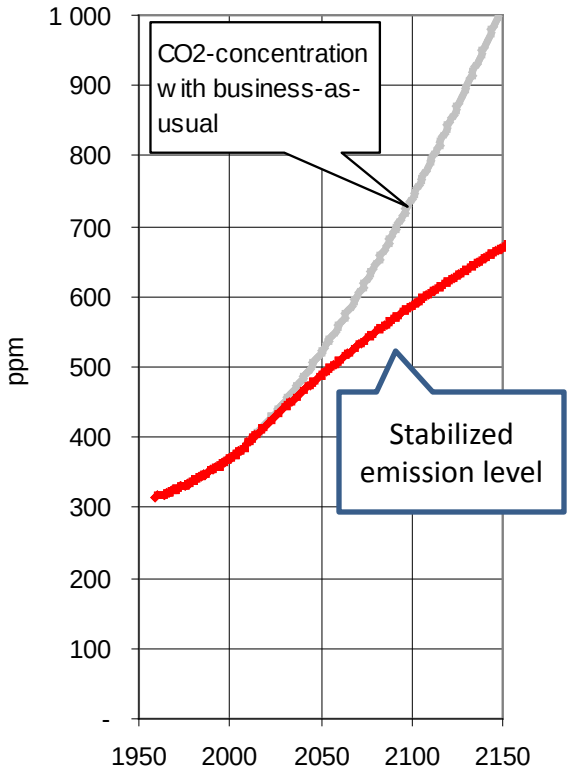
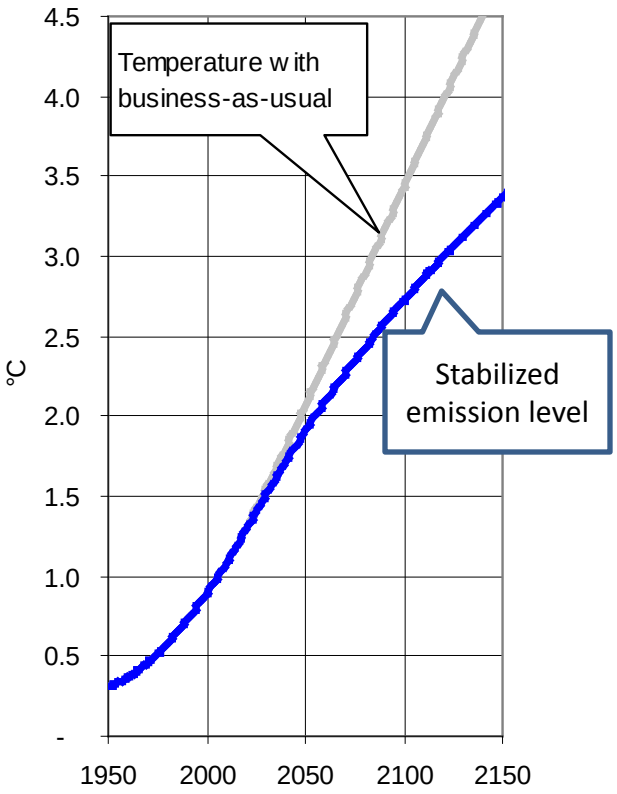


Klimaproblemet er ”et badekar”







Future progress ”may” solve or make it cheaper to solve the problem

- Technology/cost
  - Second generation biofuel (cellulosic)
  - Third generation biofuel (algae)
  - Geoengineering
  - Fusion
  - Electric cars (esp. battery technology)
  - Carbon capture and storage
  - Solar
  - Wind
- Better treaties
  - Globally traded carbon quotas
  - Quotas for ”emerging economies”

Politiske insentiver er rettet mot tilpasning/geo-engineering

- **Tilpasning/geoengineering**
  - Bedrer dagens problemer på kort sikt
- **Klimakutt**
  - Har kostnader i dag, men forhindrer ”bare” ytterligere problemer om flere tiår

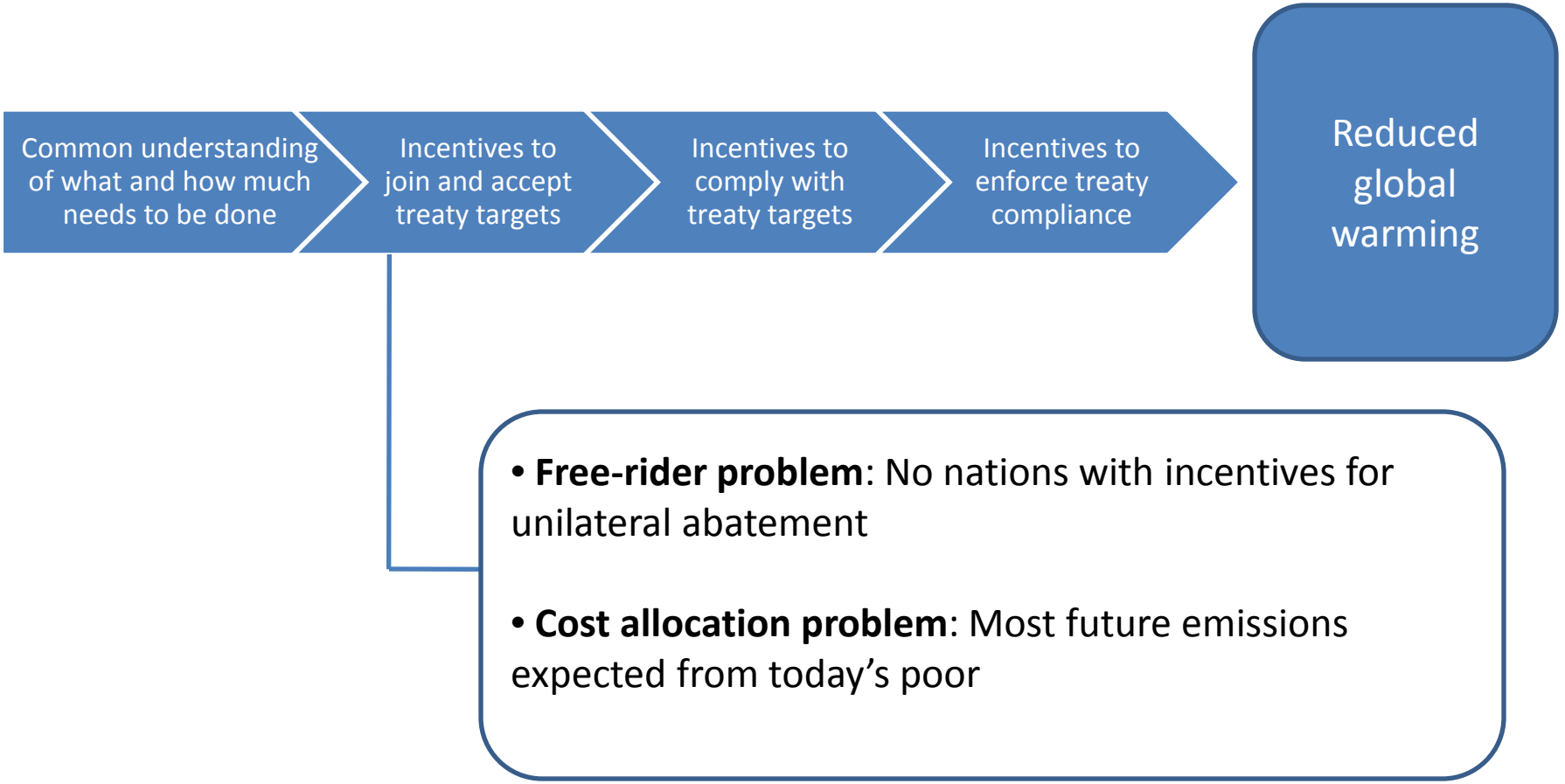
Ingen land *er store nok til at de kan løse problemet på egen hånd*

*The effect of a single country's emission reductions. The case of China, India and USA**

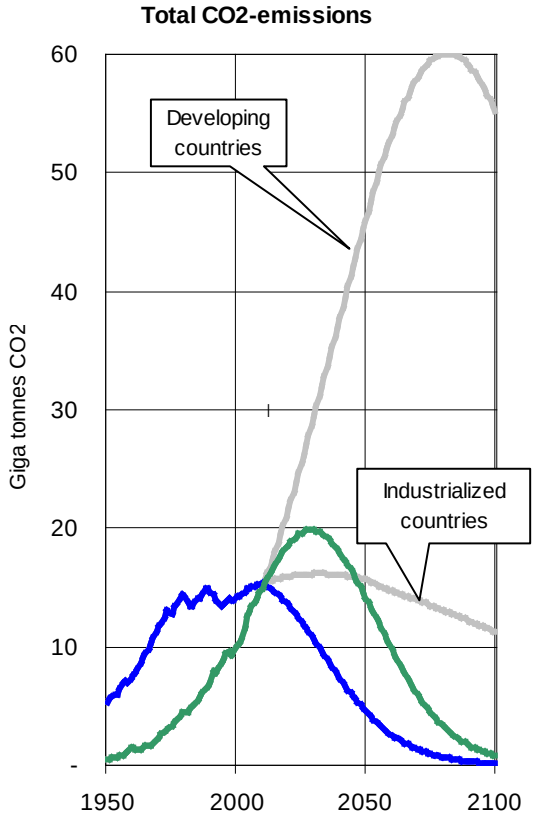
	Emission reductions from BAU	Reduced temperature from BAU. Degrees Celsius		
		China	India	USA
2025	-20 %	-0.01	-0.00	-0.01
2050	-60 %	-0.07	-0.03	-0.06
2100	-95 %	-0.23	-0.12	-0.17

* The table shows the result of three different model simulations, where each model simulation measures the effect of a single country's emission reduction, , , and the , respectively.

Necessary factors for a functioning climate treaty



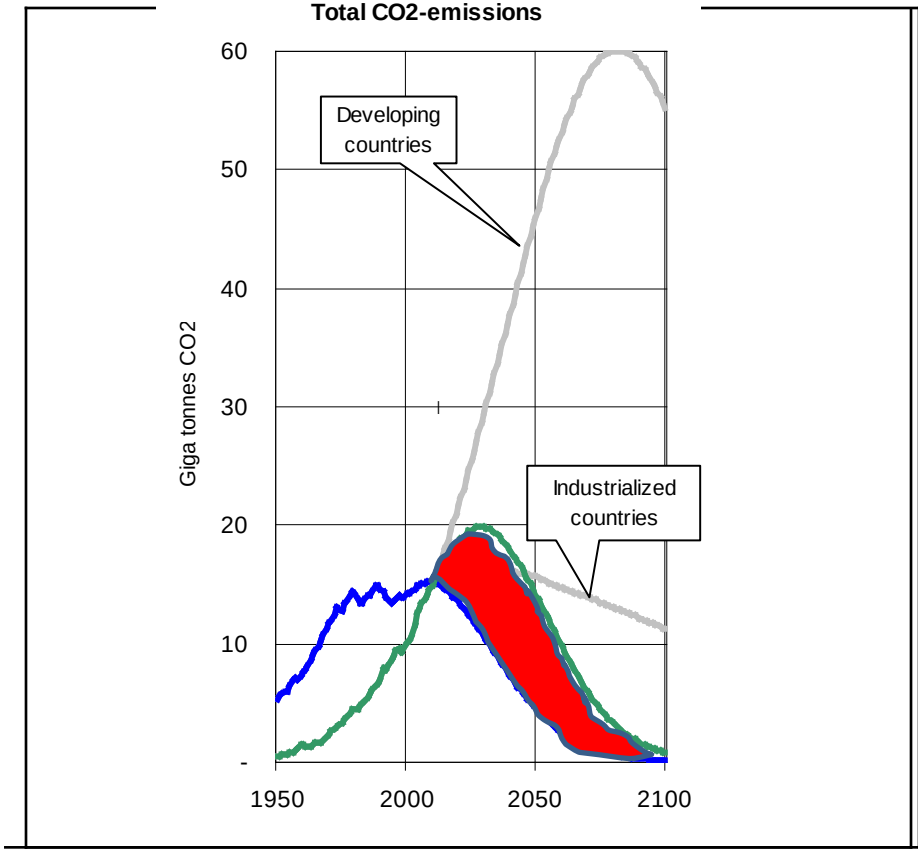
70% of ”business as usual” emissions need to be cut



Global CO_2 emissions in developing and industrialized countries in the IPCC reference scenario A1 MESSAGE (grey curves), and in a scenario consistent with a target (colored curves).

With emission ”cost” at $50 per ton CO2, total burden to be allocated equals ~4 x current global GDP

Most emission reductions need to come from emerging economies



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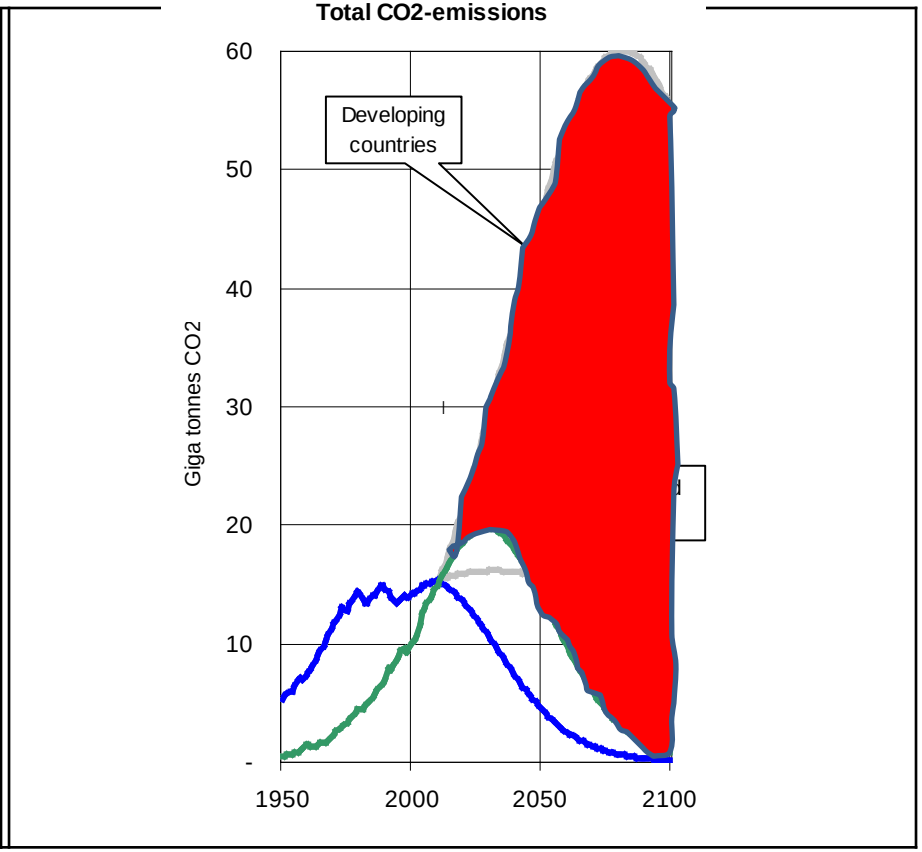

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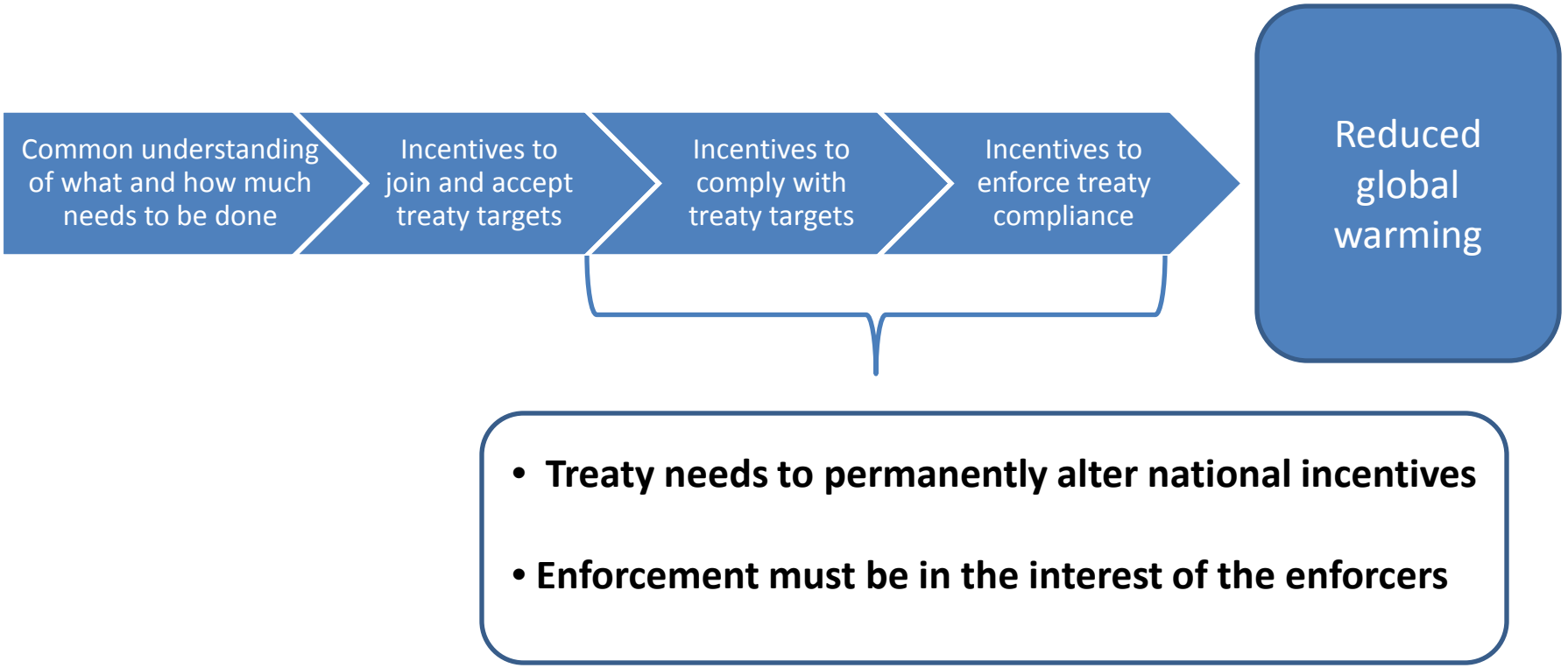
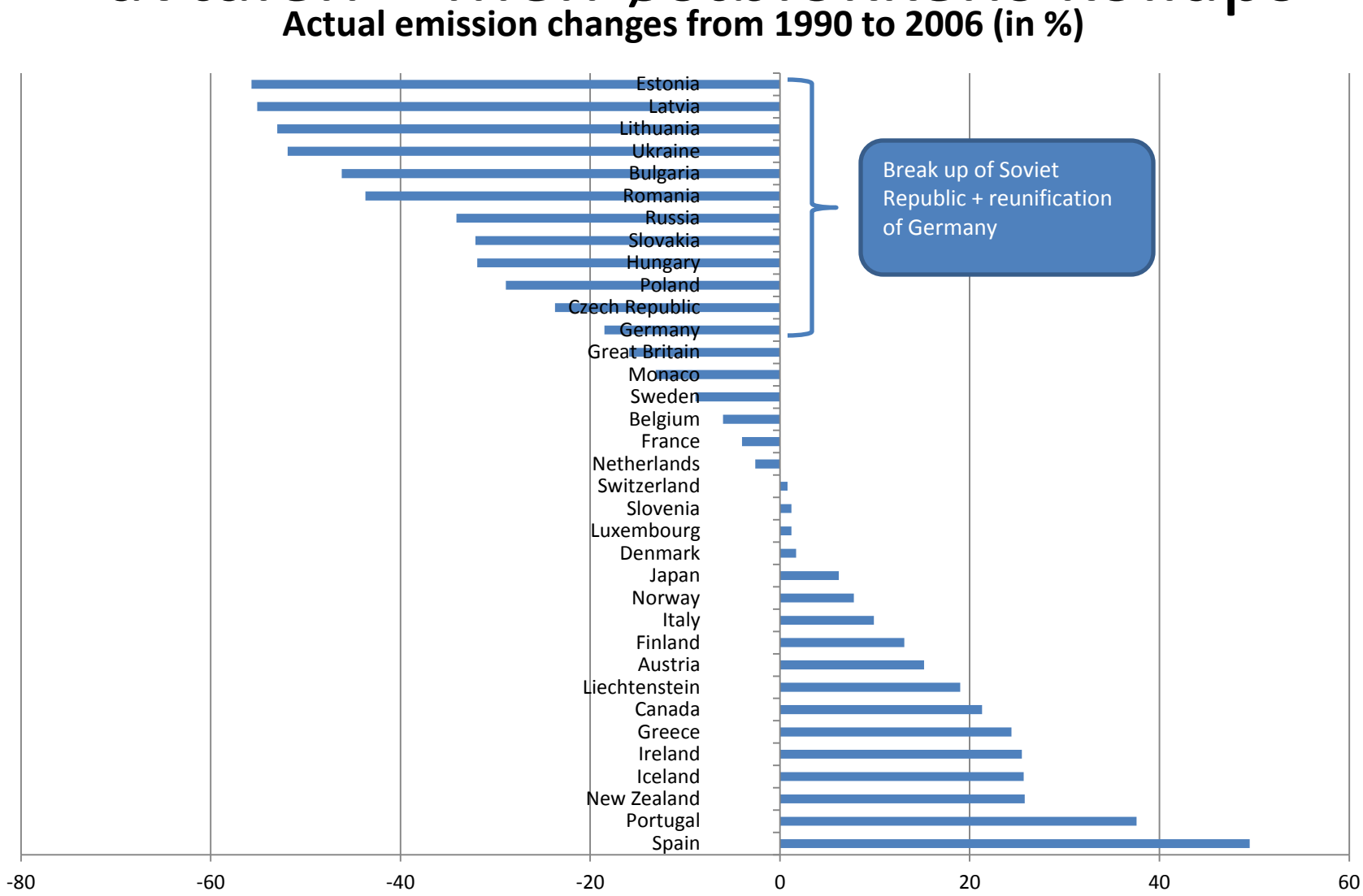


Konsekvent gjennomført klimapolitikk på sikt krever at land er ”låst fast” av permanent endrede insentiver

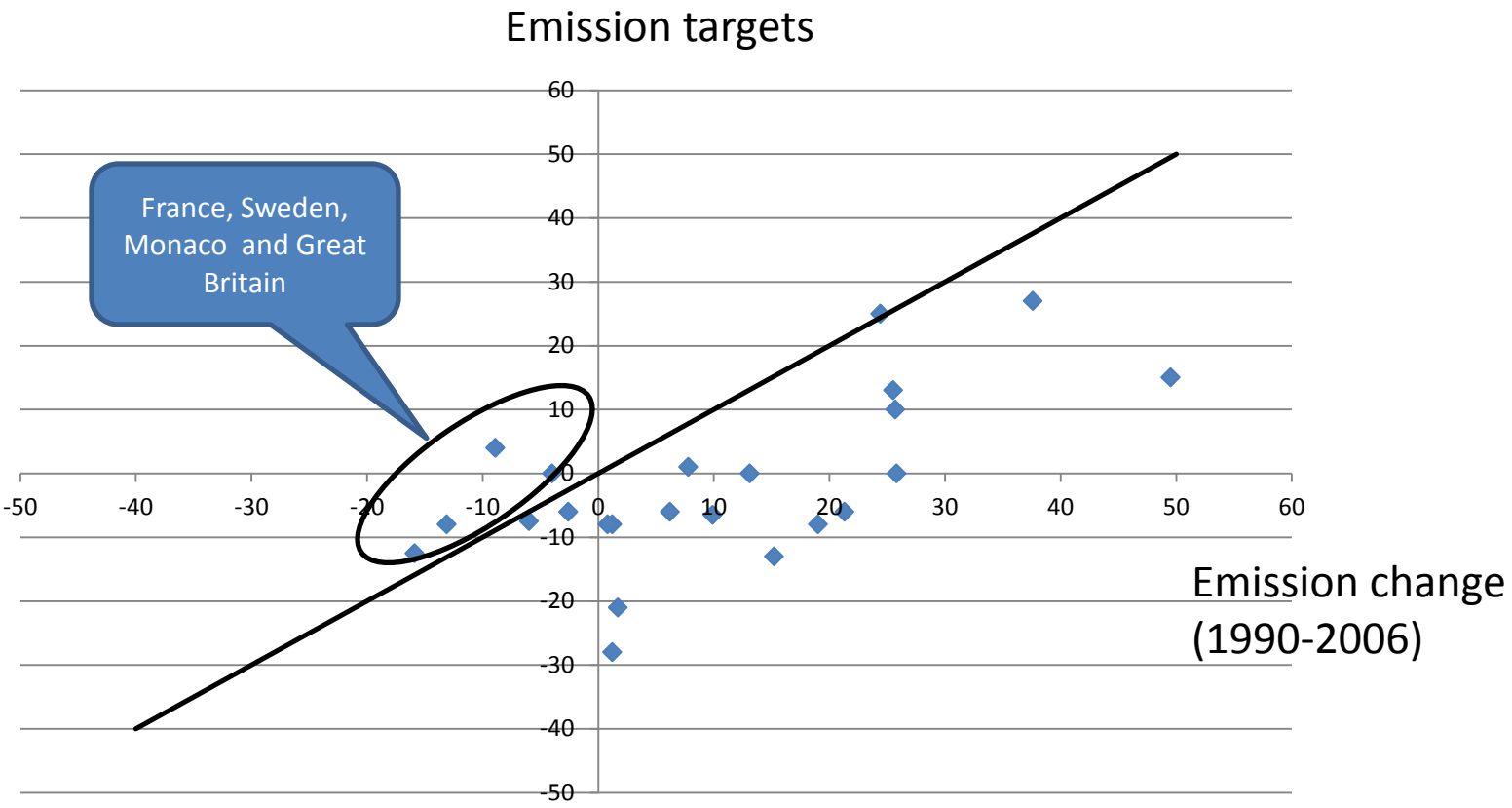
- Avtaleverk med tilstrekkelig straff for utslipp utover det avtalte
- Medlemsland som godtar å binde seg til strafferegime
- Medlemsland som velger å straffe land som bryter avtalen

Men hva med Kyoto.... ?

Kyoto: Utslippskuttene skyldes ikke avtalen – men østblokkens kollaps



Land utenfor østblokken slipper ut mer enn målet (før kvotekjøp osv)

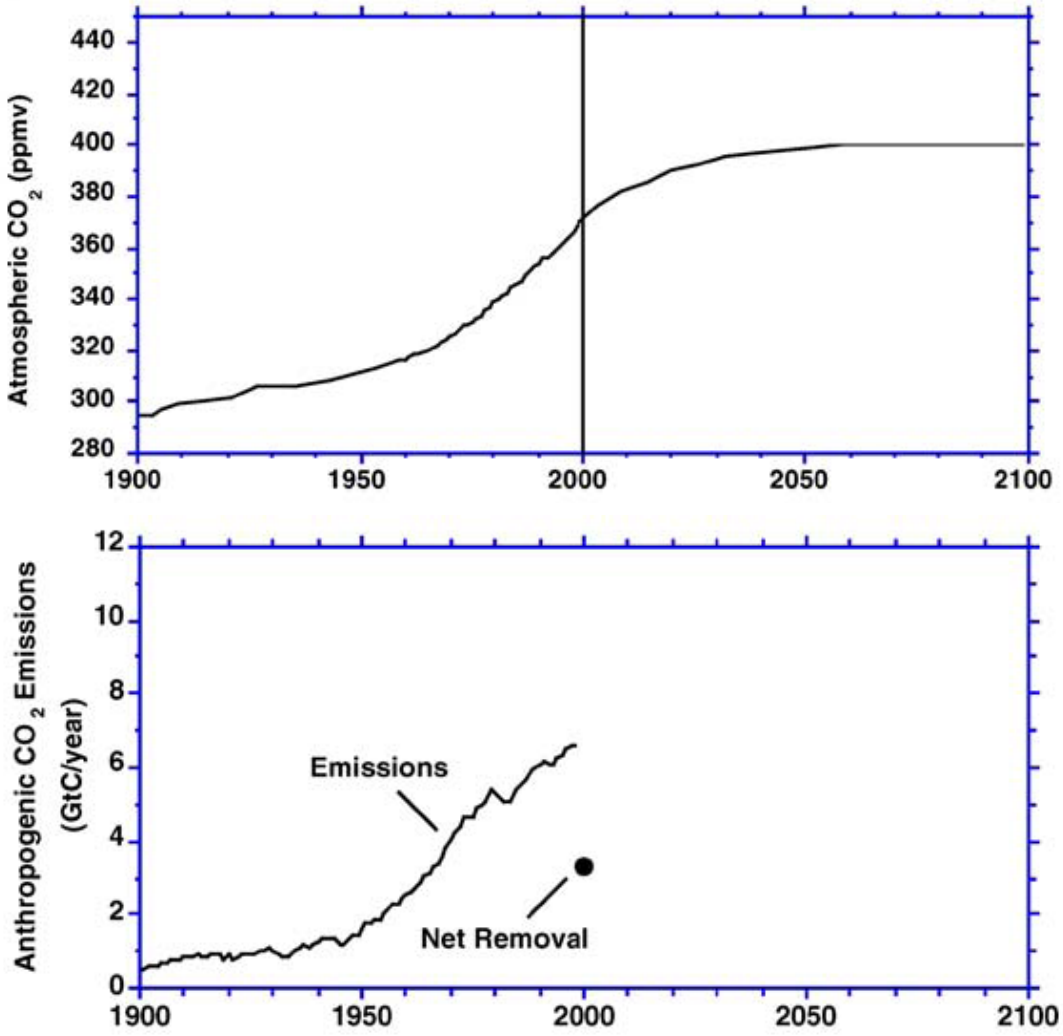


Kyoto ”straffe-mekanismen” er uten betydning

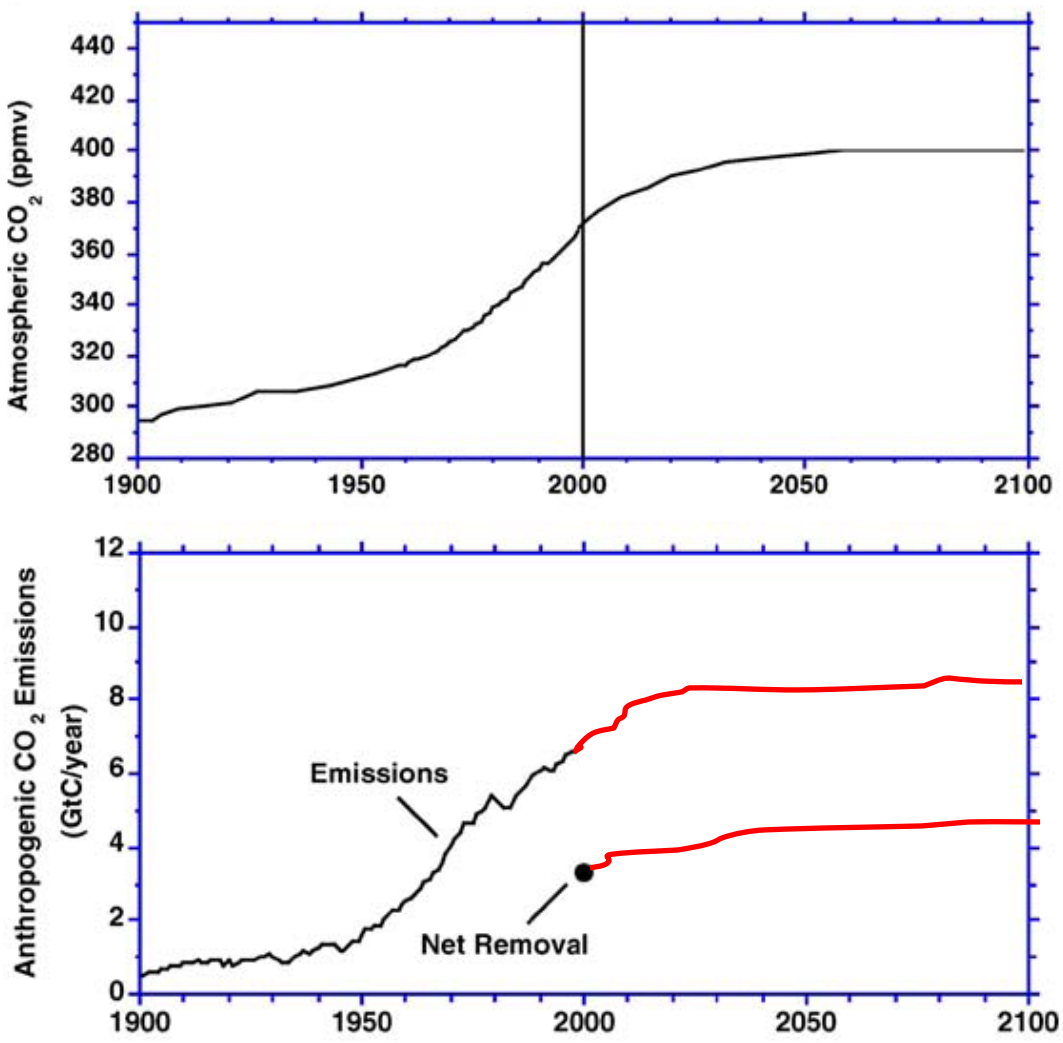
- Slipper du ut for mye blir dette +33% lagt til i neste periodes mål
- MEN!
  - Neste periodes mål avtales med det enkelte land…
  - Du kan hoppe av avtalen og unngå straffen (jamfør Canada)

Backup

People's "intuition" makes the climate problem seem less severe



Typical response: pattern matching



GDP catch-up and demographics major part of climate problem

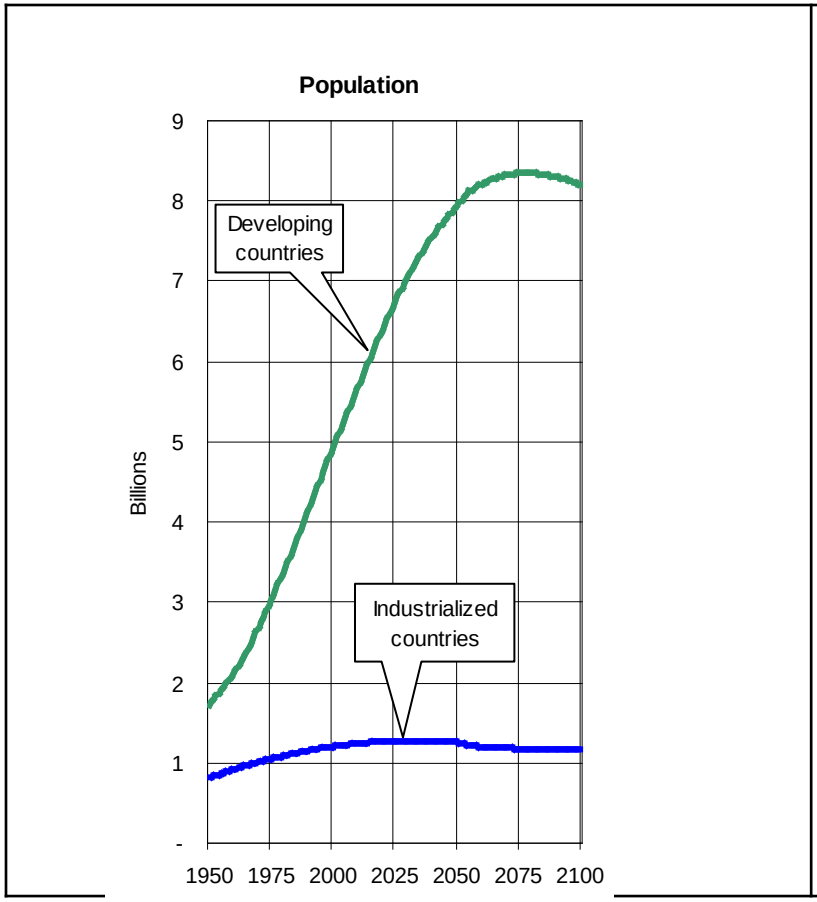


Figure 3. Population in developing and industrialized countries 1950 – 2100. UN population database and projections, medium scenario. Billions.

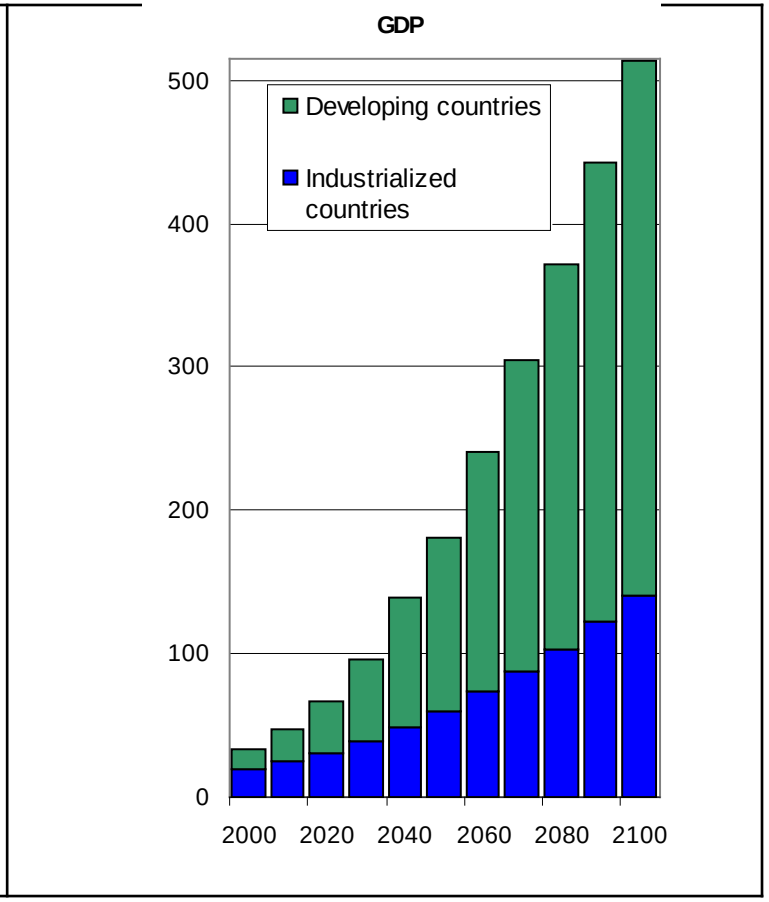


Figure 4. GDP (PPP) in IPCC's scenario A1 Message. Trillion USD (1990-prices).