

# Droit à l'énergie, accès à l'énergie comme condition d'accès aux droits humains essentiels, réponse au changement climatique : où en sommes-nous dans le monde d'aujourd'hui ?

**Conférence internationale publique  
L'énergie : bien commun de l'humanité ?  
Fondation Gabriel Péri 17 mars 2023**

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INTERGOVERNMENTAL PANEL ON  
climate change



## DONNÉES CONTEXTUELLES

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# SIXTH ASSESSMENT REPORT

Working Group I – The Physical Science Basis

ipcc

INTERGOVERNMENTAL PANEL ON climate change



## Extreme heat

More frequent

More intense



## Heavy rainfall

More frequent

More intense



## Drought

Increase in some regions



## Fire weather

More frequent

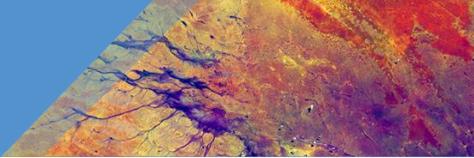


## Ocean

Warming

Acidifying

Losing oxygen



## Future global climate risks



### Heat stress

Exposure to heat waves will continue to increase with additional warming.



### Water scarcity

At 2°C, regions relying on snowmelt could experience 20% decline in water availability for agriculture after 2050.



### Food security

Climate change will increasingly undermine food security.



### Flood risk

About a billion people in low-lying cities by the sea and on Small Islands at risk from sea level rise by mid-century.



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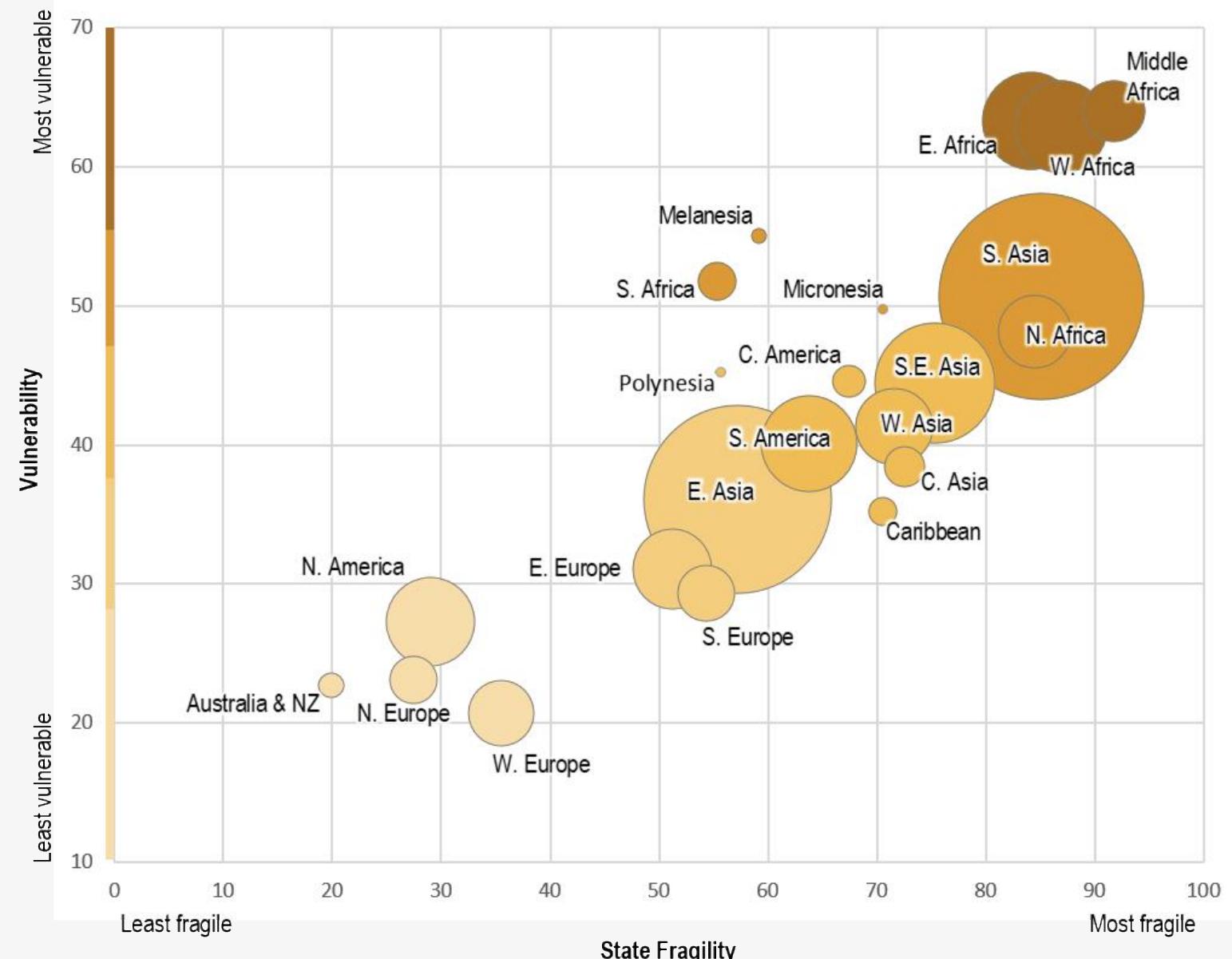
# DE L'INJUSTICE CLIMATIQUE

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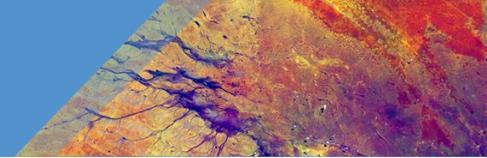
**3.3 – 3.6 billion people live in hotspots of high vulnerability to climate change.**

**Intersectionality issues have been identified**

AR6 WGIII Chapter 8 Figure 8.8



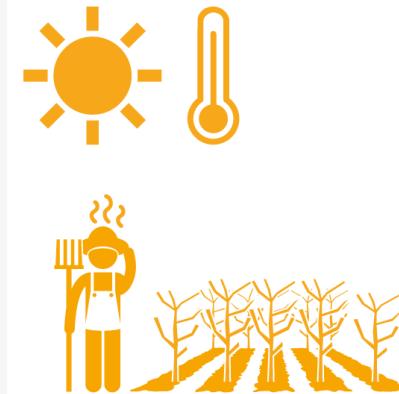
Vulnerability in this report is defined as the propensity or predisposition to be adversely affected and encompasses a variety of concepts and elements, including sensitivity or susceptibility to harm and lack of capacity to cope and adapt.



# Simultaneous extreme events compound risks

Multiple extreme events that compound the risks are more difficult to manage

Increasing heat and drought



Reduced crop yield



Increased food prices



Local effects



Heat stress among farm workers

Reduced productivity

Reduced household incomes

Potentially global effects





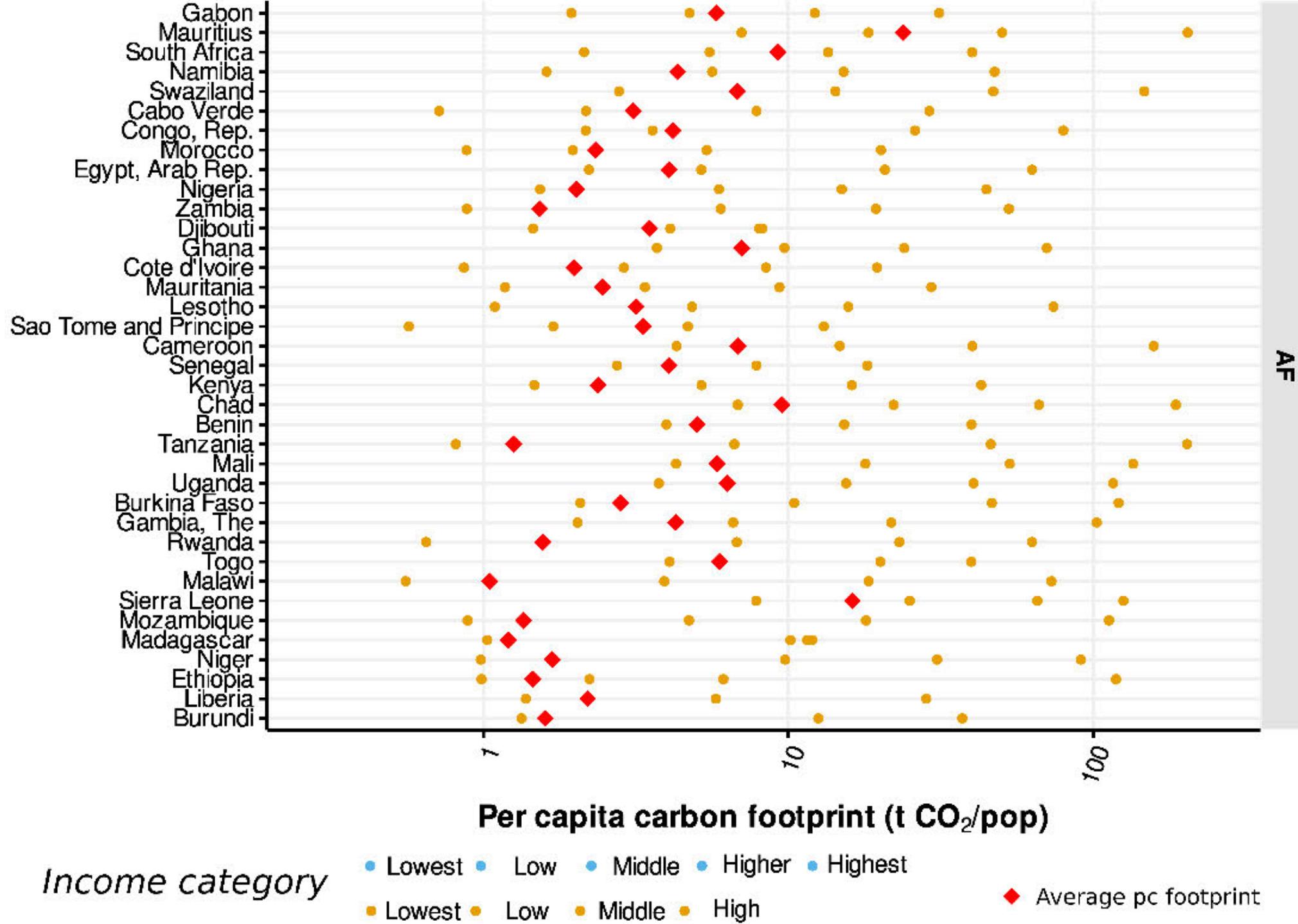
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## DE LA RESPONSABILITÉ

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**Carbon footprints per capita income and expenditure category for 19 countries ranked by per capita income (consumption-based emissions)**



AR6 WGIII Chapter 2 Figure 2.25

Income category

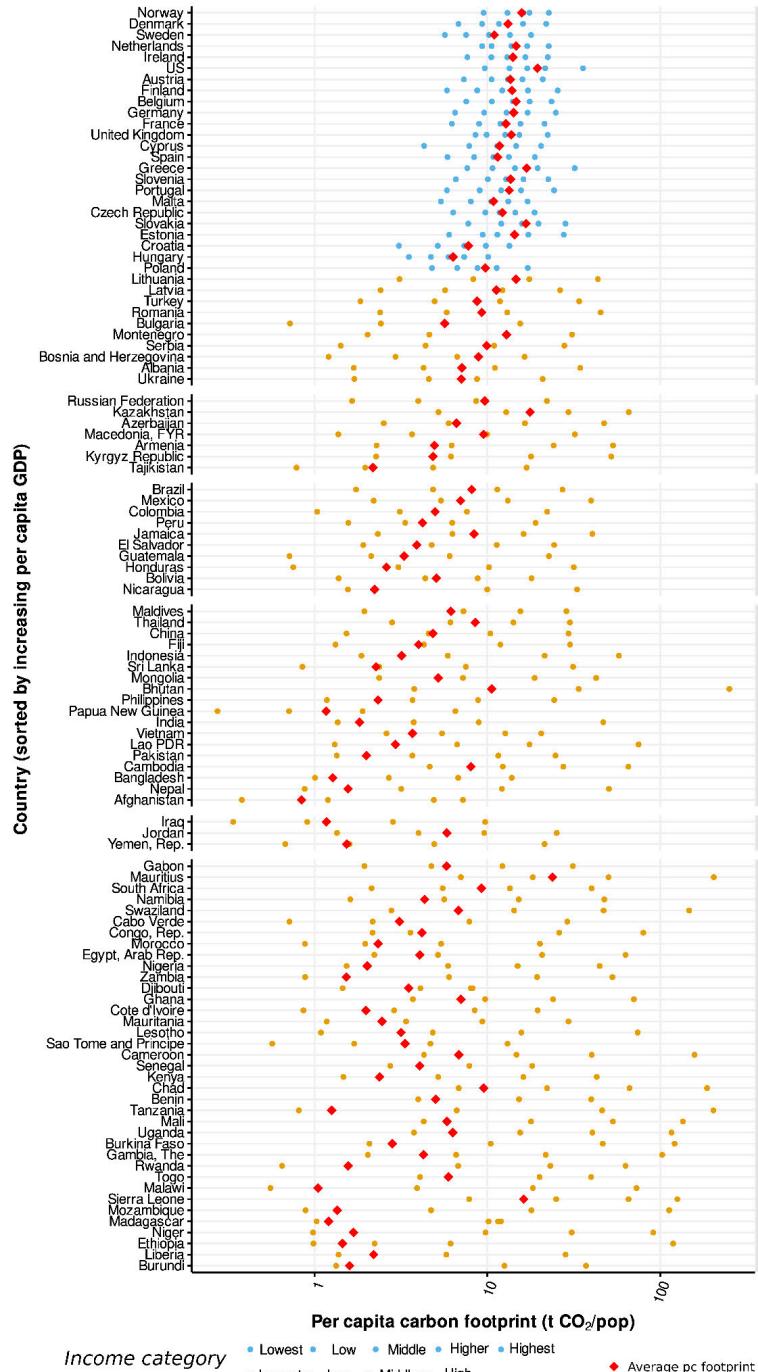
- Lowest ● Low ● Middle ● Higher ● Highest
- Lowest ■ Low ■ Middle ■ High
- ◆ Average pc footprint

**« The global wealthiest 10% contribute about 36-45% of global GHG emissions »**

AR6 SPM WGIII



CHAPTER 2 FIGURE 2.25



**Disparité de l'empreinte carbone mondiale**

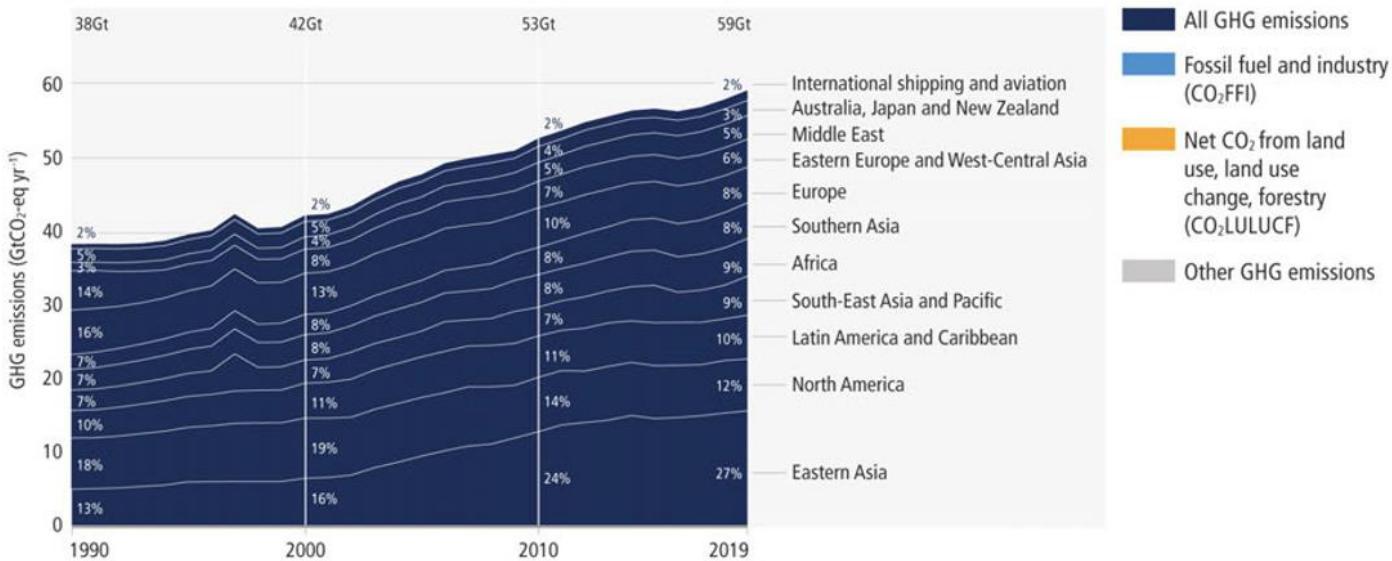
Chapter 2 IPCC AR6 WGIII

## Regional contributions to global GHG emissions continue to differ widely.

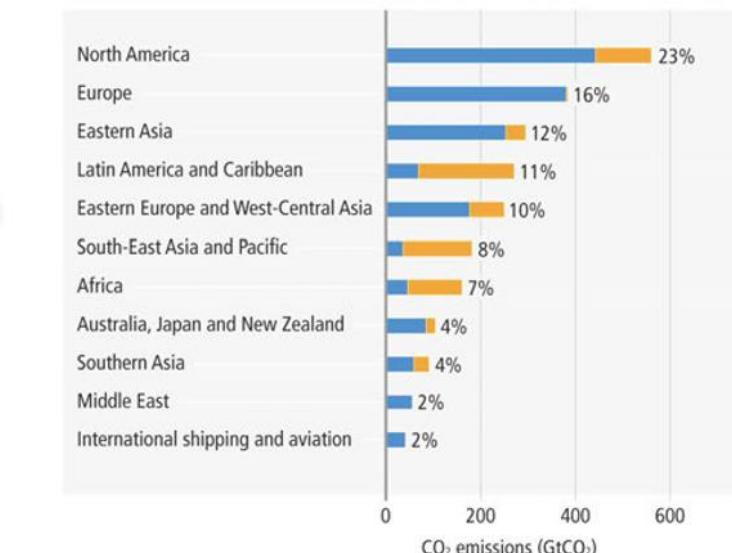
Variations in regional, and national per capita emissions partly reflect different development stages, but they also vary widely at similar income levels. The 10% of households with the highest per capita emissions contribute a disproportionately large share of global household GHG emissions.

Emissions have grown in most regions but are distributed unevenly, both in the present day and cumulatively since 1850.

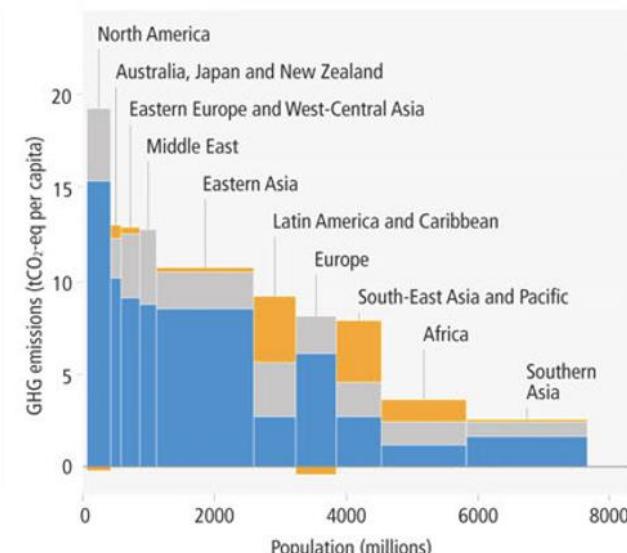
a. Global net anthropogenic GHG emissions by region (1990–2019)



b. Historical cumulative net anthropogenic CO<sub>2</sub> emissions per region (1850–2019)



c. Net anthropogenic GHG emissions per capita and for total population, per region (2019)



d. Regional indicators (2019) and regional production vs consumption accounting (2018)



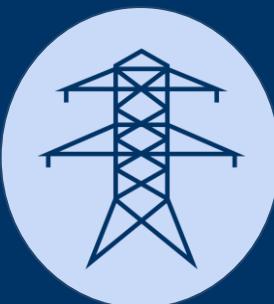
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## DES SOLUTIONS

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Il y a maintenant des options disponibles dans chaque secteur qui permettraient de réduire au moins de moitié les émissions d'ici 2030



Energie



Usage des sols



Industrie



Villes & bâtiments



Transports



Demande & services

# Un potentiel considérable <100USD/tCO<sub>2</sub>-eq

(trad non-officielle @yannweb)

Summary for Policymakers

IPCC AR6 WG III

**Figure SPM.7 : Aperçu des leviers d'atténuation avec fourchettes de coût/potentiel de réduction estimés en 2030.**

On estime que les nombreuses solutions, déjà disponibles actuellement dans tous les secteurs, offrent un potentiel important de réduction nette des émissions d'ici à 2030. Les potentiels et les coûts relatifs varient selon les pays et sur le long terme, par rapport à 2030.

## Leviers d'atténuation

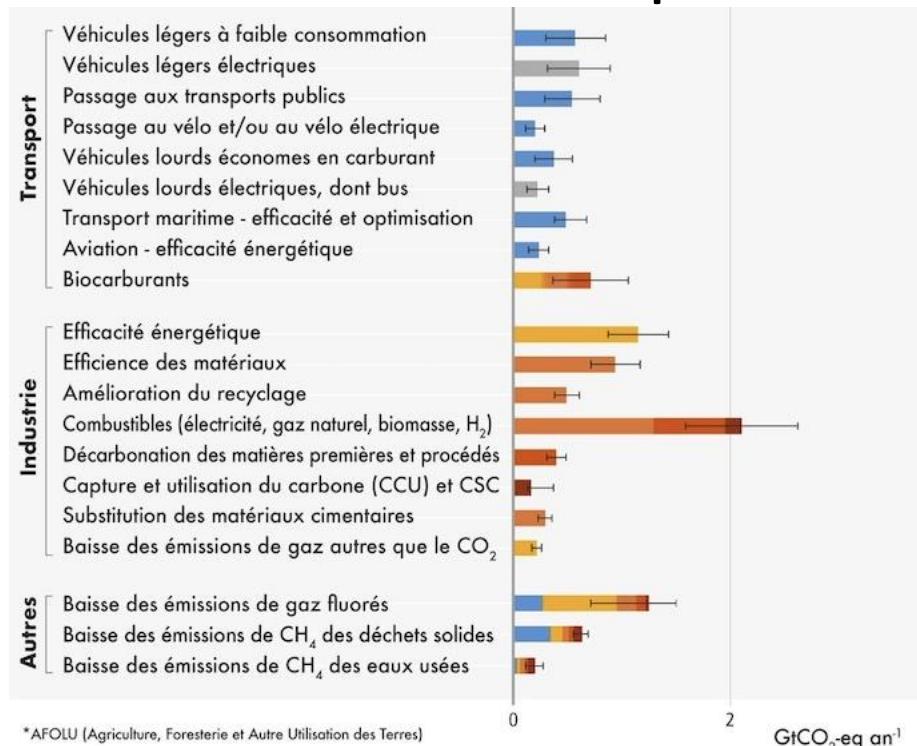
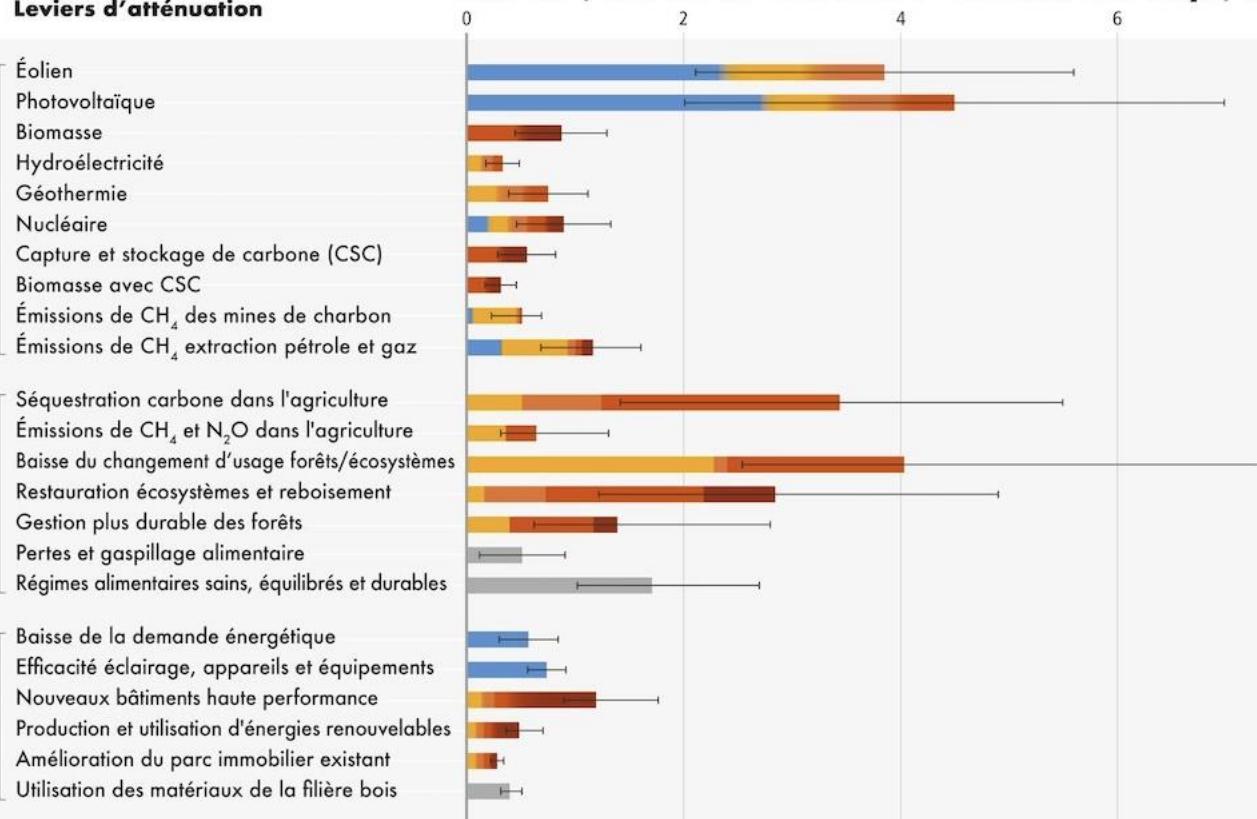
- Éolien
- Photovoltaïque
- Biomasse
- Hydroélectricité
- Géothermie
- Nucléaire
- Capture et stockage de carbone (CSC)
- Biomasse avec CSC
- Émissions de CH<sub>4</sub> des mines de charbon
- Émissions de CH<sub>4</sub> extraction pétrole et gaz

## AFOLU\*

- Séquestration carbone dans l'agriculture
- Émissions de CH<sub>4</sub> et N<sub>2</sub>O dans l'agriculture
- Baisse du changement d'usage forêts/écosystèmes
- Restauration écosystèmes et reboisement
- Gestion plus durable des forêts
- Pertes et gaspillage alimentaire
- Régimes alimentaires sains, équilibrés et durables

- Baisse de la demande énergétique
- Efficacité éclairage, appareils et équipements
- Nouveaux bâtiments haute performance
- Production et utilisation d'énergies renouvelables
- Amélioration du parc immobilier existant
- Utilisation des matériaux de la filière bois

## Contribution potentielle à la réduction nette des émissions (2030) GtCO<sub>2</sub>-eq an<sup>-1</sup>



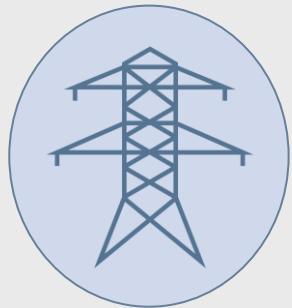
\*AFOLU (Agriculture, Forsterie et Autre Utilisation des Terres)

### Coût net des actions sur leur durée:

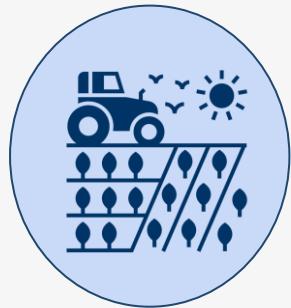
- Coûts inférieurs à ceux de référence
- 0-20 (USD-\$ tCO<sub>2</sub>-eq<sup>-1</sup>)
- 20-50 (USD-\$ tCO<sub>2</sub>-eq<sup>-1</sup>)
- 50-100 (USD-\$ tCO<sub>2</sub>-eq<sup>-1</sup>)
- 100-200 (USD-\$ tCO<sub>2</sub>-eq<sup>-1</sup>)
- Coûts non alloués en raison d'une grande variabilité ou d'un manque de données

La plage d'incertitude s'applique à la contribution potentielle totale de réduction des émissions. Les fourchettes de coût sont également liées à l'incertitude.

Potentiels 1) énergies renouvelables, 2) agriculture terres forets, 3) efficacité, 4) non-CO<sub>2</sub> et 5) modes de vie



Energie



Usage des sols



Industrie



Bâtiments et villes



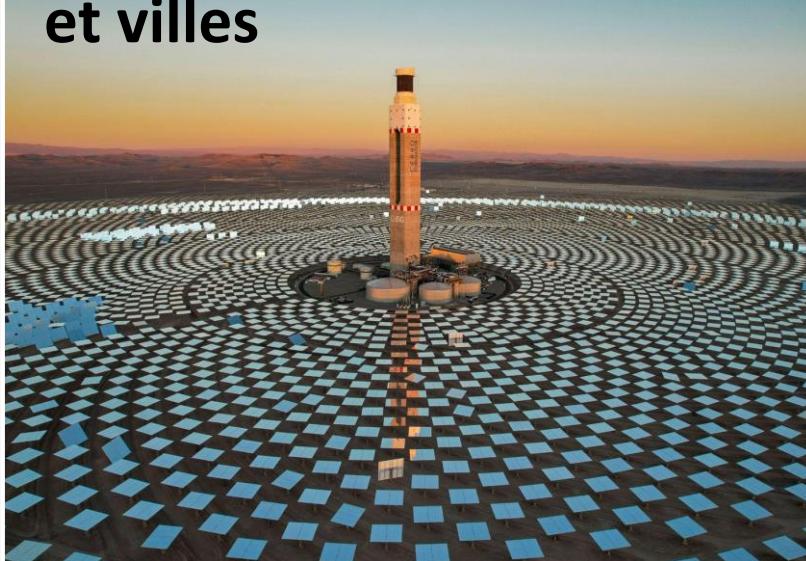
Transports

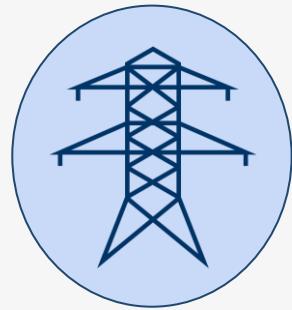


Demande & services

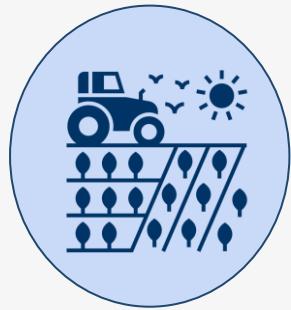
## Energie

- **Transitions majeures** nécessaires pour limiter le réchauffement
- Réduction d'utilisation des énergies fossiles et utilisation de captage et stockage low- or **no-carbon** energy systems
- **électrification** généralisée et amélioration de l'**efficacité**
- **Carburants alternatifs:** e.g. hydrogène and agrocarburants soutenables





Energie



Usage des sols



Industrie



Villes & bâtiments



Transport



Demande & services



## Demande et services

- Potentiel de diminution des émissions de gaz à effet de serre de **40-70% d'ici 2050**
- Marche et vélo, transports électrifiés, diminution des voyages en avion, adaptation des logements constituent les plus grandes contributions
- Les changements de modes de vie demandent des changements systémiques dans l'ensemble des sociétés
- **Besoin de logements, énergie, ressources supplémentaires pour assurer le bien-être de certaines personnes**



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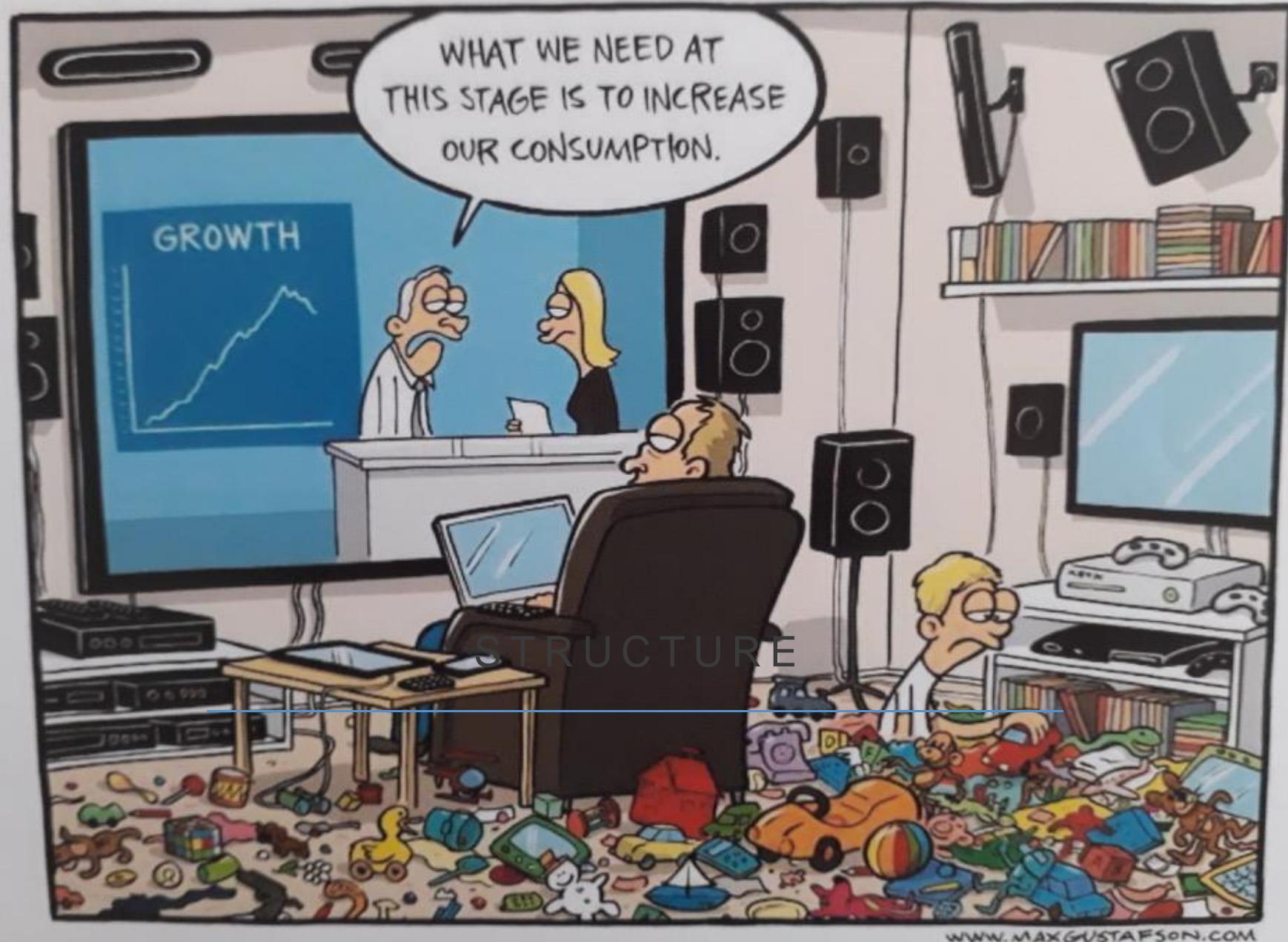


DU BIEN-ÊTRE

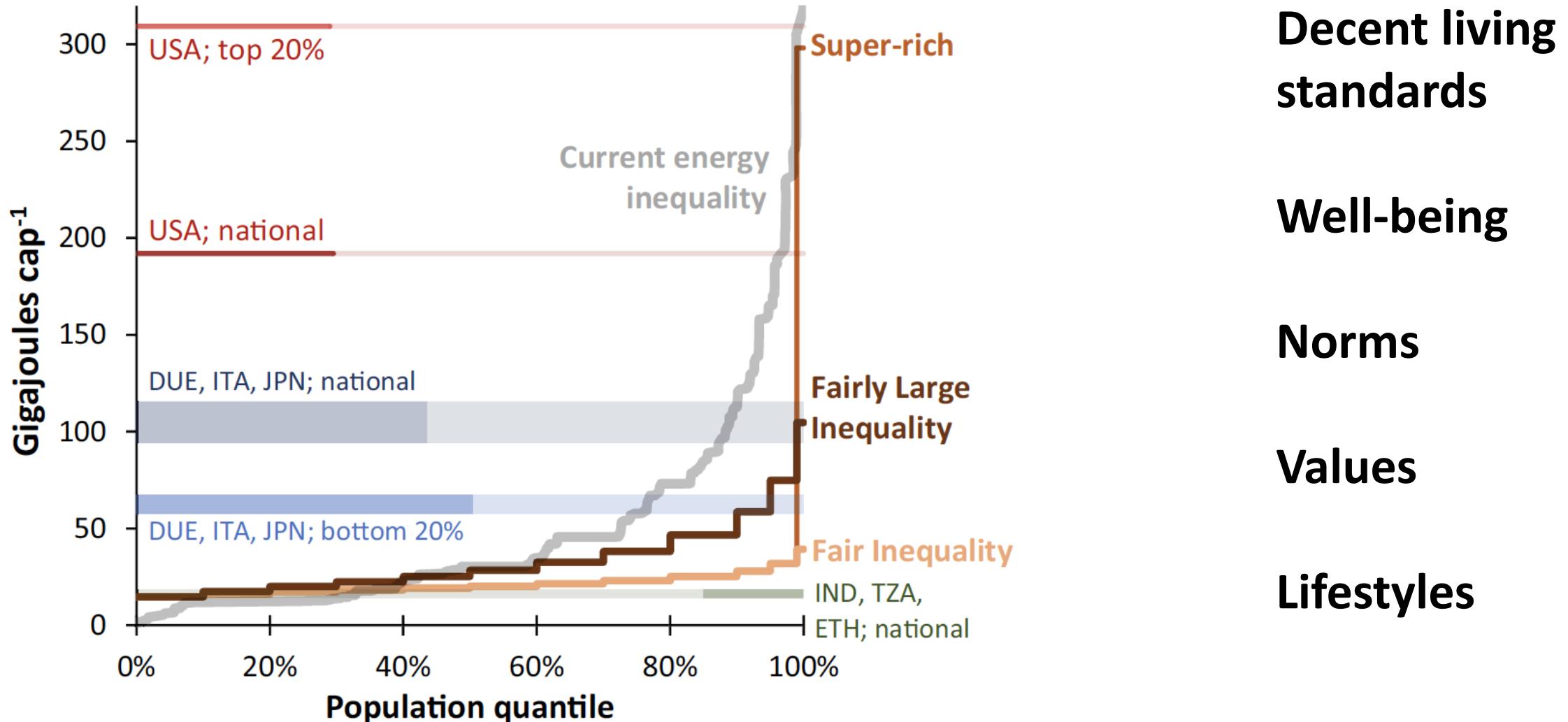
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« Studies give divergent results on the effect of economic inequality reduction on emissions, with either an increase or a decrease in emissions »

WGIII chapter 3



# Estimates of final energy use per capita across global population quantiles in 2050 : Different visions



Final energy per capita in 2050 for the three inequality scenarios, shown averaged across population quantiles for the lowest to highest consumption groups. For comparison the current distribution of final energy is also shown, as well as that for a selection of income groups and countries (from Oswald et al. (2020), but with government & capital energy added). The stepped patterns arise from the distributions produced in the inequality scenarios, which are at a resolution of deciles up to the top decile, which is split into three further groups (see Methods for more details). DUE Germany, ITA Italy, JPN Japan, IND India, TZA Tanzania, ETH Ethiopia.



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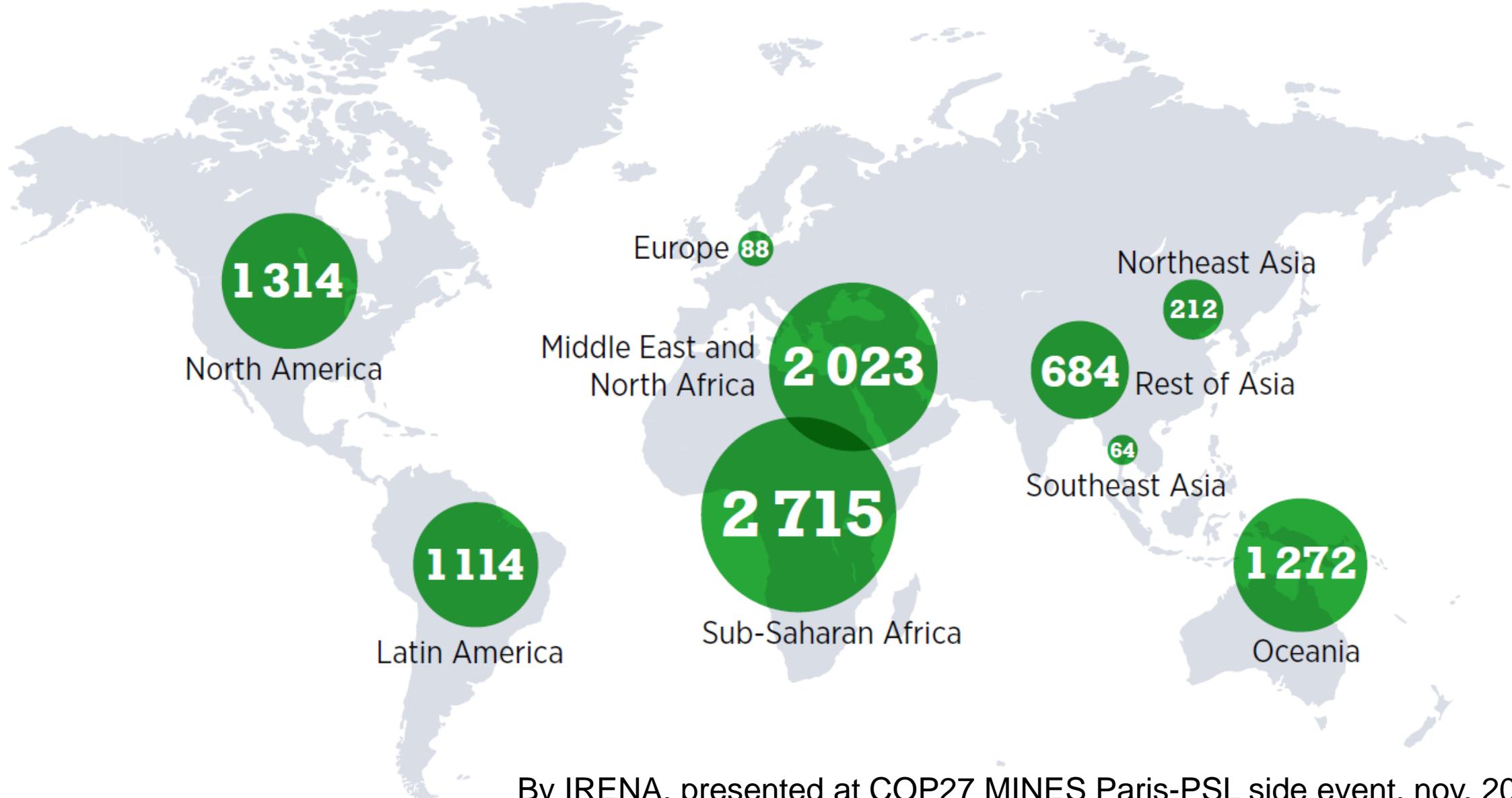


## DES LEÇONS DU PASSÉ

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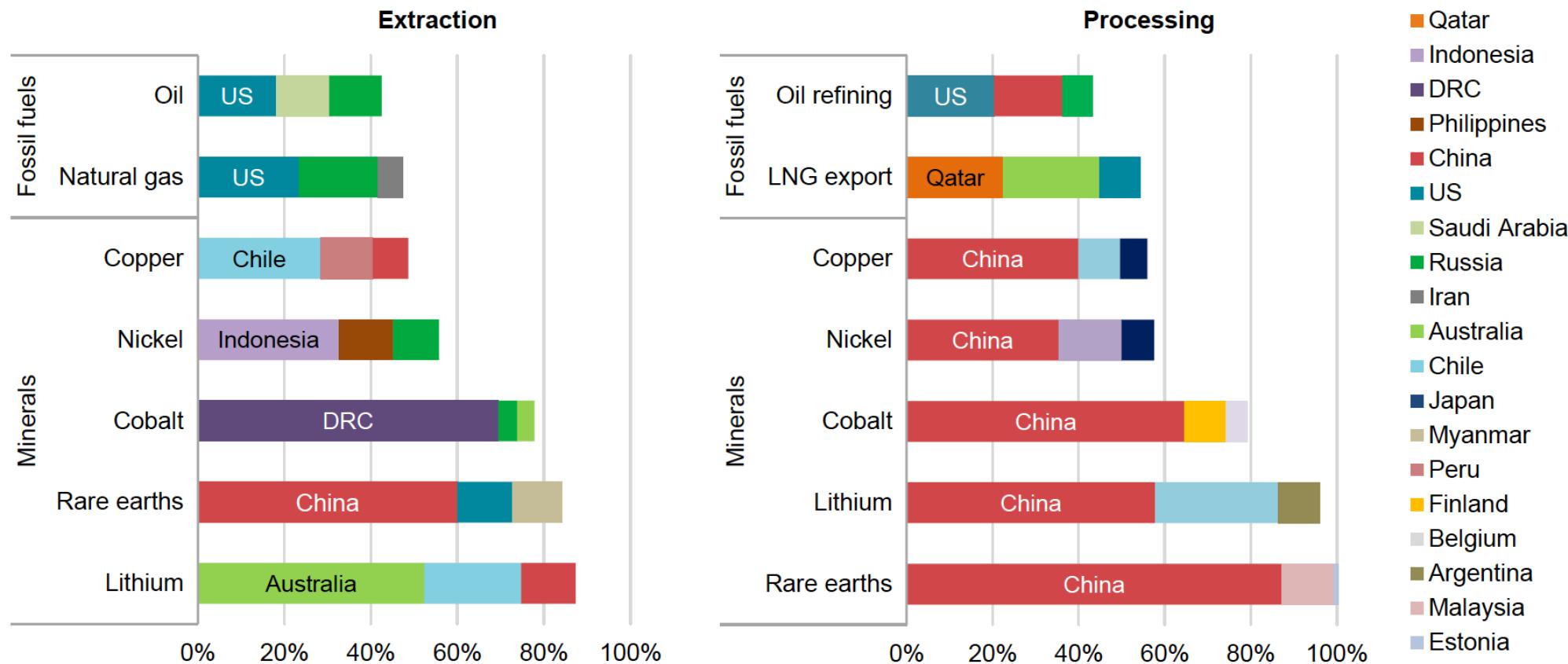
# Technical potential for producing green hydrogen under USD 1.5/kg by 2050, in EJ

IRENA  
International Renewable Energy Agency



# Production of many energy transition minerals today is more geographically concentrated than that of oil or natural gas

Share of top three producing countries in production of selected minerals and fossil fuels, 2019



IEA. All rights reserved.

Notes: LNG = liquefied natural gas; US = United States. The values for copper processing are for refining operations.  
Sources: IEA (2020a); USGS (2021), World Bureau of Metal Statistics (2020); Adamas Intelligence (2020).



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## RECOMMANDATIONS

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# ADOPTER UNE APPROCHE SYSTÉMIQUE ET HOLISTIQUE



pour que les solutions des uns ne soient pas les problèmes des autres





L'ambition d'une véritable transition

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