

POPCLIMA (Grant agreement: 101002973)

Department of Statistical Sciences, University of Bologna

United Nations Population Division Expert Group Meeting,  
19 July 2023



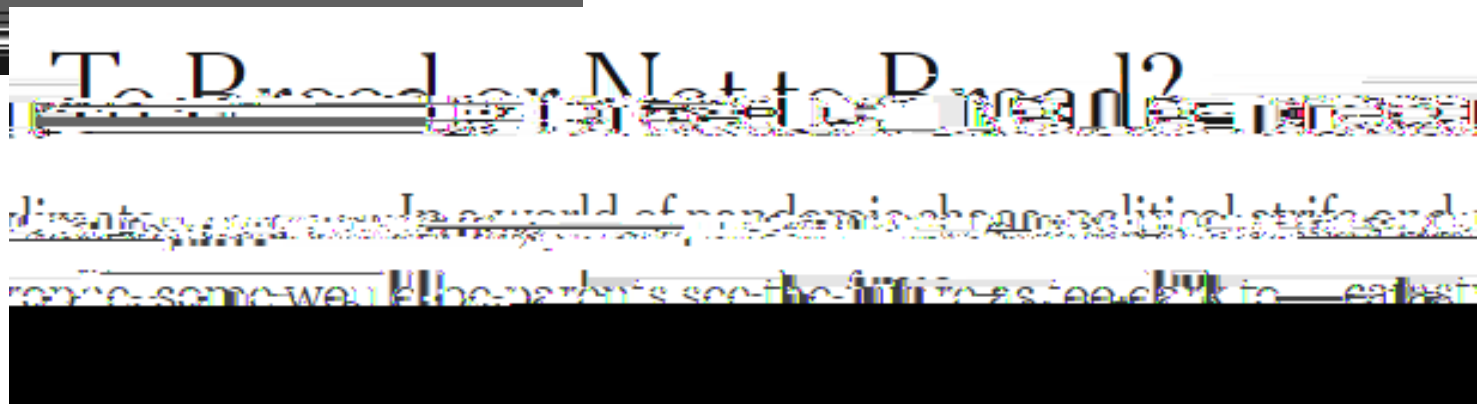
(e.g. organic pollutants,  
radioactive materials and  
microplastics)

Source:  
Steffen, W. et  
al. (2015).  
[Science](#).





Time-governed



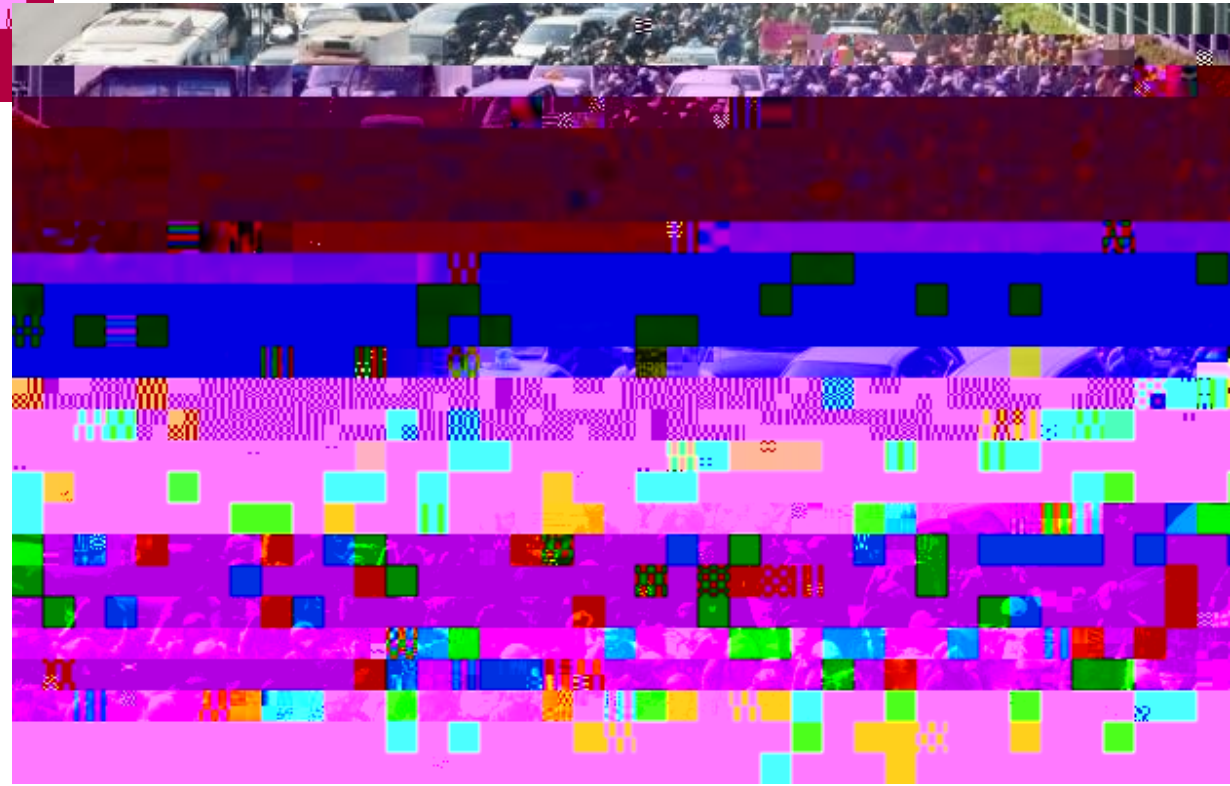




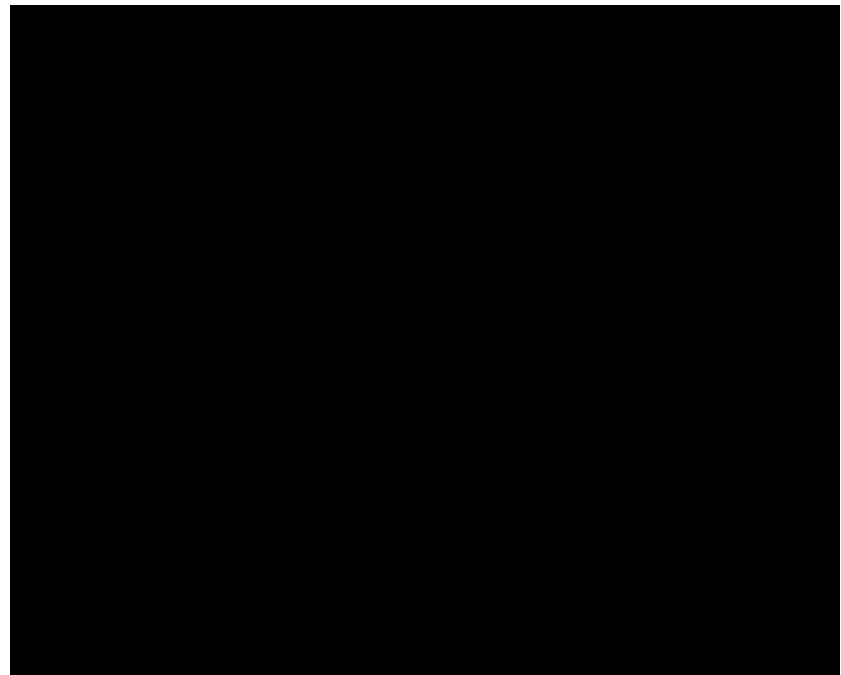
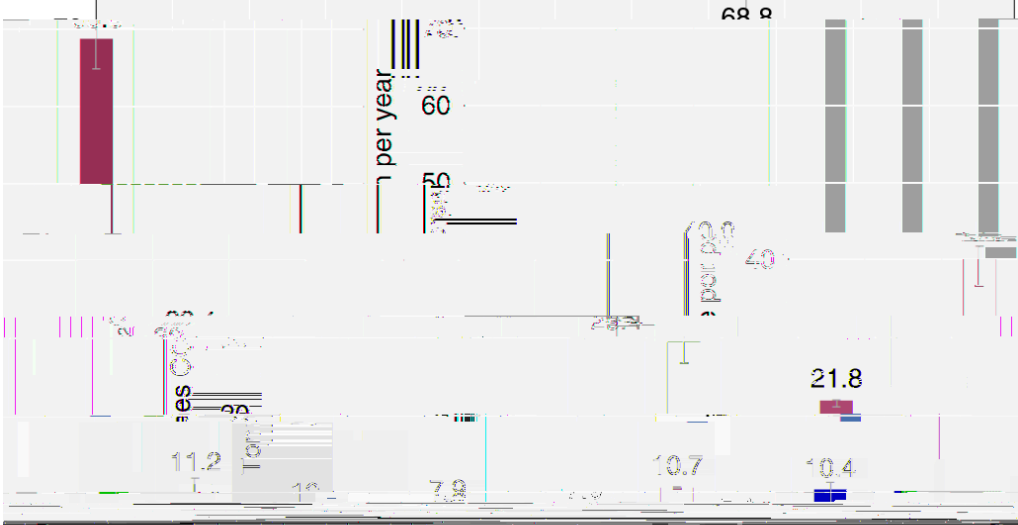


Source: [Drestime.com](http://Drestime.com)

Source: vietnamnet.vn



- $I$  = Human impact on the environment
- $P$  = Population
- $A$  = Affluence (consumption per person)
- $T$  = Technology (impact per unit of consumption)



Source: Chancel, L. (2022). [Nature Sustainability](#).

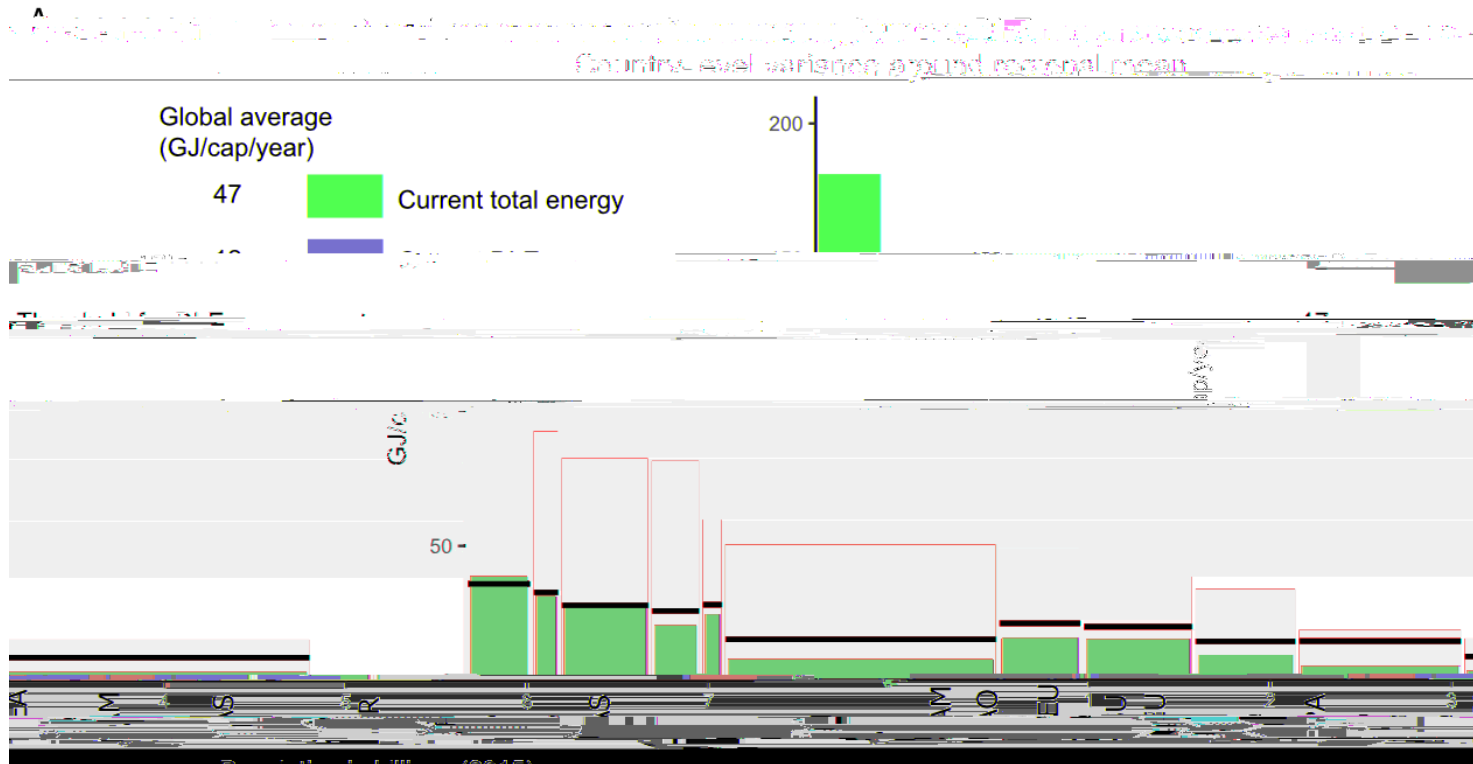
c

Global emissions inequality in 2019: summary table

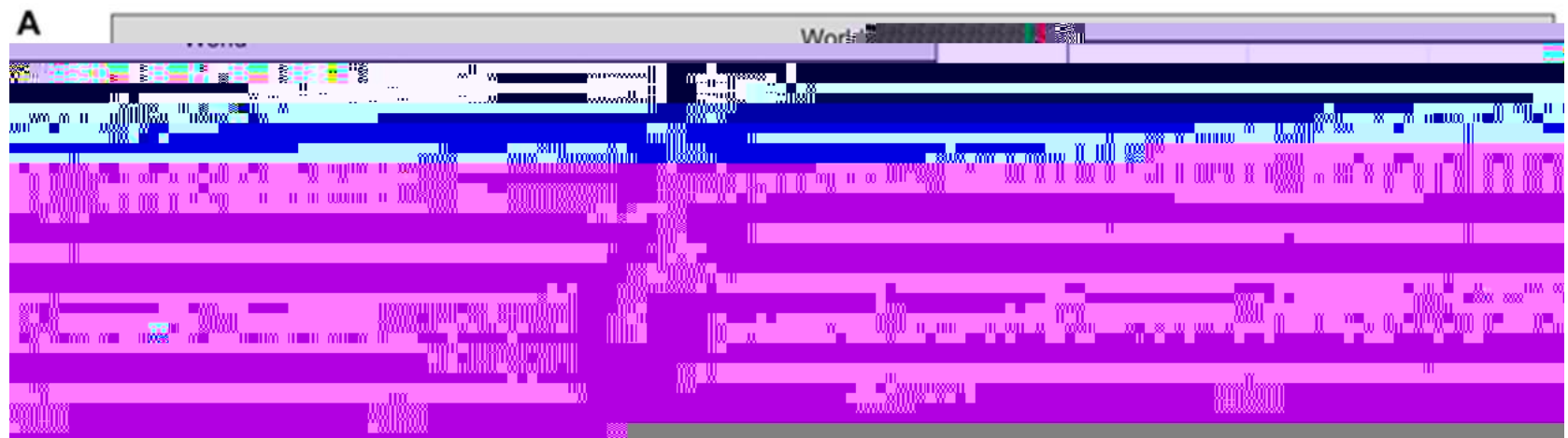
	Average	Threshold		
Population	7,710			
1.5%	11.5%	1.5%	11.5%	11.5%
0.7	<0.1	2.3%	Incl. bottom 20%	1,542
1.2	1.1	0.8%	Incl. top 20%	2,315
Incl. 100%	771	20	18	46%
			Incl. top 91%	7,710







Timeseries of future pathways of decent living energy under a scenario in which decent living is provided to all by 2040 (DLE-2040), and a scenario in which decent living provision is related to economic growth (DLE-GDP), compared to SSP2 and its 2 °C (SSP2-26) and 1.5 °C (SSP2-19) compatible pathways.



Source: Kirkstra, J. et al. (2021). [Environmental Research Letters](#).



Source: Belmin, C., Hoffmann, R., Pichler, P., Weisz, H. (2021). [Nature Sustainability](#).

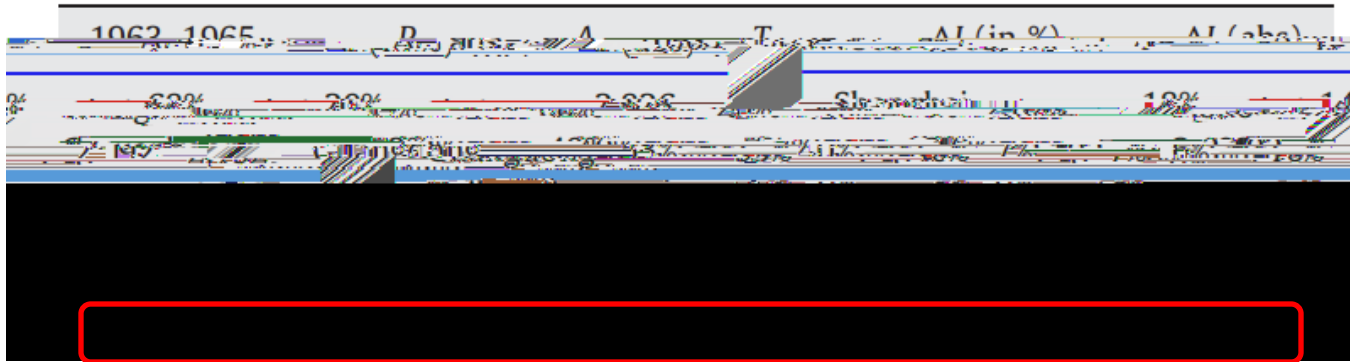




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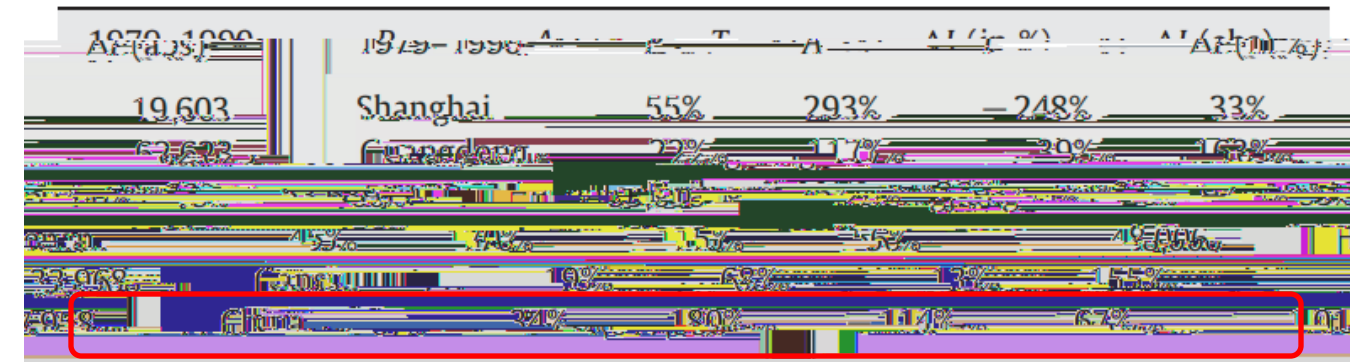
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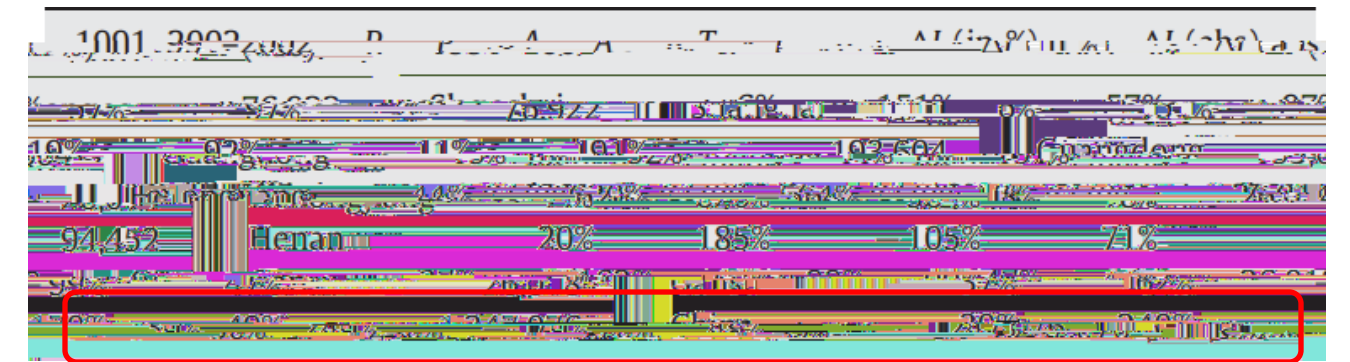
(1963–1965)

- Mao's call of 'Great Leap Forward'



(1979–1990)

Deng's 'socialist market economy' an open door policy for international trade and investment allowing foreign direct investments (FDI)



Source: Feng, K., Hubacek, K., Guan, D.(2009). [Ecological Economics](#).