



**Landscape  
Indonesia**

# **Carbon Budget for Indonesia?**

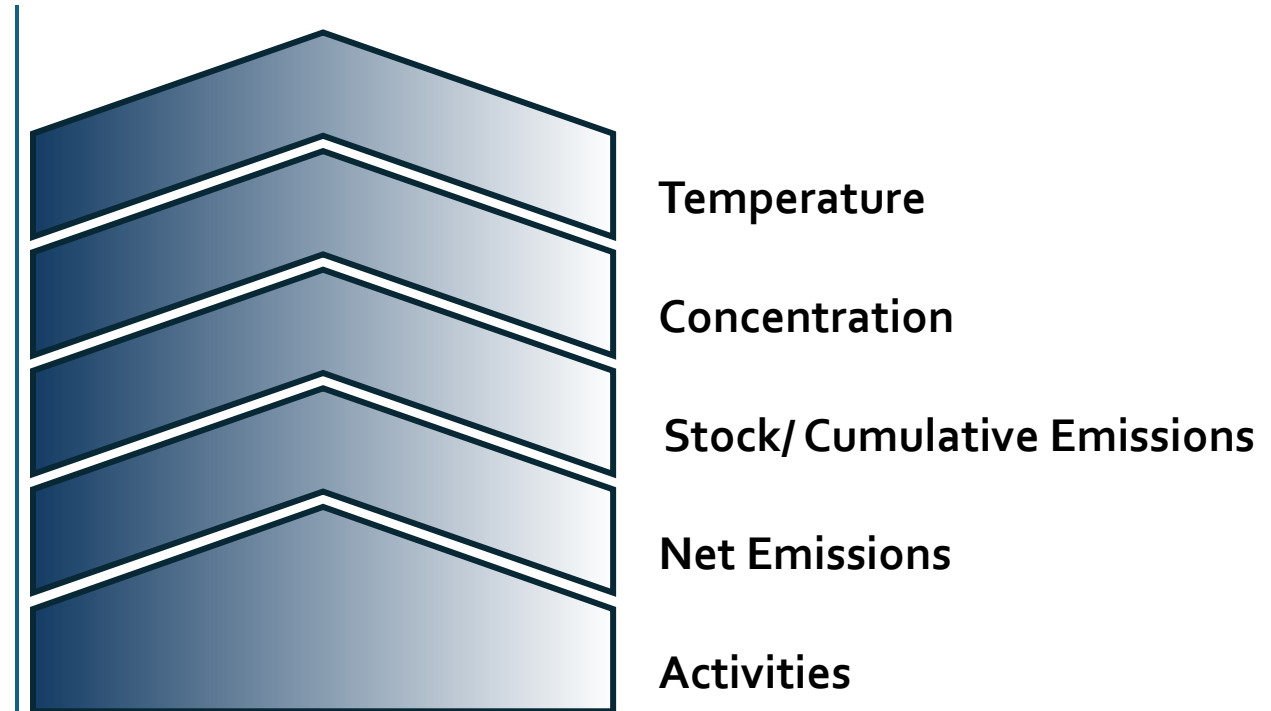
**Agus P. Sari**  
Landscape Indonesia  
[agus.sari@landscape.id](mailto:agus.sari@landscape.id)

# What is carbon budget? The amount of the stock of carbon dioxide permitted to keep within a certain temperature threshold.

The amount of carbon dioxide emissions permitted over a period of time to keep within a certain temperature threshold – have grown in importance in the climate change debate in recent years.

A single number that encapsulates the finite limits of our planet's physical system and highlights the need to reach net zero – if we continue to release emissions on a net basis, the budget is breached, and the temperature keeps rising.

-- Carbon Tracker

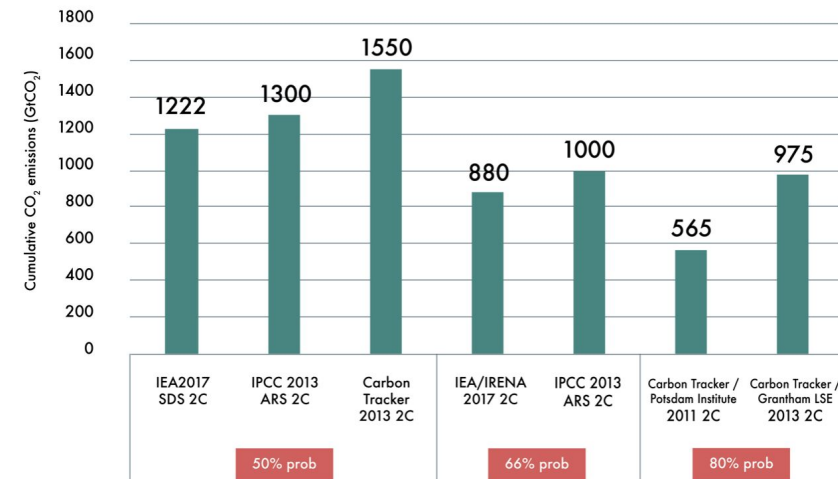
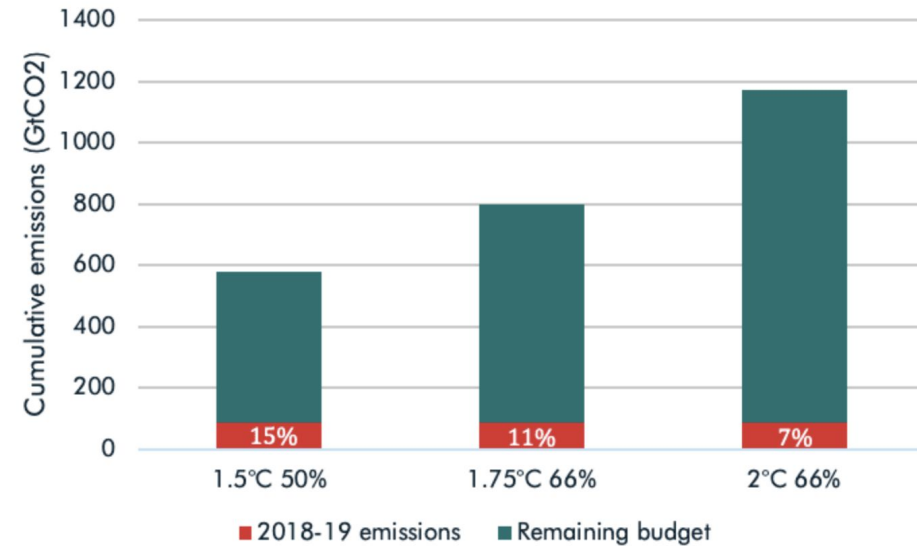


# What is our carbon budget now?

At 50 percent probability, 1.5°C will only be kept when cumulative emissions after 2019 inclusive are kept at or lower 600 GtCO<sub>2</sub>.

While at 66 percent probability, 2°C will only be kept when cumulative emissions after 2019 inclusive are kept at 1,200 GtCO<sub>2</sub>e.

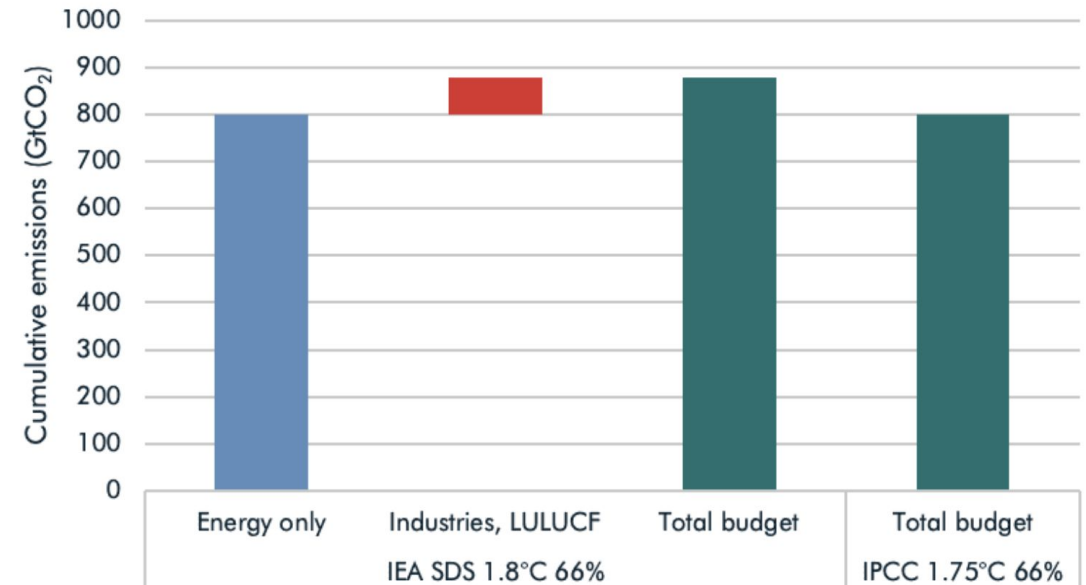
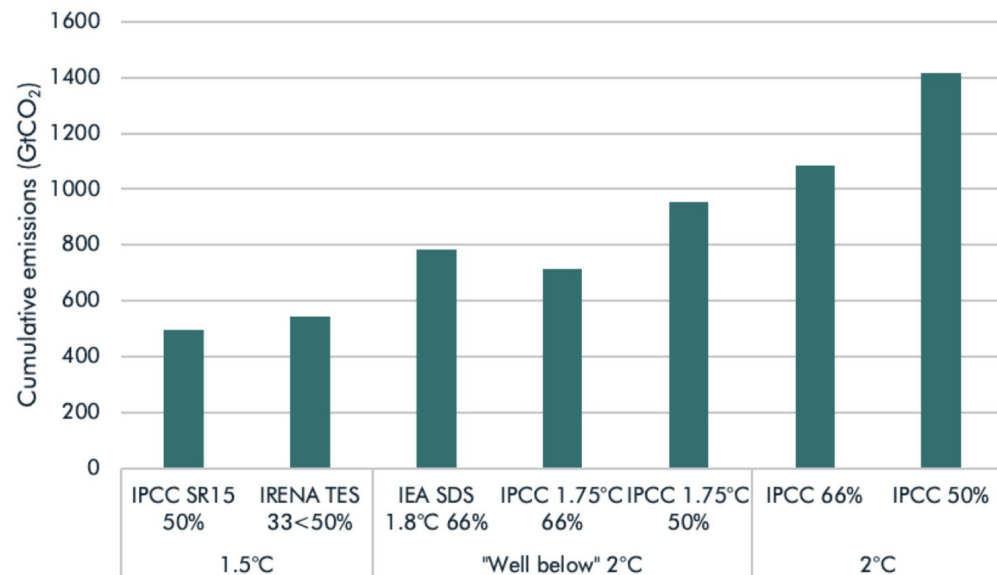
Different institutions publish different numbers.



# What is the current carbon budget globally? About 500 – 550 GtCO<sub>2</sub> cumulative emissions for 1.5°C, and 1100 – 1400 GtCO<sub>2</sub> for 2°C.

About 500 – 550 gigatons of carbon dioxide (GtCO<sub>2</sub>) with 33 – 50 percent confidence for 1.5°C.

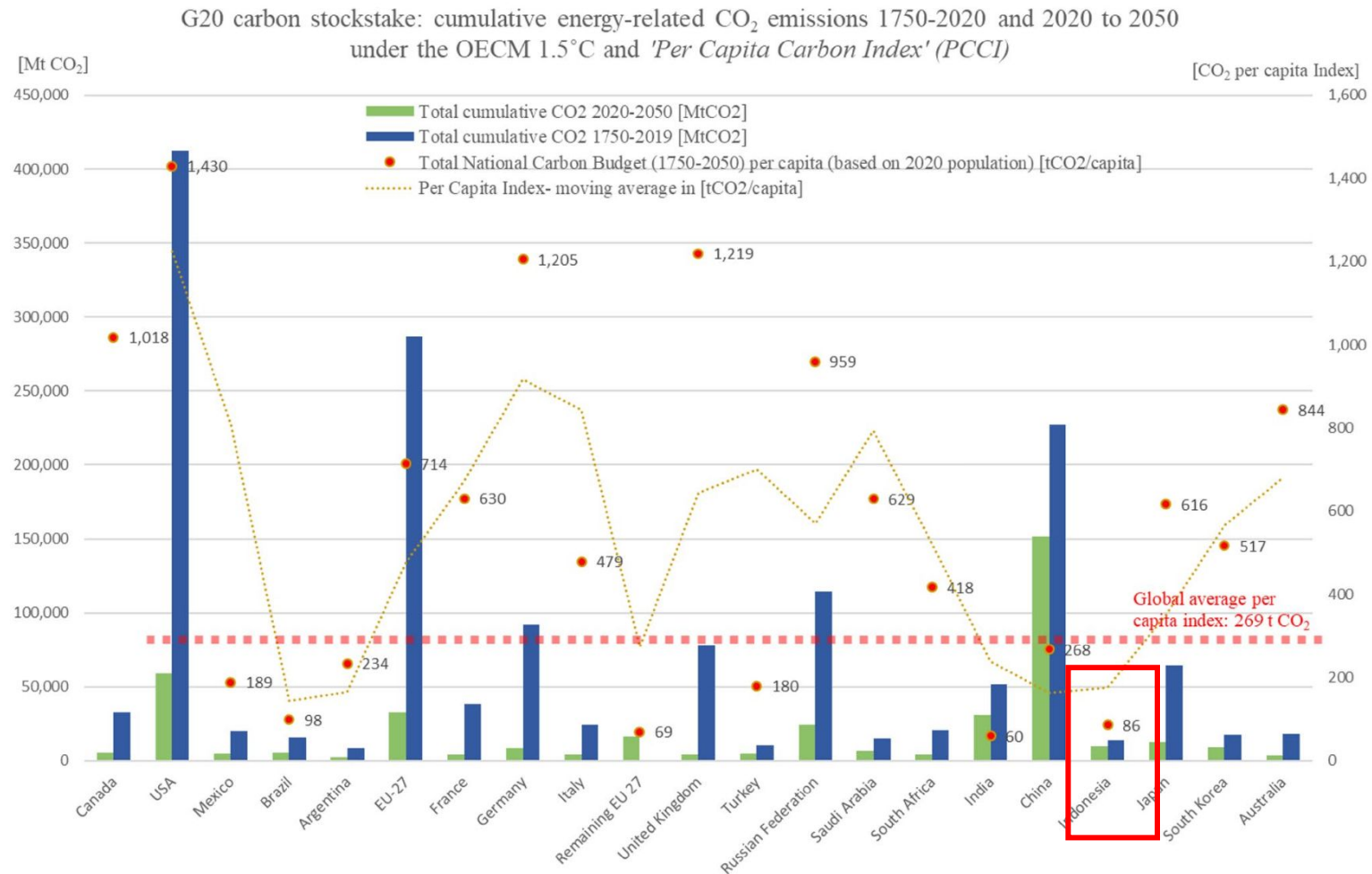
About 1,100 – 1,400 GtCO<sub>2</sub> at 50-66 percent confidence for 2°C.



Source: IPCC, IRENA, IEA

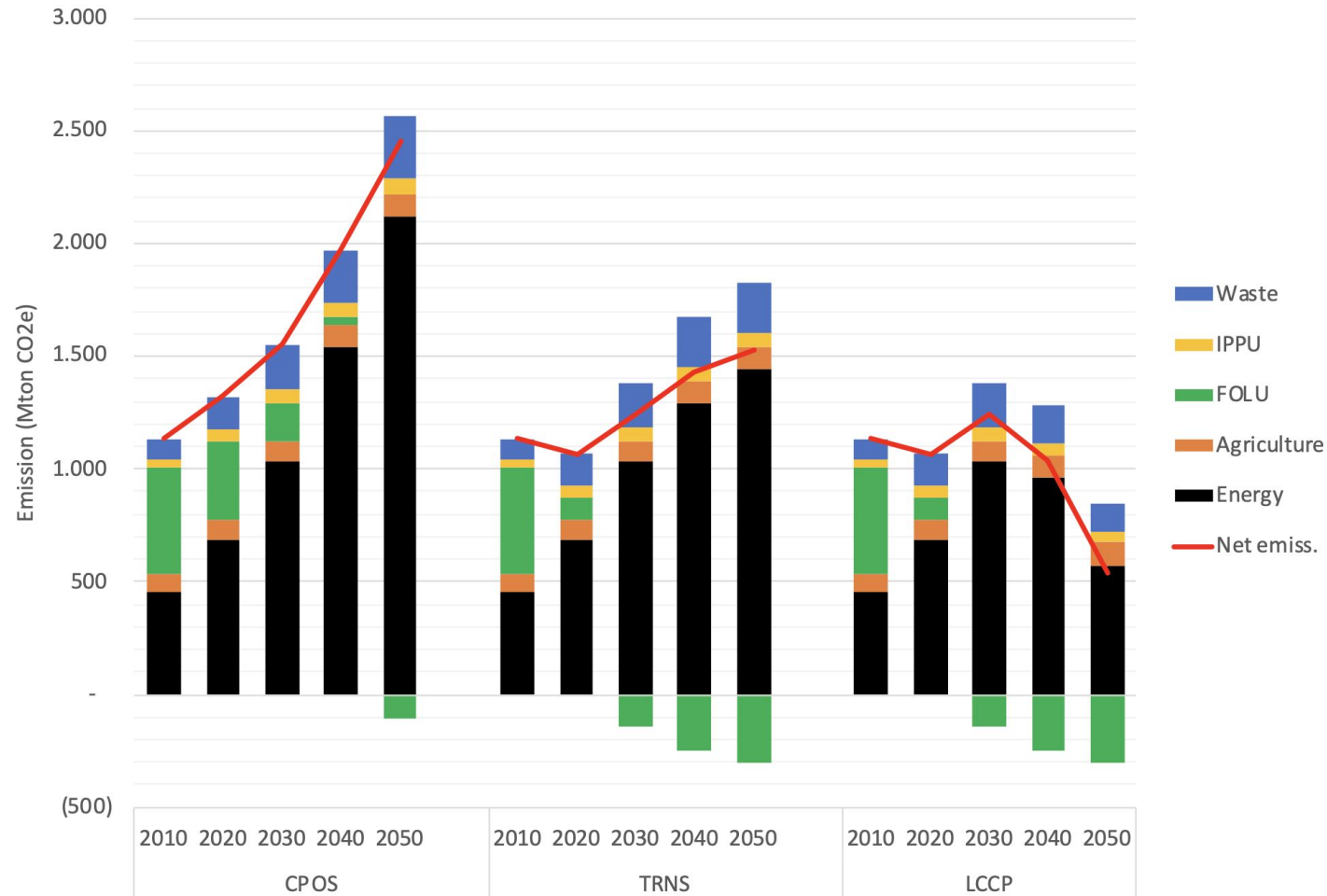
Source: IEA, IPCC

# Cumulative energy-related carbon dioxide emissions, Indonesia among other G20 countries and per-capita index



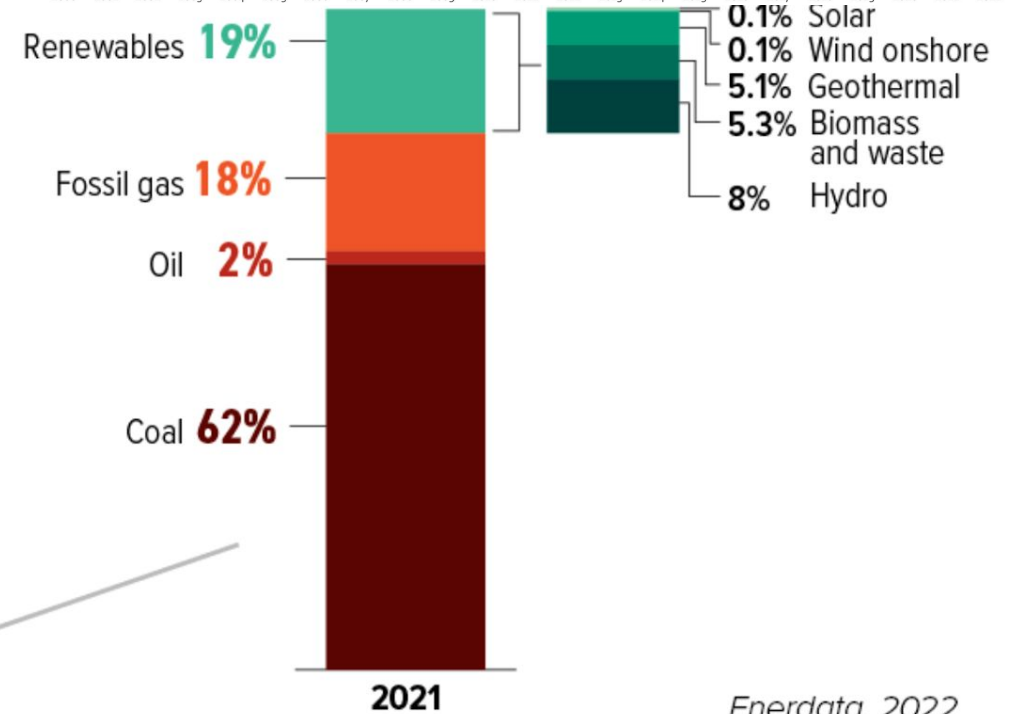
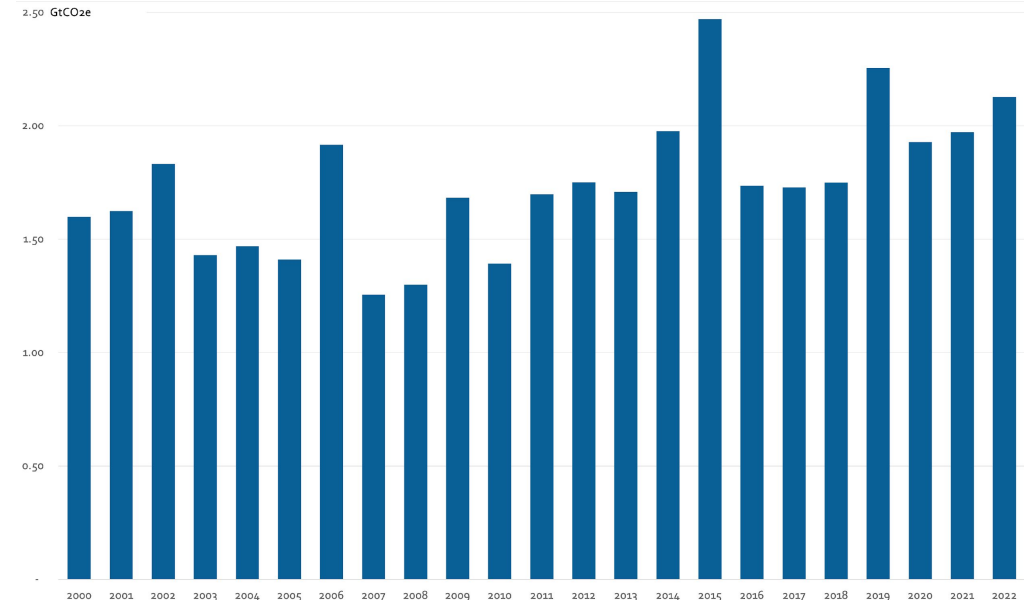
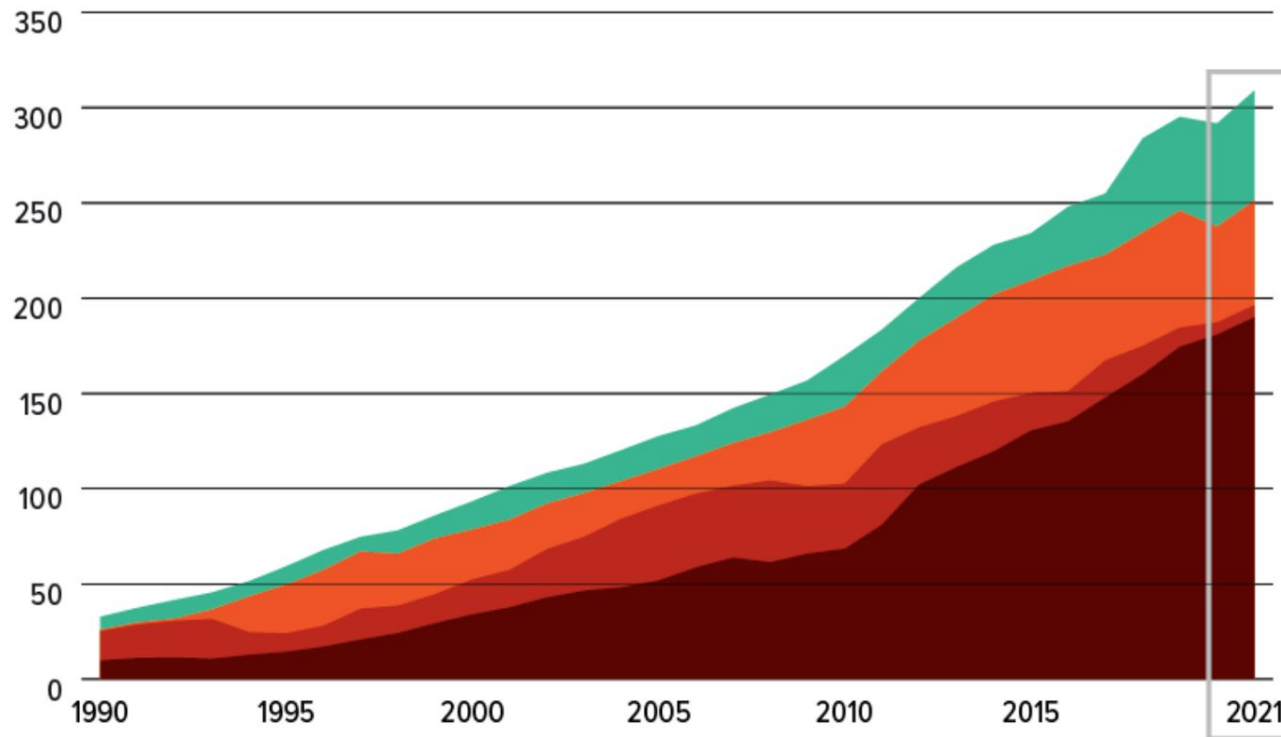
Teske, S. The 'Global Stocktake' and the remaining carbon budgets for G20 countries to limit global temperature rise to +1.5 °C. *SN Appl. Sci.* 5, 256 (2023). <https://doi.org/10.1007/s42452-023-05482-w>

**What is Indonesia's carbon budget? According to the LTS-LCCR, Indonesia needs to peak emissions at 1,400 MtCO<sub>2</sub>e by 2030 to reach 2060 net zero emissions that is consistent with Paris Agreement.**



# Energy will be the most strategic sector in Indonesia's future emissions.

Gross power generation (TWh)



In the energy sector, renewables need to be the dominant source of energy, and fossil fuels, especially coal, will need to peak and then decrease in absolute amount.

