Zahra Alavi

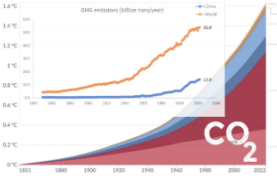
ENVIRONMENTAL ISSUES

Scenario and Strategies on Co2 Emission: Global and China

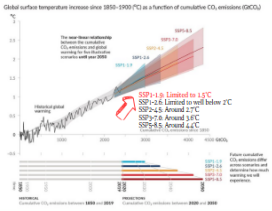
PRESENTED TO

DR. Zigan, on 17-04-2024

GLOBAL CONTEXTS



Global warming contributions by gas and source, World, 1851 to 2022(1)



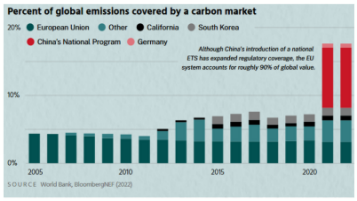
GREENPEACE

Under Greenpeace East Asia's pressure, Hyundai and Kia accelerated their **European internal combustion engine** (ICE) phase-out from 2040 to 2035. They committed to ending ICE Vehicles in **China**, **South Korea**, and the **US** by 2040, while moving up their carbon neutrality target to 2045 from 2050. **Hyundai** shut down its **South Korean** powertrain engine development department and shifted focus to a battery development center.

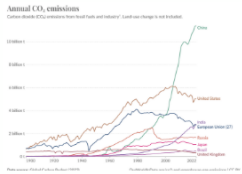
Environmental Defense Fund(EDF)

EDF drives **global methane reduction** through research and advocacy, deploying a **methane-tracking satellite**. Goal: Cut global methane emissions from energy and agriculture by 30% below 2020 levels by 2030.

Carbon markets are trading schemes that provide **financial incentives** for **climate change mitigation**. In these schemes, greenhouse gas emission reductions and/or removals are quantified into carbon credits that can be bought and sold, with the aim of transitioning economies to **Net-Zero** by mid-century (UNDP).



Regional Context- CHINA



Position | Impacts | Activities | Outcomes

P: Heavy reliance on coal, **31%** of global greenhouse gas emissions (**2022**).

I: Carbon emissions have a long-term adverse impact on residents' health (1% rise in carbon emission adds **0.298%** more outpatients and **0.162%** more inpatients).

I: Unabated climate change could lead to estimated GDP losses of between 0.5 and 2.3 percent for China as early as **2030**.

A : Transition to renewable energy (Solar & wind) from fossil fuels.

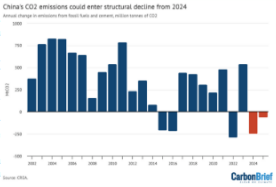
A : China established several regional carbons trading pilots, primarily targeting the coal power sector. (ETS EU : €80/tCO2 & China : $8/tCO2)

O : FY **2023** Solar, wind, hydro, and nuclear capacity installation generated an estimation of 423 terawatt hour (TWh) per year, equal to the total electricity consumption of France.

O : The implementation of the carbon emission trading system in China yielded has **13.6%** increase in economic returns.

Initiatives, Suggestions & Prediction

- China has implemented a "1+N" policy framework to achieve its goals of peaking carbon emissions before **2030** and reaching carbon neutrality before **2060**.
- The Paris Agreement 2015; China's updated NDC in 2021 included more ambitious targets, such as a **65%** reduction in CO2 intensity by **2030** compared to **2005** levels.
- Strengthen policy coordination and implementation at the provincial and local level.
- ·Reduce personal carbon footprint through actions like energy efficiency, renewable energy use, sustainable transportation, and waste reduction in homes, schools, and communities.
- ·Increase investment in clean energy and research & innovation in green technologies such and hydrogen and carbon capture, utilization and storage (CCUS).



- China's carbon dioxide (CO2) emissions are projected to fall in **2024** and could be facing structural decline, due to rapid growth in the installation of new low-carbon energy sources such as solar, wind, Nuclear & Hydropower.

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