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The Challenges of Balancing Economic Growth with Environmental Protection

Kira Tarasova

Deputy President of GA1

Introduction

As the world's population crossed an 8 billion mark in 2022, the question of disparity has never been so relevant. As 1% of the world's population owns 38% of total wealth, the question grows of how is that even possible. For centuries, the economy of the world has been dominated by a small number of developed countries. But in recent decades things have turned around. With Saudi Arabia being the fastest growing economy in 2022 and countries like India and China entering the rush of rapid economic growth, the hope for a future with equal rights and opportunities for everyone arises. But the biggest challenge of a fast growing economy of a not developed country is through what ways such growth is achieved. Not all of the ways can be considered environmentally considerent as the use of fossil fuels is very high in the fast developing countries. If the economy is more developed there is also a higher individual pollution level. A household that has access to electricity and uses devices such as a refrigerator, a TV, multiple outlets constantly, etc. has higher environmental impact than a household that doesn't have an access to electricity at all. As a more developed economy provides better opportunities and increases the standard of living for the people, the environmental concern is getting more and more of an issue. If even only the countries of India and China (which collectively have almost 3 billion people) would start living to the level that countries like France or Sweden are enjoying without changing any world wide approaches to the protection of the environment, our planet will experience a rapid death by its own citizens due to global warming and pollution. The committee of Ga1 is set to debate the challenge of balancing economic growth while protecting the environment.

Definition of key terms

Economy: Britannica dictionary's definition of economy is *the process or system by which goods and services are produced, sold, and bought in a country or region.*

Economic growth: *economic growth means that the goods and services are not only present in the economy but also constantly increase in quantity and quality.*

LEDC: *stands for a less economically developed country, the country is relatively poor and is considered a developing country*

WHO: *World Health Organisation*

Terawatt-hours: *a unit of energy equal to outputting one trillion watts for one hour. It is equal to 3.6x1015 Joules.*

General Overview

China's economic boom

In the last decade the Chinese economy has grown rapidly. China has the second largest economy after the US and it is on the road to becoming the largest, since 2000 China's GDP has tripled, taking 15% of total world GDP. The Chinese economy is based on China being a large manufacturing place and export of multiple diverse products. In recent years the country has also become an economy with a growing middle class and service sector. However China has a big gap between the upper and lower class with the minimum salary 2 - 10 US dollars a day.

Household impact on the environment in various countries

Each French citizen produces an annual average of 510 kg of municipal waste. This figure has fallen since the economic crisis but remains above the European average of 480 kg. In India the waste has drastically increased as the rise of plastic and cheap but harmful to the environment equipment has started being in the massive use with the growing economy. Average municipal waste per capita in India is 670 grams per day which is 244,55 kg per year which is still twice as less as France's. However, unlike France that has a population of 68 million, India has almost a billion and a half of people. Because of that, India is placed third in the world by the amount of CO_2 emissions with 2,533,638,100 tons of CO_2, while France is 19th with 331,533,320 tons. After doing some calculations, France's CO_2 emissions per person is 4.87 tons, while India's is 1.69 tons of CO_2 per person. That is 3 times the difference between the two countries. When finding CO_2 emissions per capita the total amount of CO_2 emissions produced by the whole country is divided by the amount of people living in the county. What should be taken into account though is the fact that a lot of developing countries like India have a lot of government owned factories which contribute to the total emissions level the most. In reality a person living in India produces closer to 0.002 tons of CO_2 gas when not taking into account emissions from big corporations. This makes the difference between the average person in India and a person in France emission levels differ by 2435 times. If

every person in India lived to the standards of France's average CO2 emissions, India would have 6,901,633,352.51 tons of CO2 emissions per year which would put India second in the world after China by the amount of CO2 emissions. That is 3 times more than what India is polluting right now.

Major Parties Involved

This is a worldwide issue therefore every country is involved in it, from Nepal to Paraguay. Countries impacted the most are stated as following:
- The capital of **Mongolia**, Ulaanbaatar is one of the most polluted cities in the world. In the coldest days of January PM2.5 pollution levels reach 687 micrograms per cubic metre. To put it in perspective, it is 27 times what WHO recommends as a safe level. After the fall of the Mongolian Empire the country has had no political or economical power on the world arena and is now considered a developing country because of the low performing economy.
- As stated above, **India** is placed third in the world by the amount of CO2 gases emitted. But the dilemma with India is although the country produces one of the biggest amounts of CO2 emissions, the country also has a population of 1.5 billion people. With that many people and a chaotic economy 270 million people live in poverty without access to basic human necessities.
- **China** is currently marked the first country to produce more than 10 billion tons CO2 emissions making it leading in the amount of CO2 emissions. China emits twice the amount of the following up by the numbers USA which emits 5 billion tons of carbon dioxide. As China has a totalitarian regime which forces people to produce trillions of products for exports, the government does not care about the long lasting effects of environmental harm.

Possible Solutions

1. Balancing economic development and environmental protection is a difficult issue to tackle, but there are a few solutions that could reduce the impact on the planet and help the development of LEDCs.
2. The first one is of course banning fossil fuels world wide. Currently, the world uses 136,018 terawatt-hours of fossil fuels with oil being the number one use, then coal and gas. Currently the countries using the most fossil fuels are China, US and India. China is leading in the use with 36,223 terawatt-hours, and the US being the

runner up with 21,017 terawatt-hours. Banning fossil fuels is a highly controversial topic as it will set a lot of countries back as they heavily rely on the use of such materials. Renewable and nuclear energy is also expensive, especially for the developing country who have a crushing economy and can't afford renewable sources as it is not their first priority.

3. One of other solutions can be financially supporting LEDCs and providing them with renewable energy generators such as solar panels. This solution is resourcefully costful as it will require support from a lot of countries.

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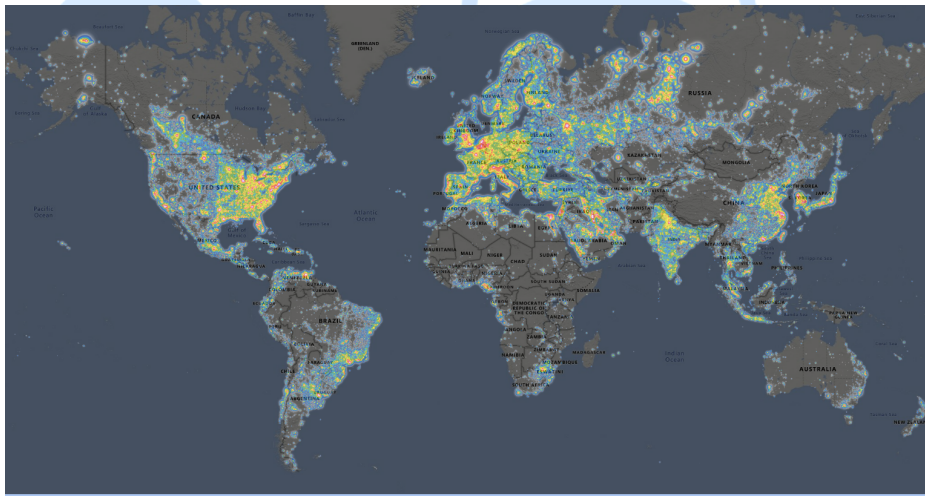
Annual CO2 emissions?
Annual CO2 emissions by world region?
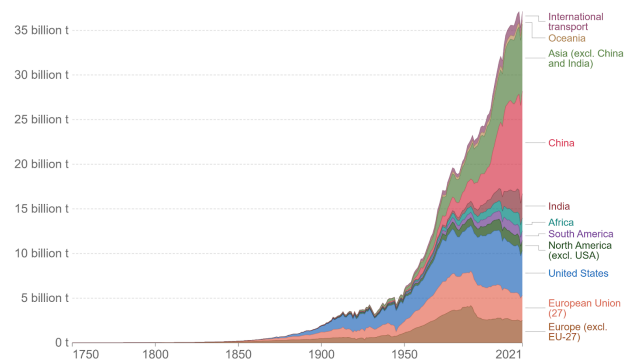Annual % change in CO2 emissions 2021?
Who emits the most CO2?
Fossil Fuels?

Annual CO₂ emissions by world region

This measures fossil fuel and industry emissions[1]. Land use change is not included.

35 billion t
30 billion t
25 billion t
20 billion t
15 billion t
10 billion t
5 billion t
0 t

1750   1800   1850   1900   1950   2021

International transport
Oceania
Asia (excl. China and India)
China
India
Africa
South America
North America (excl. USA)
United States
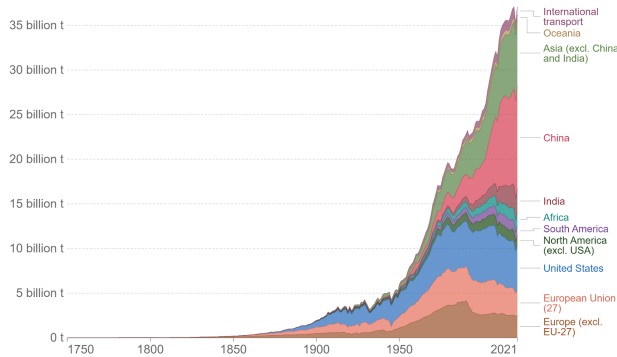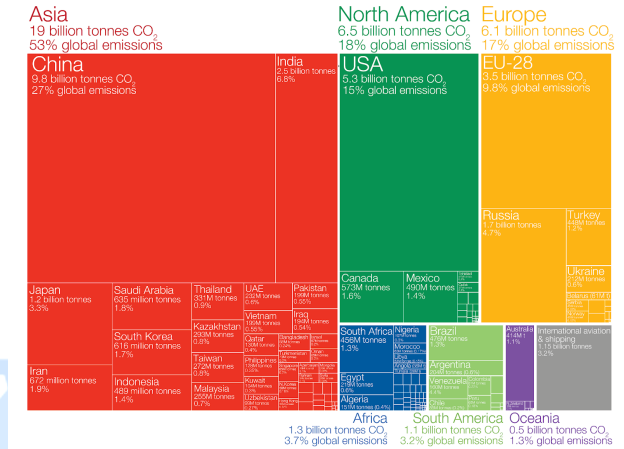European Union (27)
Europe (excl. EU-27)

Source: Our World in Data based on the Global Carbon Project (2022)   OurWorldInData.org/co2-and-greenhouse-gas-emissions • CC BY

1. Fossil emissions: Fossil emissions measure the quantity of carbon dioxide (CO₂) emitted from the burning of fossil fuels, and directly from industrial processes such as cement and steel production. Fossil CO₂ includes emissions from coal, oil, gas, flaring, cement, steel, and other industrial processes. Fossil emissions do not include land use change, deforestation, soils, or vegetation.
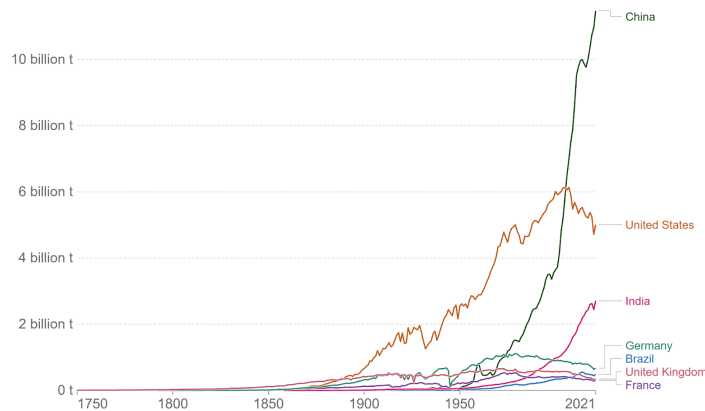
Who emits the most CO₂?

Global carbon dioxide (CO₂) emissions were 36.2 billion tonnes in 2017.

Asia 19 billion tonnes CO₂ — 53% global emissions
China 9.8 billion tonnes CO₂ — 27% global emissions
India 2.5 billion tonnes — 6.8%
Japan 1.2 billion tonnes — 3.3%
Iran 672 million tonnes — 1.9%
Saudi Arabia 635 million tonnes — 1.8%
South Korea 616 million tonnes — 1.7%
Indonesia 489 million tonnes — 1.4%
Thailand 331M tonnes — 0.9%
Vietnam 192M tonnes
Taiwan 272M tonnes — 0.8%
Malaysia 250M tonnes — 0.7%
UAE 232M tonnes
Pakistan 198M tonnes — 0.54%
Iraq 198M tonnes — 0.54%
Kazakhstan 293M tonnes — 0.8%
Qatar 115M tonnes
Philippines 138M tonnes
Kuwait 100M tonnes
Uzbekistan

North America 6.5 billion tonnes CO₂ — 18% global emissions
USA 5.3 billion tonnes CO₂ — 15% global emissions
Canada 573M tonnes — 1.6%
Mexico 490M tonnes — 1.4%

Europe 6.1 billion tonnes CO₂ — 17% global emissions
EU-28 3.5 billion tonnes CO₂ — 9.8% global emissions
Russia 1.7 billion tonnes — 4.7%
Turkey 448M tonnes — 1.3%
Ukraine

Africa 1.3 billion tonnes CO₂ — 3.7% global emissions
South Africa 456M tonnes — 1.3%
Nigeria
Egypt 258M tonnes — 0.6%
Algeria 157M tonnes (0.4%)
Morocco

South America 1.1 billion tonnes CO₂ — 3.2% global emissions
Brazil 476M tonnes — 1.3%
Argentina
Venezuela

Oceania 0.5 billion tonnes CO₂ — 1.3% global emissions
Australia 414M t — 1.1%
International aviation & shipping 1.15 billion tonnes — 3.2%

Shown are national production-based emissions in 2017. Production-based emissions measure CO₂ produced domestically from fossil fuel combustion and cement, and do not adjust for emissions embedded in trade (i.e. consumption-based).

Figures for the 28 countries in the European Union have been grouped as the 'EU-28' since international targets and negotiations are typically set as a collaborative target between EU countries. Values may not sum to 100% due to rounding.

Data source: Global Carbon Project (GCP).
This is a visualization from OurWorldInData.org, where you find data and research on how the world is changing.   Licensed under CC-BY by the author Hannah Ritchie.

Annual CO₂ emissions

Carbon dioxide (CO₂) emissions from fossil fuels and industry[1]. Land use change is not included.

10 billion t
8 billion t
6 billion t
4 billion t
2 billion t
0 t

1750   1800   1850   1900   1950   2021

China
United States
India
Germany
Brazil
United Kingdom
France

Source: Our World in Data based on the Global Carbon Project (2022)   OurWorldInData.org/co2-and-greenhouse-gas-emissions • CC BY

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