# Green Participation Green Europe

## A7 Introduction of Renewable Energy

PROJECT NUMBER : 2023-2-TR01-KA154-YOU-000168735








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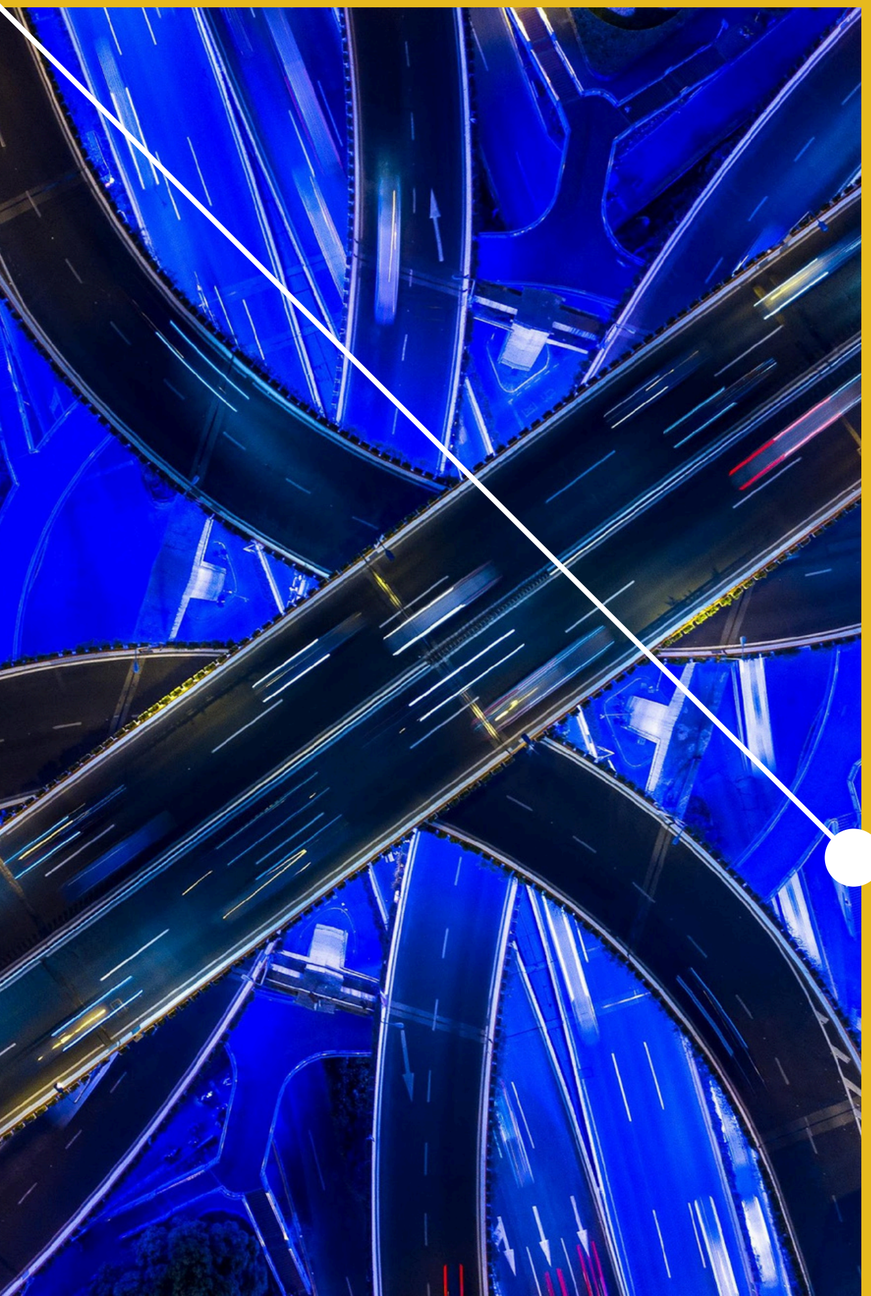
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# INTRODUCTION OF RENEWABLE ENERGY SOURCES

- PRESENTATION: A7
- PROJECT NUMBER : 2023-2-TR01-KA154-YOU-0001687335

# TOPICS

1. Fossil fuels
2. Statistics on fossil fuels and other energy resources
3. Greenhouse gases
4. References



# FOSSIL FUELS

# WHAT ARE THE FOSSIL FUELS

The most widely used fossil fuels include coal, crude oil and its derivatives, as well as natural gas.

# WHAT ARE THE FOSSIL FUELS

Fossil fuels develop through the anaerobic breakdown of organic deposits subjected to prolonged geological compression and heat (Britannica, 2023).

# WHAT ARE THE FOSSIL FUELS

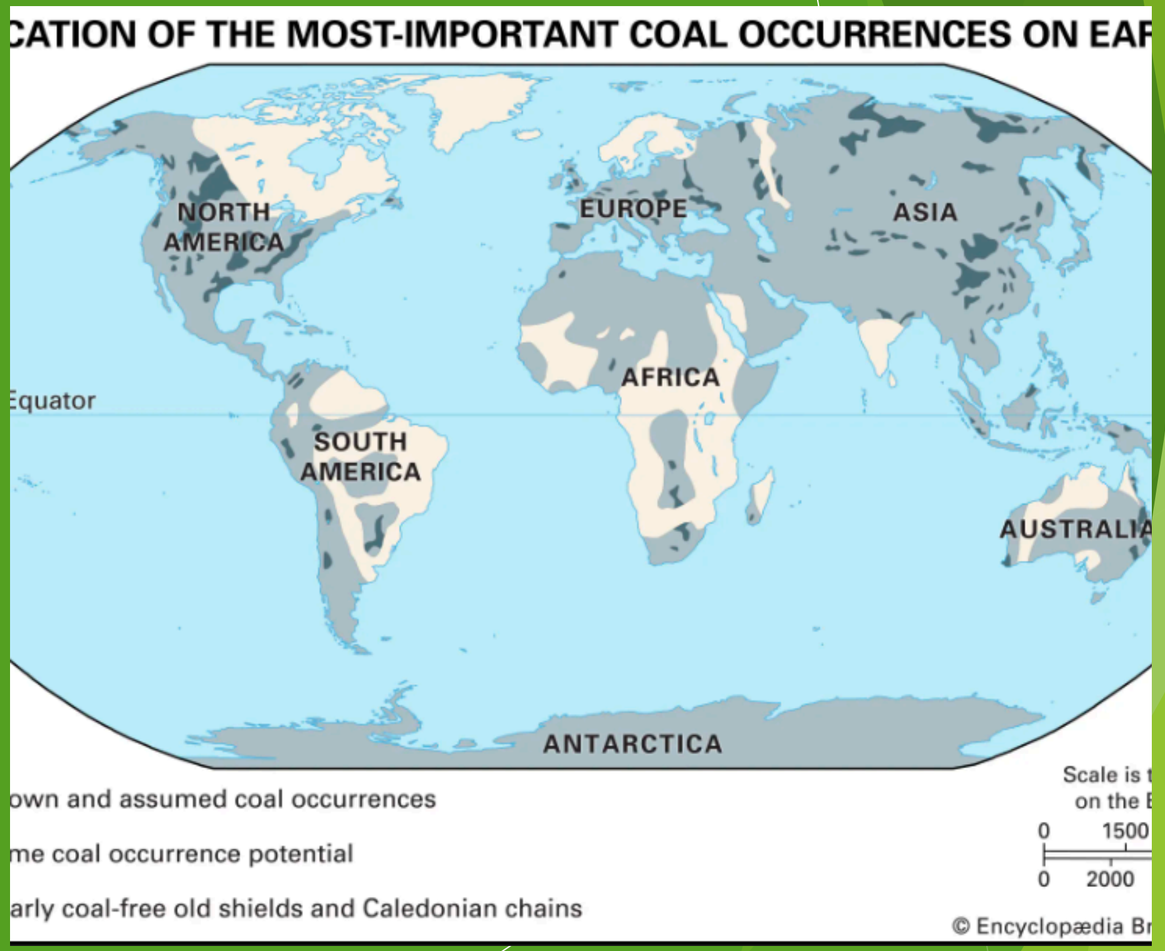
The formation of different fossil fuels depends on variations in organic material composition and environmental conditions, such as temperature, pressure, and geological time.

# WHAT ARE THE FOSSIL FUELS

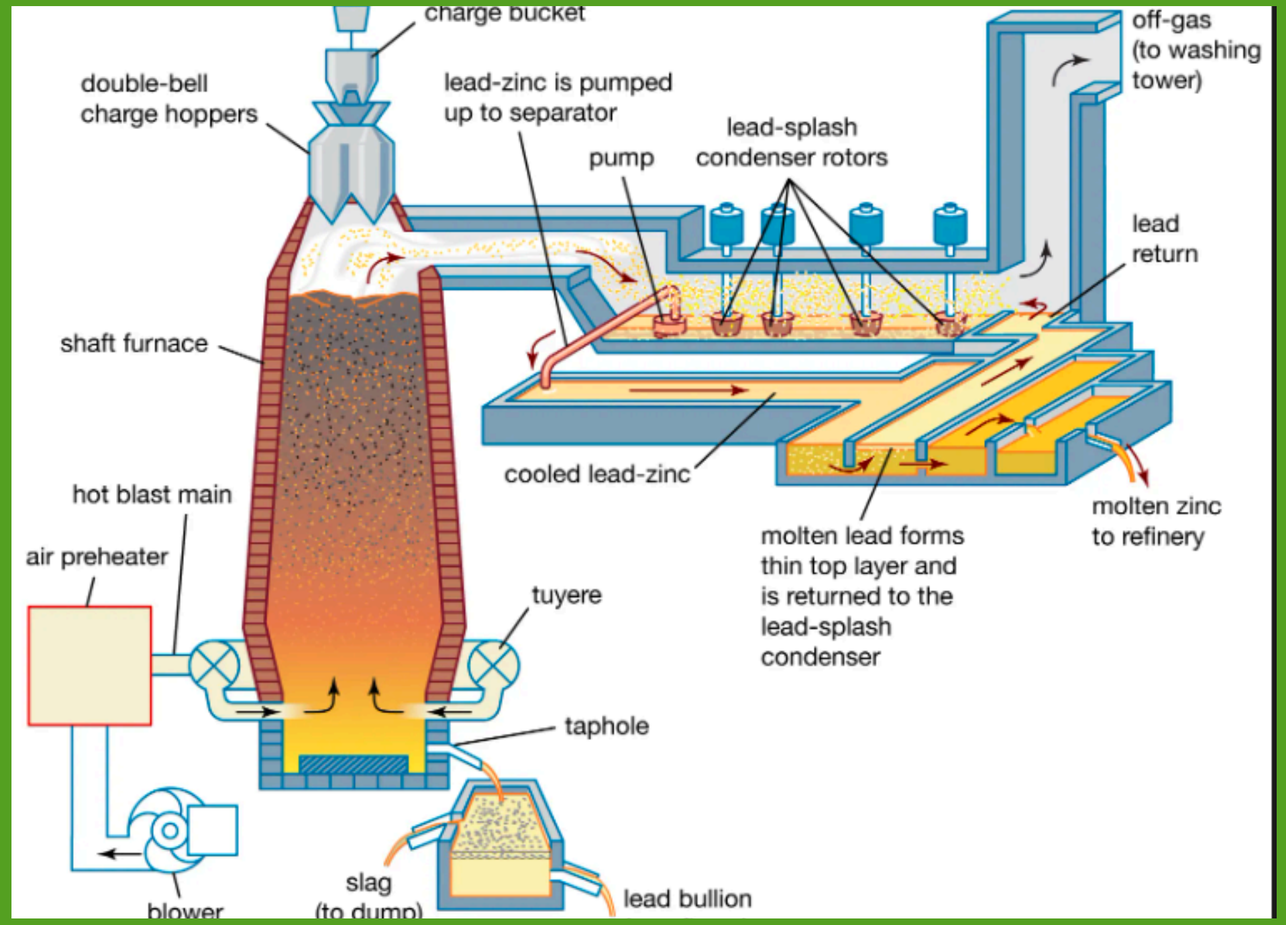
Fossil fuels can be categorized into several main types.

# SOLID FOSSIL FUELS OR COAL





# MANUFACTURED GASES





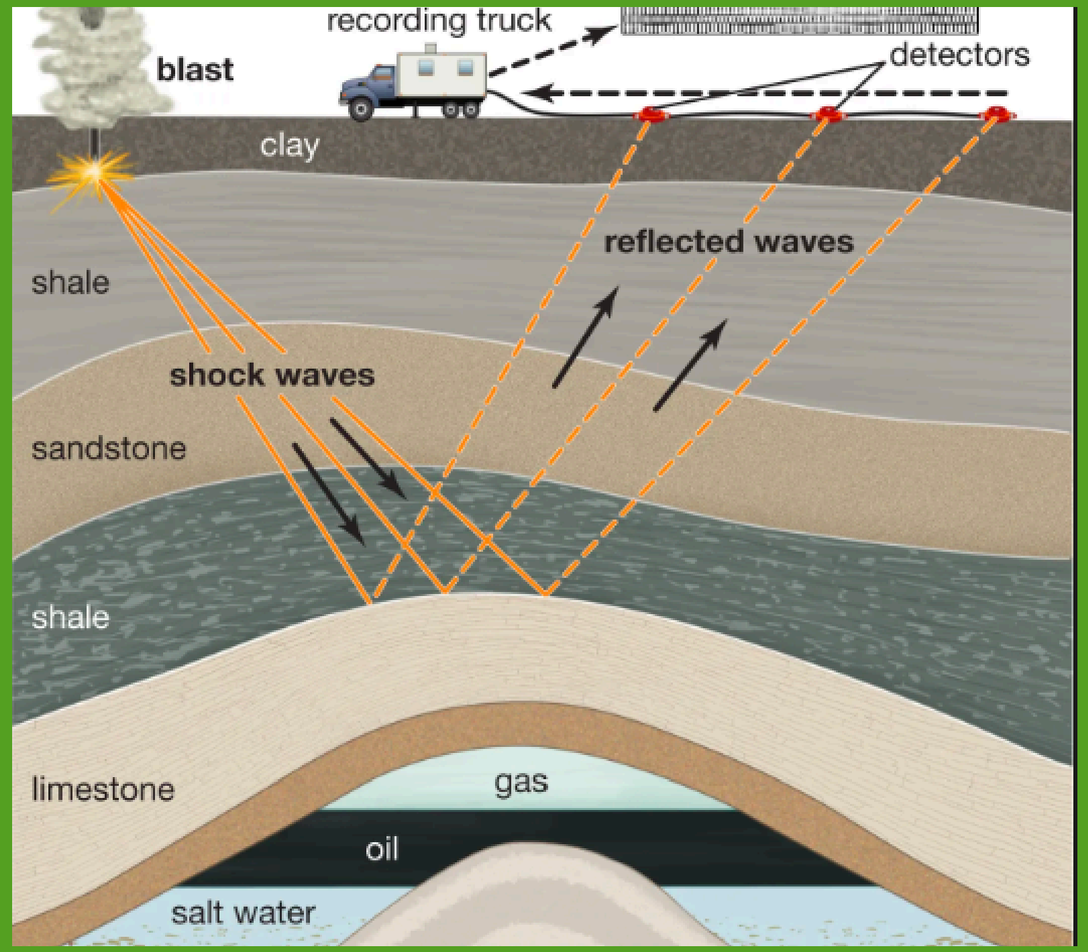

# PEAT AND PEAT PRODUCTS



# OIL SHALE AND OIL SANDS



# OIL AND PETROLEUM PRODUCTS



# NATURAL GAS



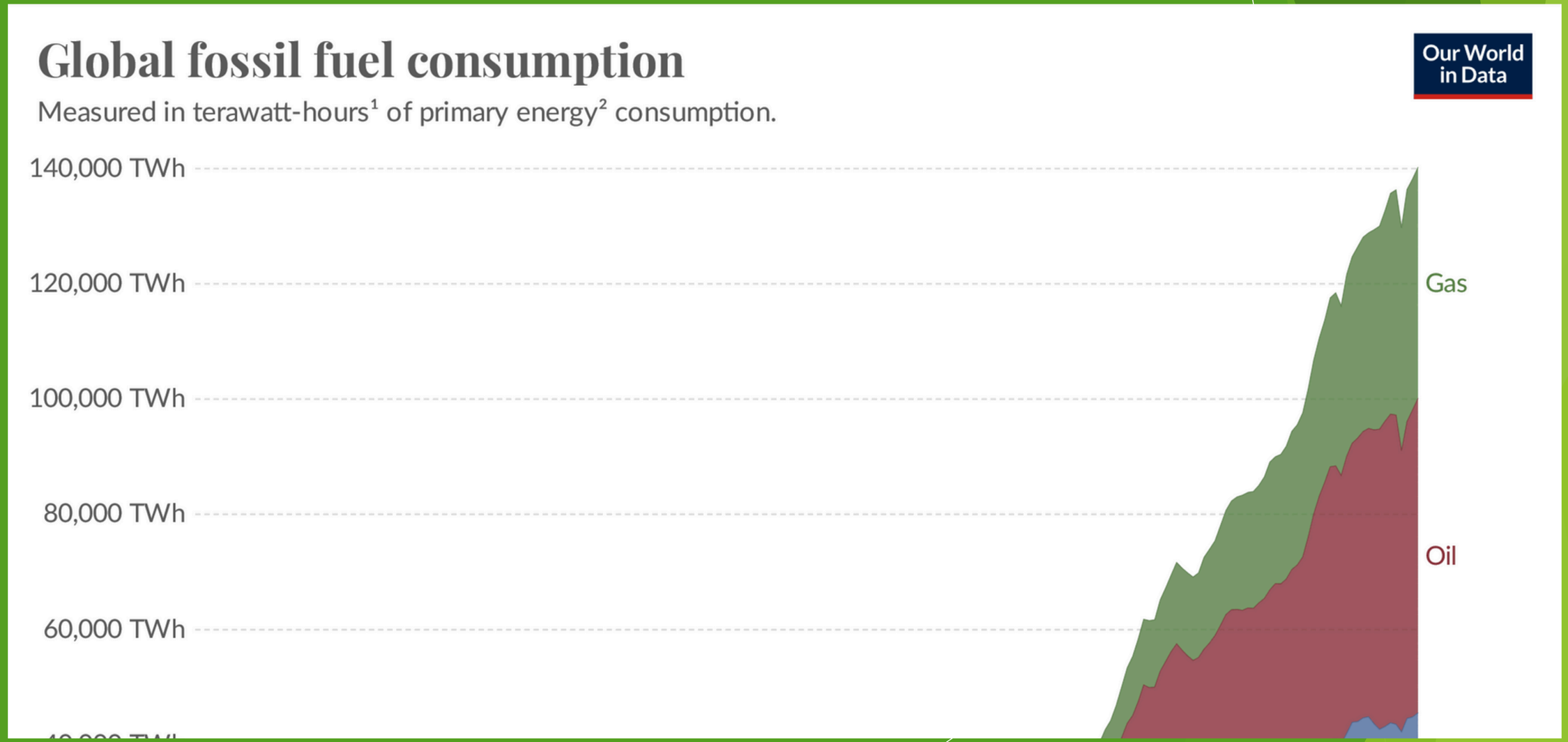
# NON-RENEWABLE WASTE



# STATISTICS ON FOSSIL FUELS AND OTHER ENERGY SOURCES

Fossil fuels currently dominate global energy consumption as the primary energy source worldwide

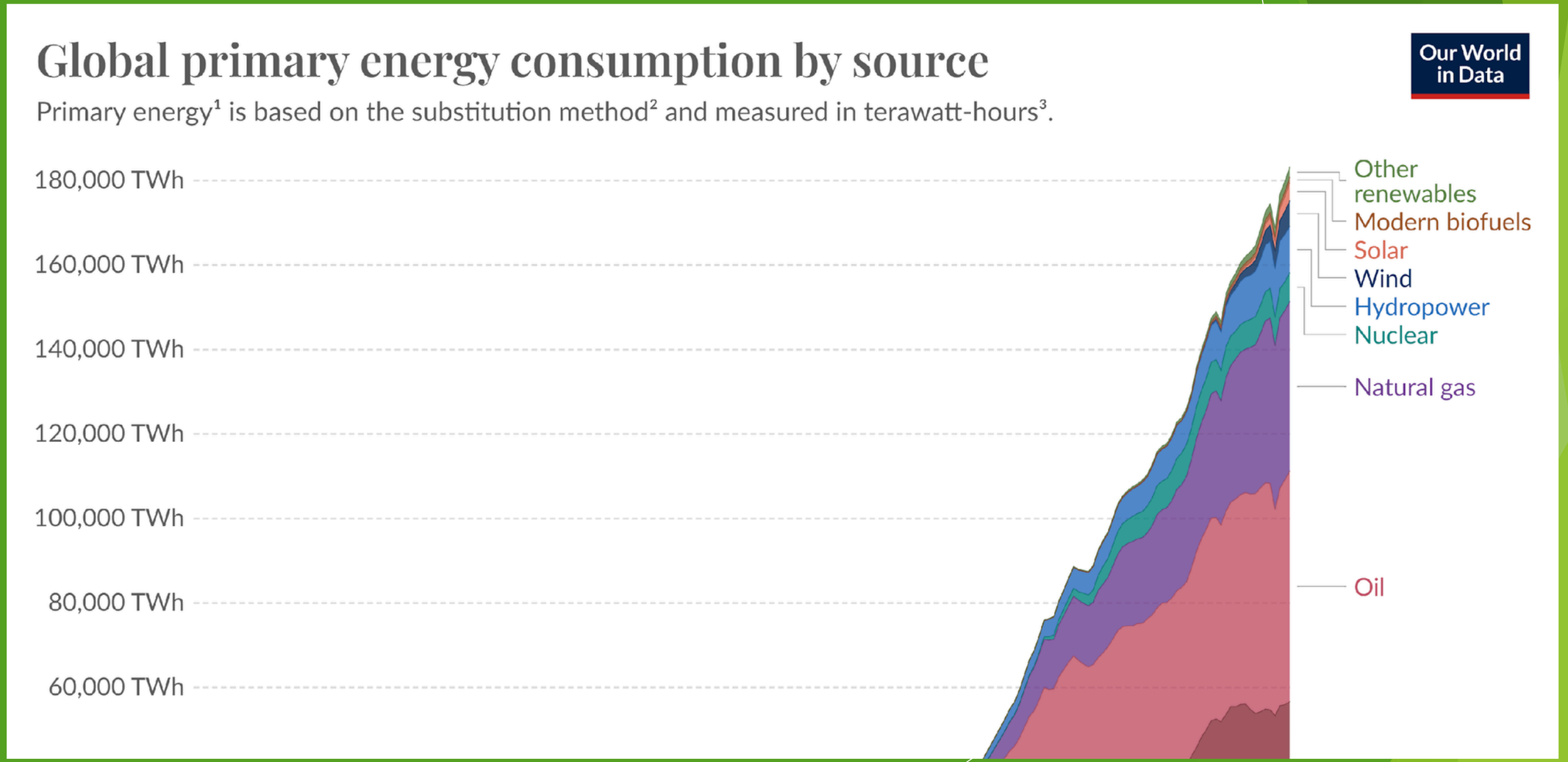
# GLOBAL FOSSIL FUEL CONSUMPTION



# GLOBAL FOSSIL FUEL CONSUMPTION

In 2023, fossil fuels accounted for 140,231 TWh of global energy production, with oil (54,546 TWh), coal (45,565 TWh), and natural gas (40,102 TWh) as the primary contributors.

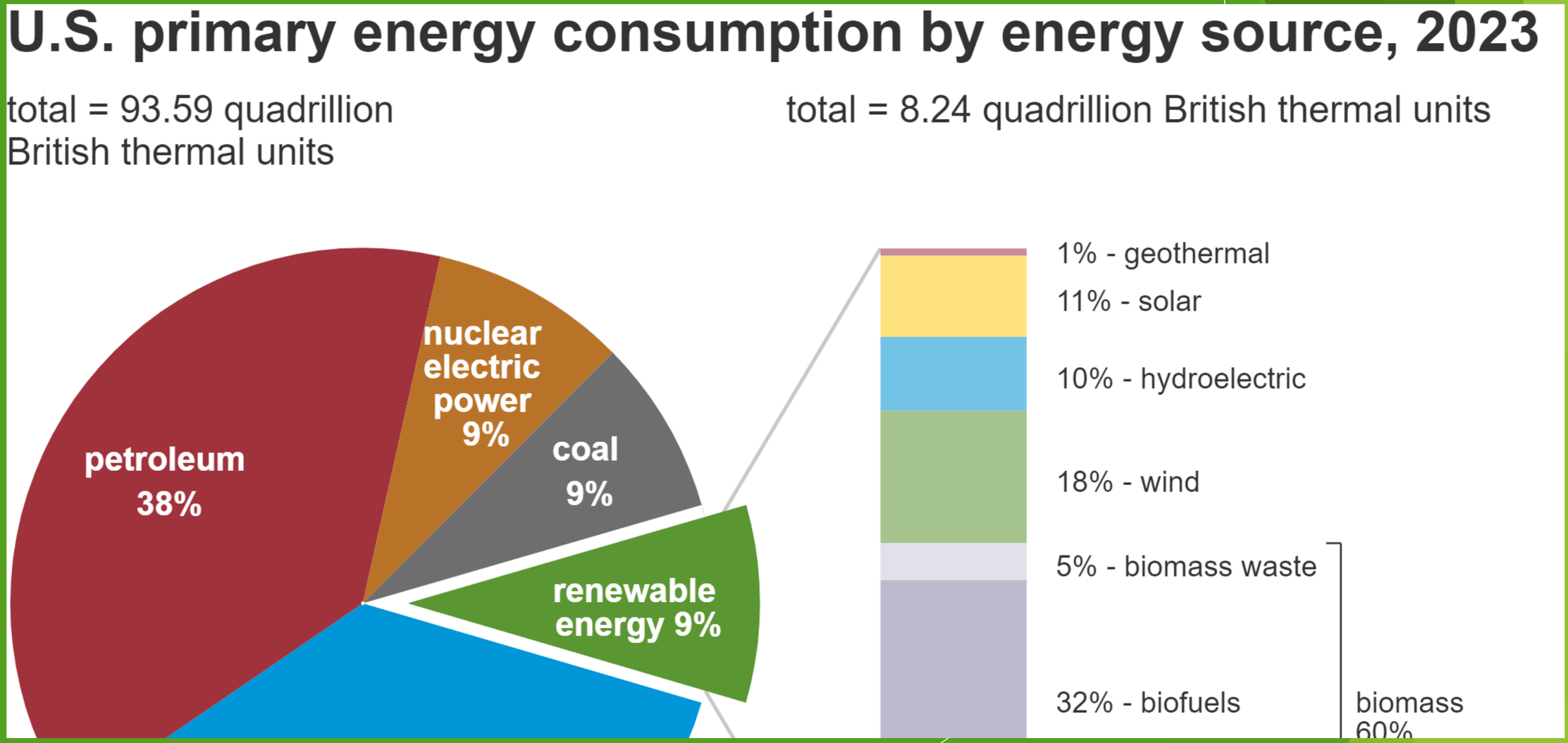
# GLOBAL PRIMARY ENERGY CONSUMPTION BY SOURCE



# GLOBAL PRIMARY ENERGY CONSUMPTION BY SOURCE

While global primary energy demand stood at 183,230 TWh in 2023, fossil fuels dominated the energy mix, providing 140,231 TWh (Our World in Data, 2023).

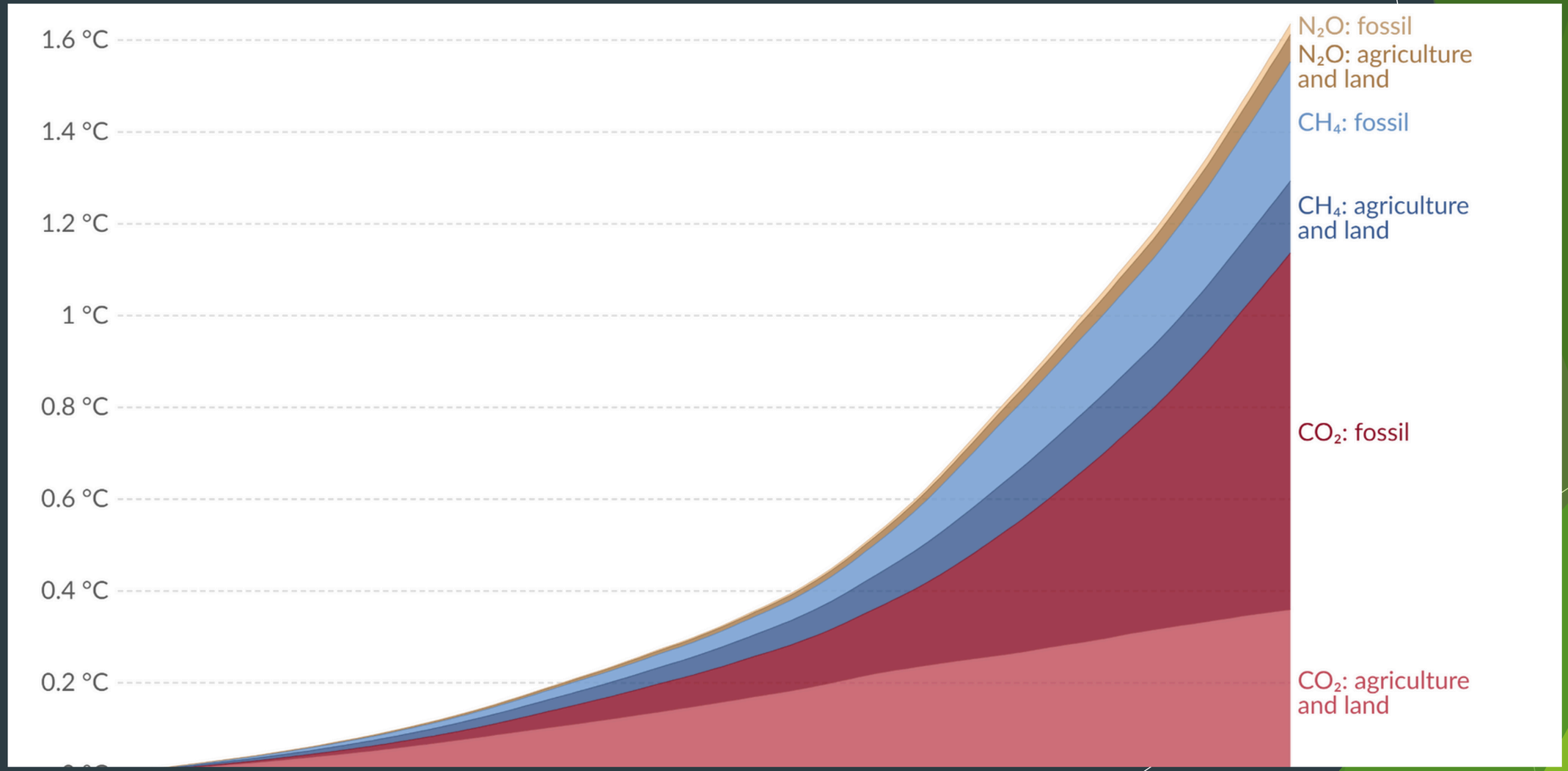
# U.S. PRIMARY ENERGY CONSUMPTION BY ENERGY SOURCE, 2023



# GREENHOUSE GASES

1. Atmospheric gases like $CO_2$ and methane trap thermal energy, intensifying Earth's heat retention (EPA, 2023).
2. Human activities are amplifying greenhouse gas emissions beyond natural levels, creating harmful environmental impacts.

# GREENHOUSE GASES



# GREENHOUSE GASES

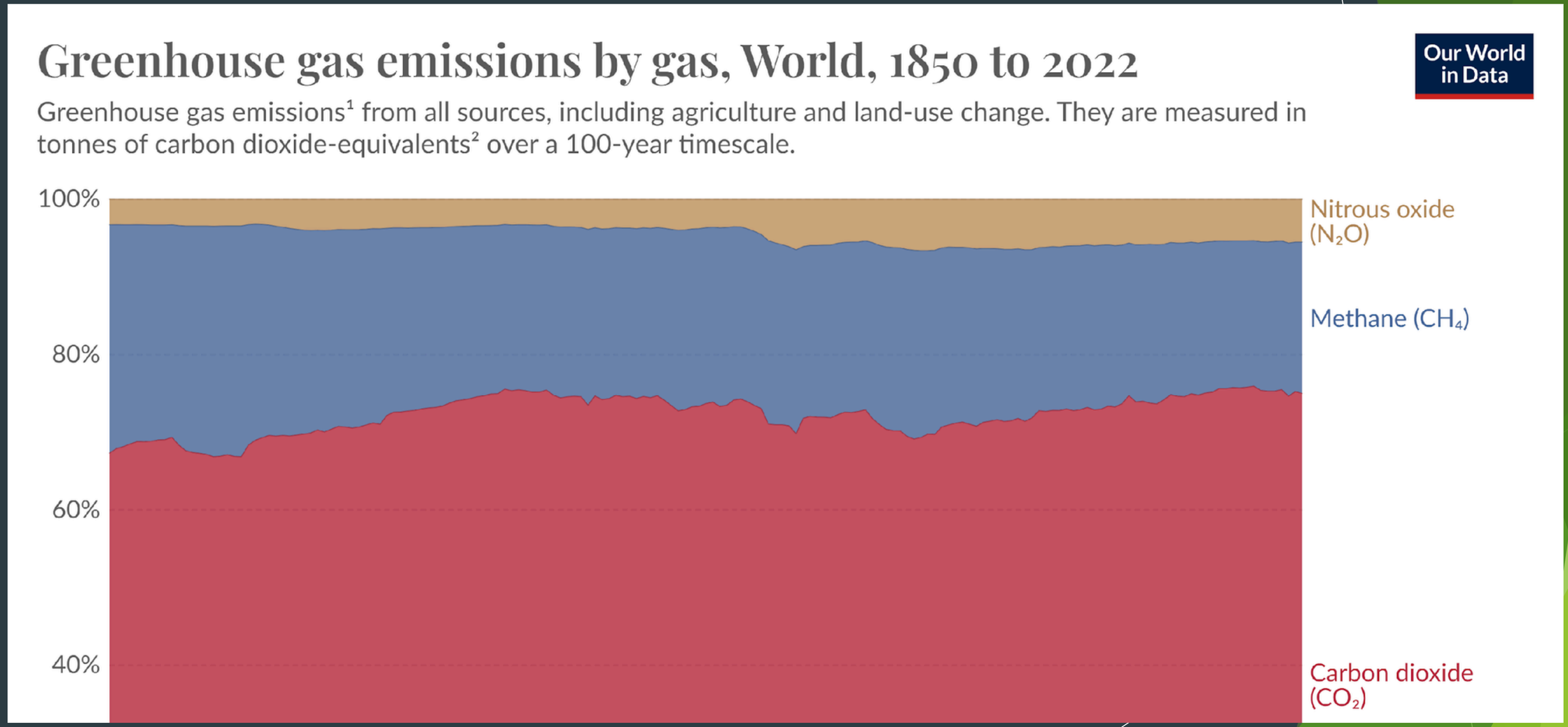
1. Fossil fuel use accounts for the majority of human-caused greenhouse gas emissions.
2. As of 2023, anthropogenic GHG emissions were dominated by fossil fuel combustion (76%), with $CO_2$ emissions alone representing 90% of the total (Our World in Data, 2023).

# GREENHOUSE GASES

There are several main greenhouse gases:

- Carbon dioxide ($CO_2$)
- Methane ($NH_3$)
- Fluorinated gases

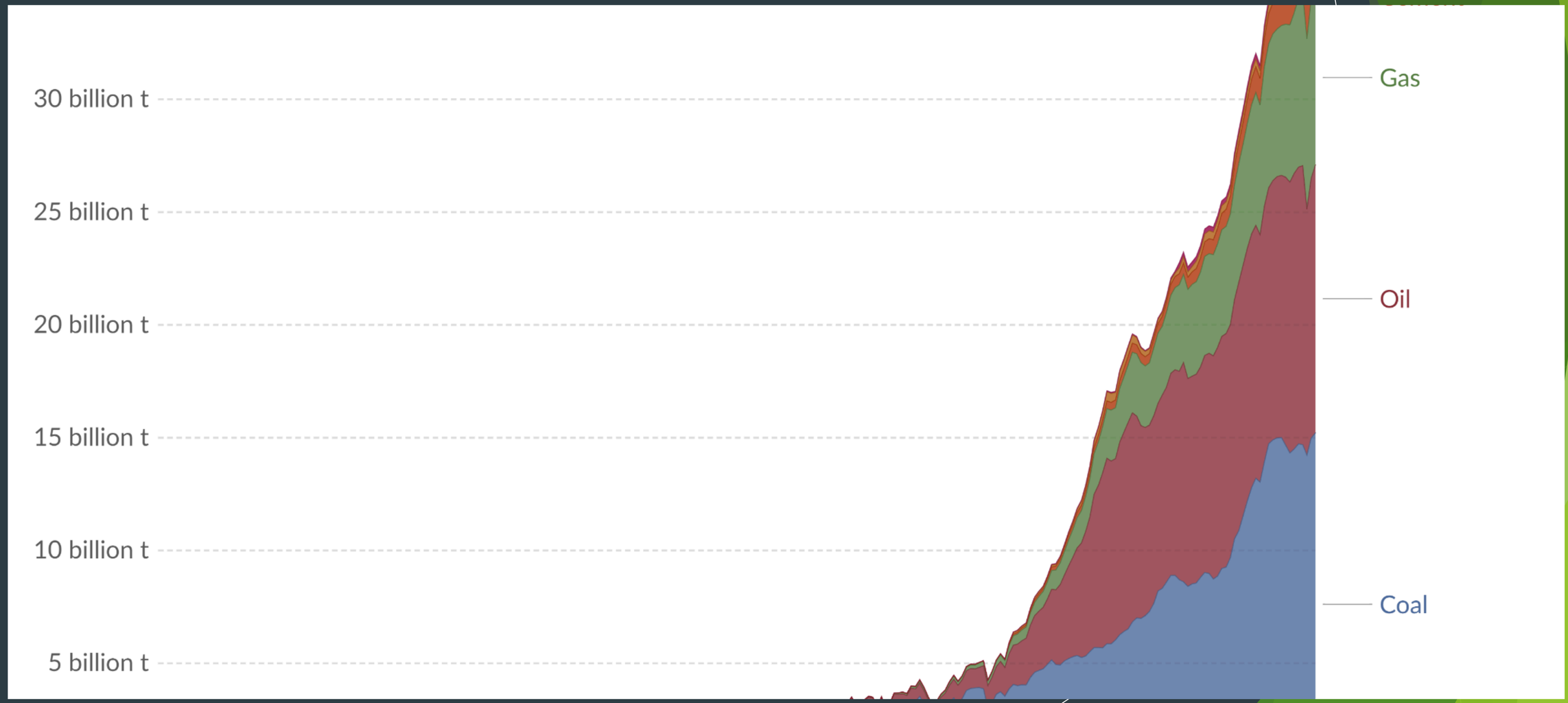
# GREENHOUSE GAS EMISSIONS BY GAS, WORLD, 1850 TO 2022



# GREENHOUSE GAS EMISSIONS BY GAS, WORLD, 1850 TO 2022

According to data from 2022  most common type of greenhouse gas is carbon dioxide second most common type is methane and third is nitrous oxide.

# $CO_2$ EMISSIONS BY FUEL OR INDUSTRY



# $CO_2$ EMISSIONS BY FUEL OR INDUSTRY

Coal accounted for 40% of fossil-derived $CO_2$ emissions in 2022 (Our World in Data, 2023).

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# THANK YOU FOR LISTENING

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