



Sustainable Logistics – Developing Greener Trade Routes

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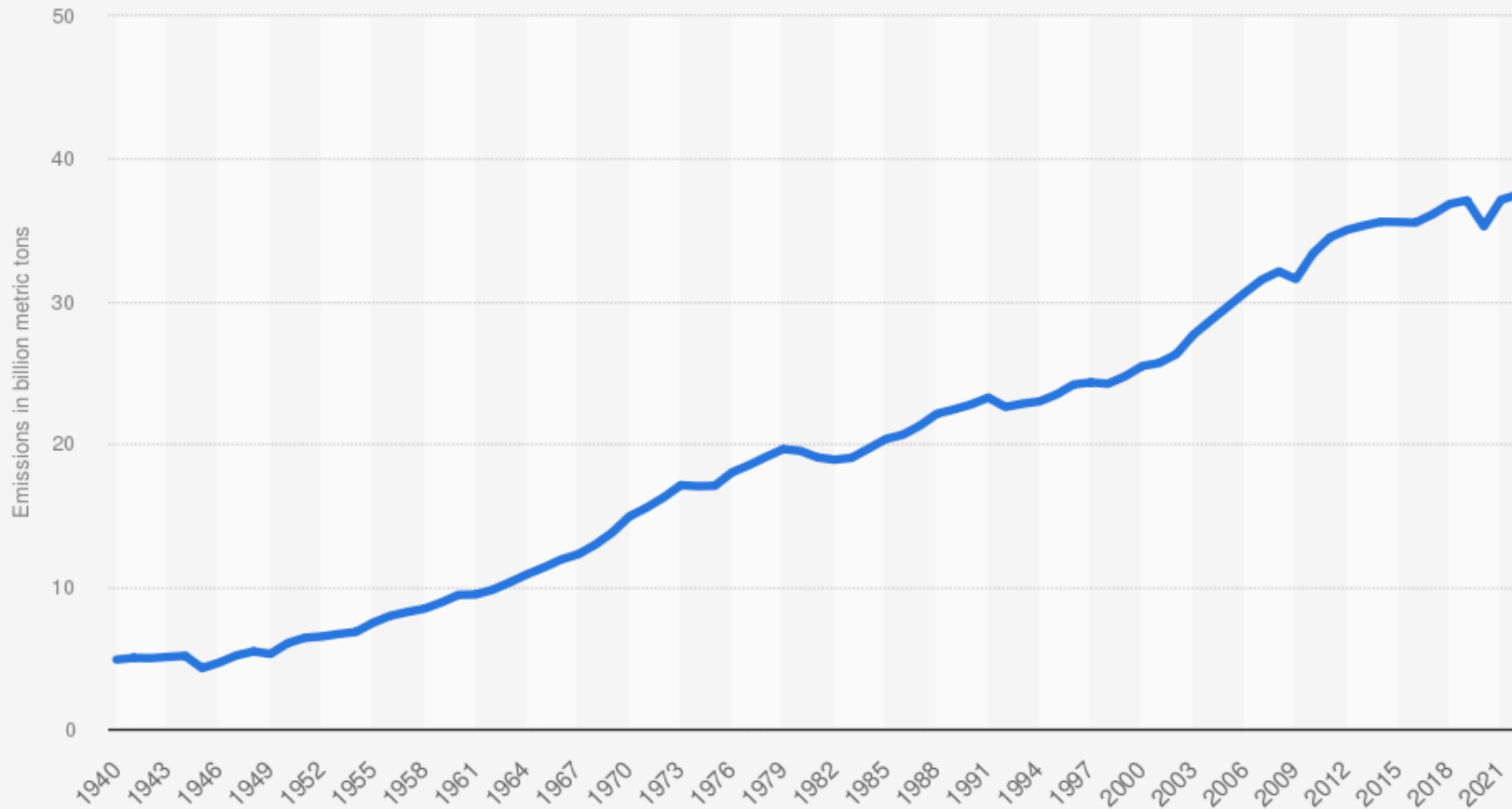


“Global Emissions must decline by at least 45 percent by 2030 and reach net zero by 2050”.

UN Secretary General



Annual carbon dioxide (CO) emissions worldwide from 1940 to 2022 (in billion metric tons)



Total:
36.8 billion tons
in 2022

Increased by **0.9%**
or **321 million tons**
in 2022

Sources

Global Carbon Project; Expert(s) (Friedlingstein et al. (2022))

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Additional Information:

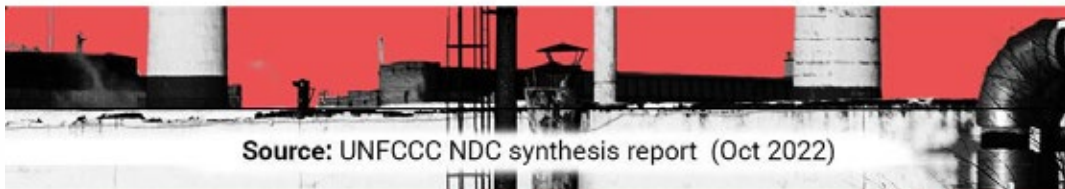
Worldwide; Global Carbon Project; Expert(s) (Friedlingstein et al. (2022)); 1940 to 2022



Increase in global greenhouse gas emissions **projected** by 2030, compared to 2010, based on available national action plans



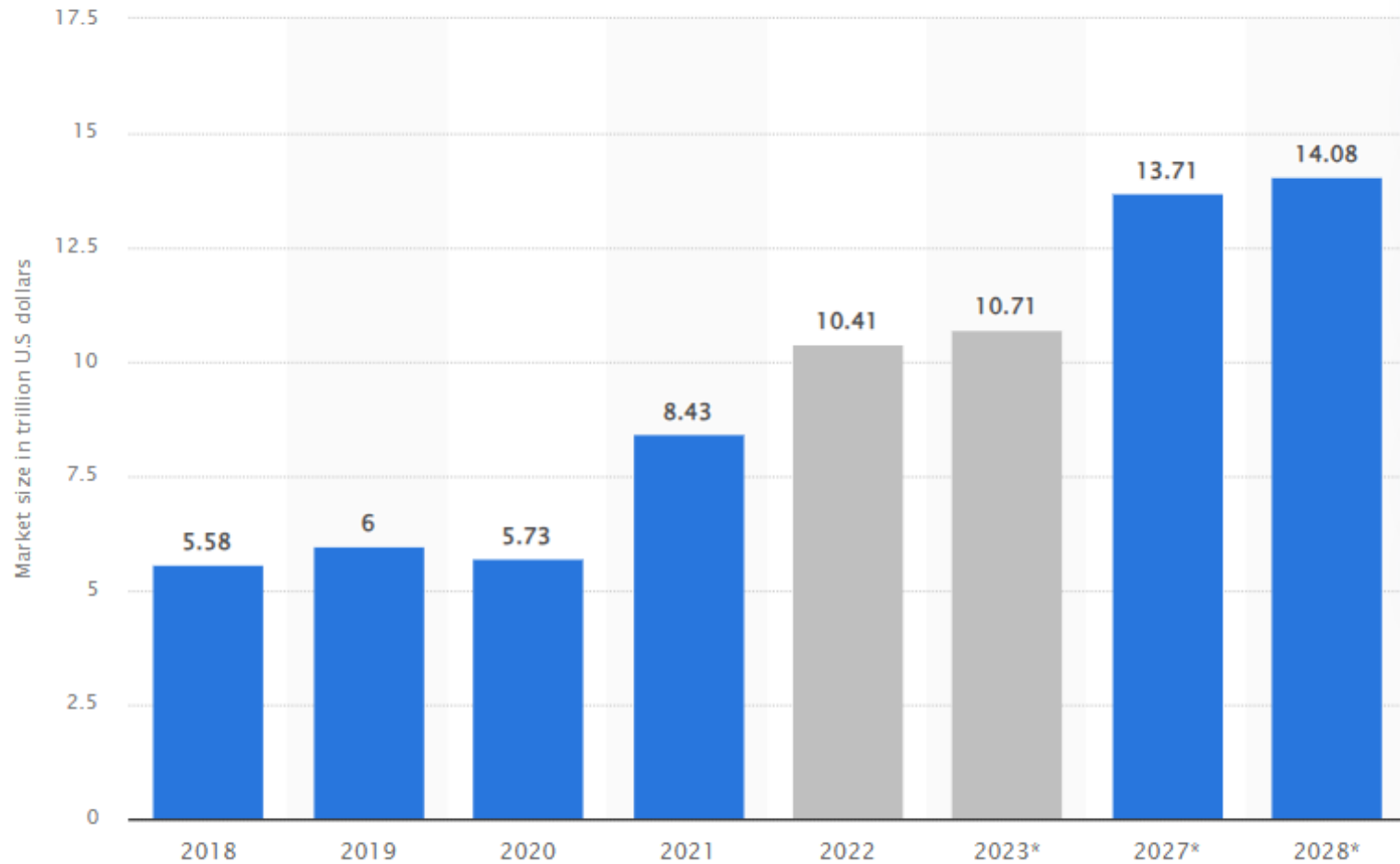
Reduction in global greenhouse gas emissions **needed** by 2030, from 2010 levels, to keep warming to no more than 1.5 degrees Celsius



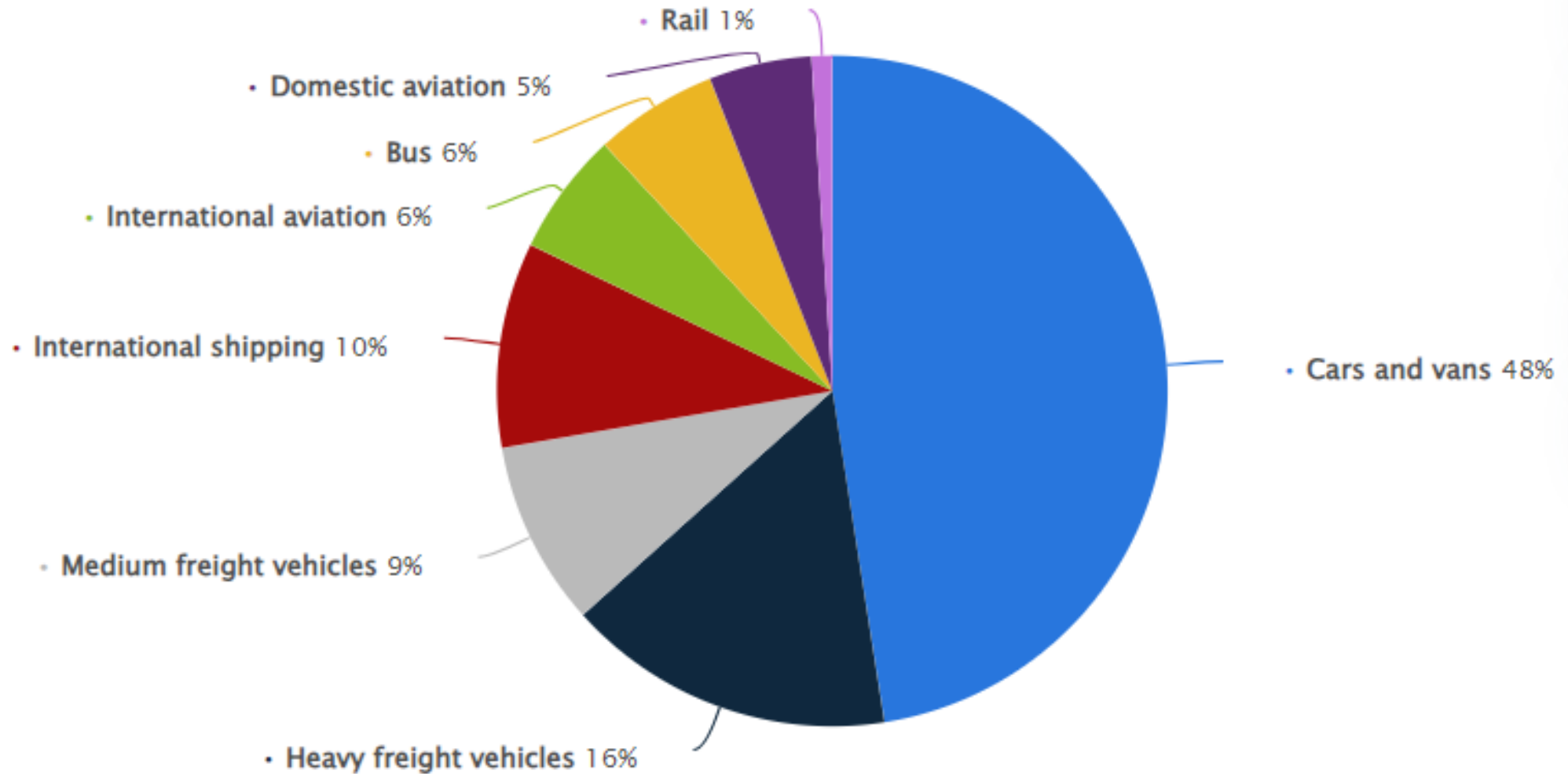
GLOBAL LOGISTICS MARKET



- The logistics sector contributes an estimated **13% to global GDP**.
- Logistics accounts for **17% of the global emissions**, second to the power sector.
- China, USA, and EU covering about **76% of global emissions**.
- More than **3,000 businesses** and financial institutions are working to reduce their emission.



CO2 Produced by Transportation sector in 2022

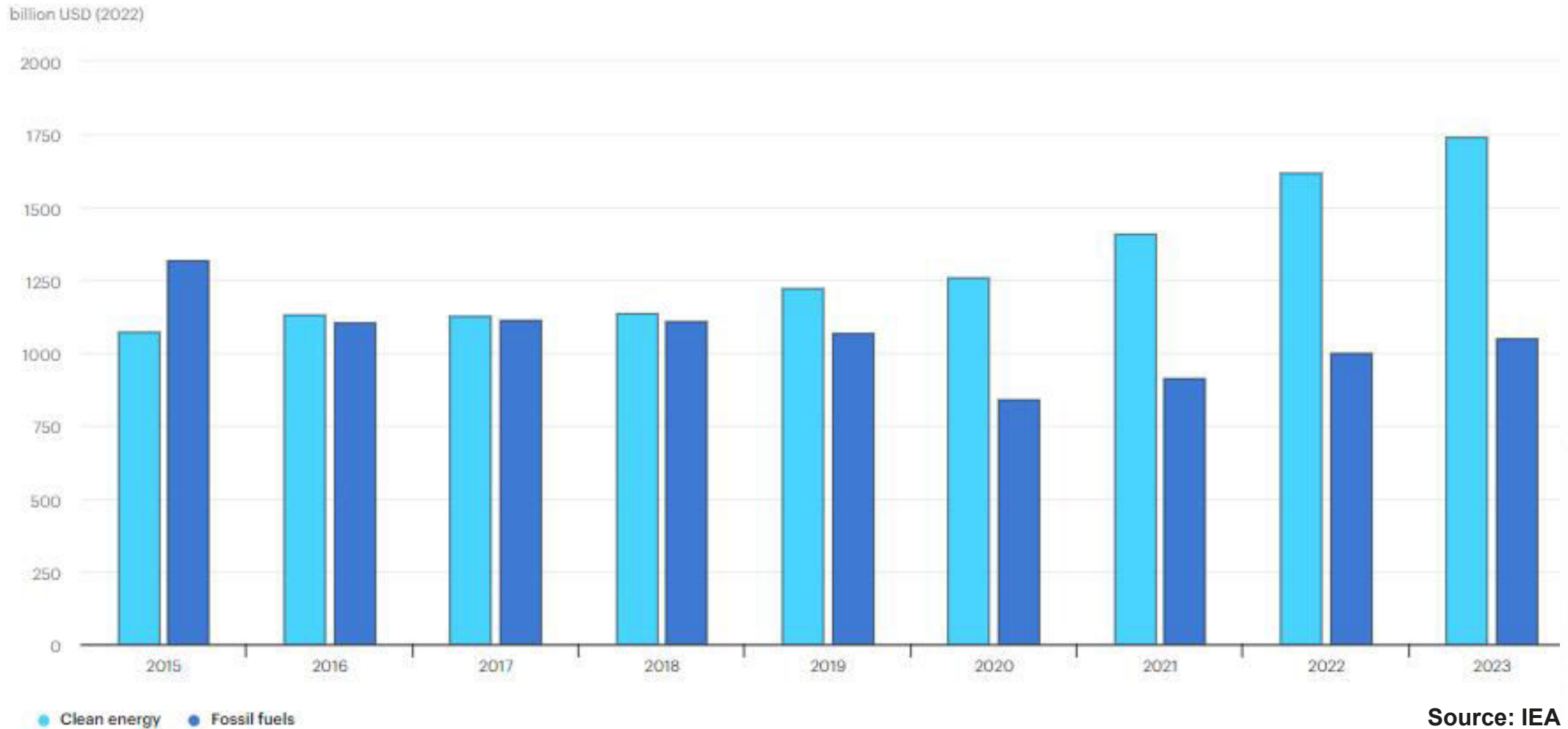


Source: IEA

Transition of Clean Energy for Sustainable logistics



Global energy investment in clean energy and in fossil fuels, 2015-2023



Source: IEA

Transition of Clean Energy for Sustainable logistics



CNG produce up to **30%** less greenhouse gas emissions than traditional fuel vehicles.

Hydrogen is the future of transportation and logistics it generates only water as a by product, i.e. no harmful GHG emissions.

Bio-Ethanol emits lower levels of greenhouse gases upto 30% and contributes to reducing carbon emissions.

Ammonia a clean-burning fuel that does not produce any greenhouse gas emissions when burned.

Electric Vehicles can save up to **90%** of CO2 emissions over their lifetime.

Multimodal Transitions for Sustainable logistics



TRUCKS



- Electric Vehicles
- Cleaner fuels
- Freight modal shift
- SDG Credits

SHIPS



- Efficiency Improvements
- Zero Emission Fuels
- Green Shipping Corridors

TRAINS



- Electrification
- UIC Sustainability Platform
- More efficient engines



Making Logistics Process Greener



Using renewable energy: Companies are using renewable energy sources, such as solar and wind power, to power their warehouses. For example, DHL has installed solar panels on many of its warehouses around the world, and FedEx is using renewable energy to power over 50% of its operations.



Improving energy efficiency: Companies are improving the energy efficiency of their warehouses by using energy-efficient lighting and appliances, and by insulating their buildings. For example, UPS has installed energy-efficient lighting in over 90% of its warehouses, and FedEx has reduced its energy consumption by 20% since 2009.

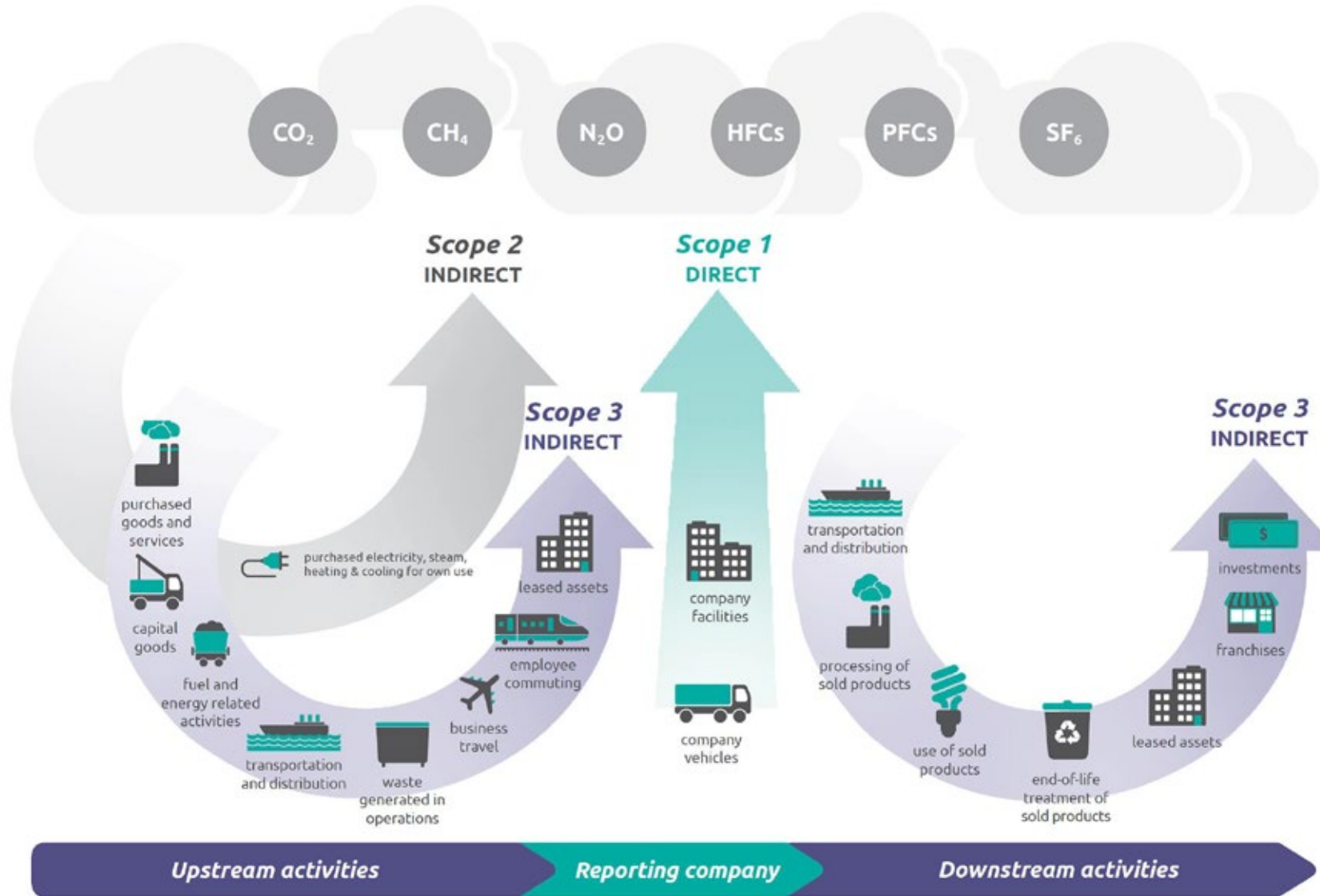


Using sustainable materials: Companies are using sustainable materials in the construction and operation of their warehouses. For example, Prologis is using recycled materials in the construction of its new warehouses, and Amazon is using sustainable materials in its packaging.



Investing in green technologies: Companies are investing in green technologies, such as automated guided vehicles and automated storage and retrieval systems. For example, DHL is using automated guided vehicles in many of its warehouses, and FedEx is using automated storage and retrieval systems to improve the efficiency of its operations.

Sustainable Scopes



Sustainable Initiatives by Countries



European Union

- Targets for reducing net GHGs by at least 55% by 2030.
- Investing in renewable energy projects.
- Developed strategy to reduce GHGs from the maritime shipping sector.

United States


- Aiming to reduce GHGs up to 52% by 2030.
- Promoting energy efficient logistics operations.
- Invested heavily in renewable energy & electric vehicles.

China

- Aim to have CO2 emissions peak before 2030.
- Investing in Port Infrastructure and Green Shipping.
- Developing Technological Advancements, Electric Vehicles and Clean Energy.

Global Players initiatives to Achieve Zero-Emission



 has pledged to achieve net-zero emissions by 2040 and to power 100% of its operations with renewable energy by 2025 and has ordered 100,000 electric delivery vehicles from Rivian.



will be aiming for zero emissions home deliveries in all 30 IKEA retail countries by 2025 and commits to reduce the greenhouse gas emissions from the IKEA value chain by at least 15% in absolute terms by 2030.



has pledged to achieve zero emissions from its global operations by 2040 and to use 100% renewable energy by 2035 and also aim to zero out the emissions of our heating systems and vehicles, including long-haul trucks, by 2040.

Global Players initiatives to Achieve Zero-Emission



has pledged to be carbon neutral by 2040 and to invest \$2 billion in sustainable initiatives over the next 10 years.



has pledged to achieve net-zero emissions by 2050 and to invest 7 billion euros in sustainable initiatives over the next 10 years.



has pledged to be carbon neutral by 2050 and to invest \$1 billion in sustainable initiatives over the next 10 years and has ordered 10,000 electric delivery vans from Arrival.

Developing Greener Routes in Pakistan



The China-Pakistan Economic Corridor (CPEC) is a flagship project of the Belt and Road Initiative (BRI) that plays a significant role in green transport by:

- Investing in low-carbon transportation infrastructure
- Promoting the use of low-emission vehicles and technologies
- Supporting the development of green transportation policies and regulations

Projects:

Orange Line Metro Train-Lahore A renewable energy project aiming to reduce 200,000 tons/ year emission.

Gwadar Port

A green port focusing on renewable energy and energy efficiency.

Islamabad-Karachi Motorway

1510 kms long motorway with electric vehicle charging stations.

Developing Greener Routes in Pakistan



The transport sector in Pakistan contributes more than **13% of GDP** and **94%** freight movement is by road.



3999 kg CO₂e

VS

Distance:
1240km



1035 kg CO₂e

2964 kg CO₂e saved per trip

Evolving Green Multimodal Transportation in Pakistan



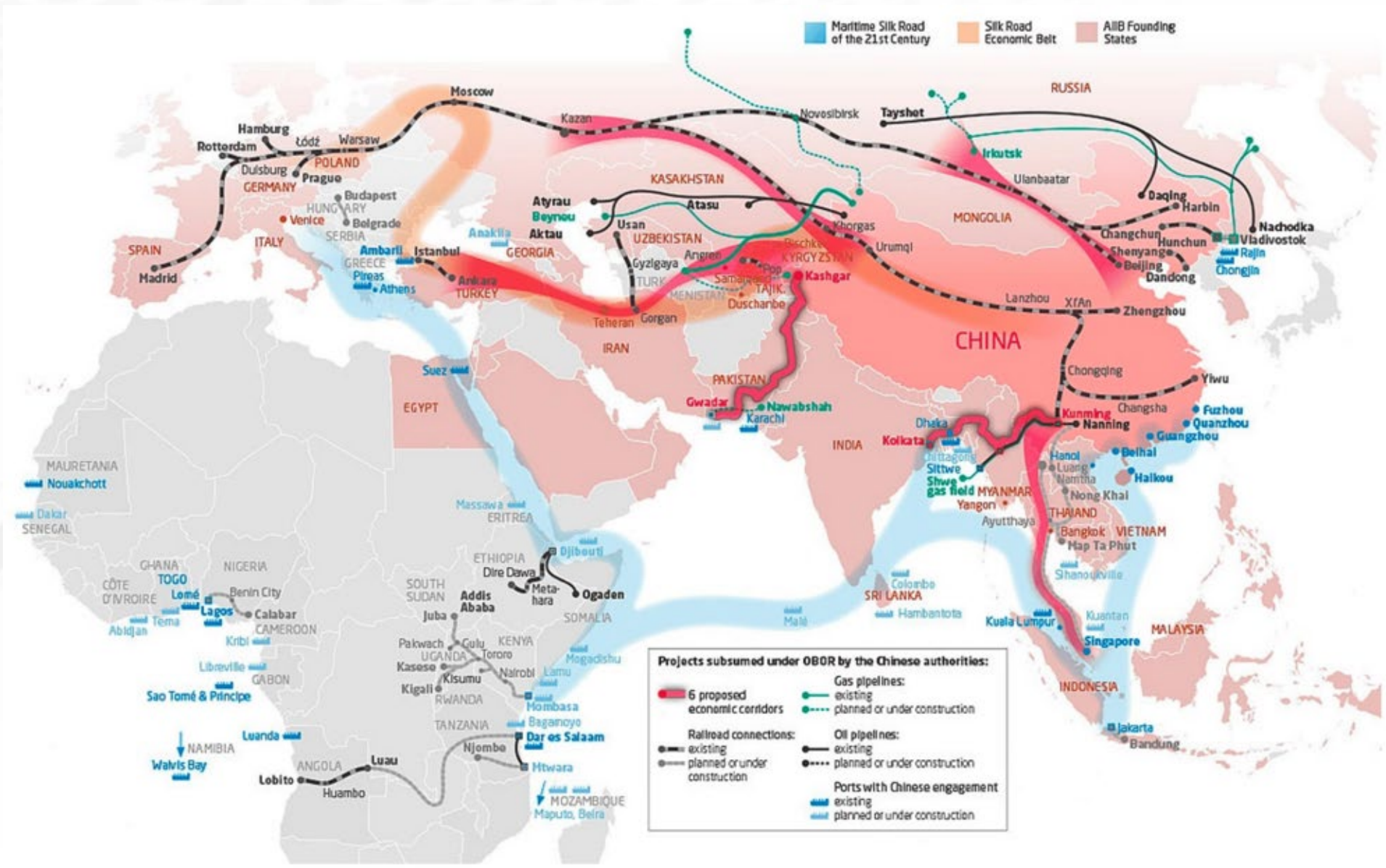
GHG Emission
3999 kg CO₂e



GHG Emission
1128 kg CO₂e

2871 kg CO₂e
GHG Emission **Reduced** Per Trip

Developing Greener Global Trade Routes



Sustainable Initiatives for Greener Routes in Pakistan



A shift from road to rail.

Making Rail infrastructure more efficient and cost-effective.

Streamline the Transit Trade Business with the Neighboring countries.

Development of more dry ports and logistics parks.

Encouraging greener freight.

Investing in New technologies.



***“Sustainability in logistics is more than just a trend,
it is the future.”***