

ADF Quarterly Climate Review #3

GHG Emissions : Recent developments and outlook

LES ATELIERS DU FUTUR

June 2025

GHG Emissions:

Recent Developments





GHG EMISSIONS: RECENT DEVELOPMENTS



ANTHROPIC CO2 EMISSIONS UP 2% IN 2024, WITH AN 8% RISE FROM AVIATION & SHIPPING

The global **atmospheric CO2 concentration** is forecast to average 422,5 parts per million in 2024, up 52% versus 1750 and +2,8% in 2024.

Global CO2 emissions projected to reach 41,6 GtCO2 in 2024, **+2% above 2023** level of 40,6 GtCO2:

Fossil CO2 projection for 2024: 37.4 GtCO2, **+0,8% versus 2023**, after +1,4% 2023/2022 ow coal 15,5 (+0,2%), oil 12,4 (+0,9%) ow IAS +8%, gas 8,1 (+2,4%), cement 1,5 (-2,8%),



Most developed countries have managed to decrease their fossil CO2 emissions, but at a relatively low pace compared to Net Zero trajectory: EU: -3,8%, USA -0,6%

22 countries representing 23% of global fossil CO2 emissions managed to decrease them during the past decade, while their economy grew.

China and India development driving steady increases in CO2 emissions, despite at a much lower pace for China.

Land use change projection for 2024: 4.2 GtCO2, +0,5 GtCO2 vs 2023, exacerbated by drought El Nino conditions in South America. Permanent deforestation still represents 3,7 GtCO2.

Brazil, Indonesia and Congo represent 60% of global LUC emissions.



Projected change in fossil CO2 emissions by fuel type [mtCO2-2024/2023]

Country	Total	Coal	Oil	Natural Gas	Cement
World	+399	+66	+143	+214	-40
	(+0.8%)	(+0.2%)	(+0.9%)	(+2.4%)	(-2.8%)
China	+55	+51	-8	+68	-56
	(+0.2%)	(+0.3%)	(-0.8%)	(+8%)	(-8.1%)
USA	-16	-25	-10	+22	-2
	(-0.6%)	(-3.5%)	(-0.7%)	(+1%)	(-5.8%)
India	+149	+98	+27	+16	+8
	(+4.6%)	(+4.5%)	(+3.6%)	(+11,8%)	(+4%)
EU27	-89	-85	+5	-7	-2
	(-3.8%)	(-15.8%)	(+0.2%)	(-1,3%)	(-3.5%)
RoW	+197	+28	+38	+115	+13
	(+1.1%)	(+0.5%)	(+0.5%)	(+2.2%)	(+2%)
IAS	+90 (+7.8%)		+90 (+7.8%)		



GHG EMISSIONS: RECENT DEVELOPMENTS

METHANE ANTHROPIC EMISSIONS: ENERGY SECTOR EMISSIONS STILL NEAR RECORD HIGH



Atmospheric CH4 concentrations rose faster over the last decade than in the 2000s.

Since 2013, the trend in atmospheric methane concentrations is closer to the most greenhouse-gasintensive scenarios of IPCC AR5 than scenarios integrating mitigation policies.

Anthropogenic sources are responsible for all or most of the recent rapid rise in global CH4 concentrations, equally from agriculture and fossil fuels sources.





Sources of methane emissions [Mt; 2023]

Atmospheric methane concentration
Annual change in concentration



Methane emissions from the energy industry remained near record high in 2023

Emissions from coal and natural gas continued to rise in 2023, with oil fugitive emissions rebounding





GHG Emissions:

Outlook





GHG EMISSIONS: OUTLOOK

PUTTING CO2 EMISSIONS UNDER CONTROL REQUIRES AMBITIOUS TRANSITION PLANS, INVESTMENTS



Global CO2 pathways using PICC AR6 Remaining Carbon Budgets

Annual CO2 storage capacity, current and planned vs Net Zero Scenario [2020-2030]





The remaining CO2 carbon budget to limit global warming to 1.5°C, 1.7°C and 2°C (with 50% probability) is **235 GtCO2**, **585 GtCO2**, and **1110 GtCO2** resp. (equivalent to 6, 14 and 27 years from 2025)



According to IEA, planned CDR (Carbon Dioxyde Removal) infrastructure is insufficient against the Net Zero scenario

Source : IEA (2024), CCUS Projects Database



GHG EMISSIONS: OUTLOOKS

METHANE EMISSIONS: CUTTING FOSSIL FUEL EMISSIONS BY 75% & BY 2030 IS VITAL TO 1,5°C TARGET Methane abatement potential to 2030 [Mt]

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Methane mitigation offers rapid climate benefits and economic, health and agricultural co-benefits that are highly complementary to CO2 mitigation

Cutting methane emissions from fossil fuels by 75% by 2030 is critical to limit global warming to 1.5 $^\circ\text{C}$ in 2100

Source: IEA

GHG EMISSIONS: OUTLOOKS

97% RISK TO EXCEED 2°C WARMING UNDER CURRENT CLIMATE POLICIES









G20 HAS A KEY RESPONSIBILITY TO TURN AROUND THE OUTLOOK

Fait-share and cost-effective mitigation ranges consistent with different limits for the G20 collectively [excluding African Union & LULUCF]



G20: Cost-effective ranges



Who we are



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WHO WE ARE

ATELIERS DU FUTUR, AN NGO OF EXECUTIVES WHO ACT TO ENHANCE BUSINESS $\sqrt[5]{0}$ MOBILIZATION FOR THE CLIMATE



In response to the interconnected challenges of climate change and biodiversity loss, our **mission** is to **act for the Climate**



A multidisciplinary group of business executives and senior managers All volunteers, we are **experts in modeling** (trained in climatology), engineers focused on **energy** and **green technologies**, or **finance specialists**

Our experience facilitates their mastery of business climate strategies



A focus on the Climate

An international vocation, as key governance for the normative framework of businesses and citizens is at global and regional levels An orientation towards corporations, as they alone meet the key conditions to successfully decarbonize our activities: Ability to do, know-how, and, to some extent, willingness to do



Raising awareness - policy makers and governing bodies (public or private)

Challenging corporate strategies and public policies with a constructive, optimistic yet ambitious mindset.

Training future generations through Universities/Schools





LES ATELIERS DU FUTUR

INDEPENDANT NGO ACTING FOR THE CLIMATE





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