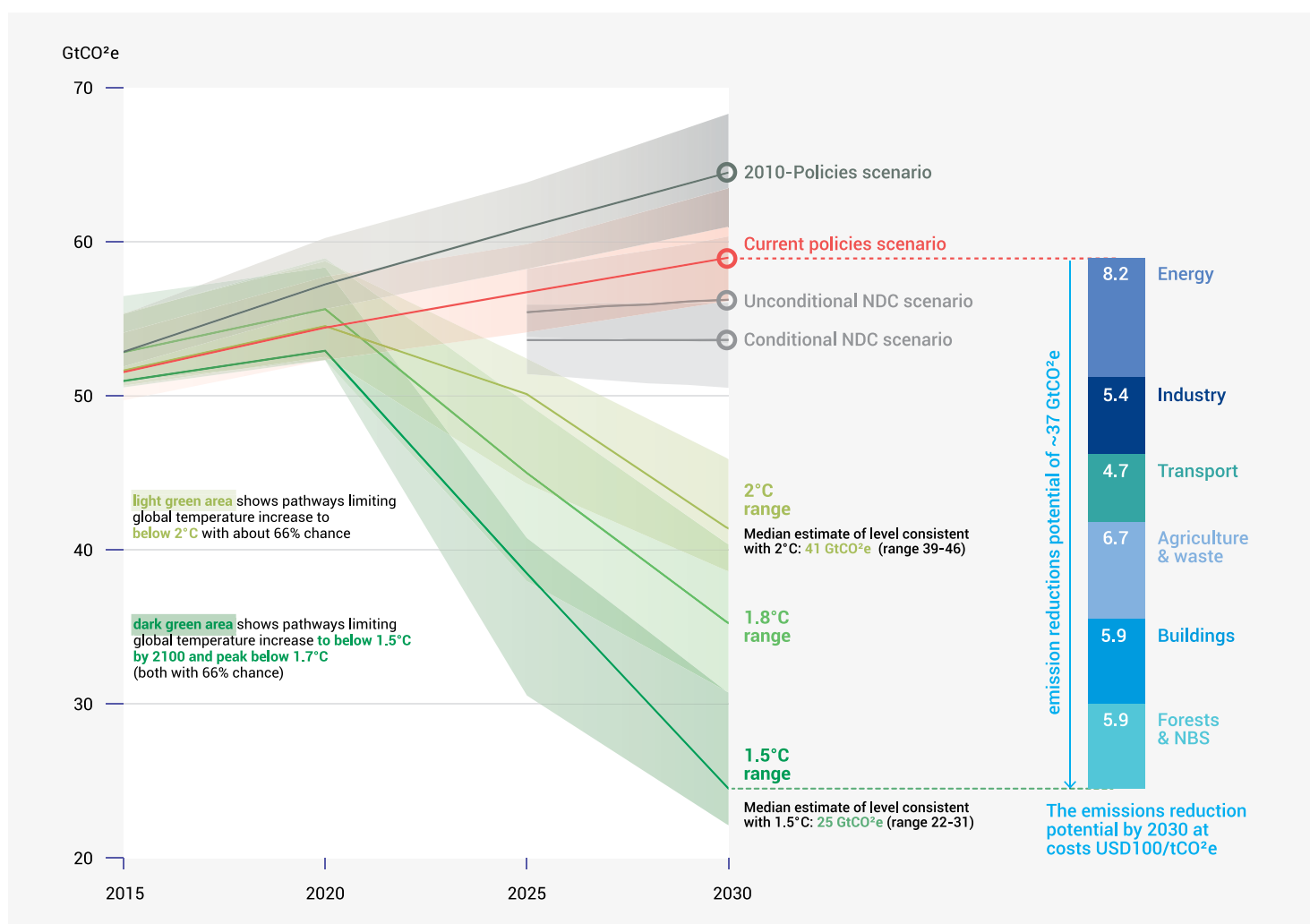
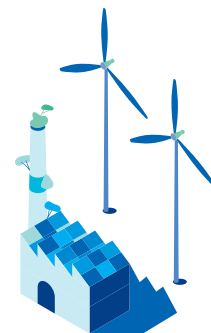


The world is losing the fight against climate change. Global greenhouse gas emissions have risen **1.4 per cent annually in the last decade, reaching a record 59.1 gigatons of carbon dioxide equivalent (GtCO₂e)** in 2019. The average global temperature is now 1.2°C warmer than pre-industrial times and even if countries meet their commitments under the Paris Agreement, temperatures are forecast to rise at least 3°C by 2100. Several countries have announced net-zero emission goals, including the United States of America. Those nations account for some 65 per cent of global emissions. But the timelines in their pledges mean that temperatures would still increase by 2.5°C. To close the emissions gap, annual emissions must be cut to 25 GtCO₂e by 2030 to limit warming to 1.5°C and 41 GtCO₂e for a 2°C trajectory. Lowering emissions would also reduce the economic cost of climate change.



On the next page are **six sectors** that will be critical in the battle against climate change. Rapid climate mitigation and adaptation in these industries offers the best chance for limiting temperature rise while providing returns on investments. Together, these sectors present an **emission reductions potential of ~37 GtCO₂e**, which is enough to close the emissions gap for a 1.5°C warmer world.

Energy

Transforming energy into electricity and heat **accounts for 33 per cent of all greenhouse gas emissions**. Innovations in energy efficiency and price drops in renewable energy present an opportunity to cut emissions by 8.2 GtCO₂e a year. However, many countries still depend on fossil fuels for power generation - fossil fuel production is projected to increase 2 per cent annually through 2030. To reach 1.5°C, fossil fuel production will need to decrease by roughly 6 per cent per year between 2020 and 2030. Cooling: The hydrofluorocarbons used in air conditioners and other cooling systems are potent greenhouse gases, trapping thousands of times the heat of carbon dioxide. Phasing out these refrigerants, as required by the Kigali Amendment to the Montreal Protocol, can avoid up to 0.4°C of global warming by 2100.

Industry

Industry accounts for about **20 percent of total greenhouse gas emissions**, which stem largely from energy use, industrial processing and the creation of mineral products, such as cement. The sector offers cost-effective opportunities to cut emissions by 5.4 GtCO₂e through energy efficiency and technology transfer. Methane, a powerful pollutant with a global warming potential over 80 times greater than carbon dioxide, needs special attention. Reducing methane emissions is an efficient near-term method of slowing the impacts of climate change. Solutions in the oil and gas sector can mitigate over 75 per cent of these emissions – and up to 40 per cent at no net cost.

Agriculture & waste

Agriculture and waste cause about **15 per cent of global greenhouse gas emissions**, most of which come from livestock, like cattle, nitrogen fertilizers and municipal waste. Food loss and waste generate 8-10 per cent of global emissions, yet only 11 countries address food loss in their nationally determined contributions. Food systems offer opportunities to cut emissions by 6.7 GtCO₂e per year.

Forests and nature-based solutions

Deforestation causes some **11 per cent of emissions**, with agricultural expansion as main driver. Land and marine ecosystems are carbon dioxide sinks, absorbing about 57 per cent of all anthropogenic emissions of carbon dioxide. In addition, nature-based climate solutions can provide 5.9 GtCO₂e per year of cost-effective climate mitigation, with adaptation benefits, as well as boost progress towards the Sustainable Development Goals.

Transport

The sector is responsible for around **14 per cent of global greenhouse gas emissions**. Road transport is the primary source, a trend that shows no sign of abating: by 2050, non-OECD countries are set to add at least 1 billion vehicles to their roads. International emissions from shipping and aviation are not covered under nationally determined contributions. But based on current trends, those industries are projected to consume between 60 and 220 per cent of the 2050 allowable carbon dioxide emissions under a 1.5°C warming scenario. The immediate emission reduction potential in the sector is 4.7 GtCO₂e year.

Buildings and construction

The sector is a major consumer of electricity and accounts for some **7 per cent of global greenhouse gas emissions**. With floor space set to double by 2050, the industry's impact on the environment is set to rise. By embracing renewable energy, energy efficiency, recycled materials and carbon-neutral construction practices, the sector could reduce emissions by 5.9 GtCO₂e annually. For every US\$ 1 million invested in retrofitting buildings and incorporating efficiency measures into new builds, the sector could create up to 30 jobs. As the climate changes, an increasing number of heatwaves will require more effective cooling, which can be achieved through passive design and nature-based solutions, such as green roofs. This makes buildings and construction a prime sector for COVID-19 recovery packages.

Financing climate action

Countries have unveiled fiscal stimulus packages to address the impact of COVID-19. If directed towards the decarbonization of the sectors above, those packages could reduce annual GHG emissions by 15 GtCO₂e by 2030. At the same time, they would support a rapid, employment-intensive and cost-effective economic recovery from the pandemic.



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