

This document is intended as background briefing for the co-authors and journalists covering the release of the Global Carbon Budget 2018. Do not cite or quote until the embargo is lifted.

Governments and businesses have the tools to start lowering carbon emissions from 2020

As carbon emissions continue to rise, leading climate voices from around the world are championing the many tools the world's governments, businesses and decision-makers have at their disposal to radically up their climate ambition ahead of 2020.

A *Nature Commentary* article, co-authored by Christiana Figueres, Corinne Le Quéré, Anand Mahindra, Oliver Bäte, Gail Whiteman, Glen Peters and Dabo Guan, and co-signed by more than 100 leading experts¹ from political, civil and business sectors, responds to this year's Global Carbon Project (GCP) annual report's headline finding that global energy growth is currently outpacing decarbonisation, with carbon emissions expected to rise more than two per cent in 2018.

Christiana Figueres, convenor of Mission 2020 and vice-chair of the Global Covenant of Mayors said: *"Global CO₂ emissions must start to fall from 2020 if we are to meet the temperature goals of the Paris agreement, but this is within our grasp. We have already achieved things that seemed unimaginable just a decade ago"*.

The commentary comes as representatives of 190 nations gather in Poland to review progress on the Paris climate agreement, at the annual UNFCCC climate negotiations.

The new GCP emissions estimate adds another layer of urgency for cutting carbon pollution to the findings of the recent IPCC 1.5 Special Report. The IPCC report outlined with brutal clarity the difference between a 2°C and 1.5°C rise in average global temperatures.

The commentary authors are clear: changes caused by dangerous warming are upon us, and a zero-carbon world cannot come quickly enough. They argue that the new evidence from the IPCC means all decarbonisation efforts must now strive for the 1.5C target.

The authors outline three reasons for optimism: Key technologies are on track; subnational action on emissions reduction is booming even in countries where national commitments are retreating; and there is growing support for bolder Paris targets.

Despite the upwards trend in CO₂ emissions, Christiana Figueres and colleagues are heartened that the low-carbon transition is gathering speed, and occurring faster than any experts predicted. Serious deployment of solar or wind energy was unthinkable just ten years ago, but the world started commissioning more gigawatts of clean energy than fossil fuels from 2015. Today, more than 50% of new electric generation capacity is renewable, with wind and solar capacity doubling every four years, and the capital cost of a utility-scale storage system based on lithium-ion batteries is predicted to fall 52 percent by 2030. If these trends continue, renewables will produce half of the world's electricity by 2030.

¹ A full list of the co-signatories is available upon request. From Dec 5th 18:00 GMT the list will be available via: go.nature.com/2riswcr

More than 9,000 cities and municipalities from 128 countries, representing 16% of the world's population, have reiterated their commitment to the Paris Agreement. In the private sector a full 6,225 companies headquartered in 120 countries, representing US\$36.5 trillion in revenue—larger than the combined GDPs of the United States and China—have pledged to reduce their emissions to contribute to the Paris goals.

Over twenty countries have already declared they will explore the possibility of strengthening their Paris pledges before 2020 and the Marshall Islands submitted its upgraded national target to the UN in November.

The Paris Agreement was built on a ratchet mechanism - the first round of pledges kick-started the world's decarbonisation efforts. Those commitments are expected to be increased every five years as technology and economic progress allows for exponential change. Governments and business leaders can now act on their pledges, and match the momentum revolutionising the energy sector.

Christiana concluded: *“Exponential progress in key solutions is happening and on track to displace fossil fuels: renewable energy technology costs have dropped by 80% in a decade, and today, over half of all new energy generation capacity is renewable. Before 2015 many people thought the Paris Agreement was impossible, yet thousands of people and institutions made the shift from impossible to unstoppable. The same is true of decarbonizing the economy. Propelled by the pursuit of clean air, jobs and energy-independence among other benefits, the intrepid, collective efforts of young people, civil society, businesses, investors, cities and states are charting the course to net zero emissions by 2050.”*

-ENDS-

NOTES TO EDITORS:

PRESS EVENTS:

December 4th, 12.30-13.00 CET @ (TBC - COP24) with Christiana Figueres, Corinne Le Quéré, Gail Whiteman & Glen Peters, Room: Press Conference Room Katowice, Area F - Theatre
December 6th, 09.00-09.35 CET @Climate Action Hub inside COP24 with Corinne Le Quéré, Gail Whiteman, Helen Mountford & Achala C. Abeyesinghe (livestream: <https://unfccc-cop24.streamworld.de/>)

ADDITIONAL QUOTES FROM THE COMMENTARY CO-AUTHORS AND CO-SIGNATORIES

CO-AUTHORS:

Professor Le Quéré, Director of the Tyndall Centre and Professor of Climate Change Science and Policy at the University of East Anglia said: *“The growing global demand for energy is outpacing decarbonisation for now. Renewables are rising fast but not yet enough to reverse global emissions trends. Efforts need to expand from renewable energy, to also tackle emissions from transport, from buildings, and from industry. The rapid actions needed to address climate change also need to be fair to all generations.”*

Anand Mahindra, Chairman of Mahindra Group said: *“The idea that companies face a trade-off between improving the environment and growing their profits is a myth. There is a new way to build businesses. It is people, climate and shareholder friendly at the same time. Our Group of businesses is*

actively looking at new opportunities in areas like alternative energy, electric mobility, resource efficiency to grow sustainably. Addressing climate change is this century's biggest opportunity. It brings a multitude of health and social benefits to people everywhere. We are excited to be part of our local - and global - community working hard to ensure we bend the curve of rising emissions and reach net zero by 2050."

Professor Gail Whiteman, Director of the Pentland Centre for Sustainability in Business at Lancaster University, and co-author said: *"The global economic risk from not bending the emissions curve from 2020 will likely run into the trillions of dollars. It is imperative that both state and non-state players take advantage of the significant economic opportunity offered by renewable and sustainable business models. The truly visionary leaders of today and tomorrow understand that doing business in this way is the only way to secure a stable and long term economic future for the planet."*

Glen Peters, Research Director at CICERO and GCP co-author, said: *"Global commitments made in Paris in 2015 to reduce emissions are still not being matched by actions. Despite rapid growth in low carbon technologies, not enough is being done to support policies that limit the amount of carbon dioxide that is put into the atmosphere."*

Dabo Guan, Chair Professor in Climate Change Economics at School of International Development, University of East Anglia and co-author said: *"Global climate change mitigation is in the hand of developing countries. It is important to further strengthen South-South cooperation, in particular on the matter of rapid and efficient low carbon transformations for those future emission giants such as India and Indonesia. Practically feasible technology transfers together with sustainable consumption patterns are the keys for their low carbon transformations."*

CO-SIGNATORIES:

Dominic Waughray, Head of the Centre for Global Public Goods, World Economic Forum said: *"Amid the current backlash against globalization and pressure on our systems of international cooperation, climate action driven by business, cities, communities and civil society organisations is on the rise. Technology costs are falling, and the number of significant climate action coalitions is growing. By harnessing the technologies of the Fourth Industrial Revolution, these public-private activities are also finding new ways to turn climate risks into innovations and opportunities for smart, clean economic growth. This revolution appears unstoppable and it is how we will drive the pace required to decarbonize our world economy."*

Sunny Verghese, Co-Founder and Group CEO, Olam International Ltd, and Chair of the World Business Council for Sustainable Development said: *"The recent IPCC special report on the impacts of global warming of 1.5 °C served as a stark reminder of the need for urgent and continued meaningful action. I call on political and business leaders to create the enabling environment necessary to strengthen the global response to the threat of climate change, recognising this will provide considerable support and opportunity to drive sustainable economic development and efforts to eradicate poverty."*

Feike Sijbesma, Chief Executive Officer & Chairman of the Managing Board, Royal DSM said: *"Mother Earth doesn't negotiate: it responds to climate disruptions unilaterally, and the effects of that are already being felt. As also expressed by 50 [World Economic Forum CEO Climate Leaders](#), business leaders stand ready to fast-track solutions to help government leaders realize the goals of the Paris Climate Agreement. If we act in partnership, we can scale our actions, and, especially if we put a meaningful price on carbon: accelerate!"*

Johan Rockström, Professor & Director, Potsdam Institute for Climate Impact Research (PIK) said: *“Science is clear: cutting global emissions by half by 2030 is a necessary first leap to lock in a decarbonized future of well below 2 degrees global warming. Every year of delay gradually shuts the door to this essential goal. But with all solutions at hand, and the empirical evidence showing that constraints drive innovation, it is still possible to unleash a disruptive innovation path to ensure our common future”.*

Peter Bakker, President and Chief Executive Officer, World Business Council for Sustainable Development said: *“With the release of this new Nature piece, now more than ever the climate science data is telling us that we need to accelerate the bold transformation towards the low-carbon economy. This is important information for business leaders. Science brings the facts. We bring the innovative economic solutions in light of those facts.”*

Andrew Steer, President and CEO, World Resources Institute said: *“There are no more excuses for inaction. We know that climate change is already destroying jobs and communities, and it’s becoming more critical by the year. We know how to solve the problem. And we know that, contrary to earlier opinions, strong smart climate action will promote more economic growth and opportunity. Some leaders are acting on these realities, but too many are not. We need more leaders to step forward. The coming two years will be critical in order to get on track to fulfill the vision laid out by the Paris Agreement.”*

Rohinton P. Medhora, president of the Centre for International Governance Innovation said: *“The global community has delayed meaningful action on climate change for far too long; now is the right time to act. Rapidly evolving technology and a newfound willingness and ability to respond, particularly in key emerging economies like China and India, provide an opportunity to change the ecological trajectory our planet is on.”*

Dr. Arvind Kumar, Founder & Managing Trustee at Lung Care Foundation; Chairman, Centre for Chest Surgery at Sir Ganga Ram Hospital, New Delhi said: *“Air pollution is devastating people’s lives in India and around the world. As a Lung Surgeon, I have witnessed the ill-effects of air pollution in my practice in the form of deposits of harmful toxins in lungs, even in non-smokers and teenagers, causing the increasing incidence of lung cancer and acute and chronic respiratory diseases. But, we have the solutions to address Air Pollution, as the new commentary from Christiana Figueres and colleagues that I co-signed shows. The links between climate change and air pollution are coming into focus and the faster we can limit global warming, the sooner people will breathe clean air. Doctors all over the world are joining the movement to push world leaders to act immediately and clean up our air. Every breath matters”.*

Helen Mountford, Vice President, Climate and Economics, World Resources Institute said: *“Fighting climate change is not only the world’s greatest challenge, it is also now our greatest opportunity. Globally, there is a \$26 trillion economic benefit to taking bold climate action up to 2030, as highlighted by the recent report of the New Climate Economy. But to seize this opportunity, and to avoid the very worst impacts, countries must act quickly and decisively.”*

Zhang Yue, Chief Executive Officer, BROAD Group said: *“We must popularize building thermal insulation technology to save 80% of energy consumption on cooling and heating.”*

This media release is part of the Global Carbon Budget 2018, the annual update by the Global Carbon Project. It is based on the analyses published here:

Le Quéré et al. (2018) Global Carbon Budget 2018. *Earth System Science Data*.

<https://doi.org/10.5194/essd-10-2141-2018>

Figueres, C., C. Le Quéré, A. Mahindra, O. Bäte, G. Whiteman, G. P. Peters, D. Guan, et al. (2018).

Emissions are still rising: ramp up the cuts. *Nature*. DOI: <https://doi.org/10.1038/d41586-018-07585-6>

Jackson, R.B., C. Le Quéré, R. M. Andrew, J.G. Canadell, J.I. Korsbakken, Z. Liu, G.P. Peters, and B. Zheng (2018). Global Energy Growth Is Outpacing Decarbonization, *Environmental Research Letters*.

<https://doi.org/10.1088/1748-9326/aaf303>

Access:

- Data and figures: <http://www.globalcarbonproject.org/carbonbudget>
- Data interface for exploring data: <http://www.globalcarbonatlas.org>
- Prior to embargo:
 - ESSD paper and Infographics can be requested for media purposes to communications@uea.ac.uk
 - Global Carbon Atlas with country data can be accessed via <http://emissions2018m.globalcarbonatlas.org/>
User name: media
Password: fromlsce2018
- After embargo: ESSD paper is open access available at link above