

## What happens in Glasgow?

- The projected path for global warming leads to 2.7°C by the end of the century, and not 1.5°C as is the goal.
- This year's UN conference on climate change is important since the countries will present how they plan to limit their carbon footprint, as promised at the Paris agreement.
- Four goals will be the main focus: mitigation, adaptation, finance and collaboration. But the goals seem far from reach at the current situation.
- Dual investments are needed to curb further emissions and to adapt to climate change that is already occurring.
- The current global energy crisis has accentuated the need of clean and stable energy production and could increase incentives for investing in green energy sources.

The 26<sup>th</sup> UN Climate Change Conference called COP26, begins in Glasgow on Sunday October 31. The meeting is a follow-up to the Paris agreement from 2015, when the world promised to cut carbon emissions to limit global warming below 1.5°C compared to pre-industrial levels. The recent IPCC report shows, however, that the projected path for surface temperature that we are on now, will lead us to 2.7°C warming by the end of the century.

Four main goals will be on the agenda: mitigation, adaptation, financing, and collaboration. So far, neither mitigation nor financing initiatives have been sufficient compared to what was agreed on in the Paris agreement. National plans for cutting emissions are not in line with what is needed to limit warming to 1.5 °C (Emission Gap Report, UNEP 2021). A recent report also establish that many governments still invest more in fossil fuel than in clean energy and governments also plan to produce substantially more of fossil fuels than what is consistent with the Paris Agreement (The Production Gap, SEI 202).

Investments are needed globally to curb further emissions and to adapt to the changes and risks that climate change brings on. Investments will be needed in both public and private sector over the coming decades. The global energy crisis could increase the incentives to invest more in green energy. The crisis could also lead to higher emissions as countries shift to last-resort energy options like coal instead of green energy. Increased green investments could potentially benefit the Nordic countries who are frontrunners in green innovation.

What we can expect from the meeting is most likely more promises on increased financing and reduced carbon emissions but without any legally binding force behind it. Getting the big emitters like China and the US to make further commitments would be the most valuable outcome.

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## Following up on the commitments of the Paris Agreement

On October 31 to November 12, the 26th UN Climate Change Conference, called COP26, will be held in Glasgow. UN Climate Change conferences are annual and summon the leaders of the world, climate experts and organizations to discuss and unite on climate change actions. The meeting was originally planned to take place in 2020 but was delayed due to the covid-19 pandemic.

In 2015, the climate conference COP21 resulted in the Paris Agreement where the world agreed to cut carbon emissions to limit global warming to well below 2°C and preferably below 1.5°C. The countries decided that each nation was to develop plans on how to significantly reduce their carbon emissions and present these plans five years later, at the COP26 meeting. The follow-up on the commitments from the Paris Agreement is one of the reasons why experts deem COP26 as an important meeting.

COP26 is also crucial due to the urgency of the climate crisis, which has been highlighted in several recent research articles (e.g. IPCC, WMO, WWA, UNEP). Human influence have had widespread influence on the world's climate (IPCC), and the relationship between climate change and an increased frequency and intensity of extreme weathers, have both been established in research (IPCC, WWA) and visualized in extreme weather events all over the world this year. To be able to limit global warming to 1.5°C or even 2°C, there is a need to act now.

## Four main goals on the agenda – all currently far from reach

The overall agenda and what the conference strives to achieve is summarised in four goals:

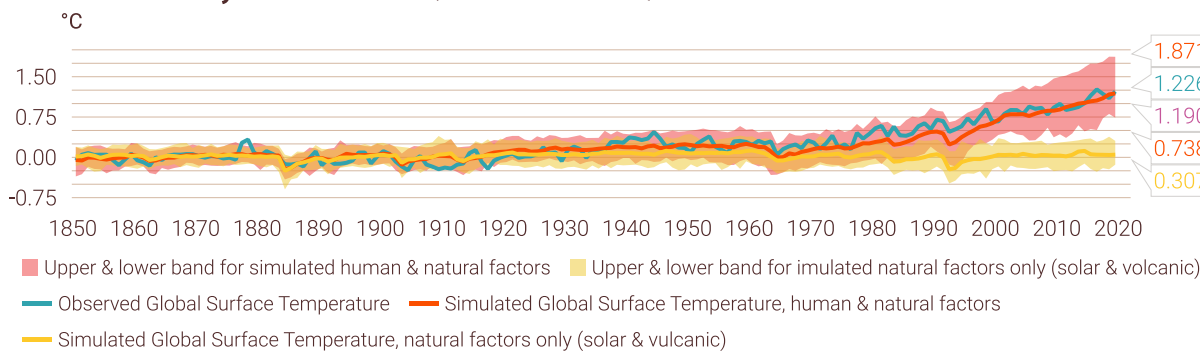
1. **Mitigation:** Secure global net zero by mid-century and keep 1.5°C within reach
2. **Adaptation:** Adapt to protect communities and natural habitats
3. **Finance:** Mobilise finances
4. **Collaboration:** Work together to deliver

How to reach these goals should both be discussed and decided during the meeting and be reflected in the upcoming 5-year plans (called Nationally Determined Contributions, NDC'S) that the countries should present at the meeting. *From the current situation, all goals seem far from reach.*

## So far, mitigation actions have not been effective or big enough

The projected path for surface temperature that we are on now, will lead us to 2.7°C warming by the end of the century which is far from the goals set in the Paris Agreement (IPCC). The 2021 Emission Gap Report shows that the combined efforts in the countries' NDC plans don't come near the 1.5°C goal but rather stay on the 2.7°C path. Annual greenhouse gas emissions are expected to reach 60 gigatons (of CO2 equivalent) in 2021. According to the report, following the countries' plans would only reduce 7.5% of total emissions, while 55% would be needed in the next eight years to be able to limit global warming to 1.5°C and 30% reductions to limit warming to 2.0°C. Many nations also delay action until after 2030 which is problematic since global warming will continue with a lagged effect. Even if all emissions were to stop today, warming would continue due to the amount of greenhouse gases that has already been emitted to the atmosphere (IPCC).

### Change in global surface temperature (annual average) as observed and simulated using human & natural and only natural factors (both 1850-2020)



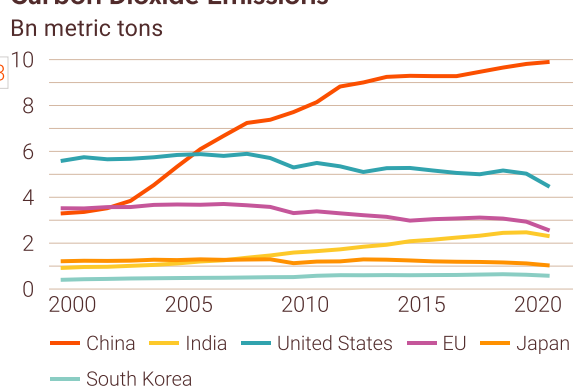
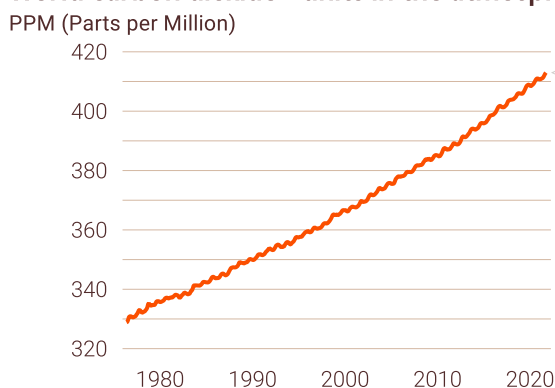
There was a hope that the covid-pandemic would bring something good with it on the climate mitigation area, but the pandemic did not slow climate-affecting emissions more than temporarily. As economies are rebooting, emissions are growing back at a fast pace (United in Science).

### The heterogenous size of emissions makes global collaboration important

Countries emissions are heterogenous in size. Over time, the G20 countries<sup>1</sup> have emitted about 75% of all greenhouse gas (Climate analytics) and the US alone have emitted about 25% of global cumulative CO<sub>2</sub> emissions (Our world in data). However, China is the biggest emitter today, emitting near 30% of annual global emissions (Our world in data). A lot of the world's production is placed in China, which contributes to their large share of emissions, whereas the seat of the producing company could be placed in another country.

The heterogenous size of emissions makes **global collaboration** important, as it will not be enough if only some countries engage in climate change action. However, the G20 countries could limit warming to 1.7°C if they strengthened commitments to achieving net zero emission by 2050. Actions from non-G20 countries are also needed, as is mitigation from international aviation and shipping (Climate analytics). So far China and India have not made formal commitments to the Paris Agreement, and under President Trump the US left the agreement. Current US President Joe Biden have announced that the US will follow the agreement again. Notably, neither Chinese president Xi Jinping nor Russia's president Vladimir Putin plan on attending the conference.

### World carbon dioxide - units in the atmosphere Carbon Dioxide Emissions



<sup>1</sup> Argentina, Australia, Brazil, Canada, China, European Union, France, Germany, Italy, India, Indonesia, Japan, Mexico, Republic of Korea, Russia, Saudi Arabia, South Africa, Turkey, United Kingdom, and United States.

## Financing to developing countries are lagging and has so far not been met

When it comes to the **financing goals**, the promises from the developed world are plenty but the actual financial contribution to developing countries are lagging. In September, President Biden, announced an increase in US contribution to \$11.4 billion a year, by 2024 (Climate Change News, 09/21), from previously promised \$5.7 billion. Even before the Paris Agreement, at the climate conference in Copenhagen in 2009, developed countries promised to provide \$100 billion a year by 2020 (and up to 2025) to help developing countries in their climate adaptation. According to OECD data, \$79 billion was mobilised in the year of 2019, and probably the mobilisation of resources will be lower for 2020 when countries focused on getting through the covid-pandemic (Climate Change News, 09/17). The financing goal has so far not been met.

Moreover, to estimate how much each country should “fairly” contribute to the yearly \$100 billion of joint climate finances, the Overseas Development Institute (ODI) have estimated what would be a “fair share” for each country to pay (based on GNI, cumulative emissions and population) and compares it with each country’s actual contribution to the international climate finances. Several EU-countries are in top of the list, contributing with more than their estimated “fair share” (Norway, Sweden and Germany), whereas US is at the bottom of the list contributing with 4% of their estimated share in 2017-2018 (Overseas Development Institute). Based on ODI composite index, the “fair share” US should have paid in 2017-2018 was \$43.4 billion. Financial aid alone, does not suffice, but is a necessary piece of the puzzle.

The **adaptation goal** goes hand in hand with investments, which is discussed below.

## Investments needed for mitigation and adaptation are accentuated by the energy crisis

Two kinds of investments will be needed globally: investments to curb further emissions (e.g. investments directed to innovation to reduce emissions from industries and transport, green energy, greener manufacturing etc.) and investments to adapt to what climate change brings along (increased climate risks, extreme weather events like flooding and wildfires, migration streams, health effects on populations etc.) Thus, investments will be needed both from the public sector and from the private sector. Since investments are needed now and for at least a couple of the next decades, investments would have to shift from other less critical areas to climate related areas. Where competing interests arise, it will demand precision from decision makers to balance these interests. According to the International Energy Agency (IEA), investments in clean energy alone, must triple to reach the required levels to make net zero emission possible by 2050 (IEA, WEO 2021).

On top of this, a global energy crisis has emerged, leading to increased energy prices in many countries and affecting production and households. The energy crisis has highlighted the increasing need of clean and stable energy production in many countries and could contribute with higher incentives for investing in green energy sources. In the long-term, renewable energy should provide a cheaper source of energy than fossil fuels ([read more here](#)). On the other hand, green energy has gotten part of the blame for the surging energy prices and as countries have run out of affordable green options, they have turned to energy sources like coal which is increasing the emissions. It should also be mentioned that due to climate change, wind-dynamics and especially the strength of winds over land have weakened over the past decades (Financial Times 10/8), which could be a risk to the efficiency of wind-power. It is therefore vital that more types of green energy is explored (so that one does not put all eggs in the same basket) and that investments are directed to innovations that could help make wind-power and other green energy sources more optimized.

Ironically, it looks like investments are going in the wrong direction and global production of fossil fuels will increase in coming years contrary to many countries’ climate commitments, according to a Stockholm Environmental Institute report called “The Production Gap”. Since the beginning of the covid-19 pandemic, the G20 countries have directed around \$300 billion in new funds towards fossil fuel activities, whereas they have directed approximately \$250 billion toward clean energy (SEI, 2021).

Moreover, ECB conclude that climate change represents a major source of systemic risk (ECB, blog) and establish that there are clear benefits of acting early both when it comes to investments and other types of adaptations. According to ECB's economy wide climate-stress test, the short-term costs of the green transition is far less than the costs that climate change would bring on the medium to long term. Countries should hurry to provide the investments that are needed to limit disruption to the economies, businesses, and livelihoods (ECB, blog).

### **Sweden is preparing for the COP26-meeting by launching extended financial aid**

Leading up to the climate conference, the Swedish government has announced that they will double the financial aid to developing countries to 2025 (from 7.5 billion to 15 billion over a 6 year period). The Minister for the Environment, Per Bolund, has also mentioned that it will be important to discuss the global climate financing from 2025 and onwards, since the goal of 100 billion yearly expires 2025.

Sweden and other EU countries jointly participate in the climate negotiations. In a recent meeting, a joint negotiating mandate was decided for the EU at COP26. Some of the decisions applied to finalizing the implementation of the Paris Agreement, like how progress in goal achievement should be reported globally and common time frames to mitigate further emissions (Regeringen, 10/8). EU's stance on international carbon dioxide markets was also discussed (Consilium).

The EU-commission has presented a climate package called "Fit for 55", that they will probably market at COP26. The package is, however, an independent EU-package and is not based on the COP26-meeting. Fit for 55 includes measures, on an EU level, to reduce emission with at least 55% in comparison to 1990 levels.

### **What to expect from the meeting?**

The current situation offers a setting with relatively strong momentum, leading up to the conference. During 2021, we have seen several important contributions to research in climate change and many countries have also seen the consequences of global warming in extreme weather events. Especially the IPCC assessment report have gotten a lot of public attention and contributed with at least a temporary increased pressure on governments and other agents to take climate change into consideration. The current energy crisis also contributes to the momentum to the meeting. Many countries have seen big domestic effects since energy prices have continuously increased and energy supply suffered from disruptions. Incentives to invest and build out green energy options and climate infrastructure should be big around the world. On the other hand, some countries might turn to fossil fuels instead. At the same time, looking at the countries' NDC, not even their planned emission reductions are big enough to limit global warming to the goal set in the Paris Agreement (EGR, 2021). So, if there is a momentum leading up to the meeting, it hasn't showed in the national determined contributions yet.

Furthermore, we can likely expect further promises of financial contributions at the meeting, and further attempts to reduce carbon emissions, but the countries will probably not agree to make the promises legally binding. Since recent reports have established discrepancies in what governments have promised about reducing emissions and how they plan to produce energy like fossil fuel, internalising a holistic perspective on climate change in government policies would be a valuable result of the upcoming climate conference.

The bottom line is, that the most important quest is to get the big emitting countries like China and US, to extensively limit further emissions, and that the rest of the world follow suit. Geopolitical prestige should not be underestimated, and negotiations will probably be tricky, but the current momentum could contribute as tailwind for impactful agreements.

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