

Climate Diplomacy in Turbulent Times

Taking stock of major climate developments in 2022

Briefing

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Summary

- 1 Geopolitics dominated climate politics in 2022.** Russia's war on Ukraine and the effect of the pandemic have conditioned global politics, and climate diplomacy in particular.
- 2** Inflation from higher energy prices, global monetary contraction, and the consequences of the pandemic have **thrown many developing countries into debt distress**, which jeopardizes investments in sustainable development.
- 3 New climate neutrality pledges** have been made and some countries updated their NDC's. At the same time, COP27 saw a **broad pushback against more ambition** by many parties.
- 4** The establishment of a **Loss and Damage Fund** at COP27 presents a breakthrough. But the politics of loss and damage remain tricky and progress on climate finance generally piecemeal.
- 5 Geopolitics and crisis politics will continue to dominate 2023** and it is doubtful if the hosts of the main multilateral fora will pursue an ambitious climate agenda (G7 Japan, G20 India, and COP28 in UAE).

Geopolitics has dominated climate diplomacy in 2022

2022 has been a challenging year for climate diplomacy. As the global pandemic headed into its third year, Russia's war of aggression against Ukraine has sent a shockwave through global politics, throwing the geopolitical status quo into disarray. The crises resulting from pandemic and war created headwinds for climate diplomacy.

The spike in fossil energy prices affected climate policy and upended long-standing energy relations. Energy prices have reached historic highs. As Russia weaponizes its gas and oil supply to Europe and the latter tries to end its historically evolved physical and economic energy dependence on Russia, global energy relations are remade in short timespans. European governments are implementing measures to shield consumers from growing energy bills, to safeguard industry's competitiveness, and to transition away from Russian gas and oil. Whether the measures will accelerate the transition to renewables or slow it down as new lock-ins are created is still undecided.

The fossil energy price increase contributes to another headwind for climate policy: inflation. High energy prices pile on top of pandemic-induced supply chain disruptions to create a broad-based rise in prices. The response by central banks to increase interest rates and contract the money supply has repercussions for the global energy transition, as capital – and therefore, renewable energy projects – has become more expensive.

In developing countries inflation and the monetary response to it are contributing to debt distress. Deteriorating fiscal positions and balance of payment issues make climate policy more challenging. And while rich countries can shield their consumers from higher energy prices, developing countries are increasingly priced out of the market. Global access to electricity has

declined for the first time since the IEA started tracking it 20 years ago. In addition, global food prices have skyrocketed. These developments reinforce calls for reform of the global financial system and climate finance.

Amidst these multiple, interconnected crises, multilateralism and global climate politics have become more difficult. Some developing countries such as India have pursued strategies of non-alignment, skirting Western sanctions against Russia. Others are cautious to side with the US in its conflict with China, as exemplified by the newly elected Brazilian president, Luiz Inácio Lula da Silva. This strategic non-alignment has implications for climate diplomacy.

Fundamental uncertainty and crisis mode politics have dominated the agenda at the G7, G20, and UNFCCC negotiations. Progress on climate had to take the backseat, as day-to-day crisis politics took over. While the G7 showed relative unity in its response to Russia's aggression, there was less unity at G20. At COP27, many countries took the opportunity to push back against ambitious policies, in what some observers have described as backsliding. Still, despite this complicated situation, the year 2022 saw some major breakthroughs on climate – from the US' Inflation Reduction Act to the agreement on a loss and damage funding arrangement at COP27.

This briefing takes stock of the challenges and breakthroughs in climate diplomacy in 2022. We first review the latest evidence on climate action and progress on targets. We then look at plurilateral initiatives, namely the G7 climate club and Just-Energy-Transition-Partnerships, before assessing recent developments on adaptation and climate finance. Lastly, we look at some country highlights before closing with an outlook on 2023.

Progress on climate action is improving but still too slow

The contributions of Working Groups 2 and 3 of the IPCC to the Sixth Assessment Report were released in February and April 2022, respectively. The Working Group 2 report, which focuses on impact and adaptation, has been framed in the press release as a “dire warning about the consequences of inaction” and points out that some climate hazards would materialise even at global warming of only 1.5°C. It emphasizes the important role of natural ecosystems as well as cities to adapt to a warming climate (IPCC, 2022a). The Working Group 3 report is concerned with mitigation. It compiles a wide range of scenarios and policy options to achieve emission reductions in line with the targets of the Paris Agreement, emphasizing the critical importance of achieving a peak in global greenhouse gas (GHG) emissions before 2025. The report provides an overview of investment needs and opportunities to mobilise financial flows and discusses the links between climate change mitigation and other objectives of the SDG agenda (IPCC, 2022b).

In terms of climate policies, the year 2022 witnessed a further spread of net-zero targets across the globe. At the time of writing, laws, plans or announcement to aim for net-zero emissions covered about 83% of global emissions, 80% of the global population and more than 90% of world GDP (Net Zero Tracker, 2022). All G20 members except Mexico have some net-zero policies either already in place, or announced, as can be seen in Table 1 below. However, there is large variation in net-zero pledges regarding the emissions covered, sectors included, the target year, the intended use of carbon sinks to achieve negative emissions, the use of offsets, and concrete measures implemented to be able to achieve the targets. For instance, the net-zero targets of Argentina, Saudi-Arabia and Turkey are announcements that still need to be translated into more concrete policies and laws. Likewise, while most high-income countries aim to achieve net-zero for all GHGs by 2050 or earlier, India sets 2070 as the date to achieve net-zero emissions, and it is not clear whether this target includes all GHGs.


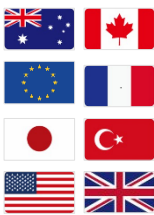





Net-zero	2045	2050	2060	2070	No target
All GHGs					
Not specified (or CO ₂ -only)					

Table 1: Climate neutrality in G20 Member States *Own depiction based on Climate Transparency (2021); CAT (2022); Note: Turkey announced a net zero emissions target for 2053; China announced to reach its net zero emissions target before 2060.*

The global stocktake, which takes place every five years to provide an overview of how NDCs compare to the targets of the Paris Agreement, has started in 2021 and will continue until 2023. The first meeting of the technical dialogue on the global stocktake took place in June 2022 at the 56th session of the Subsidiary Bodies. Furthermore, the Glasgow Climate Pact, adopted at COP26 in 2021, requests countries to revisit and strengthen their 2030 targets. Since then and at the time of writing, 30 updated NDCs were submitted, and NDCs

now cover about 95% of global emissions (UNFCCC, 2021). However, in many instances, the updates have fallen short of expectations and UNEP’s Emission Gap Report estimates that the current NDCs would correspond to an approximate stabilisation of global emissions at the current level in 2030. This would put the world on a trajectory to global warming of about 2.5°C – 3°C (UNEP, 2022). Moreover, according to Climate Action Tracker national policies are generally insufficient to meet announced NDCs (CAT, 2022).






	First NDC	Updated NDC	2 nd NDC update
No increase in ambition in 2022			
Increased ambition in 2022			

Table 2: Categorization of G20 members’ NDCs. As of December 2022. Note that the EU submits one NDC covering all 27 Member States. Own depiction based on Mossmann et al. (2022)

Plurilateral initiatives are gaining traction in 2022

Plurilateral initiatives not formally part of the UNFCCC process have featured prominently before and at COP26 in Glasgow and continued to do so in 2023. Two notable initiatives are the G7 effort to form a climate club and the formation of Just-Energy-Transition-Partnerships, the first of which was launched at COP26 between South Africa and a group of Western countries.

A G7 Climate Club

The G7 agreed to set-up a “Climate Club” at its Leaders Summit in Elmau in June 2022. The proposal for an “open, cooperative, and bold” Climate Club was chancellor Olaf Scholz’ initiative and a key deliverable of the German G7 Presidency.

The initial proposal was broad and reflected the internal disagreements of the German government. The club was meant to have three pillars: (1) progress on common carbon pricing and comparable ambition, (2) industry decarbonisation, (3) outreach and partnerships (Martini and Görlach, 2022).

However, the politics of setting up a climate club proved very difficult. Russia’s aggression against Ukraine and the need to respond to it politically shaped the German G7 Presidency. Moreover, not all countries welcomed the proposal for a climate club. Japan and the US, for example, saw no basis for cooperating on carbon pricing. Beyond the G7, many countries perceived the initiative as potentially exclusive. Still, the G7 agreed to form a club at the Elmau

summit, and the Terms of Reference (ToR) were agreed on in December 2022 (G7, 2022b).

The language in the ToR changed substantially compared to the initial proposal. The club is now called an intergovernmental forum with an explicit focus on the industry sector. Members of the club want to develop common definitions for zero-emission materials, set common standards, develop common green hydrogen markets, and joint green lead markets. The ToR explicitly cite other initiatives, like the Industrial Deep Decarbonisation Initiative, the Industrial Decarbonisation Agenda, and the Hydrogen Action Pact, which the club wants to amplify and align with.

The ToR still include the other two pillars, albeit they appear to be secondary. There is no longer the intention to establish minimum carbon price levels. Instead, the first pillar will focus on comparing mitigation actions and carbon leakage protection. Here, the club wants to build on the OECD's Inclusive Forum on Carbon Mitigation Approaches (IFCMA), which tries to establish a methodology for comparing mitigation efforts.

The third pillar still focuses on multi- and bilateral cooperation. But these actions are solely meant to be on a "voluntary basis". This rather uncommitted language may reflect the fact that the club no longer intends to sanction non-members. Moreover, making partnerships conditional on club membership set negotiations on the partnerships always up for a challenge.

In terms of governance, an interim secretariat is to be hosted by the OECD and IEA. This organisational structure may be made permanent after a transitional period.

With its emphasis on industrial decarbonisation, the G7 decided to focus on an area that many commentators deemed most productive.¹ In the context of the US' Inflation Reduction Act and looming competition

over green manufacturing, the forum can play an important role in remedying trade tensions.

Just-Energy-Transition-Partnerships

Bilateral or plurilateral "climate partnerships" are increasing in numbers. For example, at COP27, Kenya agreed a Climate and Development Partnership with Germany (BMZ, 2022a). And Egypt, the US, and Germany signed a cooperation agreement (BMZ, 2022b). Yet, most visible have been Just-Energy-Transition-Partnerships, which are seen as a mechanism to increase climate finance and foster transformation.

At COP26, South Africa declared the establishment of a Just Energy Transition Partnership (JETP) with France, the EU, UK, US, and Germany. This JETP aims to raise USD 8.5 bn to support the just transition to clean energy. The funding plan was released in November 2022 (UK COP 26, 2022). It consists predominantly of sovereign and multilateral loans and credit guarantees, with grant financing accounting for only about 4% of the total. This has raised some concerns of rising debt burdens in South Africa, especially given the currently highly volatile macroeconomic environment in which interest rates for countries that are major loan providers are expected to rise further to tame inflationary pressures (Pilling, Cotterill and Hodgson, 2022).

In their Leaders Declaration, the G7 called for establishing similar partnerships (G7, 2022a). Since then, two more JETPs with Indonesia and Viet Nam were concluded.

At the G20 summit in November 2022, Indonesian president Joko Widodo announced an USD 20bn JETP with the G7, EU, Denmark, and Norway. The JETP includes provisions to accelerate the retirement of Indonesia's large coal fleet and expand renewable energies. Likewise, at the

¹ See our own recommendations (Martini and Görlach, 2022) and the recommendation of

others (Agora Industry, 2022; Vangenechten and Lehne, 2022).

EU-ASEAN summit, the International Partners Group announced a JETP with Viet Nam over USD 15.5bn.

In contrast to the JETP with RSA, the other two involve private capital in the agreement.

The Glasgow Financial Alliance for Net-Zero is supposed to contribute 50% of the investment volume.

UNFCCC: Mitigation, Adaptation and Climate Finance

Mitigation

COP27 brought no substantial progress on climate change mitigation. A work programme running until 2026 was agreed to “urgently scale up mitigation ambition and implementation”. As this work program does not have a mandate to set concrete targets, it is uncertain if it will have a substantial influence on countries’ climate policies. COP27 also continued the Global Stocktake, which started at COP26 in Glasgow and will conclude at COP28 in Abu Dhabi in 2023. The Global Stocktake assesses the ambition of submitted NDCs towards achieving the targets of the Paris Agreement and identifies gaps that need to be filled by ratcheting up ambition.

Adaptation

Pursuant to Article 7 of the Paris Agreement, which calls for a “global goal on adaptation of enhancing adaptive capacity, strengthening resilience and reducing vulnerability to climate change”, parties agreed to submit and periodically update information on national adaptation priorities, policies, and support needs. At COP26, a registry was created to assemble these so-called “adaptation communications”. At the time of writing, all G20 Members except Saudi-Arabia had national adaptation policies in place. Yet, national adaptation programmes show a substantial variation in sectoral coverage. Whereas agriculture, coastal areas and health are included in most adaptation communications, issues such as transport and tourism receive significantly less coverage.

At a high-level meeting in May 2022 in the Maldives, the “Glasgow-Sharm-el-Sheikh Work Programme on the Global Goal on Adaptation (GlaSS)” was announced (UNFCCC, 2022b). Under this workstream, regular workshops will be conducted to enhance understanding of the Global Goal on Adaptation, review progress and support planning and implementation of adaptation measures. At COP27, during the World Leaders Summit, the ‘Sharm-El-Sheikh Adaptation Agenda’ was launched. The agenda is a list of actions that can help improve resilience against climate-related risks. It outlines 30 adaptation goals across five “impact systems”, including food and agriculture, water and nature, coastal areas and oceans, human settlements, and infrastructure. The agenda spells out ambitious aims to mobilise USD 140bn to USD300 bn per year to protect people by e.g. increasing food security and early warning system but does not include provisions how these monies shall be raised (Owen-Burge, 2022).

Climate Finance

Climate finance remains a contentious issue in international climate diplomacy in 2022. Progress on the matter proved challenging. Yet, in the face of growing debt distress in developing countries, climate finance for adaptation and mitigation is more important than ever.

Developed countries pledged USD 100 bn annually by 2020 at COP15 in 2009. However, according to an OECD analysis, developed countries still fall short of their pledge. Climate finance only amounted to USD 83.3 bn in 2020. Most of the finance was delivered as loans, with a large share

of the overall flows going to Asia (OECD, 2022).

A study by Oxfam questions even this rather modest sum that was delivered (Carty and Kowalzig, 2022). Most loans are non-concessional, thereby adding to the debt burden of many countries. Moreover, many developed countries simply repurpose and relabel their official development aid. The additionality of delivered climate finance is therefore questionable.

Beyond controversies around how much climate finance was delivered, even the target is not enough to meet developing countries' external finance needs. The Independent High-Level Expert Group on Climate Finance estimates that emerging markets and developing countries need about USD 1tn per year by 2030 in external finance. This implies a tripling of the funding of Multilateral Development Banks and Development Financial Institutions in the next five years alone and a doubling of concessional loans by 2025 (Songwe, Stern and Bhattacharya, 2022).

The mismatch of pledged, delivered, and needed climate finances sets the context for negotiations on the New Collective Quantified Goal that is meant to replace the 100bn target after 2025. Negotiations started at COP27, although with little progress. Furthermore, negotiations on Article 2.1(c) of the Paris Agreement did not make it onto the formal agenda. The Article sets out the goal to make finance flows consistent with low-emission-pathways. It is one of the three overarching goals of the Paris Agreement.

In 2022, developing countries reiterated their calls for reforms to the global financial system and delivery on climate finance. Many developing but also developed countries, like the US and Germany, called on the World Bank and IMF to take a more aggressive stance on climate action.

In addition, the call for innovations on climate finance grew louder in 2022. The Bridgetown Agenda, initiated by Barbadian

Prime Minister Mia Mottley, gained traction among developing countries. The Bridgetown Agenda is a proposal for a USD 500bn Global Climate Mitigation Trust resourced with IMF Special Drawing Rights (SDRs), which would provide a cheap source of finance. IMF managing director and French President Macron publicly praised the proposal. Its economic, but foremost, political feasibility are doubtful and there was no new progress at COP27. However, the Bridgetown Agenda and calls for reform of the global financial infrastructure will feature prominently in climate diplomacy in 2023.

Loss and Damage

COP27 saw a breakthrough on Loss and Damage (L&D) finance. Parties agreed to “establish new funding arrangements” and decided to “establish a fund for responding to loss and damage”(UNFCCC, 2022a). While at COP26 developed countries had effectively blocked the G77 plus China's push for a dedicated fund, progress on L&D emerged as a necessary condition for agreeing a cover decision at COP27. For SIDS and the coalition of vulnerable states, L&D finance was the key priority at COP. Their demands were supported by a broad coalition of developing countries, represented by the “G77 plus China” negotiating group.

While L&D made it onto the formal agenda, disagreements between “developed” parties, most notably the US and EU, and “developing” parties, represented by the G77 plus China negotiating alliance were large. Whereas the former did not want to set up a new fund and preferred integrating L&D into existing facilities, the latter pushed for a dedicated fund. The EU gave in on setting up a fund in return for increased mitigation ambition and progress on Article 2.1(c) of the Paris Agreement. This paved the way for an agreement. Although the EU did not get either of its asks, parties decided to establish a dedicated financial facility. A decision that many developing countries,

especially least developed countries (LDCs) and small island developing states (SIDS), applauded as a major breakthrough (Harvey, 2022).

The decision leaves many of the details to be worked out in the coming year. Modelled on the modalities of the Green Climate Fund, the decision mandates a “Transitional Committee” to make recommendations for operationalising the fund, to be considered and adopted at COP28. This includes proposing “institutional arrangements, modalities, structure, governance”, “identifying and expanding sources of funding”, and “ensuring coordination and complementarity” with the existing funding landscape. The Transitional Committee consists of both developed and developing countries and must adopt its recommendations by consensus.

The details and modalities of the fund are therefore still to be decided in the coming years. This includes the central question of who will contribute to the fund and on what terms. The EU and US are adamant that not just Annex I countries contribute to the fund, but also emerging economies and emitters such as China. Likewise, it is unclear who will be eligible for receiving funding and on what basis. The decision notes that the

funding arrangements are supposed to be targeted at those countries “that are *particularly vulnerable* to the adverse effects of climate change” (own emphasis). What constitutes particular vulnerability is yet to be agreed upon. Likewise, the mechanisms by which financial aid will be released are still unclear.

It is uncertain if the Transitional Committee will be able to reach a consensual agreement on the technical level. If it does, it is unclear whether the recommendations will be easily adopted at COP28. Consequently, while the decision at COP27 set a precedent, experiences with the Green Climate Fund give reason to remain cautious regarding the transformative impact of the fund.

On the sides of the formal negotiations, several pledges and initiatives for L&D finance were launched at COP27. Countries such as Denmark, Scotland, or Canada pledged smaller sums. In addition, Germany in cooperation with the G7 and the V20 launched the Global Shield against Climate Risks at COP27. The initiative is meant to provide ad hoc financial support in case of climate disasters (Carbon Brief, 2022).

Breakthrough domestic climate wins in 2022

The US Inflation Reduction Act

Historically, the US has been an uncertain and at times tenuous player in international climate diplomacy. Domestic developments in the past year are a sign that this paradigm may have begun to shift.

In August 2022, President Biden signed the Inflation Reduction Act (IRA), the most ambitious and wide-reaching climate policy in US history. The IRA is a package of fiscal measures that amount to a USD 370bn investment in the clean energy economy over the next ten years. Among these are

investment and production tax credits for solar and wind technologies, a residential rooftop solar tax credit, energy efficiency and building modernisation as well as incentives for electric vehicles aimed at private consumers. The IRA further leverages private finance with a USD 27bn “green bank” and significantly raises the loan guarantee authority of the Department of Energy.

In its fine print, the IRA codifies the mandate of the Environmental Protection Agency (EPA) to regulate GHG emissions, amending the US Clean Air Act of 1963. This overturns a 2022 Supreme Court decision (West

Virginia v. EPA) to strip the EPA of this regulatory authority on climate and could go a long way discouraging future legal attacks on federal regulation (as was the fate of the Obama-era Clean Energy Plan).

Independent projections show that the IRA—together with the more modest climate provisions in the bi-partisan Infrastructure Investment and Jobs Act (IIJA) passed in 2021—achieves significant domestic emission cuts of approximately 40% by 2030 compared to 2005 levels. However, this does not meet the US national target in the NDC of net 50% by 2030 (Jenkins *et al.*, 2022). Further executive actions, i.e., in the transport or power sectors, are necessary to close the remaining emissions gap.

It remains to be seen how the IRA in implementation will be met by international trading partners. Simultaneously applauding the scale of US progress, the EU has already claimed that certain domestic content requirements in the IRA breach global trade agreements by discriminating against imported products. Furthermore, the IRA is silent on US contributions to international climate finance. In his remarks at COP27, Biden promised additional support, doubling the US pledge to the Adaptation Fund to USD 100m and announcing an additional USD 170m in resilience support for developing countries (i.e., the PREPARE plan). However, with a split Congress looming in 2023 Biden, like his democratic predecessor, will likely need to turn to executive actions to further his climate agenda.

EU doubling down on clean energy?

In 2022, the EU continued its negotiations on Fit for 55, the package of legislative proposals that is meant to deliver on new 2030 target to cut EU emissions by 55% (relative to 1990).

As of November 2022, the negotiations between the EU's legislators – the Council and Parliament – are in full swing.

Negotiations of the entire package are expected to conclude in the first semester of 2023.

Three important dossiers – the Effort Sharing Regulation (ESR), LULUCF and emission values for cars – reached a political agreement in mid-November. ESR requires that emissions from buildings, transport, agriculture, waste, and small industries are reduced by 40% in 2030 (compared to 2005). The ESR also sets legally binding reduction targets on EU Member States. The new LULUCF Regulation sets an overall EU-level objective of 310 Mt CO₂ equivalent of net removals in the LULUCF sector in 2030. For the period from 2026-2030, each Member State will have a binding national target for 2030. New EU rules establish a 55% CO₂ emission reduction target for new cars and 50% for new vans by 2030, and a 100% CO₂ emission reduction target for new cars and vans by 2035.

In response to Russia's war against Ukraine and the entailing crisis in energy prices, the EU Commission proposed the RePowerEU Plan in May 2022 (EU Commission, 2022). This Plan builds on the Fit For 55 package. According to the Plan, the EU's energy efficiency target is increased from 9% to 13% and its target for renewables energies from 40% to 45%. The Plan also proposes measures to meet these new targets, such as an EU Solar Strategy to double solar photovoltaic capacity by 2025 and install 600GW by 2030, a legal obligation to install solar panels on most new buildings, and new rules to accelerate permitting for wind and solar energy.

As another important part of the RePower Plan, the EU has secured record levels of LNG imports and higher pipeline gas deliveries. These efforts to secure new gas supplies may stand in contradiction with the EU's climate neutrality goals.

In addition to the RePowerEU Plan, the EU adopted various emergency interventions to reduce high energy prices. These include for example an electricity price cap for "inframarginal" producers to €180/MWh, and a

temporary solidarity contribution on excess profits made in the oil, gas, coal, and refinery sectors. Excess profits are at least 120% of the average profits of the previous 3 years.

As additional measures, the Commission proposed joint gas purchasing, and price limiting mechanisms on the main European gas exchange. As of November 2022, negotiations of the price cap on gas purchases have not been concluded but a price cap on Russian oil was set at USD 60 per barrel.

Additional dossiers that are crucial for EU climate and energy policies will be decided in the near future include reforms of the EU Emission Trading System (ETS), a new, separate, ETS for buildings and road transport, a Carbon Border Adjustment Mechanism and the revision of the Energy Tax Directive.

India

India has implemented some promising actions this year. India's updated NDC, submitted to the UNFCCC in August 2022, sets the target to reduce emissions per unit of GDP by 45% relative to the year 2005 by 2030. It also aims at a "non-fossil" share of electricity production (i.e., solar, wind, nuclear and hydropower) of 50% by 2030 and the creation of carbon sinks of 2.5 to 3 GtCO₂e through afforestation (Gopalakrishnan, 2022). The country's government has further announced a net-zero target (without specifying whether this includes all GHGs or CO₂ only) for the year 2070 at COP26, but not yet submitted a long-term strategy to present details on implementation. At COP27, India declared its ambition to include calls for a phase-down of all fossil fuels in the final declaration.

India's national policies are more ambitious than what is stated in its NDC. That means, if they deliver, India would overachieve its NDC targets. India aims to more than triple non-fossil electricity capacity to 500 GW by 2030, up from currently about 160 GW (the

500 GW target had also been part of India's previous NDC, but not included in the update). Nevertheless, the draft National Electricity Plan 2022 also envisages 26 GW of coal capacity to come online by 2026-27. The Indian government has also announced the goal that 30% of private car sales, 70% of commercial vehicle sales and 80% of two- and three-wheelers should be electric by 2030. The industry sector has efficiency targets for 13 energy-intensive sectors (such as cement and thermal power generation) and a scheme of tradable energy-efficiency permits. Furthermore, in July 2022, the Indian Lower House of Parliament adopted an amendment to the Energy Conservation Act that provides the legal basis for a voluntary carbon credit trading scheme (ICAP, 2022). This amendment still needs to pass the Upper House to come into effect. A decision is expected for the end of 2022.

Recently, plans to increase the production and use of green hydrogen have been announced, such as setting up a Green Hydrogen and Green Ammonia policy to generate 5 million tons of green hydrogen by 2030 to be used in oil refining, fertiliser, and the steel industry. The Interim Green Hydrogen Strategy released in February 2022 focuses on achieving cost reductions, e.g., by waving transmission fees for electricity used to produce green hydrogen. A more comprehensive green hydrogen policy is at the time of writing under consultation.

China

China continues its ambiguous agenda on climate action in 2022. In the run-up to COP26 in October 2021, China had submitted its updated NDC and its long-term climate strategy to the UNFCCC. These documents include pledges to reduce CO₂ emissions per unit of GDP by at least 65% relative to the year 2005 by 2030, reach a peak in CO₂ emissions before 2030, and

achieve carbon neutrality before 2060.² The NDC further includes the target of 25% of non-fossil energy in primary energy consumption and a capacity of 1.200 GW of wind and solar energy installed by 2030.

With more than 1.000 GW of installed solar and wind capacity already installed in 2022 and several programmes for the roll-out of renewable energy in place, China is expected to overachieve the respective target of its NDC. For instance, the 14th Five-Year Plan for Renewable Energy, a key document for the development of the energy system released in mid-2022 aims to increase the share of renewable electricity generation to 33% (of which 18% from non-hydro sources), up from 28.8% in 2020 (11.4% from non-hydro) by 2025 (Feng, Linan and Jie, 2022).

In early 2022, the Chinese government has further introduced the updated National Strategy on Climate Adaptation 2035, which lays down priorities and adaptation goals for a broad range of sectors and activities (China Dialogue, 2022). The methane strategy, which had also been announced for 2022, has at the time of writing still not been published.

The 20th Party Congress in October 2022 produced mixed signals for China's climate ambition. Whereas the Communist Party emphasized the importance of modernisation, efficiency improvements and clean

production, it also mentioned the importance of coal for energy security. This announcement might signal a weakening of the earlier commitment to “strictly control” coal-fired power generation projects and limit the increase in coal consumption over the 14th Five-Year Plan period (2021-2025), and phase down coal consumption during the 15th Five-Year Plan period (2026-2030). Debates on the next Five-Year-Plan are expected to start in 2023.

In terms of international efforts to mitigate climate change, the Chinese leadership had announced to stop financing coal power plants in third countries at the UN General Assembly in September 2021. Yet, geopolitical tensions and trade restrictions imposed by the US on imports from China could have a chilling effect on the country's willingness to engage in cooperation on climate issues (Mallapaty, 2022), as exemplified by the suspension of US – China climate cooperation since August 2022. At COP27, China's chief negotiator Xie called on the US to “open the door” to re-establish climate cooperation, and the Chinese and US delegations held informal talks, which resulted in the two countries resuming their dialogue on climate policy in mid-November (Tankersley and Friedman, 2022). At COP27, China also backed the loss and damage fund but highlighted that China does not assume responsibility to make financial contributions to this fund.

Outlook to 2023

To achieve the targets laid down in the Paris Agreement, additional efforts are required. Negotiations under the G7, G20 and UNFCCC did not yield substantial progress, being overshadowed by geopolitical tensions and the resulting immediate economic challenges.

We can expect geopolitical struggles to continue dominating global climate policy in

2023. Even if a ceasefire or a peace agreement can be reached in Ukraine, Russia's role as a supplier of oil and natural gas will likely be diminished permanently. European costumers implement measures to reduce their import dependency by diversifying suppliers and switching to alternative energy sources. While this may accelerate the transition to clean energy, there is also the risk that new fossil fuel reserves are

² Most observers understood China's carbon neutrality goal as net-zero CO₂ emissions but not of other GHGs, but according to a statement by

the Chinese delegation at COP27 it also includes other GHGs.

explored and developed, generating lock-ins of carbon-intensive modes of energy use.

Attempts of the US to contain China, for instance, through restricting access to key technologies and raising trade barriers, could sour international relations and make cooperation on climate policy harder to achieve. Furthermore, the industrial policy approach taken in the US Inflation Reduction Act has provoked political resistance from some key trade partners, including the EU.

Therefore, energy and climate issues will likely be increasingly regarded from the perspective of national security. This includes trade in fossil fuels and clean alternatives, such as green hydrogen. It also includes supply chains for critical raw materials, such as lithium, cobalt, and zinc. Indonesia's announcement to seek an "OPEC-style" cartel for raw materials used in battery production points in the direction of increasing conflicts in international trade relations that could have major impacts on countries' decarbonisation efforts (Dempsey and Ruehl, 2022).

The limited progress on mitigation at COP27 suggests that smaller initiatives could play a central role to complement the multilateral process. JETPs have emerged as a new form of North-South partnerships and could play an important role in the years to come. Furthermore, the G20 and G7 could build on existing commitments to propel member countries' climate policies.

On Dec 1, 2022, India took over the G20 Presidency. The Indian government announced that it would strive for "a new paradigm of human-centric globalisation" under the headline of "One Earth. One Family. One Future". Even though no concrete priorities were put forth at the time of writing, President Modi mentioned climate change, terrorism, and pandemics as the greatest challenges facing humanity and that the Indian Presidency would "seek to depoliticise the global supply of food, fertilizers and medical products" (Modi, 2022). The G20 summit will take place on September 9-10, 2023, in New Delhi.

Japan will take over the Presidency of the G7 from Germany on Jan 1, 2023. Most observers expect that Japan will show relatively low ambition to promote climate issues during its G7 Presidency (Hakko, 2022). The G7 summit will take place in Hiroshima on May 19-21, 2023.

COP28 will be held at the end of 2023 in Abu Dhabi in the United Arab Emirates. A crucial element of this COP will be the final phase of the Global Stocktake, in which technical assessments for updating and enhancing mitigation efforts will be presented and discussed. In addition, parties will need to agree on the details of the loss and damage fund. Some commentators have raised concerns that the Presidency might use the opportunity to put the interests of fossil fuel producing nations centre stage, further delaying much needed progress in climate policy (Harvey and Michaelson, 2022).

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