ENERGY, ENVIRONMENT, AND COP26

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AT NO POINT IN TIME, ARGUABLY, have energy and the environment been as widely perceived as more connected with one another and important to the future of mankind. And the Conference of the Parties (COP) on Climate Change held in Glasgow, UK between October 31 and November 12, 2021 had been viewed by many beforehand as a good opportunity to help determine more clearly and positively the future relationship between climate and energy production and distribution within and among countries. A truly complex relationship, where uncertainty is present nearly everywhere on account of the very large number of actors affected by it and affecting it in different ways all over the planet. The COP held in Glasgow certainly confirmed the complexity and uncertainty characterizing these crucial issue areas.

The Conference, known as COP26, had been preceded by 25 COP international conferences taking place every year after 1994 when the United Nations Framework Convention on Climate Change (UNFCCC) entered into force, with the "ultimate aim" of "[p]reventing 'dangerous' human interference with the climate system."[1] The Conference of the Parties is the supreme decision-making body of the UNFCCC and the nearly 200 countries that have at present ratified the UNFCCC are called Parties to the Convention.

Before examining the most important results of the COP26, let us refer briefly first to an important document issued a few weeks before by the International Energy Association (IEA), which was "designed to assist decision makers at the 26th Conference of the Parties (COP26) and beyond by describing the key decision points that can move the energy sector onto safer ground."[2] After that, we are going to briefly refer to another major source of current information for decision makers in these areas, the research published by Climate Analytics and NewClimate Institute, two major scientific institutions based in Germany. And then, last but not least, we shall also refer to two important UN publications.

The 2021 World Energy Outlook, the Climate Action Tracker, and two major UN publications

Created in 1974 in the wake of the previous year's oil crisis to ensure the security of oil supplies, the International Energy Association is an autonomous intergovernmental organization within the OECD framework based in Paris. Given the changes that have taken place in the world economy in the last five decades and the much greater concerns developed over the challenges to mankind stemming from climate change, the organization has understandably expanded its scope and it is now "structured under three pillars: strengthening and broadening the IEA's commitment to energy security beyond oil, to natural gas and electricity; deepening the IEA's engagement with major emerging economies; and providing a greater focus on clean energy technology, including energy efficiency."[3] In these policy areas, the parties affected are many and its mission statement reflects this: "The IEA works with governments and industry to shape a secure and sustainable energy future for all."[4] In order to have a more significant impact on the COP26 UK event, where it was an admitted observer, the IEA decided to anticipate by a month the publication of its authoritative yearly *World Energy Outlook* (WEO). This communications strategy was effective, and the document was often referred to during the meetings that took place in Glasgow.

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The WEO employs a scenario approach to examine future energy trends. One scenario discussed is the *Net Zero Emissions by 2050 Scenario* (NZE), describing – ideally, most observers would say – the course of action designed to achieve net zero CO2 emissions by 2050 and a 1.5°C stabilization in global average temperatures – keeping in mind that at present we are, pursuant to the WEO estimate, at 1.1°C above the pre-industrial age. Another one, *The Announced Pledges Scenario* (APS), looks at where all current announced energy and climate commitments, including NZE pledges, would take the energy sector if – and that is a big if given the multiplicity of actors and interests – implemented in full and on time. A third one, *The Stated Policies Scenario* (STEPS), does not take full implementation of these pledges for granted, but takes a more specific, sector-by-sector look at existing policies and measures as well as those that are under development – a most difficult task, not the least in terms of information gathering – and assesses where they lead the energy sector.[5]

An attentive reading of the IEA document reveals how complex – and unsatisfactory – the relationship between saying and doing is in this set of policy areas. Such complexity and the significant goal-reaching challenges associated to it is also evident in reading *The Climate Action Tracker* (CAT), which is an ongoing scientific analysis by the two respected German research institutes mentioned earlier. It tracks government climate action and measures it against the 2015 COP21 Paris Agreement's aim of "holding warming well below 2°C, and pursuing efforts to limit warming to 1.5°C."[6] CAT is another important source of information for decision-makers. Notably, CAT's most recent summary (published while COP26 was taking place) of where we are at present states that: based on current policies and action, the world is going to have an estimated increase in temperature of 2.7°C above pre-industrial level; with the full implementation of the 2030 nationally determined contributions (NDCs) targets, the increase would be 2.4°C; if there is going to be full implementation of submitted and binding long-term targets and 2030 NDC targets, the increase would be 2.1°C; and lastly, in the most optimistic scenario, where all announced targets are fully implemented, there would be a 1.8°C increase.[7] What emerges from the WEO and the CAT Warming Projections, I would argue, is that: what should be done, what has been promised, and what is actually being done are dimensions that differ significantly. Indeed, what had been promised by governments before COP26 was considered by the WEO and CTA very inadequate to reach temperature stabilization at 1.5°C. Most interestingly, the Emissions Gap Report 2021, issued by the United Nations Environment Programme (UNEP), has a title that is totally in line with the WEO and CTA assessments: "The Heat is On. A world of climate promises not yet delivered".[8] In it, the governmental promises and actions are considered very inadequate, and the implementation only of unconditional NDCs is estimated to lead to a global temperature rise of about 2.7°C by the end of the century,[9] well above of the Paris Agreement's goals.

Significant concerns emerge also from reading the Sixth Assessment Report (AR6) published by The Intergovernmental Panel on Climate Change (IPCC), the UN body for assessing the science related to climate change. In it, the emphasis placed on ever better data and knowledge emerging in the last few years and the unequivocal harsh impact – in many instances irreversible – of humans in the warming of the atmosphere, ocean, and land are completely in line with the other reports mentioned. And, also in line with the other reports, the IPCC strongly recommends scenarios with low or very low greenhouse gas (GHG) emissions, which of course require rapid and intensive governmental actions worldwide.

The decisions at COP 26

After two intense weeks of negotiations, on November 13, 2021, the nearly 200 countries participating in COP26 signed The Glasgow Climate Pact. The negotiating delegations were undoubtedly influenced by the worrisome forecasts and scenarios of future extreme weather events that they had read in authoritative reports such as the ones we mentioned. They agreed to move "towards the phase-down of unabated coal power" and the "phase-out of inefficient fossil fuel subsidies"[10]. While the specific reference to "coal" and "fossil fuel subsidies" represented a positive novelty from a green point of view, the expression "phase-down" was most controversial. Introduced by India with the support of China at the very final stages of negotiation, it was a significant decrease in commitment level with regard to coal power from the original "phase-out". The change was accepted by all because of the strength of its supporting countries and the United States defended the change in language as a necessity to avoid a political deadlock. Here the complex set of national interest alignments was evident. Most European countries had a significant level of discomfort toward any limitation to the attacks on greenhouse emissions. In marked contrast, Australia expressed clearly its desire to protect its coal exports and miners. And, notably, nations where climate change effects have been already very visibly damaging were very vocal in their requests to move against greenhouse emissions and, among them, island nations decried the immediate threat to life for them deriving from rising sea levels.

Awareness of the importance of the time factor was central in the studies mentioned. The impacts of increases in temperatures and greenhouse-gas emissions were central in the COP26 discussions, also influenced by the growing tv, radio, print, and internet coverage in recent years of floods, draughts, hurricanes, wildfires, and heatwaves. The commitments by countries to reach net zero emissions seemed too distant in the future and it had become clear that the timeline for climate action had to be accelerated. The Glasgow Pact "*request*[ed]" that "Parties revisit and strengthen the 2030 targets in their nationally determined contributions as necessary to align with the Paris Agreement temperature goal by the end of 2022, taking into account different national circumstances"[11]. Here we see the often present (and dominant in affecting negotiating postures) reference to national realities. But this proviso does not, I would say, reduce too much the emphasis on the need for the signatory countries to work hard in the months before COP27 to move faster. Undoubtedly, the text reflects an acknowledgement that the reduction in emissions by 2030 as heretofore submitted by 151 countries is not adequate at all. Notably, this is a full acceptance of the critical assessment of current policies and NDCs put forth - among others - in the UNEP report mentioned earlier. The objective of reaching a global stabilization of temperatures at 1.5 °C above pre-industrial level (and definitely below 2 °C) was central in the Paris Agreement and viewed by most as unrealistic (and in any case not sufficient to avoid fairly negative climate consequences). But this has also been considered by many as useful to keep on referring to for communication and marketing purposes.[12]

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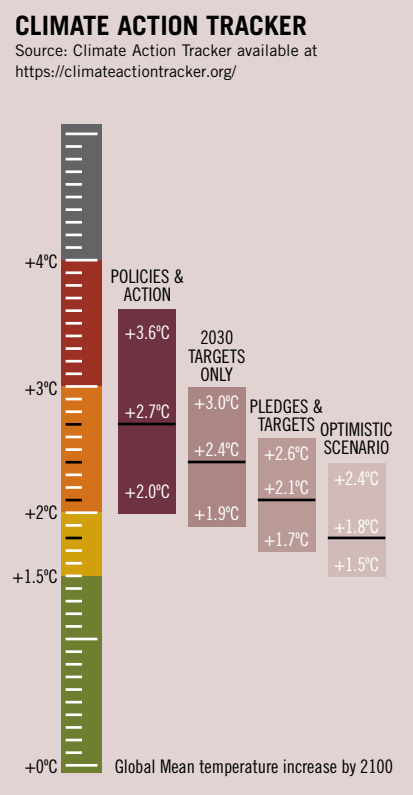
Another important issue area can be clearly seen in art.44 of the Glasgow Pact where it is "*not*[ed] *with deep regret* that the goal of developed country Parties to mobilize jointly USD 100 billion per year by 2020 in the context of meaningful mitigation actions and transparency on implementation has not yet been met". The divide between developed and developing countries is very clear here. The financial help was designed along two dimensions. One, mitigation, involves the reduction of the flow of heat-trapping GHG into the atmosphere: essentially, abandoning fossil energy. The other, adaptation, involves the change of societies so that they could better adjust to the impacts of present and future climate changes.[13] The failure to meet the $100bn per year by 2020 objective (with OECD estimates putting the amount at less than $80bn in 2019) was seen by many developing countries as a great lack in solidarity and charitability from richer nations, especially in light of the fact that the amount was also considered much too low to confront present and future climate-connected challenges.[14] And, most interestingly, advances in climate science informing recent reports (like those mentioned earlier) showed more directly than ever the impact of rich countries' emissions. In other words, developing countries, especially those from the most hard-hit areas, emphasized the need to see flows of funds from richer nations also as a needed compensation for loss and damages suffered by them. Reparations, however, is a concept that developed countries strongly resist, in no small measure on account of concern about its entrance in international courts. And, most likely, these discussions on financial flows will be inserted very often in the ever going debate on aid and its effectiveness and limitations.[15] In any case, optimists were pleased in reading that the COP, also in article 44, "*welcomes* the increased pledges made by many developed country Parties and the *Climate Finance Delivery Plan: Meeting the US$100 Billion Goal* and the collective actions contained therein."

Two other developments in climate finance which were discussed at COP26 will also be monitored in the months leading to COP27 in 2022 and beyond. One is the promise by the U.S., U.K., European Union, France,



and Germany to provide up to $8.5 billion from public and private sources to South Africa to help the country transition away from coal, while protecting the livelihoods of the workers in the sector.[16] Interestingly, South Africa's President Ramaphosa has pointed out that the money has to be given mostly as grants and any loans would have to be at concessionary rates.[17] Clearly, the complex relationships among international, national, and local interests and the challenges to balance them out was most present throughout COP26 and will be ever present in the road ahead. Anyway, the South African case may constitute the earliest model that can be used – with adaptations – in other countries especially if it starts effectively before COP27 (keeping in mind that, as discussed amply among participants in reference to most issues, Covid-19 continues to complicate matters further).

The other major development in the area of climate finance that needs to be looked at in the months ahead and beyond is the pressure placed on the private sector to act responsibly. One entity whose members stood out across the COP26 negotiations was The Glasgow Financial Alliance for Net Zero (GFANZ) which was launched in April 2021 by Mark Carney, a former governor of the Bank of Canada and, later, of the Bank of England. GFANZ's "goal is to transform the global financial system in order to finance the investment in a net-zero economy."[18] GFANZ states that it "represents over 450 major financial institutions from across 45 countries, controlling assets of over $130 trillion." Its "members represent every segment of the financial-sector value chain – asset owners, insurers, asset managers, banks, investment consultants, exchanges, rating agencies, audit firms, and other key financial service providers".[19] The investment requirements number that GFANZ considers central in advancing toward its objectives derives from several net-zero scenarios linked to the 1.5°C goal, including that of the IEA. It is indeed a huge sum: roughly $100 trillion over the next three decades. GFANZ intends to play a big role to contribute to the 1.5°C goal through its investing activities but here, like elsewhere, the debate on the future success of different intervention scenarios between optimists and pessimists keeps on going. Anyway, the fact that for mutual funds and exchange-traded funds focusing on ESG (environmental, social, and governance) goals, the E ones have become vastly more capable to attract cash (than the S and G ones and in absolute terms) is testimony to the impact of the COP events. Thus, investors such as these funds have certainly benefited from companies' growing concerns in recent years about not appearing as environmental "laggards".

Furthermore, entities such as the Securities and Exchange Commission (SEC) and the Financial Accounting Standards Board (FASB), and their counterparts in Europe and elsewhere in the world have increased significantly (or plan to do so) their regulatory activities on energy and climate change. Most notably, at the COP26, the International Financial Reporting Standards (IFRS) Foundation Trustees announced the creation of the International Sustainability Standards Board (ISSB) "to develop—in the public interest—a comprehensive global baseline of high-quality sustainability disclosure standards to meet investors' information needs"[20], and which will work closely with the IFRS' International Accounting Standards Board (IASB) to make sure that their Standards complement each other.

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As we have noted so far, the uncertainty about the emission cuts plans and the funding of climate change was diminished somewhat (certainly not considerably) by the Glasgow Climate Pact. Negotiations in a third major issue area, carbon trading, resulted arguably in more tangible outcomes. In view of the fact that a global carbon tax levied on polluters is most difficult to negotiate, many economists in the green camp have been pushing for a while for the creation of a new international carbon market, in which carbon-emissions credits are traded across borders. These so-called Article 6 rules aim to create a UN-certified standardized credit framework comprising: (1) a centralized system open to public and private entities and (2) a separate bilateral system, where a government that is not meeting the emissions targets it submitted to the UN could buy trade credits to compensate.[21] Among the schemes that could generate credits there could be tree planting undertakings and carbon capture tech systems. The months and years ahead will show how these markets will evolve, keeping in mind disparate challenges that have to be confronted in creating, valuing, and swapping credits, such as: the allowing of the carry-over of old carbon credits, created since 2013; companies' additional incentives to push suppliers to provide more climate data and the suppliers' responses; and the existing high levels of market fragmentation. With regard to this last one, the World Bank's Carbon Pricing Dashboard shows that there are 65 regulated national or regional carbon pricing initiatives that currently cover about 21.5% of global greenhouse gas emissions. The existence also of many informal markets contributes further to significant price differences. How the desirable standardization of markets will proceed will also be interesting and challenging to monitor and analyze.

Anyone who looks at the proceedings of COP26 – and the Global Climate Pact signed at its end – as well as the discussions preceding it and following shortly afterwards, must acknowledge the complexity and uncertainty in the issue areas discussed. Distinctions between agreement and disagreement as well as winners and losers are most challenging. Here are a few brief considerations, in line also with what we mentioned thus far. First, it is extremely unlikely that the transition process to global NZEs is going to be smooth and orderly. Developing countries want to be adequately financially assisted on their way to continue to decrease the standard of living differences with the rich world – and the sums required are enormous. Further, even if one does not add this huge flow of funds to developing countries, the "going green" domestically for the countries of the developed world is going to be very tough in terms of taxation and government indebtedness. Politically very challenging, particularly considering the risks of much higher inflation and job losses (especially for those working in countries where the fossil fuel industry is important, e.g. US, UK, Norway). Even countries where direct popular elections do not play a major role, like China, are understandably very concerned with the political costs of an NZE transition. Further, it can be argued that energy insecurity, high inflation, and social unrest are and will be reduced by the petrostates' continued fossil fuels sales during the transition period. In that sense, meeting the world's energy needs during the transition period will be very beneficial economically to petrostates, as they will be facing less competition from producers from the West. And, clearly, the challenges to advance toward an as-soon-as possible NZE stage will be compounded by the problems that can arise in the national security and diplomatic spheres between and among the US, China, Europe, Russia, and India. The role that investment in R&D is going to play in the years ahead to reach NZE is of course vital. It will be affected by, among others: standard setting for clean energy; control of minerals like cobalt, copper, lithium, manganese, nickel, and rare earths (especially in light of the fact that solar photovoltaic (PV) plants,

wind farms and electric vehicles (EVs) in general require more minerals to build than their fossil fuel-based counterparts)[22], and the challenges to supply-chains (including the need to increase their resilience as we have recently learned from extreme weather events, Covid-19, and trade bans), which may lead to less globalization and more regionalization.

In any case, the path to COP27 and future COP events will deserve a lot of attention.■

Notes

[1] https://unfccc.int/process-and-meetings/the-convention/what-is-the-united-nations-framework-convention-on-climate-change. The COP conference did not take place in 2020 on account of Covid-19.

[2] World Energy Outlook (WEO) 2021 p.16, available at the www.iea.org website.

[3] IEA website at https://www.iea.org/about/history

[4] IEA website at https://www.iea.org/about/mission

[5] WEO, especially at pp. 80, 94-5.

[6] Climate Action Tracker (CAT) website, https://climateactiontracker.org/about/

[7] See CAT Warming Projections Global Update, November 9, 2021, available at their website.

[8] Emissions Gap Report, available at www.unep.org

[9] Ibidem, especially Chapter 4.

[10] See Article 36, Glasgow Climate Pact, available at https://www.un.org/en/climatechange

[11] Article 29, ibidem.

[12] It is important to note how much attention is being paid in the media to the year when a country pledges to reaching NZEs. For a list of pledging countries, see the Net Zero Scorecard, available at https://eciu.net/netzerotracker

[13] See, for instance, https://climate.nasa.gov/solutions/adaptation-mitigation/

[14] See, for instance: "Out of Reach?" The Economist, November 20, 2021.

[15] See, for instance, Giuseppe Ammendola "Some Trends and Perspectives on Globalization, Economic Growth, Equality, and Development". Janus.net, e-journal of International Relations Fall 2011.

[16] See, for instance, Kate Mackenzie "Want to Help Poor Nations With Climate Finance? Try Listening to Them" Bloomberg.com November 26, 2021. https://www.bnnbloomberg.ca/want-to-help-poor-nations-with-climate-finance-try-listening-to-them-1.1687415

[17] "S. Africa will only accept $8.5 bln green energy deal on good terms, president says" REUTERS November 25, 2021.

[18] See GFANZ Progress Report, November 2021 available at https://www.gfanzero.com/progress-report/

[19] Ibidem.

[20] See the IFRS website at https://www.ifrs.org/

[21] On Article 6 of the Paris accord, see for instance Sarah McFarlane and Matthew Dalton "Climate Accord Opens Path To Global Carbon Trading" The Wall Street Journal November 15, 2021.

[22] IEA "The Role of Critical Minerals in Clean Energy Transitions", available at https://www.iea.org/reports/the-role-of-critical-minerals-in-clean-energy-transitions