

PLATO Society

After Glasgow: Challenges Confronting the Paris Agreement and Multilateral Climate Action in the 2020's

February 25-April 1, 2022

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Today's Meeting

- 1. Two topics that require comment:**
 - A. Ukraine**
 - B. IPCC report, released 2/28/2022**
- 2. Last Friday's meeting: summary**
- 3. Looking forward from COP26**
- 4. Emissions gap**
- 5. Market mechanisms**

Current Matters: Ukraine; IPCC Report

- **Ukraine and climate change**
 - Impact on Paris System momentum
 - Energy debate: prices, security

- **Intergovernmental Panel on Climate Change (IPCC): 2/28/2022 report**
 - Impacts of climate change
 - Part 2 of IPCC's 6th "Assessment Review"

The IPCC (created, 1988)

- An intergovernmental organization (195 representatives; hundreds of researchers and authors)
- Its purpose: provide policymakers with assessments on the current state of scientific knowledge about climate change
 - Does not do original research

IPCC's AR6, part 2 (2/28/22)

- The impacts of global warming are appearing faster than expected, so rapidly that they could soon overwhelm the ability of both nature and humanity to adapt.
- Sharp reductions in GHG emissions needed
- AR5 was issued in 2014: warned of coming threats
- AR6: impacts occurring now
 - Increased use of attribution science

Another UN Report: Biodiversity (2/17/2022)

- U.N. Environment Programme report
- Issued in conjunction with the U.N. Convention on Biological Diversity
- Pace of climate change accelerating too quickly for many plant and animal species to adapt, leading to profound impacts on species' ability to survive and food production.
- Well-established patterns (“phenology”) being thrown off by changing climate cues

Plastics Treaty Planned

- **Yesterday, 175 countries agreed to begin writing a treaty to restrict production of single-use plastics, improve recycling, and clean up plastic waste.**
- **Delegates said they hoped to model the treaty on the Paris Climate Agreement (individual countries must set targets, but choose their policies).**

Today's Material

- **Review of Feb. 25th meeting:**
 1. **Climate science tenets (e.g., urgency)**
 2. **The Paris Climate System:**
 - **Pillars: mitigation; adaptation; finance**
 - **Temperature goals & emissions targets**
 - **1.5°C-2.0°C in 2021; net-zero (2050); 45% off 2010 emissions (2030)**
 - **Individual Party pledges: “NDC’s” (targets, policies); net-zero pledges**

Review of Feb. 25th Meeting (continuing)

- **COP26: Glasgow, Nov., 2021**
- **Mixed results: no breakthroughs; incremental steps**
 - **Adoption of Glasgow Climate Pact**
 - **Implementation steps (Transparency Framework; international carbon market accounting rules)**
 - **Side agreements**

Not Covered on Feb. 25th: Specifics on Side Agreements

- Not official acts of the Conference
- Two types: “sectoral agreements” and climate diplomacy agreements.
- Their focus: “depth” of Party commitments, not “breadth”

Sectoral Agreements

- **Economic sectors: e.g., forestry, methane production, vehicle manufacturing**
- **Informally entitled “coalitions of the willing”**
- **Examples:**

Deforestation Pledge

- **End deforestation by 2030; pursue reforestation**
- **141 signatories (all of them Paris Agreement Parties), including Brazil, China, Russia and the United States**
- **Encompasses some 85 percent of the world's forests.**

Methane Pledge

- Reduce global methane emissions at least 30 percent from 2020 levels by 2030
- 111 signatories (USA, Canada, UK; not China, Russia), plus a # of “supporters” (financial, scientific institutions).
- The Global Methane Pledge website:
“Methane...accounts for about half of the net rise in global average temperature since the pre-industrial era.”
- Could eliminate over 0.2°C warming by 2050.

Electric Vehicles Pledge

- **38 Parties (e.g., Canada and U.K.; not including China, Germany, Russia, and U.S.), and a number of non-Party stakeholders (including 11 auto manufacturers (Ford, General Motors, Mercedes-Benz, and others))**
- **Parties: “work towards all sales of new cars and vans being zero emission by 2040 or earlier, or by no later than 2035 in leading markets.”**

Electric Vehicles

Pledge (cont.)

- Sub-national governments: work toward conversion of their vehicle fleets to zero emission vehicles by 2035, and adopt policies to accelerate transition to zero emission vehicles as soon as possible
- Manufacturers: 100% zero emission new car and van sales in leading markets by no later than 2035

Electric Vehicles Pledge (cont.)

- Investors with significant shareholdings in automotive manufacturers: support an accelerated transition to zero emission vehicles in new car and van sales in leading markets by 2035.
- Financial institutions: support making financial products available to consumers, businesses, charging infrastructure and manufacturers to enable the transition to 100% zero emission new car and van sales in leading markets by 2035.

Side Agreements Among Certain Parties (cont.)

- **Climate Diplomacy (not sectoral pledges)**
- **Examples:**
 - **China-USA (in spite of strained diplomatic relations overall)**
 - **South Africa (referenced by Secretary-General Guterres in his closing statement)**

China-USA Agreement

- A deal to strengthen cooperation on climate action and accelerate emissions cuts this decade.
- Joint statement: their intention to “seize on this critical moment to engage in expanded individual and combined efforts to accelerate the transition to a global net zero economy”.

South Africa Agreement

- A “co-creation” of South Africa and a group of donor countries (France, Germany, the UK, the US, and the EU): an \$8.5 billion package of grants and concessional finance over 3-5 years to accelerate the retirement of coal plants and deployment of renewable energy.
- Also targets economic regeneration in coal mining regions, with electric vehicle manufacturing and green hydrogen among the potential alternative job opportunities.

Not Covered on Feb. 25th: COP26 Takeaways

- **Broadening inclusivity in the Paris System**
 - **Non-Party stakeholders (sub-national governments, NGO's, private sector, indigenous peoples, women, youth)**
- **Integration with biodiversity goals**
- **Accountability: reducing the “trust deficit”**
- **Mitigation: urgent need for enhanced national ambition**
- **Developing countries: increased support needed**

The 2020's: Reducing GHG Emissions

■ Outline:

1. Enhancing national governments' ambition

A. The “Emissions Gap”: targets; NDC's; net zero pledges

B. Spurring ambition: market mechanisms

2. Growing emphasis on private companies

A. Net-zero pledges

B. Voluntary carbon markets

National Governments: Current Pledges and Actions

- **Indicators: NDC's; net-zero pledges**
- **At COP26:**
 - **Many Parties (roughly 130) submitted new NDC's. Of these, at least 36 did not increase their ambition.**
 - **The G20 countries reflect this.**

G20 Countries

- **The G20 members are: Argentina, Australia, Brazil, Canada, China, France, Germany, India, Indonesia, Italy, Japan, Republic of Korea, Mexico, Russia, Saudi Arabia, South Africa, Turkey, the U.K., the USA, and the EU**
- **85% of global gross domestic product**
- **Account for 76-80% of global GHG emissions**
- **For COP26: Australia, Brazil, Indonesia, Mexico, and Russia did not increase ambition; Turkey became a PA Party on 11/10**

National Governments: Current Net-Zero Pledges

- Numerous net-zero pledges (136 countries), but variations:
- 2045 (Germany); 2050 (many countries, including USA); 2060 (China); 2070 (India)
- Simply policy pronouncements, or anchored in law? (e.g.: Japan, South Korea, U.K., EU)
- Scope: all GHG's, or only carbon dioxide (e.g.: Argentina, China, Russia, South Korea)?

But Beyond Individual Parties: the “Emissions Gap” Problem

- **Climate science continues to update urgency: increasing atmospheric GHG concentrations; tipping points (years marking no return)**
- **Meanwhile, many national governments (the focal point of the Paris System) are upgrading their ambition, but not enough**

Emissions Gap Problem (continuing)

- The “Emissions Gap”: current collective pledges and policies, even if achieved, will be insufficient for alignment with temperature goals (1.5-2.0 will be exceeded permanently)
- Current climate science projection: at best, in 2100, average global temperature increase will be 2.7°C above pre-industrial levels

Emissions Gap: Another Perspective

- The “Climate Action Tracker” website:
Even with all new Glasgow pledges for 2030, the world will emit roughly twice as much in 2030 as required for alignment with the 1.5°C goal.
Therefore, *all* governments must reconsider their targets.

How to Spur Greater National Governments' Ambition?

- A difficult proposition: all countries have potential for shifting political policies
- National governments must select from among many policy options

Governmental Action: Policy Options

1. Regulatory: direct governmental intervention in the marketplace (e.g., bans on coal-fired power plants, or sales of certain vehicles)
2. Fiscal: public financial resource measures (e.g., direct spending (infrastructure), tax policies, subsidies, R&D, procurement, issuance of “green bonds”)
3. Market mechanisms: set the stage for private market actor decisions

Spurring National Ambition

- **Within the Paris System:**
 - Annual NDC upgrades
 - As to details of Party commitments: increased transparency, accountability
- **Inter-Party relations:**
 - Agreements: China-USA; South Africa plan
 - Coalitions of the Willing
 - Coercive: border adjustments (tariffs on imports, as planned by the EU)

“Market Mechanisms”

- A recurring theme during evolution of the Paris System has been this widely-held view:
- Market economics -- -- not direct governmental regulation or fiscal policy -- -- offers the best pathway toward successful action against climate change.
- Reliance on economic incentives
- Government sets up the structure, but then largely allows entities to make their own economic decisions within that structure

Cost-effective Actions

- According to this approach, public and private actors will seek the most cost-effective actions in making economic decisions.
- This proposition is reflected in these policies:

Market mechanism measures

■ I'll describe:

– Carbon pricing:

Carbon taxes

Emissions trading

-- --Carbon price on shipping (EU)

-- -- International (inter-country) carbon market

-- --Art. 6 (trading credits (allowances)

-- -- Importance of the COP26 accounting rules

(accountability; uniformity (e.g., re double-counting)

Carbon Pricing:

- Carbon fees or taxes
- Emissions trading (cap-and-trade)

Carbon Pricing and Externalities

- Carbon pricing is based on the concept of “externalities”: that the prices of fossil fuels do not reflect the costs to society and the economy of their activity. This is because of “external” environmental, social, and economic harms.

Carbon Fees/Taxes

- **Government imposes a tax on production, distribution, or purchase of fossil fuels.**
- **These costs presumably will be passed on to purchasers, who then will decide whether to pay the higher costs of these products or seek out less expensive alternatives.**

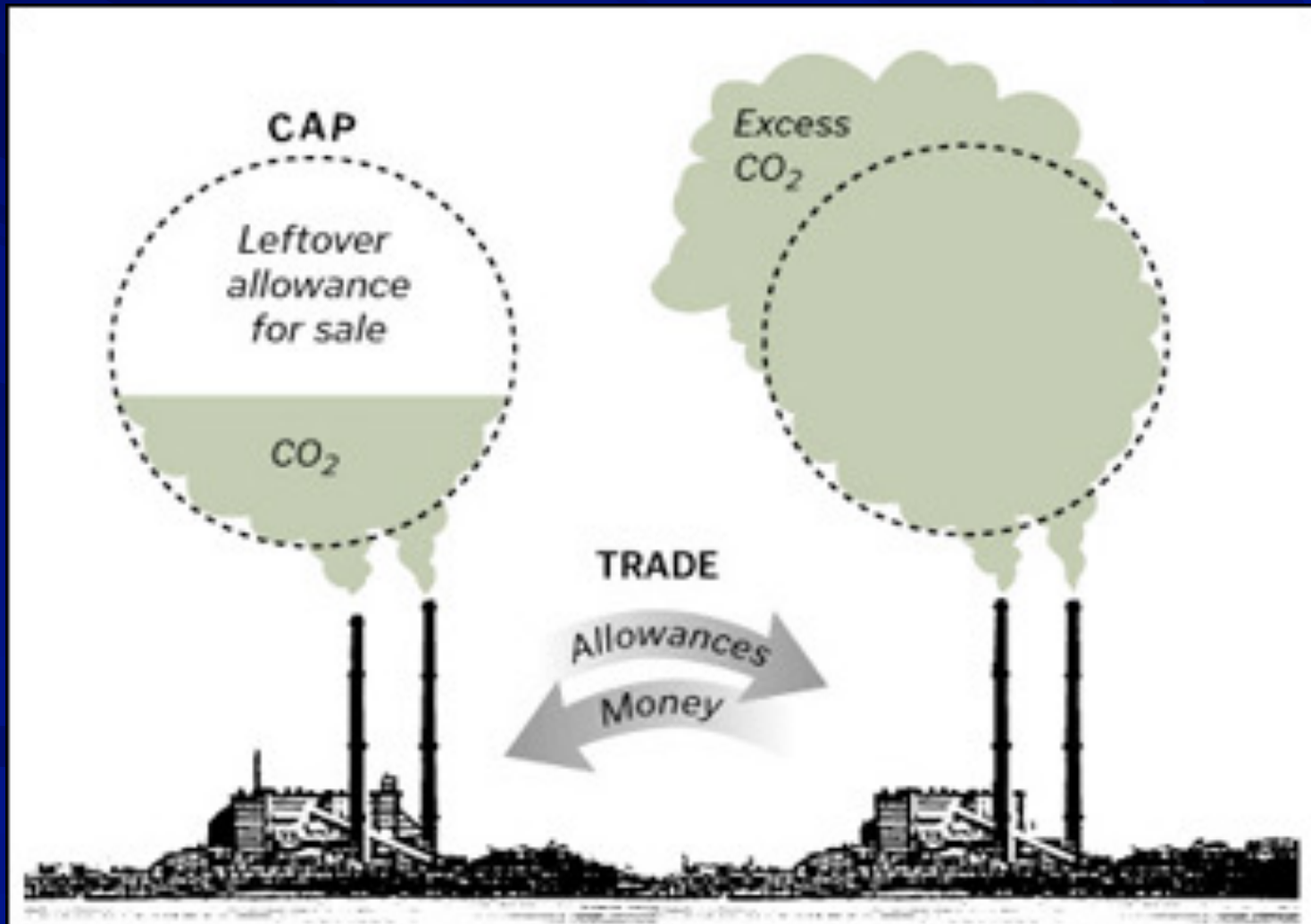
Carbon Fees/Taxes

- **Carbon fee/tax proponents expect that the expansion of demand for cheaper alternatives will increase investment in green energies.**

Emissions Trading (Cap-and-Trade)

- In an emissions trading system, the market sets the price on fossil fuel use.
- Government or a private authority sets a cap on an entity's allowable emissions, then distributes permits to the entity representing a set number of emissions.
- If its emissions are below the cap, the entity may sell permits to another entity

Emissions Trading



Emissions Trading

- **The sellers of permits will benefit economically because the price they receive for the permits will exceed the cost of climate-friendly steps they have taken to reduce emissions.**
- **The purchasers of permits will be induced to take climate-friendly steps if the costs of those steps will be lower than the cost of permits.**

Emissions Trading Systems

- **The European Union, China, and a number of other nations and sub-national governments around the world employ trading emissions systems.**
- **The EU says that its ETC will be the centerpiece of its ambitious plan (“Fit for 55”) to reduce GHG emissions by 55% from 1990 levels by 2030.**

The EU's Plan for Shipping

- Shipping is responsible for 3% of global GHG emissions (ships emit around one billion tons of greenhouse gases every year)
- The EU plans to include shipping emissions in its ETS from 2023. Shipowners, regardless of the flag they fly, will have to buy carbon allowances to cover all emissions during voyages in the EU and half of those generated by international voyages that start or finish at an EU port.

The Paris System and Carbon Pricing

- **The Paris Agreement does not explicitly adopt or endorse carbon fees/taxes or emissions trading (cap-and-trade) as domestic measures.**
- **However, it does support trading between Parties in an “international carbon market”.**
- **However, their use has been limited due to disagreements over implementation details.**
- **It is hoped that COP26 cleared these up, with adoption of detailed accounting rules.**

An International Carbon Market

- **Structured on the Paris System's recognition of "permits" (or "allowances") that represent reductions in their GHG emissions.**
- **A purchasing country may use these permits to satisfy some of its NDC emissions reduction pledge.**
- **A selling country receives income.**

The International Carbon Market

- **Example: Country “A” has pledged in its NDC to reduce its emissions by 1,000 tons of GHG’s; however, its actual emissions will be 2,000 tons**
- **It might purchase a permit worth 1,000 tons from country “B”, which still will be able to meet its own NDC pledge.**

Benefits to Both Parties and to the Paris System Goals

- Country A (the purchaser) benefits by satisfying part of its NDC pledge
- Country B (the seller) benefits by receiving income.
- Meanwhile, the Paris System will benefit if Country A is encouraged to adopt policies so it will not need to make future permit purchases.
- Ideally, all Parties will reach that point (while at the same time upgrading ambition)

Intended Benefits to Both Parties

- **Country A (the purchaser) benefits by satisfying part of its NDC pledge**
- **Country B (the seller) is rewarded by receiving income, while at the same time not harming its ability to meet its NDC pledge.**
- **Meanwhile, the planet will benefit when Country A is encouraged to adopt policies so will not have to make future permit purchases.**

Reducing Emissions: Private Sector (companies)

- **Private companies: great economic power; engage in widespread emission activities**
- **Meanwhile, growing emphasis (investors, courts, consumers) on encouraging or forcing them to reduce emissions.**
- **Therefore, many companies have taken steps to demonstrate alignment with Paris System goals**
 - **Net-zero pledges**
 - **Funding of climate-friendly projects**

Net-Zero Pledges

- **Some 682 of the world's 2,000 largest publicly-traded corporations have adopted net-zero pledges. Examples (by descending size):**
 - **Walmart (by 2040); Royal Dutch Shell (by 2050); Saudi Aramco (by 2050); Amazon (by 2040); Toyota (by 2050); VW (by 2050); BP (by 2050); Apple (by 2030)**

Two Questions

- **For what emissions is a company responsible?**
- **How to assess accountability for corporate funding of projects as a means of satisfying its pledges (the question of “offsets” in “voluntary carbon markets”)**

What are emissions for which a company is responsible?

- A question of considerable importance for investors and courts
- It's an accounting question: how to measure emissions?
- The most widely-recognized used and internationally-recognized accounting framework that is used to measure emissions is the "Greenhouse Gas Protocol"
 - Sets up three categories ("scopes") of emissions:

Greenhouse Gas Protocol: Scopes 1, 2, and 3

- **Scope 1: Direct emissions related to a company's on-site fuel combustion or fleet vehicles**
- **Scope 2: Indirect emissions used to generate energy (electricity, heating, cooling) purchased by a company**
- **Scope 3: Other indirect emissions that occur in a company's upstream and downstream activities (the company's value chain, anything from supplier waste to the use of the products it sells).**

Scope 3 Emissions

- **Scope 3 emissions are usually far larger than the two others; however, they are more complicated to measure.**
- **When making or implementing net-zero pledges, a corporation is expected to specify which scopes it is considering to ensure full transparency.**
- **Two examples where Scope 3 emissions accounting has been demanded: Chevron and Royal Dutch Shell**

Chevron

- At its May, 2021, shareholders' meeting, 61% voted in favor of a resolution instructing Chevron to cut its Scope 3 emissions: in other words, not just in the production of oil and gas but in the emissions created when customers use its products
- Chevron is working on a way to address this

Royal Dutch Shell: Netherlands Court Decision

- **May, 2021: reportedly the first time a court anywhere ordering a private company to reduce its global emissions**
- **Shell PLC must slash its GHG emissions 45% by 2030 from 2019 levels**
- **Scope 3 emissions included (in other words, those of its suppliers and customers)**
- **Roughly 85% of Shell's emissions are Scope 3**
- **Shell is appealing the decision**

Voluntary carbon markets (the use of “offsets”)

- To help with their net zero pledges, many companies turn to offsets and voluntary carbon markets
- This has triggered a boom in the voluntary carbon offset market : market value of over \$1B in 2021, and expected to reach 50B USD in 2030

“Offsets”

- An “offset”: a company pays for the cost of someone else’s climate-friendly project (e.g., forestry, or wind or solar farms).
- Often the project is in another country
- The buyer will receive a “credit” for doing so
- It then will include the resulting emissions reductions toward its net-zero pledge

Next Week's Meeting (March 11th)

- Energy, Technology, and Finance