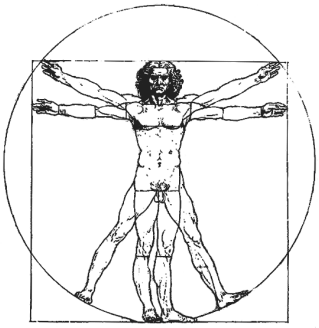

Oxford Seminar 2019

Participants in the 2019 Fellowship Colloquium, which took place before the Seminar

11-13 September 2019
Oxford Town Hall

ecbi

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INTRODUCTION

The 2019 Oxford Seminar took place from 11-13 September 2019, in the Oxford Town Hall. It was preceded by the ecbi Fellowship Colloquium, attended by 23 senior negotiators from developing countries (two participated virtually), from 9-11 September. They were joined by 20 senior negotiators from Europe for the Seminar.

Opening the Seminar, the Lord Mayor of Oxford, Craig Simmons, described efforts to address climate change, including through declaring a climate change emergency in the city.

THE RELEVANCE OF COMMON METRICS TO THE PARIS AGREEMENT GOAL

This session started with a presentation by Myles Allen, Department of Atmospheric, Oceanic and Planetary Physics, University of Oxford. It was facilitated by Clare Shakya, International Institute for Environment and Development.

Allen quoted a letter by the UK Prime Minister, saying that "*ending our contribution to global warming by 2050 can be the defining decision of this generation in fulfilling our responsibility to the next generation*". If this is the goal of governments, Allen said, scientists can provide insights into what it will take to "end our contribution to global warming". While the answer for carbon dioxide (CO_2) and nitrous oxide is simply to stop emissions, methane emissions do not need to reach zero to stop and reverse methane-induced warming.

Presenting research by the Oxford Martin School, Allen said nominally, emissions of CO_2 and methane have very different impacts on temperature. He showed graphs of emissions and their impact on global temperature, indicating that methane emissions do not need to reach zero to stop and reverse methane-induced warming. Past increases in methane emissions caused warming when they occurred, but constant methane emissions cause little additional warming. Gradually declining methane emissions of 10% over 30 years, equivalent to halving over about 200 years (for instance, through efficiency savings), cause no additional warming. Rapidly declining methane emissions, meanwhile, lead to cooling.

Therefore, Allen noted, the conventional metric of Global Warming Potential (GWP), where methane emissions are converted to CO_2 equivalent, can be misleading when applied to methane emissions, particularly when these are being reduced. This metric does not indicate when methane emissions stop contributing to global warming. He presented the following formula, which combines cumulative methane emissions and annual methane emission rates to predict the warming response more accurately:

$$\Delta T = \mathrm{TCRE} \times \sum [E_{\mathrm{LLCP}}(t) + 4 \times E_{\mathrm{SLCP}}(t) - 3.75 \times E_{\mathrm{SLCP}}(t-20)]$$

Allen said this formula, denoted by GWP*, uses the same metric values interpreted in a new way, to provide a more accurate indication of the impact of short-lived pollutants on global temperature. He then demonstrated the use of the formula through the following scenarios:

- Creating one new cow increases the methane emission rate by 100 kg methane per year, which has the equivalent impact on global temperature as:
  - A one-off release of 210 (28x75x0.1) tonnes CO_2 *plus*
  - Sustained emission of 0.7 (28x0.25) tCO_2/year from now on
- Destroying one old cow decreases methane emission rate by 100 kg methane per year, equivalent to:
  - A one-off removal of 210 tonnes CO_2 *plus*

    - Sustained removal of 0.7 tonnes CO_2 per year from now on
- Under a European-style emission trading scheme, 100 kg methane per year is considered equivalent to:
    - Sustained emission of 2.8 tonnes CO_2 per year
    - No consideration of changing methane emission rates

If methane were included in a traditional emission trading system at NZ$ 25/tCO_2, Allen said, farmers increasing their methane emissions would pay exactly the same rate for "new" vs. "old" cows, even though the impact of every new cow is equivalent to a one-off release of NZ$ 5000 worth of CO_2. Farmers managing to reduce their methane emissions by -0.3% per year would still pay NZ$ 70 per year per cow even though these emissions are not causing global warming. Farmers reducing their methane emissions faster than 0.3% per year get no credit for helping offset the warming impact of other emissions. If methane were included in a traditional emission trading system at NZ$ 1.25/tCO_2 (95% discount), nothing happens at all.

In the discussion that followed, a participant sought further clarity on the impact of this research on methane emissions from cows. In response, Allen equated the emissions reduced by closing a power plant to those reduced by "a gently declining (10% over 30 years) herd of cattle", saying it presents a fantastic mitigation opportunity that would cause global cooling. He noted there are several ways of reducing emissions from cattle, including better manure management, additives to feed, or vaccines to reduce the methane emissions produced by the cattle. These would reduce the total amount of methane produced per kilo of beef produced.

A developing country participant said finally, after many years of different reporting metrics for developed and developing countries, a decision was reached in Paris and in Katowice that all Parties must account in GWP potential over 100 years (GWP 100) from IPCC's Fifth Assessment Report, thus putting all countries on an equal footing. This finally gets all Parties, both developed and developing, using the same multipliers for their annual emissions. Parties that wish to report another metric in addition to GWP 100 are welcome to do so, but the key common metric for emissions is GWP 100 approved by the IPCC. She felt it is extremely unhelpful at this point in time, when agreement has been reached, to be pressing for use of another metric – in particular, a metric that has not even been endorsed by the IPCC. She felt the place for this research to make its case is in the IPCC, rather than in the politicised environment of the UNFCCC, where certain Parties will stand to benefit by being provided with a way to pretend that they are now contributing to "global cooling," when in reality they are just reducing their ongoing, substantial, historical emissions. New Zealand is a prominent example of a country that will benefit disproportionately, while developing countries whose methane emissions will be expanding with development would be negatively impacted. She said a developed country with large historical methane emissions will be treated differently from a developing country that needs to expand its methane emissions –the developing country would be penalised for trying to reach the same level of constant flow, while the developed country can maintain its flow with little consequence.

The participant said another substantial problem is that if Parties with fixed targets under the Paris Agreement decide to focus their attention on methane with the promise of "cooling" and reduce the attention they give to CO_2 in delivering these targets, the result will be a longer-lock in of carbon intensive infrastructure and more longer-lasting CO_2 emissions in the atmosphere. This is extremely problematic, when we know that to meet the Paris Agreement's 1.5°C limit, we need to de-carbonise completely by around 2045. To reach net zero, and reach the required balance between emissions and removals, the world needs to not to just reduce CO_2 emissions but also to remove CO_2 from the atmosphere, so there is no room for delay. Shifting focus to methane would create just such a delay. She further noted that CO_2 emissions are particularly damaging to SIDS, as unlike methane, CO_2 emissions result in further ocean acidification and destruction of coral reefs. So shifting a focus of efforts away from CO_2 and toward methane is also problematic for the survival of SIDS.

Finally, she said, countries are starting to come forward with national net zero goals and timeframes for their achievement, and it will not be helpful to have a situation where net zero means different thing to different Parties. Unlike GWP 100, GWP* does not actually require net zero CO_2 emissions to achieve net zero GWP* emissions. The reality is that we need net zero CO_2 emissions, and then we will need to continue with negative CO_2 emissions to balance out other gases that cannot be reduced to zero.

Allen responded that the GWP 100 metric is fine, and doesn't need to be changed, as long as countries are given guidance to report on individual gases. If all the gases are added up into one single national emissions number, then the numbers become useless. If they report the individual gases separately, the simple formula proposed can be used to calculate national and global contributions to global temperature, and we will know whether we're on a path to net zero to end our contribution to global warming. He said scientists can only provide the information on how different gases can deliver global cooling, and on accurate metrics to translate emissions to temperature, since the world is acting on emissions but has a long-term temperature goal. It is remarkably simple to do this with the proposed formula. In current scenarios, net zero emissions implies global cooling, as achieving net zero emissions means you get onto a cooling path, which actually would cool indefinitely into the next Ice Age.

A developed country participant said while it really helps to mitigate methane, this could have other impacts, such as increases in nitrous oxide emissions which have by far larger warming potential, or impacts on food security. He asked how policy makers can use this new information.

Allen said the science isn't new, and the different behaviour of methane has been known since 1990. He stressed that the mitigation opportunities in methane are enormous, because reducing the rate of methane emissions is actually equivalent to taking CO_2 back out of the atmosphere, but these opportunities are currently underestimated by GWP 100. How this information is used in the negotiations, he said, is up to governments.

A developed country participant said she has always understood that the choice of metric is a political choice. While it has been decided to use the GWP 100 as the common metric, she said Parties are free to choose a different metric. She asked what the formula implies for hydroflourocarbons (HFCs), which are also short-lived gases, and for policies. Allen agreed that there is nothing to stop countries providing additional information. He said while a decision was taken in Katowice to use GWP 100 for reporting, in Paris, many of the Nationally Determined Contributions (NDCs) in particular were formulated as just single aggregate numbers, combining CO_2 and other pollutants. The latter cannot be used to differentiate between short-lived gases and cumulative ones like CO_2 and nitric oxide, he said, and asked if it is it now decided that gases will be reported separately. He said the formula works for HFCs and other gases as well, using the lifetimes that are in tables by the Intergovernmental Panel on Climate Change (IPCC).

A developing country participant said there are many natural sources of methane such as swamps and natural lakes, which existed even before the Industrial Revolution. He asked how, then, is the cooling effect possible. Allen pointed to a graph showing that as methane emissions go up, they cause global warming, but once they start to fall, temperatures fall, causing global cooling. To restore atmospheric methane concentrations to their pre-industrial levels, and therefore take away methane's contribution to global warming, all you have to do is reduce methane emissions, he said. If anthropogenic methane emissions are reduced to zero, concentrations of methane in the atmosphere would fall within a few decades to their pre-industrial levels, and the warming they cause in the climate system would go back down to zero within a few decades.

A participant asked if this is due to the short-lived nature of the gas. Allen said this is a crucial point: every molecule of methane in the atmosphere has about a 10% chance of being destroyed every year. After ten years, two-thirds of the methane is been destroyed by chemical reactions in the atmosphere or the land surface. So within a few decades, if we stopped propping up methane, we hold up atmospheric methane concentrations.

A developing country participant asked if this information is reflected in the IPCC reports; and if it is true that carbon neutrality would result in indefinite cooling. Allen responded that the information is included in the IPCC's report on *Global Warming of 1.5°C*. On the second question, he said there are a lot of qualifications: in the current scenarios being considered, global cooling would result because net zero means a balance between positive methane emissions and CO_2 withdrawals. He warned that entrepreneurs are starting to look at methane removal with interest, and this could result in ongoing CO_2 emissions being balanced by active methane removal. In this scenario, while everything would look like it is headed to net zero under standard accounting under the UN Framework Convention on Climate Change (UNFCCC), the result would be permanent global warming,

The developing country participant asked why this methodology is not being used if it is better, and if there is a downside. Allen said one potential downside is that it makes short-term adjustments in methane emission rates look incredibly valuable – if you can reduce methane emissions a little bit, it looks like you've taken a lot of CO_2 out of the atmosphere. A solution would be to treat these gases separately, and realise that fungibility between methane and CO_2 does not make sense because they are not interchangeable.

A developed country participant said it has been decided to use the IPCC 2006 guidelines for reporting and inventories, which include a breakdown, but how the information is provided in the NDCs is nationally determined, and hence the NDCs have different approaches. He asked how things would look over time, and if there is sufficient stability through the phase transitions between, for instance, stability and a decline. Allen said there is no change in behaviour over time, and the numbers could be treated as quite stable for accounting purposes, with very small revision required. The change and impact on global temperature is continuous as you go from increasing methane emissions, to reducing methane emissions he said.

Müller described a discussion during the Fellowship earlier in the week on the different behaviour of methane, saying it ended in a suggestion that a different market should be developed from methane, rather than allowing its trade in the CO_2 market. Allen agreed, saying separating the markets for short-term and long-lived gases would support predictable progress to a long-term temperature goal.

A developed country participant said some stakeholders, notably representatives of the agricultural sector, make the point that methane does not contribute because of the characteristic that stable emissions would have a stable effect. He asked if work on these metrics is underway or planned for the IPCC. Allen replied that a world with zero CO_2 and zero nitrous oxide emissions, and with methane emissions that are not exactly stable but declining gently, going down by 10%, over 30 years, or halving over 200 years, would be consistent with no further warming. This point was made clear in the IPCC *Global Warming of 1.5°C* report, he said, but the report did not say how fast radiative forcing had to decline for the other gases – the answer to that question is 0.3% per year, and it is in the draft of the IPCC's sixth assessment report. If the objective is to hold the warming, then zero CO_2 and nitric oxide emissions, and not zero but gently declining methane emissions, is enough to achieve that objective, he concluded.

A developing country participant asked whether all the different sources of methane can achieve carbon neutrality without strong measures in agricultural activities or waste management. Allen replied that how much one country has to do on methane emissions will depend a little bit on what other countries do. But for

the world, it's quite simple: to stop methane causing any more global warming, net anthropogenic methane emissions have to go down about 10% over 30 years.

A developing country participant reiterated an earlier question, saying not just net zero, but negative emissions will be needed to deliver the 1.5°C goal. She asked what will need to happen after net zero is achieved, and over a longer-term perspective. She expressed a concern over attention shifting to methane, allowing Parties to ignore CO_2, and causing a lasting problem. She said CO_2 impacts such as ocean acidification has quite significant impacts on natural ecosystems, and on a number of Parties in the process.

Allen said he presented one possible interpretation of climate neutrality, which is to stop global warming, but there could be other interpretations.

A developed country participant said the GWP metric is a legacy of how the world started to address emissions, on the assumption that emissions could be reduced more efficiently if they are combined in a basket, and countries have the policy flexibility to choose where to begin. There is a need to move beyond that, and that is happening to some extent. He said the EU Emissions Trading System covers nitrous oxide and perfluorocarbons, but it does not cover methane. The regulations separate out these gases and have different policies that apply to them, in part for the very reasons that Allen described. Now, as other parts of the world begin to make as much progress as the EU has, he said, they may also need to put in place more sophisticated policy tools that separate out the different gases. One troubling development, however, he noted, is that there is another effort to bring more gases into equivalents, such as black carbon, which is even more difficult to express in terms of the CO_2 equivalent. He stressed the need to avoid replicating or accelerating mistakes that were made in the past in accounting methodologies.

Allen said the decision to keep methane out was the right one, and it would be even better if there was a separate market for short-lived pollutants. The global temperature implications of a market which involved black carbon and methane would be relatively predictable, and stable. Trading of methane against black carbon mitigation opportunities around the world could potentially be quite helpful towards achieving a long-term temperature goal.

A developing country participant asked if two markets, one for long-lived and another for short-lived gases, would be enough. Allen said that would be a perfectly viable solution if the trading is for global temperature. However, there are other considerations: for women in the developing country who are being affected by black carbon emissions, for instance, it would matter a lot whether the reductions are made in methane or black carbon. There are other very important implications of these emissions, for health and air quality for instance, that shouldn't be forgotten.

A developed country participant said this was the first time he heard that reduction of methane emissions is equivalent to removals. He asked how the methane released from permafrost, which is much more difficult to contain, would impact global temperature. Allen responded that while reductions in short-lived pollutants have equivalent impact on global temperature as active removal of cumulative climate pollutants, whether they are regarded as equivalent is another matter, because it would depend on the measure of equivalence. However, he was only talking about anthropogenic emissions of methane from identifiable practices such as farming, and not natural releases of methane from permafrost. The methane release from permafrost that might be triggered by global warming is extremely serious and is a cause for concern, he concluded.

NEXUS BETWEEN NEGOTIATIONS AND ACTION

This session, facilitated by Shakya, started with a presentation by Tomasz Chruszczow, Ministry of Environment, Poland.

Chruszczow highlighted a number of global problems: growing population, hunger, energy access for almost a billion, access of resources to develop, education, biodiversity loss, deficit of arable land, limited space for cities, and employment. He noted that these problems are no longer only local, and represent a global crisis, and one which is no longer only humanitarian. While these are very well described in many report, and rich literature on the science of these problems exist, he asked if equally rich literature exists on solutions to these problems.

In the climate context, Chruszczow noted that Article 4.1 of the Paris Agreement calls for climate neutrality to be achieved globally, balancing greenhouse gas (GHG) emissions and removals of atmospheric CO_2 by sinks such as forests and soil. The Agreement's goals related to global average temperature, adaptation, and means of implementation must be translated into necessary actions and pathways, which countries include in their NDCs. Sectors of the economy (such as energy, industry, transport, agri-food, forestry etc.), as well as financial institutions, cities, regions, non-government organisations, UN agencies, and other intergovernmental organisations have to act jointly to speed up the process, as the globally calculated mitigation result of the NDCs so far is not sufficient. Every country must produce low GHG emissions development strategy (Article 4.19 of the Paris Agreement), and take into account the impacts of the measures they plan to implement.

In achieving this transition, Chruszczow said key considerations must include the impacts of these actions and responses on: equitable access to sustainable development and eradication of poverty; safeguarding food security and ending hunger, and the particular vulnerabilities of food production systems; and the impacts on the workforce and the creation of decent work and quality jobs in accordance with nationally defined development priorities. The transition itself could have consequences, such that countries, regions, and communities are affected not only by climate change, but also by the impacts of the measures taken in response to climate change.

Chruszczow then listed key areas for climate change action: land-use; oceans and coastal zones; water; transport; industry; energy; human settlements; resilience and climate risk; and other crosscutting issues such as communication, finance, and the implementation of Sustainable Development Goals (SDGs). He highlighted that non-Party stakeholders, particularly members of the Marrakech Partnership, represent every area of climate action and the ability to act globally. They offer: willingness to act and to cooperate; expertise of individuals and organisations; financial support and advice on how to make projects bankable; a multi-task network active in many geographically diverse regions and places; and a readiness to support negotiators, including in the Katowice Committee of Experts on the Impacts of the Implementation of Response Measures.

Describing options to achieve a circular economy, Chruszczow listed fiscal instruments, adaptation, innovation, e-mobility, nature-based solutions, and renewable energy. He noted that 23% of global emissions come from agriculture, forestry, and other land-use (AFOLU) sectors. Reducing these emissions will need stopping deforestation, afforestation efforts, reforestation of mangroves, and an energy transition. Global climate neutrality is only possible if soils and forests serve as net sinks, for which cooperation is needed between all actors. Article 6 of the Paris Agreement make this cooperation possible, he said.

Chruszczow noted that despite its negative impacts, climate action is the best tool to drive industrial change and innovation; adaptation and risk management; societal change (such as lifestyles, consumer choices etc.);

job creation; adaptation and resilience to climate impacts for cities, infrastructure; and the enhanced capacity of ecosystems to absorb carbon. He emphasised climate action as the key solution to these problems.

Describing climate action as the transition, he listed the following priority areas:

- Transforming global development patterns, to achieve climate neutrality by the second half of this century.
- Reductions of CO_2 emissions through investments and technology, counterweighted by the capacity of biosystems (such as forests and soil) to capture and store atmospheric carbon.
- Just and inclusive access to development, as unbalanced development and limited access to water, food, energy, and decent jobs could lead to international conflicts or wars. The transition must therefore be sustainable, offering equal opportunities to develop all homelands using endogenous resources and traditional knowledge, respect for sovereignty, and being mindful of existing resource limitations.
- The balance between human, environmental, and economic dimensions of development must be restored and maintained.

Discussing the role of the international climate negotiations in providing solutions, Chruszczow emphasised multilateral actions, rather than unilateral measures; adaptation as the foundation for development efforts; capacity building to empower people, change behaviour, and use existing resources and technologies; job creation; and healthier ecosystems. Noting the role of Article 6 of the Paris Agreement in international cooperation, he said lack of progress on this element could threaten the ambition of NDCs. He also highlighted means of implementation as a key area of international cooperation, saying lack of progress in this area could result in lack of trust.

In conclusion, Chruszczow said without international cooperation, the engagement of all actors, and all the elements of the Paris Agreement, climate action will not be robust enough to deliver results. He encouraged the implementation of solutions, even if they are not perfect, for learning by piloting action, rather than spending more time on negotiating. We need solutions more than perfect solutions, he said.

In the discussion that followed, a developed country participant said the response to climate change is moving from negotiations to implementation, and the institutional architecture will now have to be responsive to this new role.

A developing country participant agreed that the future should be less talk and more action, with inspiration from the Montreal Protocol, on learning through implementation. He said the preceding Fellowship included an interesting discussion on common timeframes, an area where agreement is pending but very important. He said the "5+5" cycle, with the second five-year NDC indicative, seems to be a reasonable way ahead, striking a delicate balance between the long- and medium-term, while allowing countries to take into account the fast pace of technological development. He said agreement on this issue in 2019 will enable Parties to the Paris Agreement to match their implementation periods. He also agreed that agreement on Article 6 is crucial to engage entrepreneurship and the creativity of the private sector.

Another developing country participant highlighted the importance of cooperation through financial support, and expressed concern that only select elements of the Paris Agreement were being highlighted in statements and declarations, while ignoring the delicate balance that was achieved during the negotiations, and the UNFCCC principles. On the Marrakech Partnership, he asked how many of its 20,000 initiatives are being tracked to ensure implementation, and what will be reported through the UNFCCC.

A participant highlighted initiatives in Bangladesh and among least developed countries (LDCs) for action on the ground to move from theory to practice, including Bangladesh's 100-year Delta Plan and the LDC Consortium of Universities on Climate Change.

Another developing country participant said while a solution on Article 6 is necessary, Article 9 (on finance) is being overlooked, and action on the ground cannot be discussed without discussing the slow momentum in making resources available. He said "scope, scale, and speed" on climate finance has not yet been achieved, and this issue should be a high priority for the 25th Conference of Parties to the UNFCCC (COP25) later this year.

Another developing country participant highlighted lack of progress on technology, saying the LDCs have all carried out Technology Needs Assessments, but the next steps for making these technologies available and upscaled have not yet taken place. She also listed finance as a key barrier, saying that for instance, the funds available from the Global Environment Facility (GEF) will only allow her country to implement AFOLU activities in on or two of the 24 districts in her country. Excluding neighbouring districts presents challenges in implementation, she said, by creating pressures on the forest resources that are not covered by the same protection. While AFOLU presents opportunities for both adaptation and mitigation if sustainably managed, she said the majority of those engaged in the AFOLU sector in her country are illiterate women, and their needs should be better understood, for more effective action in this important sector which is producing a high proportion of emissions.

A developing country participant observed that in the negotiations, decisions are made in response to mandates which also have to be negotiated, making the whole sequence too slow to react to the emergency at hand. Querying whether the COP provides the spaces to incentivise action, he said the answer is partially no, because it has been engaged in the negotiation of rules as a first priority. This has now almost been completed, and the focus should now shift to incentivise climate action. The mandate for this already exists: the Convention clearly states that the COP *shall* promote and facilitate the exchange of information on measures to protect climate change and its effects.

A developed country participant said the international negotiations in future will focus on the nexus between negotiations and action, and on oversight and review. Negotiators will have to consider how to use the existing systems, tools, bodies, and institutions to deliver these new functions. He highlighted the role of the Nairobi Work Programme in sharing experiences and good practice.

A developed country participant said the key purpose of negotiations is to drive action, and so describing a "nexus" between the negotiations and action is slightly odd. While negotiations will continue, they will be in a different mode – it will be good if they could include more experience sharing, though sometimes the negotiations are not the best setting for that purpose. While some streams like the discussions are starting to share experience, they have to renegotiate their mandate soon after they begin. She said the UN Secretary-General's Climate Action Summit in New York could present an opportunity for initiatives on the ground, though there is some concern that some countries may not sign up to initiatives because they worry that they will be held to account. This suggests a lack of confidence in ourselves and in processes, she concluded.

Müller called for "geo-engineering of consumer aspirations", through policies and incentives that influence consumer behaviour. He described India's Ujjala programme, under which the government bulk-purchased 700 million LED bulbs, to make them more affordable for the poor. This was followed by an advertising campaign that sold the bulbs as items for an aspirational lifestyle, rather than as more energy efficient. He said social influencers can play a role in making sustainability "cool" and described an initiative by Oxford Climate Policy to gather other case studies where this has happened.

A developing country participant noted the lack of interaction between the search for nature-based solutions under the climate negotiations, with the efforts to preserve biodiversity under the Convention on Biological Diversity. She called for more horizontal linkages. Presenting an example where vertical interactions play a key role, she said while local governments in her country may not be familiar with climate science, they are now very well aware of the national goal for emissions to peak in 2030. They also have local air pollution as a "hook" to develop local climate-related policies and action. This is necessary to make action locally relevant and a priority, sure noted.

A developed country participant drew a parallel between a hospital emergency room and the priorities for climate action, asking if the UNFCCC is successful in identifying the priority cases like a good doctor or nurse, or has become distracted and over-stretched. He said while it is good to have platforms and initiatives to promote action, there is almost an over abundance of them, and they all need to be managed. He also noted that while social influencers can play a key role in the choices made by the young, most social influencers sell unsustainable lifestyles instead.

A developing country participant highlighted the frustration of many LDC governments, who have plans in place but rely on international finance for implementation.

In conclusion, Chruszczow called for solutions rather than a "language of crisis" which can be paralysing. He said decisions made at COP25 should keep in mind the consequences, and that mistakes can be reviewed and fixed. If we fail to take decisions, he said, we fail to give people confidence, and non-action is equally damaging.

GENDER AND CLIMATE CHANGE

This session started with a presentation by Stella Gama, Director of Forestry, Malawi, and ecbi Gender Advisor. It was facilitated by Anju Sharma, Oxford Climate Policy.

Gama described the Women Delegates Fund managed by the Women's Environment and Development Organization (WEDO), which funds the participation of women negotiators in the UNFCCC negotiations, as a way to ensure better gender balance.

Describing the Lima Work Programme on Gender adopted at COP20 she said it focused on how to promote gender balance in the UNFCCC process through women's empowerment and gender responsive policies. At COP22, a decision was taken to extend the Lima Work Programme for an additional three years, to be reviewed at COP25 in 2019. The mandate for the work programme included a request for Parties to nominate national gender and climate change focal points, report on gender mandates from constituted bodies (such as the Adaptation Fund and Technology Mechanism), and develop possible elements of a gender action plan.

At COP23, Parties adopted a two-year gender action plan, with activities across five action areas, set to be reviewed at COP25 alongside the Lima Work Programme. Gama noted broad support for continuing the work at COP24 in 2018, saying a workshop has since been held in Bonn, in July 2019, during the 50th meeting of the Subsidiary Body for Implementation (SBI). In the workshop, Parties and organisations shared lessons and experiences while implementing the gender action plan. An informal note was issued by the co-facilitators, considering proposed elements for the next gender action plan. Parties and organisations were also requested to make submissions on the gender action plan as well as the Lima Work Programme to review the progress and make proposals for improvements. Gama hoped that progress will be made at the pre-COP in Costa Rica, and at COP25.

Gama presented the following list for background reading:

- Decision 21/CP.22: Gender and Climate Change
- Decision 3/CP.23: Establishment of a gender action plan
- Synthesis Report (June 2019): Differentiated impacts of climate change on women and men; the integration of gender considerations in climate policies, plans and actions; and progress in enhancing gender balance in national climate delegations
- Draft Report of the Gender Workshop held in June 2019
- Gender Composition Report (2018): Annual report by the secretariat to assist Parties in tracking their progress towards meeting the goal of gender balance in advancing gender-sensitive climate policy.
- Technical Paper (April 2018): Entry points for integrating gender considerations into UNFCCC workstreams

Listing some areas of progress, Gama said the work programme and the action plan have been instrumental in advancing gender equality and women empowerment. Some progress has been made towards gender balance in the UNFCCC, though it fluctuates – for example, more women are attending the Subsidiary Body (SB) meetings (44%), than the COPs (33%). There is a positive shift with more women expressing interest in leadership positions, co-facilitating agenda items in the SBs, and leading groups like the LDC Group. The Subsidiary Body for Scientific and Technological Advice (SBSTA) has over 50% women, and two women and one man as chairs. There is also a positive shift in the level of action, attention, and support for the work on gender and climate change, for instance through gender responsive National Adaptation Plans (NAPs), NDCs, and TNAs. The Climate Technology Centre and Network (CTCN) has issued guidelines on how gender should be integrated into work of technology.

The Lima Work Programme and the gender action plan have been platforms to channel information, Gama noted, with a lot of knowledge-sharing amongst stakeholders and the Parties. There is progress, with constituted bodies committing to integrate and implement gender mandates set for them, sharing information, and enhancing capacity and coherence in their reporting, including in their annual reports.

However, Gama said there are other areas where progress is needed, for instance at the national and grassroots levels. In particular, she listed the following:

- The need for clear targets and indicators to evaluate progress and take stock of implementation, and an annual progress indicator report by the Secretariat that reviews actions and initiatives to advance all gender mandates under the Convention and provides an analysis of any gaps. For instance, she said, the 2018 Gender Composition report highlighted that women as heads of delegations decreased from 32% at COP22 to 24% at COP23. Parties could set a progressive target, that women's participation in delegations, and as heads of delegations, has to improve by 3-5% yearly over three years, including participation rates across regional groups, as heads of delegations, and in UNFCCC bodies. Parties could also develop plans, policies, or strategies for national delegations and regional groups on enhancing gender balance.
- More focused capacity building, including on: collecting gender disaggregated data; conducting gender analyses; implementing gender budgeting; information sharing among National Gender and Climate Change Focal Points (NGCCFPs), particularly on their role; and capacity building, knowledge sharing, and communication to enhance gender responsive climate finance and technology transfer and development.

Among other ideas for progress in future, Gama listed:

- The period of the next work programme and gender action plan, and whether it should be long-term or

even permanent;
- Building skills and capacities of female delegates and encouraging active participation in leadership positions;
- Issuing a supplementary guidance note on integrating gender in NDCs;
- A technical guide on implementing gender mandates based on the Katowice implementation guidelines;
- Gender balance quotas on national delegations, boards and/or bodies;
- Gender balance requirements for UNFCCC travel support to LDCs;
- Institutionalised/ required training on gender and climate change for Chairs and members of Boards and Bodies as well as NGCCFPs;
- Training of trainers on gender and climate change;
- Establishing collaborative partnerships amongst stakeholders; and
- Issuing a call for a report on gender, land and land use, food security and climate change by the IPCC.

Gama finally listed the following questions for consideration during the discussion:

- Additional areas for the next work programme and action plan.
- Has your country engaged in any capacity building activities over the two-year period of the gender action plan that enhanced skills to implement gender analysis?
- Has your country taken any steps to translate activities under the gender action plan at the national level?
- Has your country seen any substantial progress in gender balance on your national delegation and inclusion of gender analysis in country planning as a result of the gender action plan?
- Are there specific targets, indicators or benchmarks that your country would find helpful to be included in the gender action plan?
- What specific capacity needs/gaps exist for your country to effectively implement gender analysis/ gender-responsive implementation of climate policies at national level?

In the discussion that followed, Sharma said that during a meeting earlier in the year in Oxford, organised by ecbi and WEDO, there was a discussion on what kind of permanent arrangements would be ideal under the UNFCCC to follow up on gender issues. There were conflicting views on whether a separate body should be set up, or whether gender needs to be integrated into each element and body of the UNFCCC. There was also a discussion on how to expand work to the national and grassroots levels, and how to clarify the role of the NGCCFPs – whether it relates only to engagement with the global process, or also gender integration at the national level.

A participant said his organisation has been working with the Paris Committee on Capacity Building (PCCB)on how the Committee can promote the role of capacity building on gender, for women as well as for men. He said a five-day capacity building hub will be run by the PCCB at COP25, with the first day, designated as "capacity building day", focusing on the role of universities and think tanks with gender as a crosscutting topic.

A participant asked if issues related to lesbian, gay, bisexual, and transgender (LGBT) communities were also addressed under the UNFCCC. Gama said they were not yet being addressed.

A developing country participant said a number of things were planned on gender at the pre-COP, including a workshop on the next gender action plan, and a high-level discussion. She said her own country's submission on gender includes many of the elements mentioned by Gama, including the consideration of science in the activities that are going to be part of the of the gender action plan, and the request for the IPCC to issue a report on gender and climate change. She agreed that two years is insufficient and unrealistic for the next gender action plan, and her delegation has asked for it to be a five-year plan, with a review in three years.

A developed country participant highlighted the role of transparency through better data management, and of integrating gender policies into domestic implementation. She agreed that the role of the NGCCFPs needs to be clarified, saying in her country, the focal point is an interlocutor in the negotiations and the domestic agenda, translating the discussions at the global level to a context that domestic actors can understand. Describing the EU submission on gender, she said she was not convinced that a separate IPCC report is needed – rather all IPCC reports should include gender considerations. She reported that her country will use its national side event at COP25 to address gender issues in climate change and biodiversity.

A developing country participant said the COP25 President is strongly engaged on this topic, and she has declared gender is a crosscutting issue for all climate action.

Another developing country participant reported on his efforts to address gender in the discussions under Article 6, beyond ensuring gender balance on the board of the Article 6.4 mechanism. He said proposals to add gender considerations into the national market offset mechanism in his country did not go well, but two of the suggestions made there could be considered by other countries. It was proposed that:

- the oversight body for the national offset mechanism should consider the human rights and gender impacts of the mechanism and issue an annual report; and
- data collection should be initiated on how gender concerns are being addressed under the mechanism.

A developed country participant said the NGCCFP in her country is working on the international negotiations, because gender issues are dealt with by a different ministry at the domestic level. She said the role of the NGCCFPs should not only be to focus on the gender action plan and the UNFCCC, but also the national level, bringing back lessons learned from implementation. She agreed that gender should be mainstreamed in all the IPCC's reports. While progress has been made, she said, we should not be blinded by the few women chairs, because progress in other areas is lagging behind.

A developed country participant said gender is a crosscutting issue for all sectors in her country, but there has not been a focus specifically on gender and climate issues. However, a strategy is being considered to implement the Paris Agreement nationally, with a focus on gender. This could be a focus area for all countries, with specific capacity building on this issue.

A developed country participant highlighted procedural problems with ensuring gender balance in the bodies of the UNFCCC, saying women are not always put forward by delegations even when a specific request is made. He also noted that the vast majority of NGCCFPs are women, and many Parties have not yet appointed a NGCCFP.

A developed country participant asked whether the increase in the number of women leading delegation is by design, through polices and capacity building efforts, or chance. She said in her national delegation, the problem is reversed, with more women than men, but this was not planned. Gama said the national delegations often reflect the situation at the national level, depending on who holds the post of minister or secretary. This could be the result of affirmative action, or of chance. She said capacity building has played a role, as has inspiration from seeing other women take on leading positions. She also highlighted the potential role of the mentorship programme initiated by ecbi and WEDO, in inspiring young women delegates. Finally, she said, financing is often an issue for women – not all of them are find support to participate in the negotiations, and focal points do not always prioritise the participation of women when selecting national delegations.

A developing country participant asked for further clarification on what it means to integrate gender into national policies. She noted that a lot of public comments on the NAP that her country is currently preparing

say it is not gender responsive. Gama responded that data should be used to understand the differentiated roles and impacts on men and women, of climate change and of policies, in every sector.

Another developing country participant asked if there are many UN bodies working on gender mainstreaming, and whether the work on gender and climate change can build on these other processes. She noted that the UN Secretary-General has indicated that he wants 50/50 gender equality within the UN, and a similar quota should be considered for UNFCCC bodies.

A developed country participant said despite national policies and emphasis on gender, his country has a long way to go, particularly on how gender, as a crosscutting issue, can connect with more specific climate policies and their differentiated impacts.

A developed country participant cautioned against asking the IPCC for a report specifically on gender, saying it already has a busy schedule, and gender has been included in all its reports. If it is felt that gender has not been adequately covered in these reports, governments can ask for more when they go through the review process of the IPCC's sixth assessment report.

A participant said even if more information is requested on gender, sufficient research is not available to provide the information. She called for more investment in research on the differentiated impacts of climate, and the role that women and other excluded groups have, as solution-holders in the response on climate.

A developed country participant responded that a research dialogue takes place every year under SBSTA in June, and Parties could ask for consideration of gender within the research undertaking. The SBSTA chair could then set up a dialogue with gender as one of its themes.

A developed country participant said the NGCCFPs should be engaged at the domestic level, ensuring integration in NAPs and long-term strategies. She supported consideration by the UNFCCC constituted bodies of how they have included gender issues as part of their work. She highlighted the importance of data in measuring impact.

A developing country participant supported the inclusion of gender issues in updated NDCs, and capacity building on gender.

A developed country participant highlighted challenges in integrating gender issues in some sectors, such as the energy sector. He described an initiative called "Powerful Women" in his country, to increase the representation of women in middle management and executive boards in the energy sector. He noted observations by the International Finance Corporation's Banking on Women Programme, which found that women are statistically better customers, and more likely to pay back their loans on schedule. – he said this makes local banks more willing to lend to women, because it is good business. He sought more emphasis on gender integration as making economic and business sense.

FUNDING LOSS AND DAMAGE BEYOND INSURANCE

This session, facilitated by Sharma, started with a presentation by Saleem ul Huq, Director, International Centre for Climate Change and Development.

Huq described his work with the LDCs, the Africa Group of Negotiators, the Alliance of Small Island States (AOSIS), and the Independent Association of Latin America and the Caribbean (AILAC) on loss and damage due to climate change. He said progress had been made at COP19, in Warsaw, Poland, where the Warsaw International Mechanism on Loss and Damage (WIM) was established. The WIM Executive Committee then had a two-year work plan that was followed by a five-year rolling work plan, which will be reviewed at COP25.

The WIM Executive Committee has been commissioned a number of pieces of work, particularly on financing loss and damage, but the negotiations are stuck on insurance as the solution, he said. Other areas where the WIM has made progress includes the work of the task force on forced displacement due to climate change – its report was very well received in Katowice. He also described a WIM work programme on the nature and approaches to loss and damage, which looks at both fast onset events like hurricanes and floods and slow onset events like sea level rise, identifying the most vulnerable parts and communities in the world.

However, Huq said, this progress is being overtaken by events. Climate change is already resulting in severe negative impacts, and attribution to human-induced climate change is now becoming much more self-evident. For instance, Hurricane Dorian has, just in the last few days, devastated the Bahamas and thousands of people are still missing, while the death toll is rising. The Hurricane was a Category 5 that stayed in the Bahamas for five days, whereas "normal" hurricanes in the Caribbean and the Atlantic move on quickly. There is very strong evidence that this unusual behaviour is related to the elevation of surface temperature by roughly 2°C above normal.

Even if the Hurricane itself cannot be attributed to climate change, Huq said, its higher intensity can now be fairly reasonably attributed to the elevated temperatures due to human-induced GHG emissions. While countries are adapted to normal hurricanes at some level, they are not adapted to the higher intensity, which causes considerably more loss and damage. So, loss and damage due to climate change is happening, and it has to be addressed. Although the Bahamas has a regional insurance scheme, it is unlikely to pay for the scale of damage that Dorian has caused. For the people of the Bahamas, Huq said, it is a real climate emergency.

Huq proposed two ways in which finance for loss and damage can be generated: an international air passenger adaptation levy (IAPAL), which has already been proposed by LDCs several years ago, though in the context of adaptation; and creating a task force on financing for loss and damage.

On IAPAL, he said a levy of US $10 on an international economy class ticket and US $50 on a business class ticket could raise US$ 5-10 billion annually. This could be collected in a new loss and damage fund. On the task force, he said if this is created at COP25, by COP26 we would have a better idea of how to deal with the finance issue.

Sharma said while several very good proposals had been put forward on innovative financing mechanisms such as IAPAL, they do not progress in the negotiations. She invited the participants to shed light on why this may be so.

Rob Moore, from the UK Department for Business, Energy and Industrial Strategy, provided a response to Huq's presentation. He said loss and damage is a difficult topic in the negotiations for a wide variety of

reasons. The is little common ground, but everyone agrees that the threats posed by loss and damage are very real. In addition to events such as Hurricane Dorian, the Global Commission on Adaptations and the IPCC assessments have predicted losses, with the latter predicting financial losses of US $69 trillion by 2100. It is also agreed that the impact will be greatest in the world's most vulnerable countries, the LDCs and small island developing States (SIDS) in particular.

While insurance is an important aspect of the response to loss and damage, Moore agreed on the need to go beyond it. He said responses could include social protection schemes, risk transfer and contingency funds (which some could classify as insurance), knowledge building, and grant-based support. Moore also highlighted resilience-building and early warning systems. He said a prerequisite of effective action is integration, international ownership, and local ownership, and described a productive safety net programme in Ethiopia, which combines micro-insurance with credit access and social protection.

Moore emphasised that every activity must include a very close understanding of the local context, and involve a wide range of sectors and institutions. He said there is quite a wide range of literature, including from the Standing Committee on Finance, that will show that there is action and support underway in a wide range of these areas, but there is clearly more to do.

He continued that it is worth reflecting on the discussions at COP24 that were not specifically on finance. Parties can now report on climate impacts, activities undertaken to avert, minimise, and address loss and damage, and to set out institutional arrangements to facilitate implementation of these activities in their Biennial Transparency Reports (BTRs).

Moore concluded by reflecting on three issues. First, he said, a step change is needed in how we approach resilience and disaster preparedness, and address impacts of climate change through targeted interventions and systemic shifts in society. The UK is working on a call to action on adaptation and resilience, which will be set out at the UN Climate Action Summit, along with a range of initiatives, including collaboration with investors, who will be looking at how a greater proportion of investments can be made resilient, and how to enhance physical climate risk disclosure. As part of that, the UK will also be looking into how capital flight can be avoided.

Secondly, he said, such crises are really complex and have multiple causes. While attribution approaches are improving, the development community, including international financial institutions such as the World Bank, should be responsive to shifting needs. The UK Department for International Development has more than doubled humanitarian assistance funding in the last few years, he said, and is also setting out a new approach to humanitarian response. He highlighted "Paris alignment" in planning, and in responding to impacts.

Finally, he called for reflection on how the actions of the WIM can best contribute to enhanced action and support, looking, in particular, at the other key elements of the WIM's mandate, which is acting with organisations outside the Convention, to raise awareness of climate impacts and further harness integrated risk management responses.

A developing country participant called for tools and methodologies, and capacity building for communities, to address loss and damage. He said current comprehensive risk management tools do not address residual risk. He said insurance mechanisms do not work for poor farmers, who cannot afford premiums; and said while innovative funding mechanisms are being explored, the existing financial entities of the UNFCCC should make finance for loss and damage accessible.

Another developing country participant said although Caribbean countries have very good early warning system and forecast systems, and knew that Hurricane Dorian would sit over northern Bahamas for several days as Hurricane Harvey had done over Texas three years ago, there is very little they could do to avoid damage. The Caribbean Catastrophic Risk Insurance Facility (CRIF) provided US $2 million after the hurricane to allow the government to continue to function, as after a hurricane hits, airports and ports are closed, and no customs revenues are collected, so the government cannot even pay public officers to continue working. Besides, the participant noted, there is no risk facility to cover slow onset events, such as the intense drought that has hit Central America, and the erosion and saltwater intrusion affecting communities in Belize. He called for thinking out of the box, saying the WIM has done a good job gathering information, but now, how to act on the information is the next challenge

Müller recalled that a paper he wrote on the "twin taboos" of climate change: developing country commitments and liability for climate impacts. While the former taboo has been overcome, he noted that it is still taboo to talk about liability in the context of impacts. One way to overcome this second taboo, he said, could be to have a statute of limitation for liability. Unlimited liability is unlikely to be accepted by anyone, he said, but at the same time, the issue of reparations for climate change impacts are becoming more and more important.

Responding to Moore's comments, a developing country participant said the term "realignment" in the financial context usually implies realignment of money that's already in the system, rather than increasing the quantum of finance. He asked if loss and damage finance is simply a question of realignment; and also whether the reference to the WIM includes its work under both, the COP and the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement (CMA).

Moore said alignment to the Paris Agreement implies taking into account foreseen climate impacts in development planning. On the governance of WIM, he said the Paris Agreement is unequivocal on the Mechanism as an enhanced and strengthened body serving the Paris agreement, which means it must come under the authority of the CMA.

A developed country participant said insurance premiums may not be affordable for individuals, particularly as their costs rise due to climate change. In addition, borrowing money may also become more expensive because the countries are considered economically and institutionally weak, in addition to being particularly vulnerable. Among solutions, he listed targeted support from developed country Parties and philanthropists to bring down the costs of insurance premiums. The support will have to be targeted, he emphasised – for instance, resorts that can afford it should not only cover their own risks, but they should also pay a premium to help local communities.

Müller said alternative mechanisms will be needed when losses become uninsurable.

A developed country participant agreed that the issue of loss and damage is becoming more important with every hurricane season but noted divergence on the solutions. While existing solutions are not keeping pace with the problem, he said there is room for improvement, for instance of insurance solutions. To deal with those communities for whom insurance is not enough, he said better methodologies and tools are needed to understand and assess loss and damage at the country and community level. On financial mechanisms, he said Parties have proposed that the WIM itself become kind of financial mechanism or have a financial arm. However, adding yet another financial mechanism to an already complex landscape is not the right way to go, particularly if existing mechanisms such as the Green Climate Fund (GCF) are taking up a role in providing loss and damage finance. On innovative sources of finance, he noted the efforts made by the EU to shift more climate finance into adaptation, in response to the requests from development partners.

Responding to Sharma's question, he said the reason why innovative sources of finance have not gone far is once a source has been identified, there is more than one claim it. Taxing airlines or carbon markets are ways of generating new revenue streams, but many constituencies want access to those resources, and sometimes the strongest demand is from within a country or political economy. For instance, while there are proposals at the moment within the EU to tax airlines, one of the proposals that has been most developed is that those revenues should go to just transition funds within the EU, to help EU communities that are struggling with either the impacts of climate change, or the transition to low carbon.

Responding to the comment on addressing slow onset impacts, he agreed that while designing solutions and financial mechanisms, these impacts will have to be dealt with as distinct problems. The WIM could continue to deepen understanding of the challenge of loss and damage and help to turn that understanding into more actionable policy responses. In the next stage of WIM, he proposed, the Mechanism could continue to unpack loss and damage.

Sharma agreed that while there are many national claimants to innovative sources of finance, some could justifiable be designed as "international sources" that do not enter national financial resource streams; and that a stronger case has to be made nationally for the need for global solidarity on loss and damage.

Müller gave the example of the airline levy for HIV/AIDS, saying there is no connection to between flying and HIV/AIDS. The connection is stronger in the case of climate change, he said – people are causing harm by flying, and it should be easier to explain to them why they should contribute for adaptation or loss and damage. While every region or country will try to do something at home first, he said we have to make sure that the international component is not lost in translation.

Huq described a climate trust fund in Bangladesh, into which US$ 100 million is added annually from the national budget. Each year, he said, only two-thirds of the money is allocated to projects and activities. One-third is saved for use during an emergency. Over the last 10 years, well over US$ 300 million has been accumulated, and the government of Bangladesh, along with other stakeholders, is now developing a two-year pilot project to use those resources for a national mechanism on loss and damage to provide compensation to the victims of the impacts of climate change. This is not money for adaptation anymore, he highlighted, but for loss and damage caused by climate change.

A developing country participant said both Article 11 of the UNFCCC and Article 9.13 of the Paris Agreement emphasise concessional finance and public funds for the financial mechanism. He said the multilateral climate change funds have received just US$ 30 billion in pledges and approved US$ 19 billion – these numbers are very meagre. The SCF Biennial Report for 2018 notes that adaptation received only 29% (in 2015) and 21% (in 2016) of the financial flows. He said the scope, scale, and speed of finance is lacking.

A participant asked whether the Task Force for Climate-related Financial Disclosures could be leveraged more into these debates, to explore how they can support the discussion. On sources, she asked if debt swaps were a possible option. Finally, she asked if the WIM could review action over short-term and longer-term plans of five to ten years, and how these can be linked to the cycles of the global stocktake and the BTRs.

A developed country participant said setting up a new fund in the existing complex landscape will not mean that there is going to be more money for loss and damage. On innovative sources of finance, she said the narrative will be important, as national budgets are under the authority of Parliaments, and earmarking is generally frowned upon. She also cautioned against overburdening the SCF with additional requests.

Müller said the funds do not go to national treasuries in the IAPAL proposal, so there is no earmarking of national funds involved.

A developed country participant said the role of the WIM in support for action is clearly going to be a central part of the discussion under the WIM's review which he hoped will be concluded at COP25. He also noted differences between Parties on the governance arrangements for the WIM, and whether it is under the authority of both the COP and CMA, which will have to be addressed.

A developing country participant said the review of the WIM was requested by the COP, and so the review should go back to the COP. On the issue of the EU using an airline levy to address just transition issues, he asked if a separation could be made between domestic flights and international travel, with the latter going towards an international response to loss and damage. In addition, a small part of the funds raised by the forthcoming Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) could also be directed to address climate-related loss and damage.

Müller noted that CORSIA will only stabilise emissions at 2020 levels, not reduce them.

In his closing remarks, Moore said hypothecation is very difficult as finance ministries will not relinquish authority over revenues. He said the International Monetary Fund is strengthening its focus on climate, and the question is whether new vehicles, new funds, or new instruments should be created, or whether climate should be properly integrated into the ones that exist. He noted that actual concessional funding is quite a bit higher than grant-based funding, and the proportion of finance for adaptation is rising.

Sharma mentioned a paper by ecbi, describing examples of hypothecation in the UK.

In his concluding remarks, Huq said initially, some of the LDCs who are dependent on international tourism felt that they might be adversely affected by IAPAL. So analyses was conducted to show that a US$ 10 levy on a US$ 1000 ticket will not discourage travel. Secondly, there was a rigorous debate on whether the levy should also apply on the LDCs. The conclusion was that someone who can pay for an international ticket is unlikely to be a vulnerable victim, and can afford to pay the extra US$ 10. Therefore, the LDC proposal for IAPAL was universal, but applied only to international flights.

He also pointed to the CDM levy for the Adaptation Fund as a prime example of an international levy that does not involve finance ministries, saying there are many ways to go around what one might think are insurmountable problems that ministries of finance or treasuries might put in our way. He concluded that people are suffering loss and damage from climate change, and it is up to us whether we want to take responsibility and help them or not.

FINANCIAL NEEDS ASSESSMENT

This session included presentations by Stefan Schwager, Federal Office of the Environment, Switzerland, and Marc Sadler, World Bank. It was facilitated by Müller.

Schwager presented on the finance needs assessment. He said there is a formal basis for needs assessment in UNFCCC COP mandates, particularly in:

- Decision 6/CP.23, paragraph 10, which calls on the secretariat in collaboration with the operating entity of the financial mechanism, UN agencies and bilateral, regional and other multilateral channels, to explore ways and means to assist developing country Parties in assessing their needs and priorities, in a country-driven manner, including technological and capacity-building needs, and in translating climate finance needs into action; and
- Decision 4/CP.24, paragraph 13, which calls on the SCF to prepare, every four years, a report on the determination of the needs of developing country Parties related to implementing the Convention and the Paris Agreement.

Noting that these decisions refer to all needs and not only financial needs, he said assessing needs and costing them is essential for prioritising action on the ground. He said while assessments have been carried out by multilateral development banks, international organisations, think tanks, academia, non-governmental organisations, and also by several countries, they differ on scope, methods, and level of effort. The scope is variously global, regional, national: some have looked at infrastructure in general while others focus on energy infrastructure; some focus on emissions reductions while others on climate resilience; some focus on climate only while others consider social and economic impacts; some consider overall needs while other consider only climate change induced needs; and while some focus only on costs, other look at both costs and benefits.

Schwager presented an assessment by the International Renewable Energy Agency (IRENA), on the investment needed to implement just the renewable energy components in NDCs, noting that the figures run to trillions in Asia and billions in other parts of the world. He also presented other assessments, including by:

- Bloomberg's New Energy Finance, which estimates that US$ 12.1 trillion will be needed to keep global temperature rise below 2°C.
- The World Economic Forum, showing US$ 23 trillion will be needed to implement the Paris Agreement.
- The International Energy Agency, which estimates that US$ 44 trillion will be needed for global energy supply, and US$ 23 billion for energy efficiency through 2014.
- The Asian Development Bank, which estimates that US$ 1.7 trillion will be needed annually for developing Asia until 2030, if the region is to maintain its growth momentum, eradicate poverty, and respond to climate change. The baseline estimate for climate mitigation and adaptation costs is about 12%, at US$ 200 billion.

The varying estimates make it difficult to assess where to begin with needs assessments, he said. In addition, many do not consider the benefits of action. The recent Global Commission on Adaptation (GCA) report notes that investing US$ 1.8 trillion over the next decade in measures to adapt to climate change could produce net benefits of more than US$ 7 trillion. There is a "triple dividend" in avoiding future losses, generating positive economic gains through innovation, and delivering social and environmental benefits. The GCA identifies five main areas for investments, said Schwager:

- Warning systems for vulnerable communities in particular.
- Infrastructure, including building better roads, buildings and bridges to suit the changing climate and retrofitting critical ones.

- Improving dryland agriculture, including by switching to more drought-resistant varieties of crop, smart irrigation, and smart reservoir management to improve availability of water. This intervention has a high potential for protecting livelihoods and preventing hunger.
- Restoring and protecting mangroves, which protect about 18 million people from coastal flooding, but are being lost to development. Restoration projects could protect vulnerable communities from storms and boost the productivity of fisheries.
- Protecting water supplies and preventing water wastage.

Describing the work done under the UNFCCC, he said it has focused on dedicated climate finance. The three SCF biennial assessments have focused on public finance and mobilised finance; adaptation and mitigation; and regional distribution, for instance. This has led to: more data with finer granularity; tracking of year- to-year developments; and better understanding. However, the SCF reports only measures finance flows, not necessarily impacts. On whether this has generated mutual trust, he said the first figures that came out were harshly criticised for the methodology, but this has subsided to some extent. To stay relevant, he said the process needs more focus on practical issues of implementation. While some elements can be simplified, other elements can be added.

He pointed to crucial choices that need to be made for the SCF work on needs assessment, including on: whether it should focus on climate-change related needs only or broader sustainable development needs; whether it should focus only on finance needs, or other needs as well; whether it should simply rely on existing reports or create its own process, building on existing assessments; and whether it should simply be an analytic report or also include recommendations.

In conclusion, Schwager said the efforts of the UNFCCC have been joined by others, with processes under the UN Secretary-General's Climate Action Summit, the Group of 7 (G7), International Monetary Fund and the World Bank, UN organisations, OECD, think tanks, academia, and non-government organisations increasingly working on climate, including at the policy level. While this is positive, it is potentially diminishing the role of the UNFCCC. To stay relevant, he said the UNFCCC climate finance process should focus more on practical issues of implementation, let others assume their climate-related responsibilities, enhance collaboration with others, modernise reporting, focus on the global stocktake from 2023 onwards, and place a greater emphasis on results.

In addition, the operating entities of the UNFCCC financial mechanism should: move beyond financing projects and programmes; take risks and foster innovation; retune readiness programmes; cooperate with partners but selectively, to avoid getting lost in countless new platforms, initiatives and dialogues; and play a central role in scaling up via policies, platforms and risk management. He concluded that the system needs both expansion and reform.

In the discussion that followed, Müller said the SCF has been asked to do a financial needs assessment, and he welcomed advice on how they should go about this. Schwager said they should be led by the question of what will be helpful and generic for all countries; and they should not only put a price on the costs of climate action, but also think of potential benefits.

A developing country participant said the NDCs can be a basis for the needs assessments of the developing countries, saying a preliminary costing of his country's NDC is around US$ 2.3 trillion. He noted the gap between needs and existing resources, saying the supply side needs to be ramped up.

Müller noted the need for the SCF to differentiate between the total need of countries to implement their NDC, and the amount that will be needed from the international community.

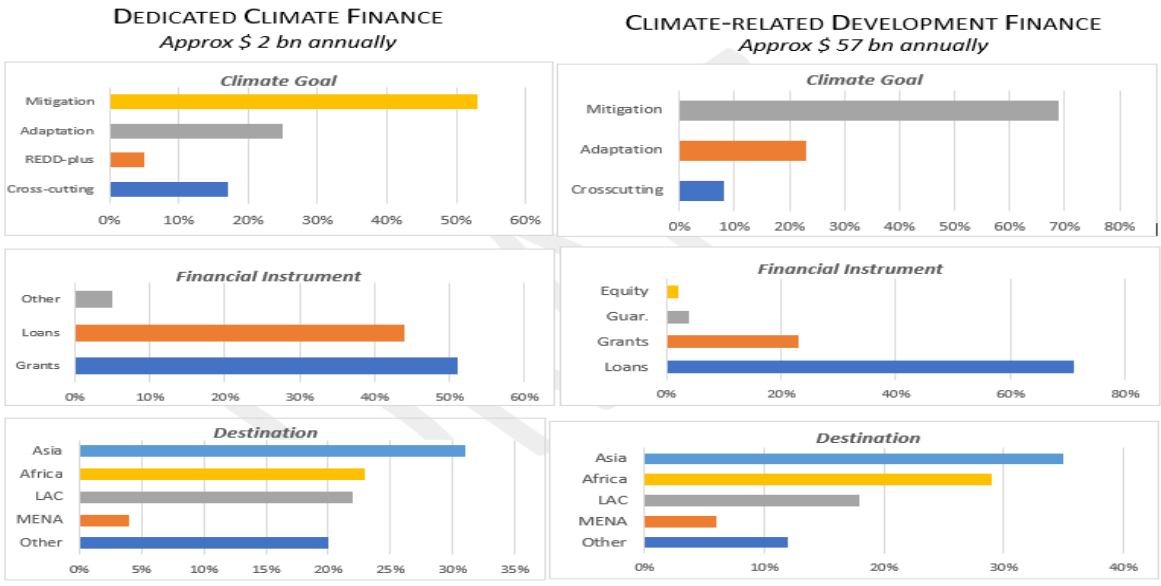
A developing country participant said the IPCC 1.5°C report is a "game changer", with its call to cut emissions by 50% over the next decade. He asked if climate finance estimates have to be revised in light of this finding.

Schwager agreed that the NDCs should be at least one of the main reference points for the needs assessment. However, only a fraction of the trillions needed for their implementation can come from international development finance, or dedicated climate finance, and so the question is how that fraction can be used for maximum effect. On whether the estimates have to be revised in light of the IPCC report, he said the estimates will have to be reviewed for their underlying assumptions.

The discussion then carried on in a smaller group, where Müller reminded participants to discuss possible advice and guidance for the SCF, in carrying out a needs assessment.

Sadler presented on the World Bank's work on needs assessments, from the quantitative and qualitative perspective. He noted that people are often talking about different things when they talk about climate finance. He presented figures from Climate Policy Initiative's (CPI) 2018 Global Climate Finance update, showing both public and private flows rising to US$ 520 billion in 2017. He said this includes four kinds of flows: dedicated climate finance; climate-related development finance; private capital; and domestic government spending. He presented UNFCCC and OECD data in figures, showing that dedicated climate finance flows approximate US$ 2 billion annually (see **Figure 1**). He noted that more money is flowing for adaptation from multilateral development banks, and they are committed to increase the flows to adaptation.

Figure 1: Flows of dedicated climate finance and climate-related development finance



Sadler then noted that funds flow through different pipelines, which interact in different ways. A key point, however, is that traditional dedicated climate finance flow towards projects. However, to leverage trillions of dollars, there are other levers in the economy that need to move, including policy-based levers. Consideration is now shifting to how dedicated climate finance can enable these other levers by, for instance, investing funds

in a capacity building programme for ministries of finance, to mainstream financing and to green the financial sector, instead of funding a solar plant for the same price. This could help leverage "brown" economic flows into "green" economic flows. Traditionally, dedicated climate finance has not been moving into those spaces, Sadler concluded, and efforts are underway to identify the biggest leverage to drive transformative climate action.

In the discussion, a participant said the recent Global Commission on Adaptation report shows different tracks for investment on adaptation, but fails to recognise capacity building efforts, where the return on investment could be in the trillions. He also noted that the GCF's recent independent evaluation is critical of the project-based approach, saying it lack an overall strategy.

Sadler then noted that funds flow through different pipelines, which interact in different ways. A key point, however, is that traditional dedicated climate finance flow towards projects. However, to leverage trillions of dollars, there are other levers in the economy that need to move, including policy-based levers. Consideration is now shifting to how dedicated climate finance can enable these other levers to move, by, for instance, investing funds in a capacity building programme for ministries of finance, to mainstream financing and to green the financial sector, instead of funding a solar plant for the same price. This could help leverage "brown" economic flows into "green" economic flows. Traditionally, dedicated climate finance has not been moving into those spaces, Sadler concluded, and efforts are underway to identify the biggest leverage to drive transformative climate action.

In the discussion, a participant said the recent Global Commission on Adaptation report shows different tracks for investment on adaptation, but fails to recognise capacity building efforts, where the return on investment could be in the trillions. He also noted that the GCF's recent independent evaluation is critical of the project-based approach, saying it lack an overall strategy.

A developed country participant said it would be useful for the SCF to take on board lessons from its Biennial Assessments process and be clear on the value addition expected from the work. She felt the most interesting parts of the Biennial Assessment reports were the annexes that summarised the methodological approaches used. She also said this should be a tool for the SCF to create ownership of this issue. The SCF will have to decide whether to have a narrow or broad focus (for instance, whether it should consider the Sustainable Development Goals and financing for development). Finally, she said the SCF should be clear on whether this is just an analytical report, or whether it will include recommendations for the COP.

Müller said the purpose of the report should be a key consideration for its design, including whether it is meant to inform domestic stakeholders or the international community. The question of how much finance should flow from North to South is another question. The SCF should choose a topic that is likely to be most useful, maybe even a slightly less controversial to start with.

A developed country participant said the needs assessment should consider the broader picture, not only finance, within and outside the UNFCCC.

A developing country participant pointed to the link between the Paris Agreement's Article 2.1(c) and the other finance elements, specifically the needs assessment, saying one would not have happened without the other. He said the starting point for the needs assessment is not the decisions of COP23 and 24 as presented by Schwager, but Article 11.3(d) of the UNFCCC. He felt the needs assessment work was being side-tracked into a procedural and methodological discussion. A move away from project-based approaches will only work if more funds are available, he said, otherwise there will be smaller and smaller budgets for projects. Likewise, converging UNFCCC work with all the other processes like the Sustainable Development Goals (SDGs) and

Financing for Development (FfD) will lose the unique characteristic of climate finance – everything will get blurred together in a giant greenwash, and no one will be able to see the wood for the trees.

Müller said as the assessment will be carried out by the SCF, which is a finance committee, it follows that what it will look at is financial needs.

A developed country participant said the process of conducting a needs assessment will be incredibly complicated. Existing studies that can feed into it will have different results, because of their different perspectives, and also because there are lots of questionable assumptions going into them. They will include elements beyond the Convention, because that is the real world in which things are implemented. For it to be a useful exercise, both bottom up and top down analysis will need to be included, and it will need to acknowledge a very broad sweep of work, whether it's sectoral or geographical or economy wide, that happens outside the Convention. It should approach the problem with the complexity that it deserves, and appreciating those linkages, because that is what will make it useful.

While he supported the inclusion of quantitative information in the assessment, he said the methodologies used should be made clear, along with assumptions. In terms of how the assessment can be useful, he said the methodologies used could inform individual reporting on support needs by Parties in their BTRs.

A developed country participant said an outline of the needs assessment has been prepared by the coordinators in the SCF, building on the Biennial Assessment work. While the outcome is not meant to be a methodological report, methodologies will be a key element. She highlighted the importance of getting people with the right capacity to work on the report.

A participant said the climate finance system is not working for LDCs, in terms of governance and of flows of finance. She said the focus should not only be on bankable projects, but also consider non-project finance, take into account principle of effective climate finance, consider meaningful transparency on the quantity and quality and finance flows, and define climate finance narrowly.

A developing country participant said moving away from project-based finance may work in the context of grants but not, for instance, in the case of the carbon market.

Sadler agreed that projects under the CDM, for instance, involve high transaction costs but are not always able to go to scale, efficiently and robustly. On programmatic crediting, he said the World Bank has a Standardised Crediting Framework, which can be used, for instance, for e-mobility for mass public transport, where reductions can be brought to individual units and then moved up to much greater scale. It is being used in Senegal for energy access, and for cook stoves in Rwanda. Policy credit is much more challenging, he said, though the World Bank has a project called the Transformative Carbon Asset Facility (TCAF), where the main challenge is around corresponding adjustments.

A developed country participant said while needs can be unlimited, the question is how countries can prioritise. While some reports commissioned in the climate negotiations do inform discussions, he felt there are many cases where reports are commissioned simply to have something to negotiate about, and that is not useful. He also felt that the reports end up focusing on challenges, rather than on opportunities. The Paris Agreement is a "new philosophy of action, cooperation, and of seeing climate in the context of sustainability", he said, and should therefore be linked to the SDG process. Investments in sustainable development, such as for public transport and water infrastructure, do contribute to climate change as well.

A developing country participant said the SCF could base the needs assessment on the work already done in countries. In her country, the decarbonisation and national development plan is integrated, and the question is whether their climate finance needs are only what is in the decarbonisation plan, or the many other things that are part of the national plan but will impact on climate action. She noted uncertainties related to international climate finance, including the time it takes to access funds from the GCF, and said countries could explore avenues like setting up national adaptation funds or working with the private sector. She felt that the SCF needs assessment should be based on in-country assessments, as countries know best what they need, instead of trying to come up with a huge number that is not based on country assessments.

Müller urged participants to address the purpose of the needs assessment report.

A developed country participant said the report should: be in a positive tone; admit that the needs are huge, and include not only financial needs; identify interventions that are likely to yield fast and transformative results at relatively modest cost; tackle policy changes needed at the national level; and address not only the operating entities of the financial mechanism, but the world at large. He felt a narrower and simpler definition of climate finance may be easier to start off with.

A developed country participant said the report was commissioned in a political space, and is likely to be delivered back into a political space. In the past, such assessment have been used to incentivise traditional donors to give more. Donors could use it to point out that the difference between what they can provide and what is needed is vast, and so other sources will also be needed. He felt it would be a missed opportunity to not consider in-country assessments like the one referred to by a previous speaker. Such case studies could help develop a set of methodologies for countries to understand the investments necessary to achieve particular outcomes. At least, he said, the conversation taking place after the report will be different from the conventional one that takes place about climate finance.

Müller said he also feared that if the assessment found that needs were in the trillions, the tendency might be to write off the importance of the UNFCCC financial mechanism. He felt the sort of needs assessment carried out by the GEF before a replenishment may be more useful.

A developing country participant said support and action are two sides of the same coin, and so it is important to have an idea of how much is needed. However, it is not the theoretical trillions, but tracking the actual concrete millions that can really make a difference – and this is even more important with big contributors stepping away. He agreed national governments have a role in creating enabling environments, but felt the international part to that conversation is always overlooked – there are things in the international system that also need to change to allow developing countries to fully participate.

Müller said clarity is needed on whether the needs assessment should only consider public sector North-South flows, or also other elements such as domestic needs and private sector finance. He felt the latter would diminish the usefulness of the report.

Sadler said there is currently an increasing demand for what is referred to as “carbon plus” or “stacked assets”. For instance, cook stoves have three main outcomes: mitigation, either related to reduced emissions or reduced deforestation; gender outcomes; and health outcomes. By pricing those individual outcomes, you end up with a stacked asset. He said demand from the private sector at the moment is very focused on where they can become more Paris-aligned and also how can they deliver on the SDGs. This gives countries a lot more leverage and potentially interesting sources of finance. He said a key purpose of the report could be to find the pathways of using the limited amount of finance that is there, to leverage the bigger numbers that are needed.

A developed country participant said this is the first time the SCF is going to do the report, and it is not going to be perfect. Transparency is a key purpose, and once the report is started, the providers of the underlying data will increase their transparency. Secondly, the SCF is going to have endless debates on the scope of the report, but she recommended using the "onion approach" that will allow both a narrow and broader focus.

A developed country participant said the UNFCCC secretariat presented a table at the first SCF meeting on the needs assessment, showing a variety of existing reports and a brief overview of the methodologies, which would be useful in itself to indicate the scale of the challenge. He noted Paris Agreement Article 2.1(c) on the alignment of finance with low GHG emissions and climate resistant development, and said the question is how to use the billions in conventional climate finance to get to the trillions needed to achieve this. While the report will need to be mindful of the wider SDG context, it will have to zero in on what is working and what is not in the climate context.

He felt recommendations will be difficult to negotiate for the report, though it is an attractive idea. On whether the report should have a particular theme or (geographical or sectoral) focus area, he said there will be lots of different interests that will want different things from the report, and it will be difficult to zero into what should be done first.

A developed country participant agreed that the report should address how the billions can influence trillions, which are being spent anyway. He also agreed that it should consider effectiveness, for instance, in getting the money to communities and in making the GCF more efficient. A third element, he said, is addressing the question of new donors, and of some countries that are going to stop being recipients over time.

COMMON TABULAR FORMATS FOR THE ENHANCED TRANSPARENCY FRAMEWORK

This discussion was kicked off with a presentation by Linda Siegle, Legal Response International, UK. She noted inputs from other colleagues from South Africa and China to her presentation.

Siegle recapitulated that Article 13 of the Paris Agreement is meant to build mutual trust and confidence and promote effective implementation of the Paris Agreement, by building on and enhancing transparency arrangements under the UNFCCC. The transparency arrangements will apply to action and support.

Article 13 consists of "*shall*" and "*should*" obligations. The mandatory "*shall*" obligations include the submission of national GHG inventories; information necessary to track progress of NDCs; information on financial, technology and capacity-building support provided; Biennial Transparency Reports (BTRs) which will undergo technical expert review; and support to developing countries for implementing Article 13. These BTRs will not be submitted until 2024, however.

The more flexible "*should*" elements include the provision of information on climate change impacts and adaptation; and on financial, technology and capacity-building support needed and received.

Siegle noted that the previous transparency arrangements under the UNFCCC included National Communications from developed and developing countries; annual GHG inventories from developed countries; Biennial Reports (BRs) from developed countries; Biennial Update Reports (BURs) from developing countries; and International Assessment and Review (IAR) of these reports for developed countries, and International Consultation and Analysis (ICA) for developing countries.

She noted a direct linkage between Article 4 of the Paris Agreement, on the NDCs, and the Enhanced Transparency Framework (ETF) Article 13. Article 4 states that "*Parties shall account for their nationally determined contributions in their biennial transparency reports, including through a structured summary…*". The ETF also links to other parts of the Paris Agreement, including Article 6 on cooperation mechanisms; Article 7 on adaptation; Article 8 on loss and damage; Article 9 on finance; Articles 10 and 11 on technology and on capacity building; Article 14 on the global stocktake; and Article 15, on facilitating implementation and promoting compliance. In addition, she noted links to existing and institutional arrangements established by the COP, namely the Consultative Group of Experts (CGE) and the Capacity Building Initiative on Transparency (CBIT).

She said the transparency decision from Katowice (Decision 18/CMA.1) has an annex which contains the modalities, procedures, and guidelines (MPGs) for reporting. The first BTR and national inventory report is to be submitted no later than December 2024. There is flexibility for those developing country Parties that need it. Support is to be provided to developing countries. LDCs and SIDS may report at their discretion and the CGE is to serve the Paris Agreement from the beginning of 2019. The first review of the MPGs will take place no later than 2028, and CBIT will continue to support developing countries in their reporting.

Siegle listed the guiding principles for the MPGs on which the tables and formats must be based, saying they should:

- build on and enhance the transparency arrangements under the Convention in a facilitative, non-intrusive, non-punitive manner, respecting national sovereignty and avoiding placing undue burden on Parties;
- facilitate improved reporting and transparency over time;
- provide flexibility to those developing country Parties that need it;
- promote transparency, accuracy, completeness, consistency and comparability (TACCC);
- avoid duplication of work;
- maintain at least the frequency and quality of reporting under the Convention;
- avoid double counting; and
- ensure environmental integrity.

She noted that SBSTA has been requested, in Katowice, to develop by CMA3 in 2020:

- common reporting tables (CRTs) for the electronic reporting of national inventory information;
- common tabular formats (CTFs) for the electronic reporting of information on: tracking progress on implementation of NDCs; and financial, technology development and transfer, and capacity-building support, provided and mobilised as well as needed and received;
- outlines of the BTRs, national inventories, and technical expert review reports (TERRs); and
- a training programme for technical experts participating in the technical expert reviews (TERs).

Siegle noted that a year was left to address this long list of technical issues.

She then listed the agenda items in which transparency issues are also being addressed. Under the UNFCCC, she said, SBI is working on reporting from, and review of, Annex I Parties, and primarily looking at the provision of GHG inventory information and review. It is also looking at reporting from Parties not included in Annex I to the Convention and considering the current guidance and review processes. The SBSTA is considering methodological issues under the Convention, primarily on coordinating existing and new technical review processes. SBSTA is also considering methodological issues under the Paris Agreement.

Summarising progress and next steps, she said Parties decided to have a dedicated discussion on flexibility at SBSTA51; the Secretariat has been requested to prepare a technical paper on existing training programmes for TERs; discussions on the revision of the terms of reference for the CGE will continue; and there will be consideration of financial and technical support required for developing countries at the next meeting of the Subsidiary Bodies (SB51).

She said there are informal co-facilitators notes from SBSTA50, on: an overview of informal consultations; CRTs for GHG inventories; CTFs for tracking progress of NDCs; and training for technical experts. Siegle provided a brief summary of each note.

In summary, Siegle listed the topics that are likely to come up for discussion at SB51:

- Using CRFs and related tools as a starting point to develop CRTs. On this, she said countries have different staring points, as developed countries have been using CRF tables for many years while developing countries have been using only Tables 1 and 2 and are not familiar with CRF tables. Another question relates to whether there should be summary tables or sectoral tables.
- How should flexibility be operationalised? Flexibility can relate to scope, frequency, or level of detail.
- What is the relationship between reporting tables and reporting tools?
- Capacity building for developing countries, including for applying 2006 guidelines, getting familiar with CRF tables and tools, institutional arrangements and other improvements domestically, and data availability and data development.

Finally, Siegle listed the categories in the modalities, procedures, and guidelines where flexibilities will be given, and the following elements where she hoped progress would be made at SB51:

- Deeper understanding on operationalising flexibility.
- Agreement on summary tables.
- Discussion around sectoral tables.
- Sectoral summary tables.
- What other tables are needed?
- More discussion around reporting tools.
- Deciding next steps.

In the discussion that followed, Müller said at the 2018 Oxford Seminar, many participants felt that rather than defining each element of flexibility, Parties should be encouraged to do the best they can, and to provide a reason for why they can't do better. These reasons can then be addressed with help from the global community, to ensure that future reporting is improved.

A developing country participant said while the new system should build on the existing arrangements, only 45 developing countries have submitted the first BUR, only 20 the second BUR, and only six the third BUR. He called for an analysis of why countries are not doing their BURs, and what can be done to encourage them, saying they will otherwise have to jump into the deep end of the pool without learning to swim, to do their BTRs.

A developed country participant asked which countries will provide information on support, and whether the information will be provided by Annex I, Annex II, and economies in transition (EITs).

A developed country participant asked what would happen in cases where the quality of data is not up to international standards, and called for capacity building in this regard. Another participant agreed with

the previous two calls for capacity building, saying it should also link to NDC implementation, because a few countries are very worried about the fact that their first even NDC was based on very weak data. She noted that while Siegle highlighted the need for countries to discuss their experience in using the 2006 IPCC guidelines, new guidelines have already been issued by the IPCC in 2019, and consideration will have to be given on how to help developing countries with the transition.

Siegle clarified that the 2006 guidelines have been refined by the IPCC in 2019, and so they are not new guidelines. Moreover, until the CMA takes on board the 2019 refinement, it won't be part of how Parties report under the CRTs.

A developed country participant said the question on whether EITs should report on their financial contributions is an interesting one from a lawyer's perspective, given that the GDP per capita in some EITs is lower than many of those countries that are still classified is non-Annex I under the Convention. Giving a "lawyer's response", he said the Annexes apply to the Convention, but the Paris Agreement does not define what a developed or developing country is. He asked Siegle what information provisions are being considered for the second sentence of Article 9.5, which encourages "other Parties" to provide finance. He said these flows could be more significant than anything that EITs could report on.

A developed country participant said while the provisions of Decision 18/CMA.1 are clear on the type of information which Parties should provide, the question of whether they are complying will need to be looked at. He stressed the need to make progress in COP25 on the CRTs, because otherwise it will be even harder for Parties to build the capacity they need to implement this process from 2024. He noted that there are five sub-items on the SBSTA agenda. The first three (reporting of inventories; tracking progress; and support) are extremely technically complicated. The other two (draft reports and training) may be simpler, with some scope for Parties to move faster. He noted time constraints in COP25 on this set of items, because other items on the SBSTA agenda involve methodological issues under the Convention.

A developing country participant noted that under current EU practice, all non-Annex II countries are providing information on the support provided, but they are doing it on a voluntary basis, and this was specified in their ratification instrument to the Paris Agreement.

In a discussion in a smaller breakout group, a developing country participant emphasised the need for capacity building in the five years left before BTRs are to be submitted, given the issues faced by developing countries in submitting their BURs, and highlighted the importance of experience sharing among developing countries.

A developing country participant asked if there are some issues in the process that should be referred for further analysis, to avoid the discussion going around in circles. For instance, she asked if the secretariat could provide further analysis on the flexibility issue.

Another participant said countries who are planning to engage in Article 6 will need a basic idea of how to report, and asked what synergies there are between the transparency discussions and Article 6. He described the "MRV Hub" developed in the Caribbean, for a unified reporting system without duplicating work.

A developed country participant said countries will get used to the formats once they have done it a few times. The more data there is, the better the reporting will be, she said, and this should not be seen as a burden but as an opportunity. She said tailor-made advice could be provided to countries based on the hurdles they face.

Discussions were also held on the potential sequencing of capacity building for developing countries; immediate capacity building needs versus future needs; the role of non-state actors; and the sequencing of the negotiations.

COMMON TIME FRAMES

This session, chaired by Stella Gama, started with a presentation by Yamide Dagnet, World Resources Institute.

Dagnet said she would discuss why the common timeframes discussion is important; the challenges, opportunities, and benefits; why a decision could and should be taken at COP25; and a preferred approach, along with possible elements for the COP decision.

She said the 2019 COP is about ambition, and a common timeframe is the first part of an ambition package, and an opportunity to create a point in time to revisit ambition. It is also an opportunity to provide a level playing field for the assessment of NDCs. It will set the same pace for all countries, and facilitate the understanding and accounting of efforts, including the carbon markets, because it is very much linked to all the agenda items including transparency, cooperative approaches, and the global stocktake.

Noting different views on the periodicity of NDCs, she said a common timeframe needs to be perceived as fair and reasonable for Parties, and it should not put an unfair burden or pressure. However, with the IPCC stating that only a short window of 12 years is left to avoid irreversible changes, the pace of efforts needs to be accelerated. A common timeframe provides the opportunity to align with what science tells us, and keep pace with technological breakthroughs, and socioeconomic and environmental changes.

Dagnet then listed the following benefits of a shorter (five-year) timeframe, compared to a medium (ten-year) timeframe:

- Alignment with the five-year ambition cycle and response to the global stocktake.
- Preventing NDCs from becoming outdated and taking into account socioeconomic and technological changes and opportunities.
- Preventing lock-in low ambition for too long while still supporting SDGs.

Moreover, she said the five-year periodicity of the Kyoto Protocol allows for benefitting from the experiences of following a five-year cycle, including for the Article 6 mechanisms.

While noting some benefits of a ten-year cycle, such as a longer horizon for policies, she said the preferred approach of the "Dynamic Contribution Cycle" (DCC) would combine the benefits of a shorter timeframe, and the comfort that a lot of countries seek in the ten-year timeframe. It allows time to measure up these longer-term plans for collective progress, as well as for individual ambition and fairness and is still responsive to opportunities and critical changes. It will bring predictability, support the 2050 certainty and yet provide flexibility. It will also allow for "timely" and more credible calibration.

She listed the following possible elements for a COP decision:

- All Parties could be requested by 2025 to communicate or indicate an NDC with a timeframe up to 2035, and to do so every five years thereafter.
- All Parties could be invited in 2030 to consider updating their NDCs with a timeframe up to 2035, and to do so every five years thereafter.

She said the words "communicate" or "indicate" are important, as they allow for those countries who are already involved in developing ten-year timeframes to provide an indication based on their long-term strategies and their ten-year NDCs. Five years later, they could be updating their 2035 targets to keep that momentum and communicate a 2040 timeframe. In addition, in 2025, countries could submit an NDC with a timeframe up to 2040, if the following language is adopted:

- 1.bis. In 2025, some Parties may also wish to indicate NDCs with a longer time frame, for instance up to 2040, in addition to the 2035 contribution.

Therefore, in 2025, everybody would have a 2035 target. But those countries willing to do so can also indicate their timeframe for up to 2040. Five years later, they could do an update responding to the 2028 global stocktake as applicable, based on equity and science and national circumstances, and communicate an NDC with a timeframe up to 2040 (and if they wish to, also indicate their policies and targets by 2045). The language of "communicate" or "indicate" provides flexibility.

In a brief session on questions for clarification, a developing country participant referred to an earlier discussion during the Fellowship Colloquium, of a "five-plus-five" option, with a firm target for the first five years, and an indicative target for the next five years. He asked if that option had been considered by Dagnet. If so, he asked how it could be translated legally – would the second soft target be called an indicative target.

A developed country participant asked if the analysis on the benefits of a five-year timeframe considers not only benefits to the international scenario, but also to the domestic policies of the country.

Another developed country participant said countries have different starting points, with some that are more mature and have already realised a lot of emissions reductions. These countries may need more time than five years to carry out structural changes. She also sought clarity on why countries should communicate a 2040 NDC as well as update the 2035 NDC in 2030.

Responding, Dagnet said the five-plus-five option was the starting point, which was altered a little to accommodate countries which have 10-year domestic processes in place and are in the process of implementing them. She said the "fixed" and "soft" nature of the NDCs do not perhaps need to be emphasised, since the intention is to get that point of re-calibration after five years. On the domestic analysis, she said they are separately looking at where countries are starting – some have five-year cycles, some have mid-point reviews even if they have a ten-year cycle, and some even have six-year cycles. Even in countries with different time cycles, there are efforts to review the process of decision-making process to make it fit better – for instance in Mexico. Others like Japan want to keep the ten-year cycle but have a three-year review, and considerations are on making that responsive to the global stocktake. In the case of the EU, she said the climate package for 2030 allows for a review in 2024, which would be perfect to respond to the 2023 global stocktake.

A developed country participant said paragraphs 23 and 24 of the Paris Decision make the notion of a five-year cycle clear, but introducing new notions of what else we do in those five years makes things confusing.

Another developing country participant asked for elaboration on the framing of equity in the presentation, in the context of avoiding unfair pressure to update.

During the breakout group discussion on common timeframes, Benito Müller made a presentation on the Dynamic Contribution Cycle (DCC). Presenting a brief history of the concept, he said it was designed during the 2014 ecbi Oxford Fellowships Colloquium and was submitted as a proposal to the UNFCCC in November that year, for consideration at the Peru COP. In 2015, in the Paris Agreement, it was agreed that:

- *Each Party shall communicate a* [NDC] *every five years* (Article 4.9); and
- *The* [CMA] *shall consider common time frames for* [NDC] *at its first session* (Article 4.10).

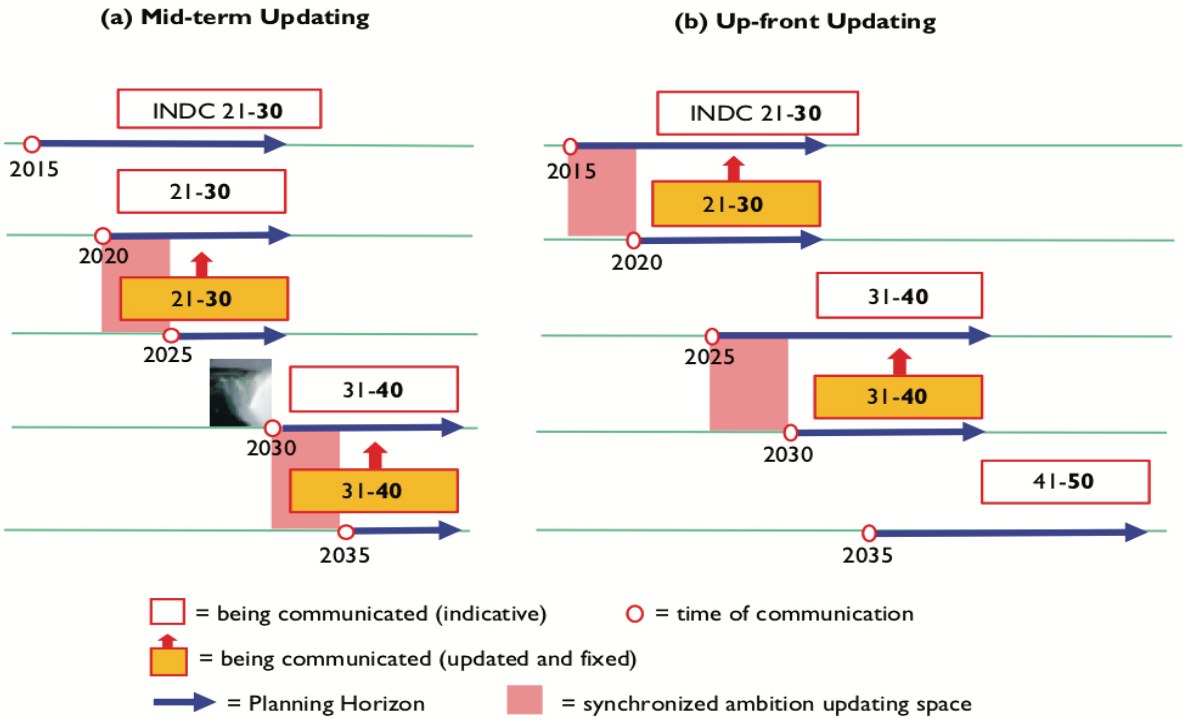
In addition, Decision 1/CP.21, included the following two related paragraphs:

- § 23. *Requests* those Parties whose INDC … contains a time frame up to 2025 to communicate by 2020 a new nationally determined contribution and to do so every five years thereafter …;
- § 24. *Requests* those Parties whose INDC … contains a time frame up to 2030 to communicate or update by 2020 these contributions and to do so every five years thereafter …;

Discussions on the common timeframes have been ongoing since. At COP24 in 2018, it was decided that Parties *shall apply* common time frames to their NDCs *to be implemented from 2031 onward*.

He then presented **Figure 2**, to show the challenges and shortfalls that could arise if more clarity is not provided.

Figure 2: Paragraph 24 Communicating and Updating Cycles



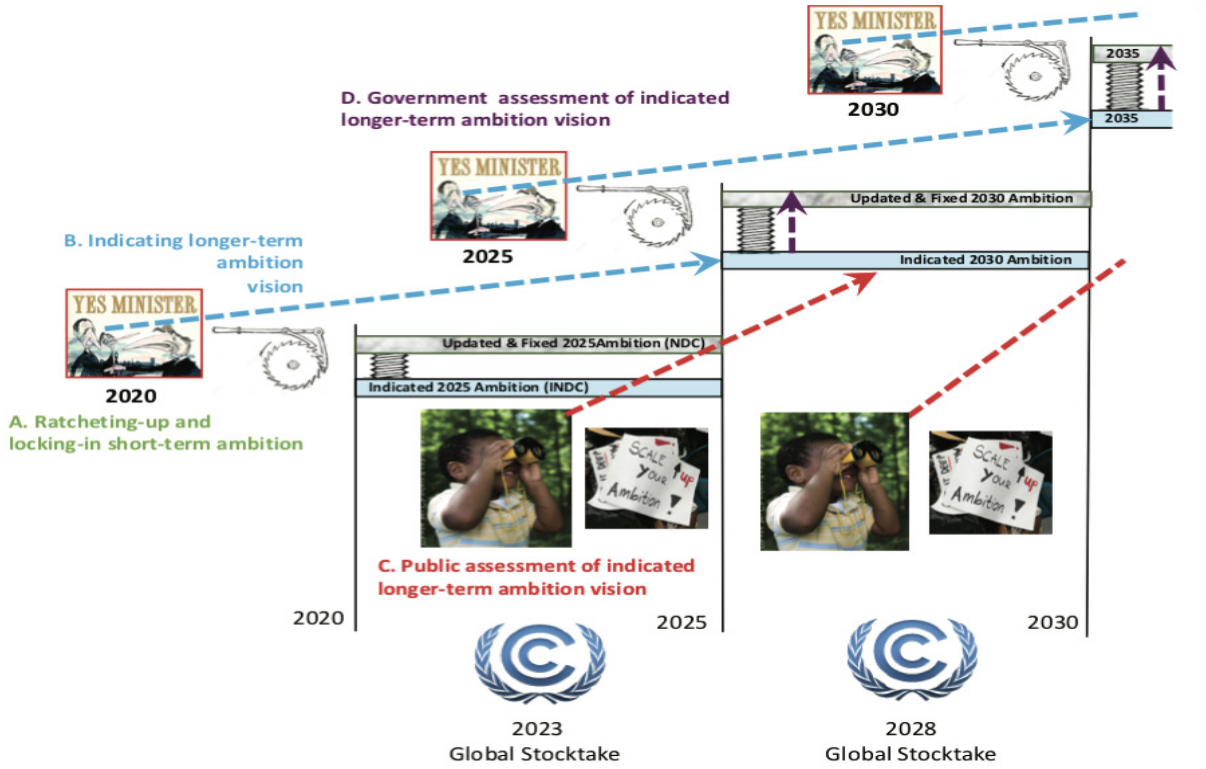
In the context of paragraph 24, he said explaining the Figure, Parties could choose the first "mid-term updating scenario". Under this scenario, in 2015 they communicate an NDC with a 15-year horizon (2021-2030). In 2025, there are still five years when everyone knows what the Party wants to do in the next five years. Then the question is, what does the Party do in 2025? In the mid-term updating scenario, it will update for the next five years, in 2025. In 2030, it will then communicate the next (2031-2040) NDC. But this leads to a cliff-edge in 2030, because there is no prior information on what the Party will do next until 9-12 months before implementation is to begin. These sort of cliff-edges are not useful in the domestic or international context, as

we have learnt from the Kyoto Protocol. One of the biggest drawbacks of the Kyoto regime was that we didn't have a multi-period, forward-looking sort of indication, Müller said.

In the second "upfront updating" scenario, a Party is expected to update the existing NDC in 2020 – whether this happens remains to be seen. Then, in 2025, the Party will announce the 2031-2040 NDC, thus providing another long-term (15-year) planning horizon. In 2030, it will update this 2031-2040 NDC, and in 2035, it will restart as in 2025.

Müller presented the DCC, as illustrated by **Figure 3**, where countries present five-year updated NDCs and at the same time indicate their longer-term ambition vision for the following five years. In this scheme, he said, the governments provide stakeholders five-year certainty, and at every stage, a five-year indication of what the following five-year NDC will aim to do. They will, however, retain the flexibility to change the second five-year indication of ambition, taking on board the indication of ambition provided by other countries. Each ten-year cycle includes a five-year contribution term, followed by a five-year indicative term. Before the end of each contribution term, the indicative term would be either confirmed or adjusted upwards, and an additional indicative term would be communicated for the following period.

Figure 3: The Dynamic Contribution Cycle



The DCC is the "goldilocks" option that can bring together the benefits of the longer ten-year time frame with the benefits of the shorter five-year time frame, Müller said. It:

- increases the effectiveness of the global stocktake;
- creates more frequent, common global "checkpoints of progress" and "political moments" for countries to re-consider NDCs;
- allows NDCs to keep up with scientific input, technological progress, societal change;

- allows countries to gauge fairness of their ambition in relation to peers; and
- helps create in-country momentum for ambition.

Providing an indication of where the ambition of all countries is headed in the following five years can allow countries to show more ambition, knowing that others will also do so, and they are not taking on a bigger or unfair share of the burden, he said. Showing that they are doing their "fair share" will be critical also to convince national stakeholders that the NDC is fair, in comparison with other countries. Müller said the DCC attempts to provide space in the process for additional ambition, as opposed to killing it. While the Paris Agreement cannot ensure ambition, as it is country driven, it can at least ensure that the process does not kill ambition, or that the process does not put up obstacles for Parties to be as ambitious as possible. The ambition should not only be determined by domestic considerations, but also through comparison with other countries at the international level, and reassurance that they are doing their share.

He proposed the following language for a COP decision to operationalise the DCC, where the year indicates the endpoint of the NDC:

- *Requests* those Parties whose NDC contains a time frame up to 2025 to communicate by 2020 a 2030 NDC.
- *Requests* all Parties by 2025 to communicate a 2035 NDC, and to do so every five years thereafter.
- *Invites* all Parties in 2030 to consider updating their 2035 NDC, and to do so every five years thereafter.

Müller also clarified that the second indicative NDC need not be detailed, or even be in the full format of an NDC, but merely describe overall ambition for the following period.

In the discussion, a developed country participant said the European Commission has just had elections, where climate change was at the centre of discussions, and the new Commission will be in place soon. The President-elect of the Commission has announced that she will stand ready to increase Europe's ambition in the longer term. The EU has a target of updating its contribution nine to 12 months ahead of 2020, which will be in the spring of 2020. While it is difficult to predict the result, the falling costs of technologies, the impact of public campaigns, the impact of climate change in Europe which are felt stronger than before, and the Climate Action Summit will put pressure to increase ambition. She said it will be worthwhile to wait till 2021 to see what the process has delivered, and if ambition has been raised in 2020. If the process is not working well, then something can be done about it. She felt adequate data will be available every five years on how countries are performing with regard to their existing NDC, and the global discussion on whether that is adequate ambition will then feed back into domestic discussions. She said that if at all a decision has to be taken this year, it will be on the date for the final decision, which for the EU will be in 2022 or 2023. By then, she said, we will have learned from the process and can think through whether we have to improve it or not.

Müller said the issue was not about tracking empirical data of where countries are, but about knowing where countries want to be after a certain point in time. That information will be needed at least five years in advance.

A participant asked whether the international system would not benefit from a common, multilaterally agreed, point in time when all countries are expected to raise ambition, rather than have to respond to bilateral pressure from countries that are in a position to do so. She said the latter has the potential to increase points of friction in an already difficult negotiating process. She said common pressure points created outside the UNFCCC, such as through the Climate Action Summit, may not deliver – for instance, the 2019 Climate Action Summit will now be more about initiatives than about NDC ambition. These initiatives may be difficult to

capture in NDCs, and there is no clarity on how they will be captured. Moreover, will such Summits have to be organised after each global stocktake, to create the common pressure point?

Responding to Müller's question, the developed country participant said forward-looking information will be provided by long-term strategies, and a number of countries are proposing a long-term target of climate neutrality which gives a clear pathway. Achieving climate neutrality will need a clear idea on the transformational change needed, and where NDCs will need to be along the way. The policies for climate neutrality are far more complex than just having a limited trading scheme, because action across all sectors is needed. Underpinning these targets with policies is not easy and takes time, she said.

Responding to the second question, she said the Climate Action Summit will also touch on long-term strategies for climate neutrality. On whether such events will be held in future, she said it is up to the UN Secretary-General to decide, but it makes a lot of sense to have these events where heads of states are involved, and they have to commit themselves to domestic action.

Another developed country participant said paragraph 23 has a clear stipulation that Parties that have 2025 NDCs have to communicate a new NDC; and paragraph 24 gives countries with a 2030 NDC the option to communicate or update those (not new) NDCs. He said the proposal to update the NDC just before implementation was not discussed during the Paris negotiations, and it doubles the effort, with countries not only having to set new targets, but to update them later. If on top of this they have to provide indicative targets for the future, it increases the work for policy makers and leaders, and all jurisdictions may not be ready to make this effort every five years.

Müller said the EU is most likely to follow the "upfront updating" scenario he presented, and update what was communicated in 2015 in 2020. In 2025, the EU will most likely submit the 2040 NDC, and in 2030, this will be updated. So the EU wants to keep a 15-year horizon between communicating and end of implementation. It is therefore possible to start thinking about what they want to do in 2035 right now, and communicate it in 2025, to cover the five years immediately after implementation, and ten years after that. This will bring the EU in synch with everyone else – in China, for instance, one idea is to communicate the 2035 NDC in 2025.

The participant responded that it is not yet decided that the EU will communicate 2040 targets in 2025. The 2035 or 2040 targets will be discussed by 2025. If in 2025 the EU decides to have a 2035 target, in 2030 it will have a new NDC for 2040, following paragraph 23. But if, in 2025, it decides on the 2040 target, then five years later in 2030 it will update the 2040 target. He agreed that the point of common timeframes is to have everyone on the same point, but that could be every five or ten years, or, in a worst-case scenario, some Parties have a ten-year horizon, others will have a five-year horizon.

Müller said the Decision does not say that Parties with a timeframe up to 2030 have to stick to ten years, but it is possible to have ten-year cycles in the DCC – as long as the rhythm of communicating NDCs is not confused with target periods or the periods of implementation.

A developing country participant said this topic is solvable in the short term, but it shouldn't be made as complicated by mixing the common timeframes with the ambition cycle. Of course, common timeframes will have an effect on ambition insofar it will be the rhythm with which Parties will start considering enhancing ambition, but he did not think that the ambition cycle will be solved through common timeframes, or that common timeframes will be the defining element for ambition. The Agreement already states that Parties will communicate NDCs every five years, and each NDC should represent a progression. The missing element is the

timeframe of implementation of those targets, which is important for enhancing the system and making it more robust.

A developed country participant agreed, saying real ambition lies with the global stocktake and domestic mechanisms to enhance ambition, not with common timeframes. She emphasised that the Paris Agreement takes a bottom-up approach, different from the Kyoto Protocol, which leaves it to countries to decide the approach that allows them to deliver the maximum ambition. She felt that locking them into a five-year approach may result in lowered ambition because countries don't have enough time for domestic planning and implementation. She also noted that the plural reference to common timeframe**s** implies that there can be five years, ten years, or even fifteen years.

Dagnet said ambition will require many things, not just the global stocktake and transparency framework, and a common timeframe is at the very core, though not the only element necessary for ambition. She said different timeframes can undermine our ability to assess effectiveness in an equitable way. She called for the discussion to go forward on the basis of what common timeframe can best enable ambition, in a more effective manner. She noted efforts, in her presentation, to take on board the concerns of countries that want a five-year and ten-year timeframe. She felt it is not enough just have a 2050 target and strategy, but to have check-points at five and ten years, in a manner that allow for consideration of the equity dimension. Responding to an earlier question on unfair pressure, she said it relates to having a just transition, creating opportunities to overcome barriers, and to push countries that can do more.

A developing country participant said countries that already have their long-term strategies can easily break them up into five-year operational plans in their NDCs, while providing an indication for the next five years. The five years are also likely to match the. political tenure in most countries, she said.

A developed country participant said she was concerned about the interpretation of the paragraphs of the Paris Decision, which aim to ensure that Parties communicate an NDC five years before they start implementing, irrespective of whether they choose a five- or ten-year NDC. This will prevent the cliff-edge mentioned by Müller in his presentation. She agreed that NDC communication should always be five years ahead of implementation, as there is no credibility in an NDC put forward a day before implementation is to begin – industry would not take it seriously and would not be able to prepare itself. She agreed with earlier speakers, however, that the ambition cycle has to be driven domestically, irrespective of a five- or ten-year common timeframe. She highlighted that EU legislation aligns the Union's cycles with those of the Paris Agreement. She felt that while it was agreed to have common timeframes, now was not the moment to do it. It would be better to have the discussion in around 2023, before the next cycle of NDCs are due. She did not think that common timeframes would solve the accounting problems in the system.

A developing country participant disagreed with the previous speakers, saying that for her country, the ambition cycle is the basis to decide the common timeframe. She felt that given the current urgency to address climate change, decisions cannot be postponed. She noted that the IPCC is considering issuing its reports every five-years to align with the Paris cycle and global stocktake, and so that will be the cycle for which the latest science and status of the global problem will become available, to inform NDC updates.

A developing country participant said she did not think that a short- or long-term timeframe would affect ambition. She asked what factors influence the decision of the EU on timeframes, saying in her country, the decision is linked to national five-year plans, and a 2035 national strategy.

ARTICLE 6

This session, facilitated by Gama, featured presentations on: accounting outside the NDCs by Müller; links between 6.2 and 6.4 mechanisms by Kishan Kumarsingh; overall mitigation in global emissions (OMGE) and baselines by Aglaja Espelage; and operationalisation of share of proceeds for 6.4 and 6.2 by Mbaye Diagne. Two additional presentations were made in the breakout discussions, on Kyoto transitions by Espelage, and centralised recording and accounting platform by M.J. Mace.

Introduction to Article 6

Presenting an introduction to cooperative approaches Müller said Article 6 provides an opportunity for international cooperation when implementing NDCs, through two market based approaches mentioned in Article 6.2 and 6.4 of the Paris Agreement, and one non-market based mechanism described in Article 6.9. The key principles for these three mechanisms agreed were to:

- protect environmental integrity (no increase in emissions);
- raise ambition in NDCs, not undercut it; and
- promote sustainable development.

Müller then described his understanding of basic concepts related to the market mechanisms:

- the "originating Party" is the same as the "originator", or "creating/issuing Party".
- the "transferring Party"
- "acquiring Party"
- "using Party"

He said the defining feature of "internationally transferred mitigation options" (ITMOs) is that they can be used by an acquiring Party towards achieving its NDC. In that context, NDCs have been associated with a "scope" (identifying what the NDC "covers"), and "quantifications" (either of the NDC as a whole, or of components thereof). A quantification, in this context, is given by the specification of:

- a "quantitative scope", that is a measurable, extensive quantity variable associated with the NDC, together with
- a "target level", that is the level of this quantity variable that needs to be reached for the NDC to be achieved.

The "final tally" is the actual (measured) level of the respective quantity that determines, by its relative position to the associated target level, whether or not the NDC has been achieved, with respect to the quantitative scope in question.

Müller said Article 6.2 states that "*Parties shall, where engaging on a voluntary basis in cooperative approaches that involve the use of internationally transferred mitigation outcomes towards nationally determined contributions, promote sustainable development and ensure environmental integrity and transparency, including in governance, and shall apply robust accounting to ensure, inter alia, the avoidance of double counting, consistent with guidance adopted by the* [CMA]".

He said the use of an ITMO can be achieved in two ways: through a target-based approach, where the NDC target of the acquiring Party is adjusted upwards by the amount transferred from the originator NDC; and a tally-based approach, where the acquiring Party removes the ITMO amount from the final tally of its NDC.

Müller said a key objective for the guidance for the Article 6.2 mechanism is to prevent double counting, and an infringement of environmental integrity, through a corresponding adjustment. The guidance relates to the accounting of ITMOs and the reporting and review cycle on the accounting of ITMOs, and possibly the underlying quality of the mitigation activities.

He listed the following key political unresolved issues:

- What are ITMOs? Do they have internationally defined characteristics? Are they *credits* or pure *accounting units*? Can they be generated from outside the NDC sector? Can they be created for any form of mitigation? Or are some sectors and activities (such as REDD+) excluded?
- Can ITMOs be used by private companies and other compliance schemes (such as CORSIA)?
- Do cooperating Parties have to *cancel* part of the ITMOs for OMGE?
- Do cooperating Parties have to pay the levy for administration and adaptation finance (share of proceeds)?

Moving on to Article 6.4, he said this Article establishes "*a mechanism to contribute to the mitigation of greenhouse gas emissions and support sustainable development*", to be supervised by a body designated by the CMA. This Supervisory Board will oversee and approve the issuance of Article 6.4 emission reductions (A6.4ERs). Activities under this mechanism must be additional and promote sustainable development. In addition:

- Emission reductions are calculated and verified against crediting baselines.
- The host country must approve the activity and authorise the international transfer of the A6.4ERs.
- The mechanism generates finance for adaptation through a share of proceeds.

Müller said key unresolved issues related to Article 6.4 are:

- The scope of the activities (REDD+).
- The use of A6.4ERs through private companies or in other compliance schemes (such as CORSIA).
- The host country role in the mechanism.
- How to set baselines and determine additionality.
- If Kyoto Protocol activities, units and methodologies will be transitioned into this mechanism.

On Article 6.8, he said in the Paris Agreement, "*Parties recognize the importance of integrated, holistic and balanced non-market approaches being available to Parties to assist in the implementation of their nationally determined contributions, in the context of sustainable development and poverty eradication, in a coordinated and effective manner, including through, inter alia, mitigation, adaptation, finance, technology transfer and capacity building, as appropriate*."

Müller said this mechanism was considered difficult to define in the early days after it was agreed, but since then it has evolved into a mechanism with many interesting possibilities. For instance, he said smaller and poorer countries could use it to "bulk purchase" energy efficient technology through a joint call for tender, like India had bulk purchased 700 million energy efficient LED bulbs to drive down their price under the Ujjala programme.

In the negotiations, Parties are negotiating a work programme to implement a framework on non-market based approaches (NMAs), Müller said. NMAs can be implemented for mitigation, adaptation, technology transfer and capacity building. Key unresolved issues include the objective of the work programme, and its governance.

Accounting outside the scope of NDCs

Müller then went on to present on accounting for mitigation outcomes outside the scope of NDCs. He presented a proposal that he developed in earlier papers, including on How to Operationalise Accounting under Article 6 Market Mechanisms of the Paris Agreement, published in *Climate Policy* in September 2018.

He noted that there are no targets or accounting units for market activities that are outside the scope of NDCs. However, including activities outside the NDC scope could help countries build capacities in other sectors of the economy and therefore raise ambition beyond NDCs. At the same time, accounting for the mitigation outcome is challenging and there is a risk of double counting. Moreover, such activities may also become a perverse incentive not the expand beyond the scope of the NDC.

Within an NDC, Müller continued, corresponding adjustments can be made from the originator NDC to the user NDC in the target- or tally-based approaches described earlier. Under the target-based approach the acquiring Party adds the ITMO amount to the target level of its NDC; and under a tally-based approach the acquiring Party removes the ITMO amount from the final tally of its NDC.

For mitigation outside the scope of the host Party's NDC, Müller proposed using a tally- based approach, saying this interpretation allows for mandatory corresponding adjustments for all ITMO usage, while the NDC level of the acquiring Party remains unchanged. Instead, a buffer registry is created for corresponding non-NDC adjustments of the selling party.

The acquiring Party could be allowed to use the units in the buffer registry only once that the sector covered by the activities of the project becomes part of its NDC. This way, Müller said, it becomes an incentive for the originator country to expand its NDC. At the same time, it is not a disincentive that makes it harder to achieve the NDC.

In a brief session on questions for clarification, Müller clarified that one of the main drivers for wanting the possibility of activities outside the scope of NDCs is to allow countries that don't have the data or capacity to include those sectors into the NDC, to pilot activities that will eventually allow them to include those activities in their NDCs. So they could be allowed to design, implement, operate, verify, and issue units, but the units would be tagged in such a way that the acquiring country cannot use them until the originating country has expanded the scope of their NDC to include those sectors.

A developing country participant said it has been agreed in Katowice to use emissions-based accounting. On the issue of accounting outside the scope of NDCs, she said if Parties have sufficient data to be able to issue a credit from an activity, then they could equally be capable of bringing that activity inside the scope of their NDC. Appreciating that countries have capacity and data challenges to engage in the market, she said a capacity building programme has been proposed to help Parties improve their readiness.

A developed country participant said assuming private actors would buy the mitigation outcomes (MOs), they would not have any certainty that the sector will ever become part of the NDC and that they will be able to use the MOs. Why then would they engage? Secondly, this assumes that carry-overs from one NDC to another are possible. Third, he asked whether the originating Party would have to do a corresponding adjustment once the use of the MOs is possible.

A developing country participant said Article 6.2 is a very flexible framework that covers a lot of possibilities for cooperation, not only emissions trading. On activities outside the scope of NDCs, he said those activities

will also have to go through some assessment. The difficulties in expanding to other sectors should also be considered, he said, because whereas specific project activities may be possible and easier, expanding to the entire sector may be challenging because of the lack of data.

A developed country participant said it will not be possible for the CMA to place these kinds of restrictions on the ITMOs – the Paris Agreement makes it clear that it will be up to participating countries to decide what kind of ITMOs they want to use, and how. Starting discussions now on what kind of reductions are will complicate matters and open new discussions, instead of closing the existing ones in COP25.

A developing country participant said a key issue to be decided is the definition of ITMOs. More clarity on this issue will help resolve many of the other issues, such as scope of activities, inside and outside the NDCs, and their use for other purposes than meeting the NDC.

Müller responded that it is clear that under target-based accounting, the only way to have corresponding adjustments is by adjusting the target. There is no target outside the NDC, so the only way you can make an adjustment is inside the NDC. Under emissions-based accounting, there is a way to not "lose" these emissions in the ether, but to account for them in a way that does not actually make the achievement of the NDC more difficult. What we then do with the buffer registry is an important but separate question. The first issue is that it can be done, and we can keep these emissions in the system so they don't get lost.

Corresponding adjustments and double counting in Article 6.4

A presentation by José Miguez, Brazil, followed, on the Article 6.4 mechanism. Miguez highlighted the differences between the Paris Agreement and Kyoto Protocol in the context of trading. Under the Paris Agreement, he said, there is no clear definition for NDCs, no gases and sectors are defined, and no fixed start year is identified. Under the Kyoto Protocol, however, each developed country has a mitigation commitment that was mandatory and legally binding under Article 3.1. Gases and sectors were specified in Annex A, and under Article 3.3, it was agreed that net changes of human-induced land-use change and forestry activities shall be used to meet the commitments of each Party. Quantified Emission Limitation and Reduction Objectives (QELROS) were inscribed in Annex B, and the base year was agreed as 1990.

He also clarified the differences between the Clean Development Mechanism (CDM) and Joint Implementation (JI), two of the Kyoto trading mechanisms, saying the two were being confused in the current discussions. He reminded participants that Article 6.4 of the Paris Agreement was developed on the basis of a Brazilian submission, which called for a "CDM+" mechanism in the new agreement. The intention was to provide incentives for voluntary mitigation actions by the private sector, and carry out activities that are additional to those that would take place anyway in the absence of Article 6.

However, Miguez said, some last-minute insertions into the draft text by the EU in Bonn, in 2019, transformed the Article 6.4 mechanism to make it more like JI, going against the spirit in which the mechanism was proposed. Corresponding adjustments applied only to JI, and not to CDM under the Kyoto Protocol, he said, and this would transform the character of NDCs, as they would no longer be nationally determined. According to the EU, any A6.4ER sold would require a corresponding adjustment in the NDC, but there was no mention of corresponding adjustments in Article 6.4 of the Paris Agreement.

Miguez said activities "beyond the NDC" are meant to cover activities that will not be carried out even if that particular sector is included in the NDC – it would not be implemented without Article 6.4 and is therefore additional and beyond the scope of the NDC. He felt that the buffer registry proposed by Müller would create

problems and discourage participation in the 6.4 mechanism, beyond the issue raised by an earlier participant on the lack of incentives for the private sector to engage in such activities.

He said Article 6.4 does not prescribe the use of units – while Article 6.2 refers to the use of ITMOs towards NDCs, Article 6.4 refers only to "*emission reductions that can also be used by another Party to fulfil its nationally determined contribution*". Article 6 as a whole does not refer to corresponding adjustments, and there is no mention of "avoidance of double counting" under Article 6.2. This issue can be easily solved through an International Transaction Log, he felt.

In the context of double counting, Miguez said it is not possible to add emissions reductions to emission inventories or reduce the NDCs by "hypothetical emissions reductions". For instance, solar and wind have no emissions and the EU's insistence on avoiding double counting would add emissions from hypothetical fossil fuel power plants to the inventories. These emissions reductions do not exist, and were never counted, so how can this be defined as double counting, he asked.

A consequence of including corresponding adjustments and double counting in the 6.4 mechanism, Miguez said, would be that Parties would not authorise the participation of the private sector and there would be no additional incentive for them to participate, going against the original objective of wanting to "*incentivize participation of public and private entities*". This will decrease the overall mitigation potential. In conclusion, he highlighted the following key points:

- Article 6.4 will cover activities that would not be implemented under the NDC, even if the sector is covered.
- The activities will be implemented by the private sector, not the government, and is therefore not part of the NDC.
- Support will be sought for only a small part of the investment for activities, and the revenues will be marginal.
- Corresponding adjustments and double counting in the context of Article 6.4 are "counterfactuals" and would imply modifications that would not correspond to reality.

A discussion in a break-out group followed, led by Espelage. A developing country participant asked how Miguez can be sure that projects under Article 6 will not be covered under the originating country's NDC, or that the same outcomes will not be delivered by policies and measures by the government.

Miguez replied that countries will have to separate out what is in the NDCs, which are not about emission reductions but about contributions. While governments may be able to include wind power projects in the NDC because it is feasible and cheap, they may not be able to provide power to remote places where wind energy is not viable and is expensive. He said Article 6.4 can encourage the private sector to go further than NDCs, but not if there are obstacles like corresponding adjustments.

A developing country participant said activities outside the sectors of the NDC can be easily differentiated, but there will have to be a robust process to assess their additionality.

Miguez agreed, saying there can be a three-step process for determining additionality: the Designated National Authority (DNA) will have to say it is outside the NDC; an independent review that is not in the control of the host Party; and then the Article 6.4 Supervisory Body can also check for additionality.

The developing country participant said his concern was that this could also be extended to Article 6.2, where mitigation outcomes could come from elsewhere, outside of any NDC. How will these be accounted for, he asked.

Miguez said the Article 6.2 mechanism is more complicated. For instance, he said REDD+ activities should be part of the NDC and "bilateral sinks" should not be part of Article 6 activities. He said there should be international control of the ITMOs.

A developed country participant said Brazil's NDC calls for a 37% reduction of GHG emissions by 2025, from 2005 levels. He asked if the activities that are happening in Brazil are counted as part of the 37%.

Miguez said they are not, and the 37% is related to policies and programmes that will be elaborated later on. If a beer maker in Brazil decides to improve efficiency and reduce emissions, he said, these activities will not be covered by the government's policy reforms. He said countries have to provide more clarity on what is within their NDC, also for the Supervisory Body to decide what is additional.

A developed country participant said as long as the activities are outside of what would be achieved in the NDC, there should be no problem with a corresponding adjustment. Referring to the presentation by Müller, he said he understood that he was starting from a totally different starting point, and referring not to emissions reductions, but to a transfer of emissions. The Paris Agreement does not talk about the transfer of emissions, however, but about the transfer of emissions reductions.

Miguez agreed, saying this was the confusion he referred to earlier between the Paris Agreement and Kyoto Protocol, and Müller was referring to Assigned Amount Units (AAUs), but there is no concept of AAUs in the Paris Agreement. He said a problem with the NDCs is that you have to wait till the end of the period to see if countries will meet their commitments – for instance, whether Brazil will reduce by 37% by 2025.

A developed country participant said that while he can conceptually understand Miguez's point on activities that are additional to NDCs, it will be very hard to provide the reassurance to everybody that it is additional. Even if it can be done, it will raise questions of how the accounting will be done for the NDC to clarify what has been achieved specifically in relation to the NDC, and the emissions fluctuations as a result of these additional activities.

Miguez said in terms of emissions, achieving the 37% would imply going below 1.3 gigatonnes of CO_2 for Brazil. He said the definition of NDCs is very loose and it is not clear what countries are referring to.

A developing country participant said that if the NDC is about policies and measures, and every single policy and measure to meet the quantified target is laid out, tracking progress would not simply imply delivering those policies and measures and hoping to see contributions, but tracking progress on the target.

A developed country participant said the rules for baselines and additionality will have to be found, and the challenge is to find a simple solution that is not gameable for the sake of transparency.

A developed country participant stressed the importance of finding something workable, not perfect, that can be agreed in COP25 to clear cooperation.

Miguez said it is better to have no decision rather than have the wrong decision, because the wrong decision means that Parties will not engage in the mechanism.

Kyoto transitions

Espelage steered the discussion in the breakout group to the transition from Kyoto. She said the issues relate to: whether all pre-2020 certified emissions reduction (CER) units should be transitioned; CDM activities; and CDM methodologies.

On units, she said there is a clear concern on transitioning units that are not additional anymore or were not additional at time of registration and on issuance. Having a large oversupply will reduce the price, she said, and the rules for transition will have to restore the trust of investors, while not simply breaking off from one system and expecting everyone to engage in the new one. The discussion at the Fellowship, she reported, attempted to address whether we actually know what investors will do, and how they will react to different agreements on transition of units. Some compromises that were discussed include vintage restrictions, for instance of credits issued after the Paris Agreement was agreed, or geographic restrictions.

On the transition of activities, she said there is a concern to limit incentives for new activities and raise ambition in NDCs, because these activities have already been implemented and have already been considered when the NDCs were written. Advocates for the transition of activities say we should not risk discontinuation, or risk losing the capacities have been installed on the ground and mobilised mitigation outcomes. Different compromises were discussed, for instance, a reassessment of additionality and host country approval, under the assumption that additionality might be assessed a bit differently than it was in the CDM, and whether now, policies would be introduced in additionality assessment. Other compromises include: cut-off dates based on registration or the start of the activity; exclusion of certain types of activities; and limiting the transition to small-scale activities. She presented tables listing the impact of restriction on the CDM transition, showing that the option of limiting the cut-off date to on or after 5 November 2016 reduces the number of projects considerably, from 7805 if there is no cut-off date, to 7 if a cut-off date is included. The "programmes of activities" are reduced from 319 to 11 in the same scenario.

On the transition of baseline and monitoring methodologies from the CDM, she noted concerns that the CDM methodologies do not reflect the Paris Agreement regime with its NDCs and are not in line with a "Best Available Techniques" emissions scenario. Advocates argue that developing methodologies takes a long time, and the CDM methodologies were reformed and capacities were built over a long period of time. Possible compromises may be to revise methodologies in a work programme over the coming decade, replacing the old with new methodologies over time; or to exclude certain methodology types.

On the transition of accreditation standards and procedures of the CDM, she said there are concerns that they do not respect the responsibilities of host countries related to NDC implementation. Advocates say a transition would facilitate rapid operationalisation of the mechanism and preserve institutional continuation in host countries. Compromises could include the transition of standards and procedures with revision in the first years of implementation; or expedited or grandfathered accreditation of Designated Operational Entities.

A developing country participant asked for more specificity on what has to be done in COP25 on baselines and methodologies, and what can be pushed to the proposed work programme.

A developed country participant asked if the transition of units was being discussed, or of projects and activities. Espelage said currently both were, but clarity would help.

A developed country participant said it will be important to know what the new rules are, for instance on additionality, before discussing what can be transitioned. He said another question relates to what happens to the CDM after 2020, and whether it will run in parallel to the new mechanism.

A developing country participant said from a big picture perspective, the impact of the re-evaluation of activities on the industry will have to be considered. She said her group does not support any pre-2020 units to be used because it will immediately undermine any market for new activities.

A developed country participant said distinction between units and projects is important, and excluding pre-2020 units is essential as they would not only lower the price, but undermine the credibility of the market.

A developed country participant said it will be better to agree on some principles and have partial agreement, than to have none, as the lack of agreement may send the wrong signal to civil society and to the private sector. He admitted it would be challenging to identify the essential minimum elements or principles to find a compromise or agreement on in COP25, and what can possibly be left to the Supervisor Body in the case of Article 6.4. He said it is progress if more Parties are in a position to accept some kind of transition, but under certain conditions. If that is the case, the next challenge is to consider the best way to assess the technical or market implications, and the implications in terms of the real emission reductions. This could be done at a technical level in a work programme or by the Supervisory Body. The important thing is to establish the conditions that assure everyone that this transfer will not means lowering the level of ambition.

Miguez said making only the projects or units of LDCs and SIDS eligible would kill the CDM, because their emissions are negligible. This would not be a compromise – choosing only some activities would be a political rather than a technical decision. He warned also of backsliding in emissions reductions if CDM activities are ceased. He further said a re-assessment of additionality of CDM projects, 20 years after they were established, will not make sense because it will mean they have to scrap their previous investments, and make new investments to comply with the current situation. Furthermore, he said any of these compromises would be tantamount to breach of CDM contracts and would reduce the credibility of the Article 6.4 mechanisms as the private sector would no longer trust these mechanisms.

A developed country participant said it would be helpful to have a common political understanding, and also to consider the legal fallback if these issues cannot be resolved.

Links between Article 6.2 and 6.4

This session started with a presentation by Kumarsingh. He said his presentation attempts to focus on the technical issues and leave out some of the political questions that continue to be asked on this issue, and the nuances and the broader context of the spirit of the Paris Agreement.

He noted that Article 6.2 sets out the principles for voluntary cooperative approaches, including sustainable development, environmental integrity and transparency (including in governance), and the avoidance of double counting.

Article 6.4, on the other hand, seeks to formally establish a sustainable development mechanism. There is a clear stipulation that it should have a supervisory body designated by the CMA. The aim of this mechanism is to promote mitigation while fostering sustainable development. It seeks to incentivise and facilitate participation of public and private entities that are authorised by a Party to contribute to the reduction of emission levels in the host Party. The resulting emissions reductions can be used by the originating Party, or by another Party, to fulfil its NDC. It must deliver overall mitigation in global emissions (OMGE). The Paris

Agreement also stipulates that the activities of the Article 6.4 mechanism will be overseen by a Supervisory Body under the authority and guidance of CMA.

Article 6.4 is further qualified by paragraph 37 of the Paris Decision, which stipulates that mitigation action is to be real, additional, measurable, long-term, and verified by a third party or designated operational entities. Article 6.5 further states that emissions reductions resulting from the mechanism shall not be used by the host Party if it is used by another Party to demonstrate achievement of its NDC. Article 6.6, meanwhile, agrees that a share of proceeds from the activities under the mechanism will be used to cover administrative expenses as well as to assist developing country Parties that are particularly vulnerable to the adverse effects of climate change to meet the costs of adaptation.

Kumarsingh said a question arises on the context of Article 6.1, which states that Parties recognise that some Parties choose to pursue voluntary cooperation in the implementation of their NDCs to allow for higher ambition in their mitigation and adaptation actions, and to promote sustainable development and environmental integrity. The Article on its own has no "action" items, and therefore it is reasonable to assume it applies to all the Article sub-items. The language is bottom-up, speaking of *voluntary* cooperation. Should there, therefore, be congruence and alignment in the design of Article 6.2 and 6.4?

Kumarsingh then presented a (non-exhaustive) list of questions for consideration. On Article 6.2, he listed the following questions:

- Does it apply to situations only where international transfers are used for NDC achievement?
- Are ITMOs discrete "units" that can be issued, used, and transferred for purposes other than NDC achievement?
- Does the term "cooperative approach", which is not defined, suggest a mechanism? If so, then what kind? Is it a trading mechanism, which can be used across emissions trading systems, or is it a crediting mechanism, where emissions reductions are credited against a baseline? Can credits originate outside scope of NDCs?

On "*promoting mitigation*" under Article 6.4, Kumarsingh listed the following questions:

- Can it promote mitigation beyond the scope of NDCs?
- What is the relationship between outcomes within and outside the scope of NDCs?

On delivering OMGE under Article 6.4, he asked:

- What exactly is delivered?
- How is it delivered?
- Who delivers it?
- How is it measured?
- When is it delivered?
- How is it accounted for?
- Who accounts?

Finally, he asked if the emissions reductions under Article 6.4 can only be used for NDCs, or also for other purposes. Kumarsingh then listed the following questions related to emissions reductions and ITMOs under Article 6.2 and 6.4:

- Will they be measured in the same units? Are they quantifiable? Or will they be reported as "amounts" to satisfy corresponding adjustments for example?
- Can they be used for cross purposes i.e. "ITMOs" generated under 6.2 used for 6.4 purposes and

"emissions reductions" generated under 6.2 used for 6.4 purposes?
- How will they be applied to NDCs given varied types of NDCs?
- What would be the relationship between emissions reductions and ITMOs if both can be used towards NDCs? How would they be accounted for? Does an ITMO become a emissions reduction if it migrates from 6.2 to 6.4 for NDC purposes and vice versa? What would then be required to prevent double counting?
- Should share of proceeds also be applied to 6.2 "units" as a result? Or should share of proceeds be applied to 6.2 units after they migrate to 6.4 for NDC purposes?
- What would be the implications of using ITMOs and emissions reductions for cross purposes? How would they be accounted for?
- Would 6.2 and 6.4 therefore have to have similar design characteristics, such as a common governance structure to ensure accountability and environmental integrity?
- How would ITMOs and emissions reductions be accounted for, if they are used outside of the scope of NDCs?
- What is the scope of activities that can generate emissions reductions and ITMOs?
- Should Parties use only either of 6.2 or 6.4? What are the safeguards for preventing cross-purposes?
- Should "emissions reductions" and "ITMOs" be fungible?

Kumarsingh presented **Table 1**, comparing the provisions of Articles 6.2 and 6.4. He noted that the Table raises further questions:
- If Parties use both 6.2 and 6.4, how would the design, rules, procedures, modalities, and guidance be operationalised to ensure environmental integrity, sustainable development, accountability, and transparency?
- Should 6.2 and 6.4 be complementary or distinct?
- What safeguards need to be put in place to avoid cross-fertilisation if they are kept distinct?
- What common features would need to be put in place if they are to be complementary?

A developing country participant said the fact that there are so many questions raises an overarching question: are Article 6.2 and 6.4, in truth, distinct? Or do they overlap? If they are distinct, how are they distinct? If they are the same, how are they the same? She said generation and use in both contexts may be the same. Are they units or accounting amounts? And if they are units, when it comes time to look at them in the context of NDCs, do they regardless become amounts? If the two are the same, she asked, why are we not treating them in the same way, including in the context of OMGE and share of proceeds? She felt a discussion on the commonalities and differences between Articles 6.2 and 6.4 would be useful, saying the lack of understanding on that issue could be underpinning some of the challenges in moving forward.

A developed country participant sought clarification on the reference to whether the governance structure should be the same for both mechanisms, saying the Paris Agreement makes it clear that Article 6.2 is the responsibility of the participating Parties, while Article 6.4 has a centralised structure.

A developing country participant said it is important to understand and agree that the main difference between the two mechanisms is that Article 6.4 defines a centralised mechanism under the UNFCCC that allows the generation of certified mitigation units; whereas the Article 6.2 mechanism is about the international transfer of mitigation outcomes towards NDCs, independent of where those units come from –they can come from 6.4, or from other schemes. This is why it should be ensured that the units generated under the Article 6.4 mechanism are credible. The Article 6.2 mechanism just needs guidance for environmental integrity and the prevention of double counting. As stated in the Paris Agreement, the outcomes of Article 6.4 can be used for many other purposes other than being used for the NDCs. Agreeing on this understanding will allow progress in many other areas, he said.

Table 1: Comparison of Article 6.2 and 6.4 provisions		
Issue/Provision	**6.2**	**6.4**
Achieving NDC	√	√
Mitigation outcomes only within NDCs	Unclear	Unclear
Higher ambition	√ Article 6.1 qualification	√ Article 6.1 qualification
Sustainable development	√	√
OMGE	Not explicit	√
Environmental integrity/ transparency	√ Explicit reference in Article 6	√ In §37, Decision 1/CP.21
Accounting for mitigation outcomes	√ Robust accounting explicit in Article 6. Corresponding adjustments in Decision 1/CP.21	√ Qualification of use in Article 6.5
Share of proceeds	Not explicit	√
Voluntary participation	√	√
No double counting	√	Not explicit, but Article 6.5 qualification
Private sector participation	Unclear	√
Type of mechanism (crediting/trading)	Unclear	Crediting, though not explicit. By virtue of qualification under §37, Decision 1/CP.21, which calls for emissions reductions, additionality, real and measurable reductions, and verification and certification
Nature of mitigation outcomes	Not defined. ITMOs can be internationally transferred, but how is unclear. As units? As "accounted for reporting" for the purpose of corresponding adjustments?	Not defined although the reference to "emissions reductions" may imply quantifiability in terms of tonnes of CO2-e
Party participation	All	All
Eligible activities	No explicit restrictions	Allows for "specific scope of activities" in §37(c), Decision1/CP.21
Governance	Centralisation not clear. Parties' oversight/ authorisation (Article 6.3); CMA "guidance"	Centralised, under the authority and guidance of CMA. Supervisory body designated by CMA. Authorisation by Party. §37 of Decision1/CP.21
Overarching rules	CMA guidance	CMA rules, modalities, and procedures.

A developed country participant said while the questions are interesting, are they relevant, and is there is a benefit in making a distinction? If there is no benefit, then perhaps we don't have to enter that debate.

Responding, Kumarsingh said the question "does it matter whether there is a distinction between 6.2 and 6.4" is key to resolving many of the other issues – once that is answered, other things will ostensibly fall into place with a common understanding,. If there are going to be transfers between the Article 6.2 and 6.4 mechanisms, it has implications for the governance: when does an ITMO become emissions reductions, and vice versa? At what point is it rechristened? If there are distinct governance structures, then would emissions reductions under 6.4 be subject to centralised governance when transferred to 6.2? Which governance system does it fall under, and when? How will it be tracked?

Overall Mitigation in Global Emissions

Espelage presented on overall mitigation in global emissions (OMGE), saying it is a principle in Article 6.4, and it is still not clear whether it applies to Article 6.2. She presented three possible interpretations of OMGE:

1. Result of ensuring environmental integrity of the activities and additionality of the emission reductions. In this interpretation, OMGE refers to "**real mitigation**".
2. Achieved through **conservative baselines** or crediting thresholds. In this interpretation, OMGE refers

to "mitigation for the host country".

3. Additional requirement of mitigation not claimed by any Party, achieved through **cancellation of ITMOs/credits**. In this interpretation, OMGE refers to "additional to Party commitments". This would refer to an additional requirement, beyond offsetting, requiring that a part of the mitigation outcome is neither claimed by the buying nor the selling country, and a portion of the ITMOs will have to be cancelled. She noted that this interpretation is not exclusive of the first two.

If OMGE is a principle of real mitigation, Espelage said, key questions relate to the integrity of baselines (how they are produced, how transparent they are, what assumptions they are based on, and how frequently do they have to be updated to reflect change in circumstances). Questions would also relate to how to hedge against environmental integrity, through gaming of baselines. The higher the level of aggregation and crediting, the higher the risks that baselines will overestimate or underestimate emissions. She highlighted, however, that stringent baseline setting does not guarantee additionality, and environmental integrity is not only a baseline issue. Another criterion is the consistency of the activity and baseline with a net zero target.

The second interpretation relates to delivering OMGE by ensuring that not all mitigation outcomes are accredited, for instance through overly conservative baselines.

The third understanding of OMGE as additional mitigation that is not claimed by any of the two Parties involved would be through cancellation, which could either happen at issuance or at transfer, and it would mean that a certain percentage of credits would be moved to a cancellation account and could not be used further. The questions then, Espelage said, are how high that percentage should be, and what impact would it have on the interest of the private sector to actually develop projects?

Espelage said the application of OMGE to Article 6.2 is a bit more contentious, because many Parties say it is not applicable, or it not feasible, though ways in which can be implemented have been considered.

In the discussion, a developed country participant said the term integrity should not only be used in the context of robust transparency and emission reductions, but also in not violating fundamental vital provisions. On the interpretation of OMGE, he said he sees the first two interpretations as merged together, and as more mitigation taking place than as compared to a situation where these activities would not have taken place.

Espelage said they initially had only had two possible interpretations, but were made aware that there is a difference in understanding between the first and the second. The first refers to the understanding that the use of the mechanism itself, because additional activities are implemented, ensures that there is more mitigation than without its use. The second refers to not exporting all mitigation and ensuring that there is more mitigation than what is exported.

A developing country participant said it is useful to pick these apart because many Parties do not understand what the AOSIS and LDCs are trying to accomplish. She said it relates to a misunderstanding between just achieving reductions through an activity versus retaining some reductions from an activity as the host Party and actually contributing to reductions that go beyond just offsetting. The first interpretation is essentially in a project context, just ensuring that a project activity actually reduces some emissions relative to the baseline. This relates to environmental integrity and has to be a given in any event. The second interpretation goes beyond environmental integrity and calls for an even more conservative baseline. The effect of drawing a more conservative baseline essentially means that the host Party of a given activity would end up retaining more of the reductions itself that it can then use toward its own NDC. For example, if a project reduces 100 tonnes, in the first interpretation the objective is to ensure that 100 tonnes is really reduced. In the

second interpretation, reducing 100 tonnes but with a conservative baseline means that a smaller number is transferred, which can be viewed as more environmental integrity. The third interpretation relates to being true to the language of the Paris Agreement, which says the mechanism shall aim to deliver OMGE. This does not refer to reduction from an activity, but to the mechanism itself, through its design, delivering OMGE.

She said OMGE is a new concept and shouldn't be conflated with the notion of environmental integrity because it's about trying to deliver an actual net benefit to the atmosphere out of this transfer. On the question about the timing of the cancellation, she said it should be at issuance, and paired with an adjustment. Without an adjustment, it would not deliver anything for the atmosphere, and the language of Article 6.4 says the mechanism shall aim to deliver an overall mitigation of global emissions.

Espelage observed that the best timing for the cancellation may depend on whether 6.2 and 6.4 are treated the same, and they go through the same database. Under the centralised mechanism of Article 6.4, cancellation at issuance would be the most forward approach, but if all units are treated the same, it might change what is more practical and straightforward.

A developed country participant said OMGE should result not only from the mechanisms, but also from the NDCs, and the impact of collective efforts should be determined during the global stocktake.

A developing country participant said while detailed discussions are important, the discussion should consider the broader context, where there are two mechanisms, and we wish to strike a balance between those two. For 6.4, we have the share of proceeds, corresponding adjustments, overall mitigation, and a centralised system. For 6.2, the provisions are much more relaxed. These differences should be kept in mind.

A developed country participant said he agrees that for the sake of balance OMGE should apply to both 6.2 and 6.4, but recognises it is not in the text for 6.2. In 6.4, he said it supports accounting for the mechanism, because if there is double counting there won't be OMGE; and it supports having ambitious, rather than conservative, baselines. He felt "conservative" baselines might be a misnomer because it sometimes means making conservative assumptions. He said the issue of the reference point for mitigation is important – is it business as usual, historic, the NDCs, or the 1.5°C goal? Is this concept meant to deliver more emissions than the NDCs request? Is it meant to divide the mitigation between the host country and the buyer? He said whether accounting applies is a fundamental issue, because if it doesn't apply, it lowers ambition.

On an issue of equity, he said the Article 6.4 mechanism is not about supporting the mitigation objectives of one set of Parties and sustainable development of another set of Parties like the CDM, but about mitigation in all Parties. Therefore the second interpretation of OMGE should be used rather than the third, which is asking Parties that are participating in the mechanism to go beyond again and increase their ambition whenever the Article 6 is used, and that is probably pushing it too far.

A developing country participant said another issue related to OMGE is the crediting period, because the lifetime of technologies are longer than these periods. He said the cancellation of units does not amount to cancelling anything, and no further guidance is needed on this.

A developing country participant expressed reservations on the first interpretation of OMGE, saying if it does not involve real mitigation, then why are we allowing it? He said the concept is straightforward – it is about going beyond a zero-sum game. He felt the differences in interpretation are a "careful obfuscation of facts". He said the third interpretation is closer to what OMGE should entail, and discussing whether we can support this

particular interpretation seems to be a far more useful approach, than discussing whether to allow real or fake mitigation into the system.

A developed country participant said Article 6.4 is supposed to foster sustainable development, incentivise participation by public and private entities, and contribute to the reduction of emissions level in the host country.

Another developing country participant said the place to discuss ambition is in the context of NDCs. Once ambition is determined, whatever means available should be used to turn that ambition into a reality. So it is a zero sum game, as long as we guarantee environmental integrity. There is no reason for us to use the third interpretation of 6.4 to do more.

A developing country participant said the ambition in the NDCs is not sufficient, and we are in an ambition deficit. So if we're going to end up exactly where we started with Article 6, that is asinine. Why are we designing a mechanism that will leave us exactly where we started or perhaps worse off, as with this CDM? We have a tool here that actually can be used to deliver more mitigation ambition, without Parties having to change their NDCs. Functionally, the effect of diverting a stream of units upon issuance, or upon transfer, is that a number of units will come out of the system and not be used by any Party. This will be beneficial for the host Party because studies have shown the price of those reductions will increase.

Espelage concluded by saying comments would be taken into account in the ecbi policy brief and called for additional inputs and quotes from negotiators.

Operationalisation of share of proceeds for Article 6.2 and 6.4

This discussion took place in a breakout group, and was kicked off with a presentation by Mbaye Diagne.

Diagne said share of proceeds was used under the Kyoto Protocol's CDM, and it is not a new concept. Article 12.8 of the Kyoto Protocol states that "*The* [Conference of Parties serving as the meeting of the Parties to the Kyoto Protocol] … *shall ensure that a share of the proceeds from certified project activities is used to cover administrative expenses as well as to assist developing country Parties that are particularly vulnerable to the adverse effects of climate change to meet the costs of adaptation.*"

This provision aims to ensure that countries that do not use markets, such as LDCs and SIDS, derive some benefit from market-based activities. It was further decided that 2% of the CERs issued for CDM project activities will be used as the share of proceeds. The second commitment period of the Kyoto Protocol extended this provision to the assigned amount units (AAUs) and the issuance of emission reduction units (ERUs) under the other two market mechanisms of the Kyoto Protocol.

In the Paris Agreement, Article 6.4 calls for a share of proceeds. It was subsequently decided that the Adaptation Fund will receive the share of proceeds from Article 6.4, just as it had from the CDM. Discussions are currently underway on other details, with two options on the table:

- The share of proceeds for adaptation shall be set and levied at [[two][five][X] per cent at issuance.][[X] per cent at [forwarding][first transfer], increasing by [Y] per cent at each subsequent transfer.]
- The share of proceeds for adaptation shall be set and levied at [X] at [registration][issuance]: {text for monetary rate needs to be developed} 77. [The share of proceeds to cover administrative expenses shall be set and levied at [X] at [registration][issuance].] {text for option of monetary rate and option of the combination of monetary rate and percentage of A6.4ERs needs to be developed}

Key issues that remain to be decided under 6.4 therefore include:

- the amount of the levy, and whether it should be 2% or 5%;
- whether the levy will be implemented at issuance or transfer; and
- whether it will be an in-kind levy, or a monetary one (in the CDM, part of the levy is in CERs and part is monetary, but the CERs element did not yield sufficient resources).

While the Paris Agreement does not include a share of proceeds for Article 6.2, the current text includes several options for a share of proceeds under Article 6.2 as well, related to what activities will be subject to the share of proceeds (cooperative approaches that are baseline and crediting approaches that are similar to mitigation activities; crediting approaches implemented by Parties; all cooperative approaches; or all acquisition of ITMOs). The amount of the levy and the point of implementing it also has many options in the text, as with 6.4.

Diagne then summarised the key issues in the negotiations on share of proceeds:

- Share of proceeds is a specific requirement of 6.4, but not for 6.2 in the Paris Agreement. However, Diagne said Article 6.1 specifically states that the market mechanisms should contribute to both mitigation and adaptation, and there is a call for balanced treatment of certain activities under 6.2 and 6.4. Moreover, a precedent was set by the Kyoto Protocol, where it was initially applied only to the CDM, but was subsequently extended to the other mechanisms. He acknowledged some challenges, like the different types of activities under Article 6.2, and the needs to ensure that there is no "double taxation" of 6.4 units transferred internationally to 6.2.
- Who should benefit from the share of proceeds, and whether it should be reserved for LDCs, SIDs, and African countries.
- How to ensure a stable source of finance for adaptation, including by having both, an in-kind and monetary levy.
- The need for simple and applicable rules.

In the discussion, Müller said he was intrigued with the issue of "no double taxation" juxtaposed with whether it should be an issuance levy or a transaction levy. He said you cannot have a transaction levy if you want to avoid double taxation, because that could mean you end up taxing every single transaction. He also highlighted the need for a balance between getting as much revenue as possible for adaptation, but without killing the market. He added that collecting money instead of credits units could become potentially a problem if they draw the attention of treasuries around the world, which may consider it very close to international taxation.

Diagne said if the levy is implemented at the point of transfer, some transactions under 6.4 may not be levied, as they may be used by the originating Party for their own NDC or for some other purpose than sale. He agreed on the dangers of identifying it as international taxation, but said the CDM currently has both – the monetary element is used for administrative costs. This is why the CDM Board has a lot of money now, but the Adaptation Fund does not. He said perhaps a basket approach could be used, where the funds are collected together.

Another developed country participant said there is no way countries will agree on international taxation. He said the levy amount for the Kyoto Protocol is in the Protocol itself and changing it would need an amendment to the treaty.

Diagne responded that while it is in the treaty, extending it to the other Kyoto Protocol mechanisms was done through a COP decision rather than treaty amendment, and a similar decision could be taken at COP25.

The developed country participant said in that case it is legally possible, but may not be politically possible. The provision for cooperation between Parties under Article 6.2 may make it more challenging than 6.4, which is a mechanism for the private sector and other entities. Moreover, he said, the definition of an ITMO is still under discussion – until a definition is agreed, Parties can interpret the share of proceeds as a tax on implementing NDCs, if that involves buying units from elsewhere. He also sought clarity on what "in-kind" means.

Diagne said "in-kind" is used to avoid using the word "units", which may not apply to 6.2, where they are called ITMOs. He said studies have been done on how the share of proceeds can be implemented in 6.2, and one way could be to apply it only to some transactions, or to the "net flow". If country A and B have transactions under 6.4, at the end of a defined period of one or two years, the net importer is subject to a levy on the net flow. There could be other ways, he said, but first the principle has to be accepted. On the governance, he said the money would go through the Adaptation Fund.

A developed country participant said the argument that the same activity could go under 6.2 or 6.4, and there shouldn't be an unfair incentive for the use of the Article 6.2 mechanism could work, but the problem is that not all activities have that choice. He asked how the share of proceeds would work if the units are used for "other uses" such as CORSIA. The UNFCCC cannot impose a share of proceeds levy on CORSIA of the purpose if to create a system that incentivises CORSIA to use credits created under the UNFCCC.

On "in-kind" activities under 6.2, he said possibilities were being considered for bilateral agreements on 6.2, but a technical way to achieve that had not yet been found, because under 6.2 we do not necessarily create a unit that has a value in itself. The only option would be to require private investors to pay a monetary contribution, but then this isn't a levy anymore. He asked how a levy would be technically possible for 6.2, without running into issues such as it being characterised as a global tax. Finally, he said the monetary element for administrative purposes under the CDM is very different from the share of proceeds, and it would be politically difficult to achieve a monetary levy.

Diagne said he agreed that not all activities can be implemented under 6.2 or 6.4, and that was why he said not all activities under 6.2 can perhaps be targeted. On how it can be done technically, he reiterated his earlier example of a levy on net flows.

The developed country participant asked if a levy on the net flow would have to be a monetary share of proceed, or whether an "in-kind" contribution would work. Diagne responded that the net flow of units can also be worked out easily, because at the end of the day, the amount of units bought by a country to implement its NDC would be easy to determine.

Müller said the notion of making CORSIA tax-exempt is very dangerous, because it runs into the danger of directing everything to CORSIA and leaving nothing to the Adaptation Fund. He said there should be a level playing field in the process.

Diagne said CORSIA would not pay a share of proceeds, because if the share of proceed is applied at issuance under Article 6.4 to pay for the infrastructure needed to generate it credibly, then any future transfers will not be subject to a share of proceeds.

A developed country participant said that was a useful clarification, because anything that goes out to CORSIA is subject to whatever happens within the Paris Agreement before it is transferred. He said the questions on Article 6.4 are not impossible to solve, and some could be worked on at a later stage. He said he was interested to hear that there were activities under Article 6.2 that are the same as 6.4, and asked if they could

be identified. He said another point that was not discussed, but is in the negotiating text, is making share of proceeds on 6.2 voluntary, and to leave it as something to be encouraged. There are two arguments for doing this, he noted. One is to have a certain equivalence between 6.2 and 6.4, particularly where there are comparable activities. The second is to raise money for adaptation. He reminded participants of the decision under the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol (CMP), which recognises that once the share of proceeds is in place on 6.4, the governance of the Adaptation Fund will move to the Paris Agreement.

Diagne said the EU Emissions Trading System provided money voluntarily to the Adaptation Fund in the past.

A developed country participant said the expansion of the share of proceeds to other mechanisms under the Protocol did require an amendment, and not only a COP decision, but it does serve as a precedent for the possibility that the share the proceeds could be extended beyond the treaty, into an emissions trading system. He said the issue of going through an international instrument to create a revenue stream based on activities that governments are going to be engaged in, whether it is called a fee or a tax or a levy or share of proceeds, is a sensitive one and would prove a challenge. However, the idea of implementing the levy on some activities of 6.2 deserves further reflection.

Müller concluded the session, saying designing markets is a special skill and it would be helpful to engage people who know about market regulations and impacts.

Centralised recording and accounting platform

This discussion took place in a parallel session and was initiated with a presentation by M.J. Mace.

Mace said Article 4.13 of the Paris Agreement requires Parties, in accounting for their NDCs, to promote Transparency, Accuracy, Completeness, Comparability and Consistency (TACCC) and environmental integrity, while avoiding double counting.

The Article 6.4 mechanism has centralised oversight, through a centralised registry and oversight body, to deliver share of proceeds and OMGE, and to prevent double counting. While the 6.2 mechanism does not have a centralised body, it is still required to: ensure avoidance of double counting; ensure environmental integrity and transparency, including in governance; apply robust accounting, to ensure the avoidance of double counting; and ensure that double counting is avoided on the basis of a corresponding adjustment by Parties. Mace said some of these 6.2 and 6.4 elements can only be addressed and ensured if information on both 6.2 and 6.4 is centrally maintained in one place, on an ongoing basis, and this information is visible and reviewable.

A range of proposals have been made on how to ensure this, she said, including for: an Article 6 database; an international registry; an international transaction log; and a centralised accounting and recording platform. But each of the proposals is trying to address different functions that are needed, and the challenge is to figure out how we can bring the most information together without pushing Parties past a level of comfort. Key overarching questions in this context include: the scope of information that needs to be centralised, and why; when we need to have it; where this information can be found; how this information is going to be brought together; and who maintains the information.

She listed the following specific questions that need to be addressed:

- What is the relationship between information on 6.4 and on 6.2?
- Will this information be used the same way by Parties?

- How to ensure no double counting of same projects under 6.2 & 6.4?
- Is authorisation relevant to both 6.2 and 6.4?
- Are both sets of information relevant to Parties and the public?
- Are both sets of information to be reviewed at same time, by the same people?
- Are both sets of information relevant for the global stocktake?
- Where do Parties and public look for a snapshot on Article 6?
- Are there restrictions/safeguards needed for both 6.2 and 6.4?
- How can we track transfers and use of 6.4 units and 6.2 ITMOs?
- Any reason to have real time information for some Parties but not for other Parties?

She listed the following potential functions for a centralised recording and accounting platform for Article 6:

- Record and compile information on corresponding adjustments.
- Track both A6.4ERs and Article 6.2 ITMOs that are transferred, acquired, held cancelled and/or used by participating Parties, including the identity of source Party, vintage of reduction, activity type, and sector, in a single place.
- Receive information from Parties' annual Article 6 reports, and receive real-time information on first transfers and corresponding adjustments, submitted by Parties between annual reports.
- Contain links to information on cooperative approaches.
- Generate annual reports.
- Maintain quantitative information on amounts forwarded in connection with the share of proceeds for adaptation.
- Maintain quantitative information on amounts cancelled/discounted in connection with an overall mitigation in global emissions.
- Support reviews.

The centralised recording and accounting platform could potentially reduce the burden on Parties, the UNFCCC secretariat, review teams, and the global stocktake process, Mace said. It could also: manage staggered reporting and plug gaps; support the reporting and review process by ensuring that information on all Parties is included and confirming pairing of transfers to check corresponding adjustments have been made; generate reports that can support Parties in reporting to CMA on their efforts; and highlight systemic problems to enable safeguards.

The Seminar ended following a discussion in the breakout group on this topic.