

**In-session technical workshop on findings on emission metrics contained in the Sixth Assessment Report  
(Bonn, Germany, 7th June 2023)**

**Opening remarks - IPCC Chair**

Thank you, Harry (Chair of SBSTA).

I am very pleased to address this in-session workshop which takes place in response to the invitation by the SBSTA 57 to the IPCC to present the findings on emission metrics contained in its Sixth Assessment Report at an in-session technical workshop at SBSTA 58.

Allow me to extend our special thanks to the Scientific Steering Committee of the workshop and both IPCC and UNFCCC secretariats for working tirelessly over the past weeks in preparation for this meeting.

We have set for ourselves two priority objectives for today. First, to disseminate key findings on emission metrics contained in its Sixth Assessment Report which represent the best available science as assessed by the IPCC. Second, to identify the benefits and shortcomings of the use of different metrics.

Metrics continue to play a crucial role as quantitative measures in the cause-and-effect chain from emissions to climate change. They are widely used to quantify the equivalence between CO<sub>2</sub> emissions and other gases or aerosols emissions. This equivalence can relate to various consequences of emissions, including climate forcing, temperature change and other climate impacts. It can also relate to mitigation or damage costs over some time.

Let me remind you that the Paris Rulebook states that each Party shall use the 100-year time-horizon global warming potential (GWP) values from the IPCC Fifth Assessment Report or 100-year time-horizon GWP values from a subsequent IPCC assessment report as agreed upon by the CMA, to report aggregate emissions and removals of GHGs, expressed in CO<sub>2</sub>-eq.

The same Rulebook also mentions that each Party may also use other metrics (for example, global temperature potential) to report supplemental information on aggregate emissions and removals of GHGs, expressed in CO<sub>2</sub>-eq.

The presentations by the IPCC representatives will demonstrate scientific developments in emission metrics since the AR5. These are assessed in WG I and WG III contributions to the AR6, highlighting key issues such as the existing types and uses of metrics, some uncertainties in metrics, gaps in current understanding, etc.

The experts will elaborate on the different types of metrics, both well-established and reviewed metrics and/or their extensions. They will also address those that have been recently proposed in the literature. These include purely physical metrics and more comprehensive metrics that account for both physical and economic dimensions of the climate change challenge.

For instance, the global warming potential (GWP), which compares the integrated radiative forcing of two greenhouse gases over some chosen time period - for example 20, 50, or 100 years horizon - in a well-established physical emission metric thoroughly addressed in IPCC assessments. It continues to be widely used in policy applications, including in the UNFCCC process.

The global temperature change potential (GTP) compares the global average temperature change at a given point in time resulting from equal mass emissions of two greenhouse gases. Efforts to establish relationships and differences between GWPs and GTPs, and other metrics are ongoing. One key difference between them is that GWPs represent the integrated radiative forcing of a pulse emission over a given period, while GTPs are evaluated at a chosen point in time.

The experts will demonstrate that practically, the effectiveness or appropriateness of using a given metric depends on which consequences are most important to a particular application.

Considering that the science continues to evolve, three experts have been invited to provide additional insights, including some recent developments [and applications building up on AR6].

Ladies and gentlemen, distinguished delegates and colleagues,

This workshop should provide an excellent opportunity to understand better what Parties consider as relevant information concerning metrics, particularly in the UNFCCC process. Furthermore, it's a chance to consider possible limitations or shortcomings which deserve further consideration by the scientific community.

Lastly, this workshop should ideally contribute towards research needs on the common metrics. Hopefully, this research will produce new scientific knowledge on emission metrics, which will be assessed in the AR7 and reflected in recommendations for the UNFCCC processes.

Let me conclude my opening remarks by wishing you great discussions and deliberations.

I now hand it over to Thelma Krug, IPCC Vice-Chair to moderate the workshop. Thelma the floor is yours.

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