Break Out Session 3: Deeper Dig into Accounting Metrics

Aims of session:

to achieve agreement and/or set of recommendations, at the end of the group discussion, on the appropriate metrics for characterizing these impacts/benefits, with adequate justification, further work as needed, remaining questions, and how to pursue the recommendations

Breakout groups:

Breakout group will start with 2 or 3 presentations digging deeper into the topics and would be followed by a moderated discussion.

Group 1: **Climate Metrics** *[Group Moderator – Borgar Aamaas]*

Group 2: **Health Metrics** *[Group Moderator – Jeff Brook]*

Group 3: **Agricultural Metrics** *[Group Moderator – Harry Clark]*

Group 4: **Economic Valuation and Metrics** *[Group Moderator – Gary Kleimann]*

Show of hands to see how many will join each group

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Group1: Climate Metrics:

Key questions for the group to consider (with justifications):

- Emissions: for which substances over which time frames do we need to develop emissions that can used with climate metrics (and units)
- What climate metrics can we use to compare the influence of substances on the rate of near term warming (e.g. over 20-30 year time frames)
- What climate metrics do we use for the warming by end of the century/ peak warming – e.g. to measure how we are achieving the Paris targets?
- What metrics can be used to estimate the course of temperature change over this century?
- What are further priorities for work to improve metrics that can be used?
- What are remaining questions?
- What should the follow up actions be?

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Group 2: Health Metrics:

Key questions for the group to consider (with justifications):

- Emission: for which substances over which time frames do we need to develop (and units)
- Emission metrics: are there metrics that can link emissions to health impacts?
- Exposure metrics: what are the required exposure metrics needed for different pollutants to quantify health impacts
- Health impact metrics (and relevant concentration-response functions):
- Further work:
- Remaining questions:
- Follow up actions:

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Group 3: Agriculture and Vegetation Metrics:

Key questions for the group to consider (for each what is useful….

- Emission: for which substances over which time frames do we need to develop (and units)
- Exposure metrics:
- Crop / vegetation impact metrics:
- Further work: (what could make it better)
- Remaining questions:
- Follow up actions

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Group 4: Economic Valuation of Impacts and Metrics for Financing:

Key questions for the group to consider on methods / **metrics to value impacts**:

- Metrics for valuation of climate impacts:
- Health impact valuation metrics:
- Crop / vegetation and ozone valuation metrics:
- Further work:
- Remaining questions:
- Follow up actions:

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Group 4: Economic Valuation of Impacts and Metrics for Financing:

Key questions for the group to consider on **metrics that can be used in financing**:

- Requirements for metrics for financing – what do they need to be able to do?
- How can metrics for climate impacts (Group 1) be used for financing mitigation?
- How can the health impact valuation metrics (Group 2) be used for financing?
- How can crop / vegetation and ozone valuation metrics (Group 3) be used for financing?
- How can the different impacts be integrated for financing purposes.
- Further work:
- Remaining questions:
- Follow up actions:

	Climate [Stabilization]	Climate [Rate of Change]	Health	Crops/Ag
Emissions	Ton/yr CO_2e	Ton/yr [CH_4/BC/HFCs]	Ton/yr [PM2.5/O3]	Ton/yr [O_3/$PM_{2.5}$]
Exposure	GWP	AGTP25 GWP*	Annual Av µg/m^3 Annual Av ppb	AOT40 M7
Response/Impact	°C	°C 25 yrs out °C 25 yr av	Deaths DALYS = YLL+YLD	Ton/4 staple lost/yr
Valuation	SCC	SCM/SCBC/SCAR	VSL Forgone Output	$/Ton each staple
Value	Market Price			
Policy objectives	SDG 13: <2°C in 2100	1.5°C in 2100 25-year rate of warming target	SDG 3	SDG 2