

Agenda item 3f

Facilitate, exchange and share experiences and best practices on the assessment of the environmental, social and economic co-benefits of climate change policies and actions informed by the best available science, including the use of existing tools and methodologies

Summary of the submissions received in response to the call for inputs

7th meeting of the KCI

Sharm el-Sheikh, 2-3 November 2022



Stig Svenningsen, KCI member

2 November 2022

Mandates

- Mandates: (Annex II to decision 4/COP.25, 4/CMP.15 and 4/CMA.2)
 - **Workplan activity 11**- “Facilitate, exchange and share experiences and best practices in the assessment of the environmental, social and economic co-benefits of climate change policies and actions informed by the best available science, including the use of existing tools and methodologies”
 - **Modalities** - “Input from experts, practitioners and relevant organizations”
 - **Estimated timeline** – “SB 55 and SB 57”
 - **KCI 6** agreed to provide more guidance on the call for inputs from experts, practitioners and relevant organizations with a view to receiving more input, and not to consider input that do not respond to the guiding questions.



Guiding questions

- A call for inputs was sent on 14 July 2022 for activity 11, requesting Parties and observers to respond to 3 guiding questions. Further guidance was provided in view of improving relevance and quality of submissions.

- **Guiding question 1:** Which climate change policy(ies) and actions, informed by the best available science, were assessed for environmental, social and economic co-benefits and what were the co-benefits identified from your assessment?

- ✓ **Further guidance:** *Define the climate change policies and actions, including scope (e.g. local, sectoral, national, international), category (e.g. mitigation, adaptation) and type (e.g. market-based instrument, regulatory instrument, voluntary programme, mitigation strategy, individual action); Describe what the environmental, social and economic co-benefits of the policies and actions are according to the assessment; Specify how the best available science informed the assessment*

- **Guiding question 2:** How such assessment was conducted? Were there any standards used? What are challenges and opportunities, and lessons learnt from these assessments?

- ✓ **Further guidance:** *elaboration on the assessment approach (e.g. qualitative and/or quantitative); the tools and methods used for the assessment (e.g. surveys, models); and the factors considered in selecting the assessment approach and data collection; the challenges and opportunities in, and lessons learned from, each step in the process*

- **Guiding question 3:** What actions were/are/will be taken based on the co-benefit assessment and what specific measures taken to maximize the co-benefits if any?

- ✓ **Further guidance:** *How the results of the assessment have informed the policymaking process; How ~~the results of the assessment have incentivized further action to maximize the co-benefits~~*



Overview of submissions

- As of 25 May 2022, in total of 13 submissions were received in response to the call.

Submitter	Status of submitter	Submission followed guiding questions?
CarbonCare InnoLab	NGO	Yes
Chile	Party	Yes
Climate Strategies *	NGO	Yes
FAO	IGO	Yes
Future Earth	NGO	Yes
Quaker United Nations Office	NGO	No
GIZ *	NGO	Yes
OPEC	IGO	Yes
UNEP-world conservation monitoring center	IGO	Yes
World Benchmarking Alliance	NGO	Yes
WMO *	IGO	Yes
Third World Network	NGO	Yes
Woman and Gender Constituency	NGO	Yes



* Organizations that have made submissions in the first-round call for inputs

Guiding question 1 – climate change policies and actions assessed

Categories	Climate change policies and actions
National level	<ul style="list-style-type: none">• Long-term Climate Strategy in Chile• The national plan to achieve Carbon Neutrality by 2050 in Chile• The nature-based solution to climate change in Vietnam (greenbelt, planting of trees, green urban parks, artificial lakes and wetlands)
Sector level	<ul style="list-style-type: none">• Nature-based climate activities in agricultural sector• REDD+• Deployment and scaling-up CCS and hydrogen technologies in energy sectors• Decentralized production of green hydrogen in Netherland
City level	<ul style="list-style-type: none">• Tracking performance of climate actions in six mega cities of East Asia
Company level	<ul style="list-style-type: none">• Climate action plan and low carbon transition plan implemented by companies
Others	<ul style="list-style-type: none">• WMO - Providing climate information service for adaptation and resilience• Adaptation measures<ul style="list-style-type: none">• investments in windbreaks as a response to heavy winds, rehabilitation and expansion of irrigation systems• Ecosystem-based adaptation measures• Nature-based solution to store water in Kristalbad, Netherland• Rights-based climate change policies and actions



Guiding question 1 – co-benefits of climate change policies and actions

- **Environmental co-benefits**
 - Reduction of social pollutants; Cooling down effect of urban areas during heat waves; less heat pollution
 - **Economic co-benefits**
 - Net benefits in terms of cost effectiveness.
 - Economy-wide GDP growth
 - The required level of CAPEX for low carbon transition crowds out investment in other sectors. However, the improvement in efficiency and savings of fuel cost outweigh the crowds-out effect.
 - Diversification of exports in energy-producing and exporting economies (by deployment and scaling-up of CCS)
 - Increased land productivity and the availability of natural resources (resulting from nature-based climate change actions)
 - Production: reduced production costs; increased crop yields
 - Income: Increased income of farmers; higher wages for employees
 - Economic diversification
 - Prosperous tourism sector (nature-based solution to climate change in Vietnam)
 - **Social co-benefits**
 - Reduction of social cost of carbon
 - **Jobs:** creation of green jobs and decent work; Improved work environment
 - **Others**
 - **Biodiversity** conservation, reduction of cost of nature
 - **Cultural values** (maintaining a sense of place, opportunities to practice traditional livelihoods, spiritual and aesthetic values)
 - **Health:** health benefits of reducing local pollutants associated with GHG emissions
 - **Risk avoidance:** Reduced market, policy, reputational and technological risk for companies
 - **Gender-specific co-benefits** of climate actions: the benefits of clean energy in households
 - **Interlinkage of co-benefits**, e.g. improvements in human health leading to reduced public expense and increased economic productivity.
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Guiding question 2 – assessment approach and tools 1/3

Basic assessment approach:

- **Marginal abatement cost analysis** to estimate the shadow price of carbon;
- **Cost-benefit analysis** to estimate the health co-benefits (from reduction of local pollutants) arising from GHG mitigation actions.

Modeling tools:

- **A multi-sector macroeconomic general equilibrium model** to simulate the effects of the mitigation package on main macroeconomic variables.
 - a) Input-output modeling and general equilibrium modeling;
 - b) Linking with sector models that generate data on capital and operational expenditure related to sector interventions;
- **Country-specific macro-economic models:** macro-econometric input-output models, dynamic general equilibrium model.
- **E3ME developed by Cambridge econometrics** – comparison of alternative scenario (stronger focus on CCS and hydrogen technologies) with the reference case



Sector-specific tools

- Ex-Ante carbon balance tool - a toolbox of excel-based calculators focusing on **agricultural sector**, consisting of three complementary tools for 1)quantifying GHG emissions from agri-production, 2)analyzing GHG emissions and social-economic benefits of agricultural value chain, and 3) assessing the project-level impacts of agricultural activities on biodiversity (FAO)

Qualitative approach

- Extensive survey coupled with community focused consultations
- The method of co-creation of policies - Engaging diverse stakeholders and understanding their role in the decision-making process. (Climate Strategies)

Mixed tools

- Combination of spatial analysis, literature review and stakeholder consultation to assess the co-benefits of nature-based climate change mitigation and adaptation actions. (UNEP-WCMC)



Indicators

- **Core social indicators** and **just transition-specific indicators** to evaluate the social impacts of climate actions undertaken at company level. (World Benchmarking Alliance)

Guidelines and best practices

- Guidance on Good Practices for Climate Services User Engagement;
- Report on Valuing Weather and Climate: Economic Assessment of Meteorological and Hydrological Services, 2015. (WMO)

Gender specific tools

- Using recognized instruments for mainstreaming gender consideration at government level, such as **gender impact assessment, gender analysis of legislation, gender equality marker systems**. (woman and gender constituency)



Co-benefits of long-term climate strategy in Chile:

On social price of carbon: the current shadow price of carbon was underestimated as it does not reflect the greater ambition committed by Chile after Paris Agreement

On health co-benefits: This assessment of co-benefits was made for the whole mitigation strategy. The challenge now is to assess the co-benefits of each measure at sectoral and local level.

Equilibrium model to assess the co-benefits of Carbon Neutrality by 2050 in Chile:

- The model indicated the need to enhance the unsolicited participation of **private sectors**;
- Further analysis could be conducted on how to ensure **financing of mitigation actions**, how to **reduce political economy constraints and investment risks** and the **evaluation of instruments** needed for the implementation of climate targets.



OPEC on the impacts of deploying and scaling up CCS and hydrogen

- Knowledge gaps exist in understanding why some regions or countries encounter delays in technological change and innovation, as well as the role of policies and limitations, including finance.
- Understanding of mechanisms for inclusive approaches in knowledge flows is important to ensure developing countries receive sufficient support to mitigate climate change while aiming to increase any expected co-benefits and eliminate potential adverse impacts.

World Benchmarking Alliance

- To date, few countries are actively developing just transition indicators to assess the impacts, benefits, and risks of the transition from a social point of view.
- The just transition assessment shows the need for governments to better integrate just transition planning into their low carbon strategies and actively work with companies in doing so.



Future Earth on qualitative approach

- The qualitative approach offered the best choice to select the most authentic and ground-based approach from a high-scientific mindset. It can be used in the climate change framework of policies or plans or climate change mitigation plans.

Future Earth on how to inform the policy making

- The results of the co-benefits assessment have been instrumental in informing the policymaking process. It identifies the gaps between the data and its interpretation for decision-making.

On WMO climate information service

- Monitoring of social, economic and environmental co-benefits remains consistently weak worldwide despite noticeable progress on governance for climate information services.



Guiding question 3 – Actions to maximize the co-benefits

- **Long-term climate strategy in Chile** - The results of the assessment have fed into and validated the decision-making process that led to the long-term mitigation strategy. The assessment also served for the legislative discussion for the climate change framework law.
- **GIZ's assessment** supported mainstreaming climate adaptation into economic development agendas of their partner countries.
- **OPEC:** Creating an enabling environment for investment in mitigation options, through appropriate policy and sufficient funding, should be a high priority for the world to achieve the long-term goals of the Paris Agreement in the context of equity and sustainable development.
- **Women and gender:** Specific measures are needed to facilitate women's access to jobs in green economies; Develop robust tools to measure economic empowerment outcomes on women.
- **Rights-based climate actions:** The co-benefits of national climate plans **targeting people living in vulnerable situations** (including people in poverty, women and girls, indigenous people, local communities etc) are critical for a successful low carbon economic transformation.



Thank you!



Strategy for implementing activities in the workplan (2021-2022) of the Katowice Committee on Impacts

11	Facilitate, exchange and share experiences and best practices on the assessment of the environmental, social and economic co-benefits of climate change policies and actions informed by the best available science, including the use of existing tools and methodologies.	SB 55/ KCI 6 (originally planned for 2021) and SB 57/ KCI 8 (originally planned for 2022)	IEPO	<ol style="list-style-type: none"> 1) KCI invites submission to provide concrete examples and best practices and participation of experts in the meeting. 2) Agree on specific focus for requesting call for inputs by KCI 5. Call for inputs will be done right after KCI 5. 3) KCI considers the inputs received at KCI 6. 4) KCI holds discussions on “best practices on the assessment of the environmental, social and economic co-benefits of climate change policies and actions informed by the best available science, including the use of existing tools and methodologies” at KCI 6 5) KCI 6 meeting report will be adopted in advance of the next forum meeting. The KCI meeting report will include recommendations and/or key findings, as applicable, for consideration by the forum. 6) repeat the process for KCI 8
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a The numbering of activities follows the agreed workplan activities for the forum and its KCI.

b IEPO = Input from experts, practitioners and relevant organizations; TP = Technical paper; CE = Concrete examples

c Also consider how to include gender considerations in implementation of these activities

Source: Report of KCI 4, Annex IV

