

Regional workshop on

Facilitate the development, enhancement, customization and use of tools and methodologies for modelling and assessing the impacts of the implementation of response measures, including identifying and reviewing existing tools and approaches in data-poor environments

Activity 3 of the workplan of the forum on impacts of implementation of response measures

Informal note by the Chair of the Subsidiary Body for Scientific and Technical Advice and the Chair of Subsidiary Body for Implementation

I. Introduction

A. Background and mandate

1. The Conference of the Parties (COP, 4/CP.25), the Conference of the Parties and the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol (CMP, 4/CMP.15), and the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement (CMA, 4/CMA.2) agreed on workplan of the forum on impacts of the implementation of response measure (RM-forum) and its Katowice Committee on the Impacts of the Implementation of Response Measures (KCI).
2. As part of this work plan, the Parties agreed to hold a regional workshop for activity 3 “Facilitate the development, enhancement, customization and use of tools and methodologies for modelling and assessing the impacts of the implementation of response measures, including identifying and reviewing existing tools and approaches in data-poor environments, in consultation with technical experts, practitioners and other relevant stakeholders”.
3. Further, the COP (19/CP.26), the CMP 7(/CMP.16) and the CMA (23/CMA.3) requested the secretariat to organize a regional workshop on activity 3 of the workplan before the fifty-sixth sessions of the subsidiary bodies in collaboration with relevant organizations and stakeholders to address regional needs and acknowledge the work that is being carried out by the KCI and note that further regional workshops on activity 3 could be decided by the forum.
4. In addition, KCI has prepared a technical paper¹ and a data base of tools² on the activity 3.

B. Informal note

5. The SBSTA Chair and the SBI Chair, with the assistance of the secretariat, has issued this informal note under their own authority. This note is informal in nature, has no status, and does not represent agreed views, ideas or text; nor is it an attempt to draw any conclusions on possible areas of convergence or divergence. It does not attempt to provide a record of all views expressed during the regional workshop or to indicate the weight of support that each of the options appeared to have.
6. This note does not attempt to synthesize the information presented by speaker. However, the views expressed by speakers and participants during the workshop are reflected in the note.

II. Proceedings

7. The workshop was held on 20 -22 April 2022 in St. John’s, Antigua and Barbuda, in collaboration with ILO and UNDP.
8. Prior to the workshop, KCI members were invited to the workshop to participate and deliver presentations, Parties from the LAC region were invited to nominate the expert for participate in the workshop. In addition, experts were identified and invited by UNFCCC, ILO and UNDP for delivery of presentation at the technical workshop. Following persons/organizations delivered the presentations:

(a) Opening remarks: Ms. Marianne Karlsen, the Chair of SBI, and Mr. Tosi Mpanu Mpanu, the Chair of SBSTA; Ms. Kusum Lata from UNFCCC; Mr. Moustapha Kamal Gueye, Coordinator of Green Jobs Programme, ILO; Ms. Valerie Cliff, Resident Representative UNDP Barbados and the Eastern Caribbean, UNDP; Mr. Wael Farag Basyouny Kamel Keshk, on behalf of the Incoming COP Presidency; Mrs. Ena Henry,

¹ KCI/2021/5/5

² <https://unfccc.int/documents/274695>

Permanent Secretary for the Ministry of Health Wellness and the Environment of Antigua and Barbuda;

(b) Organizations: SINTEF, UNFCCC, ILO, UNDP, CEPAL, Universidade de São Paulo (USP), Climate Analytics, University of Mauritius, Climate Strategies;

(c) KCI members: Catherine Goldberg, USA; Peter Mari Govindasamy, Singapore; Annela Anger-Kraavi, Estonia;

(d) Parties: Antigua and Barbuda, Argentina, Brazil, Chile, Colombia, Ecuador, Mauritius, Paraguay, Singapore, Trinidad and Tobago, and European Union.

2. In opening the workshop, the SBSTA and SBI Chairs outlined the background to the workshop which was further elaborated by UNFCCC secretariat. The ILO and UNDP provided relevance of their work to the response measures. Incoming Presidency covered importance of this workshop in delivering of the mandates at COP 27. Lastly, host country added national circumstances dimension to the importance of workshop for the region and its timeliness.

3. The workshop saw more than 20 interventions made by speakers spread over three days, roughly planned as:

(a) Day one: General introduction to impacts of response measures, tools, methodologies and process of undertaking assessment of impacts of response measures

(b) Day two: Introduction to variety of tools and methodologies used to assess impacts of response measures at regional level and country level through case studies

(c) Day three: Introduction to capacity building and financial support programmes available to countries to undertake assessment

4. Two interactive sessions were also organized as part of the workshop during which participants shared their experiences and held discussion among themselves related to specific topic.

5. More than 40 participants, including KCI members, experts and representative of Parties from the LAC region and SIDS attended the workshop in-person and virtually. Slide decks shared by presenters are available on the workshop page³.

6. In closing the workshop at the end of day three, the participants were requested to provide feedback on the workshop as an input to the forum with a view for the forum to decide on future workshops in line with the mandate. The UNFCCC, ILO and UNDP thanked, among others, the participants for their interactive engagement and for contributing to the open exchange of views, the government of Antigua and Barbuda to host the workshop, and the experts for joining and presenting at inconvenient times. Finally, UNFCCC reiterated the view of SB Chairs, that the feedback provided by the participants would be captured and communicated for the SBSTA and SBI meeting in June.

II. Summary of discussions

A. Introduction to impacts of the implementation of response measures

1. The interventions aimed to introduce the work on impacts of implementation of response measures (response measures) under the convention, the Kyoto Protocol and the Paris Agreement to enhance awareness of participants related to policies and their linkage with the impacts.

2. The secretariat presented the general information regarding and updated on negotiation on response measures workstream. These include provisions concerning response measures under the convention and under the Paris Agreement, evolution of the workstream over time and future work under the Paris Agreement.

³ https://unfccc.int/event/forum_WPactivity_3

3. Co-Chair of KCI, Ms. Catherine Goldberg, presented policies and their potential social, economic and environmental impacts that is available in KCI's technical paper on capacity building. The intervention aimed at enhancing understanding different types of impacts of implementation of policies and actions.
4. The discussion during this session evolved around:
 - (a) Which ministry should be tasked or oversee the works related to response measure;
 - (b) Involvement of the region in the negotiation on response measures workstream;
 - (c) The linkage between assessment under response measures and environmental impact assessment.

B. Introduction to the use of tools and methodologies for assessment

5. The interventions presented how the scientific tools and methodologies can be used for policy planning both just transition policies and economic diversification policies which are informed by assessment of impacts of implementation of mitigation actions and provided overview of tools and methodologies along with their strengths and weaknesses.
6. Ms. Sangji Lee from UNDP presented process aspects of using tools and methodologies for policies planning. The process includes assessment of policies, stakeholder engagement, national capacity building, policy alignment and engagement, and communication and knowledge sharing.
7. Co-Chair of KCI, Ms. Catherine Goldberg, presented KCI's technical paper on tools and methodologies which provided overview of available qualitative and quantitative tools and methodologies that can be used for assessment. Criteria for selecting tools and methodologies were also presented.
8. The discussion during this session evolved around:
 - (a) The importance of data for assessments;
 - (b) The option for qualitative assessments which do not require as much data as quantitative assessments;
 - (c) The process for engaging UNDP in the assessment, and the need to clearly state the limitation of the model, for example in terms of the data used.

C. Case studies

9. The sessions with case studies aimed at sharing studies which have been undertaken at regional or country level, the tools and methodologies that were used and the result of such studies. The assessments in the case studies were conducted in the different contexts, such as labour impacts, NDC, just and energy transitions, and cost-benefit of mitigation alternatives).
10. The case studies covered the following region, countries in the region and SIDS:
 - (a) Latin America and the Caribbean: Quantifying Labour Impacts of Decarbonization Strategies, by Ms. Kirsten Svenja Wiebe, and Scenarios for a new development pattern in Latin America and the Caribbean, by Ms. Camila Gramkow. Ms. Wiebe presented the outcome of a project/study which assessed net impacts of decarbonization strategies on jobs or employment in some countries in the region. The strategies covered a number of sectors. The study assessed jobs that can be created or that are at risk of becoming stranded in different sectors and under different strategies. The impact to the GHG emissions were also assessed in the study. Ms. Gramkow presented a work that assessed opportunities for the region for a transformative recovery with equality and sustainability in the face of crises, in particular COVID-19 pandemic. The work simulated the impacts of the scenarios in NDC of countries in the region, including impacts of the pandemic, on, among others, GDP, employment and emissions in the region;

(b) Antigua and Barbuda: NDC Revision and Just Transition Jobs Analysis, by Mr. Robert Brecha. Mr. Brecha presented the mitigation measures in the NDC of Antigua and Barbuda and how the country plans to achieve its NDC target. He also explained modelling exercise that was carried out to evaluate different scenarios to meet the energy/electricity demand of the country as part of the NDC planning. The exercise looked into the levelized cost of each scenario and its impacts on jobs, both at the construction/installation stage and during operation stage. At the end of his presentation Mr. Brecha shared general takeaways which included problem in accessing high quality, disaggregated and consistent data;

(c) Argentina: Labour impact evaluation of climate change policies towards NDCs, by Mr. Joaquin Etorena Hormaeche. Mr. Hormaeche presented labour impact analysis of NDC of Argentina. The analysis assessed the costs and benefits of different potential emission reduction options in diverse sectors. It also included scenarios for COVID-19 pandemic recovery. Modelling was involved in the analysis and it investigated the impacts on employment and CO2 emissions. Mr. Hormaeche also showed how the modelling identified the impacts on employment for each men and women, different age groups, and different types of workers, in renewable energy sectors. He also presented the result of the modelling that identified the scenarios with best result in terms of emission reductions and which scenarios with best result in terms of employment;

(d) Brazil: Green jobs in Brazil: An input-output analysis, by Mr. Joaquim Bento de Souza Ferreira Filho. Mr. Ferreira Filho presented an analysis which estimated the number of green jobs in 2015 in each sector and examined the potential of green jobs creation by sectors in Brazil. The result of the study included the employment impact (employment multipliers) and impacts to the supply chain for each of the conventional and green scenarios/strategies in the sectors. The result shows that green scenarios/strategies in the sectors have higher employment multiplier, but conventional scenarios/strategies have longer supply chain;

(e) Chile: Net-zero by 2050: Road to carbon neutrality in Chile, by Mr. Hector Osorio. Mr. Osorio presented Chile's energy scenario towards net-zero in 2050. The identified measures to achieve the target were being assessed using investment and financial flows climate finance tool in order to identify the additional financial requirements and define the necessary policies to promote the measures. This tool, together with CGE model, enabled the assessment of macroeconomic impacts;

(f) Colombia: Colombia: Green and Just Recovery Policy Assessment Colombia, by Mr. Braulio Torres. Mr. Torres presented a study which involved assessment of green and just recovery policy in the context of Colombia's green growth national policy, circular economy national strategy and NDC. The assessment served as the basis for social dialogue and promote actions towards just transition. The study identified opportunities to promote green jobs by sectors, including skills and on-the-jobs needs for future green job markets. The study also resulted in policy recommendations, i.e., among others, promoting green enterprises in some sectors;

(g) Ecuador: M3E Model adapted to waste sector in Ecuador (Modelling Mitigation Measures), by Ms. Rosa Ana Gonzalez. Ms. Gonzalez presented modelling exercise using M3E for waste sector in Ecuador. The exercise aimed at assessing and comparing waste treatment scenarios in terms of their emissions and costs. This exercise served as starting point for a more detailed analysis to determine the optimal solid waste management scenario for NDC. The tool was considered simple and flexible;

(h) Mauritius: Modelling Green Jobs and Low Carbon Development in Mauritius: The Green Jobs Assessment Model for Designing Better and Sustainable Recovery and Climate Policies, by Mr. Riad Sultan. Mr. Sultan presented a study which aimed at providing insights from economic-wide modelling of employment and GHGs. The exercise examined the current green jobs level and what employment impact low-carbon strategy of Mauritius could have in several segments in each sector. The impact included both direct impact (impact in the respective sector) and indirect impact (impact to other sectors through supply chain). The exercise also looked into the associated GHG emissions of the strategy;

(i) Paraguay: Determinants and cost-benefit analysis for the implementation, differentiated by production stratum, for the NAMA of the Livestock Sector in Paraguay, by Ms. Irene Wasilevsky. Ms. Wasilevsky presented an economic analysis for different sustainable livestock practices in Paraguay. The analysis took costs for each practice, different climates in the country, different regions and different sizes of farm into account. The analysis also came up with proposals for different combination of sustainable livestock practices and the associated costs;

(j) Singapore: Singapore's Energy Transition - Perspectives of a small island city state, by Mr. Peter Govindasamy. Mr. Govindasamy presented Singapore's energy transition as part of the country's climate efforts. He explained the country's national circumstances which also contribute to cross-border impact of its trading partners' response measures on Singapore. He also explained policy responses in place to address the impacts of the implementation of mitigation policies which include, among others, pre-emptive cooperation, coordination and coherence at both international and national levels, and stakeholder engagement at national level;

(k) Trinidad and Tobago: Managing the Energy Transition in Trinidad and Tobago – Setting the Policy Framework, by Mr. Kishan Kumarsingh. Mr. Kumarsingh present the country's work for a just transition to a low-carbon pathway which harmonizes climate, energy and economic goals. He also explained the policy directives and strategies adopted by the country to achieve the goals. These include, among others, institution framework for coordination among government ministries and agencies, stakeholder engagement to harmonize policies and reduce risks of unintended negative consequences, workers and community support, gender equality, and promoting low-carbon innovative industries.

D. Support for assessment

11. The session on support for assessment aimed at discussing what support and cooperation available to assist countries in their assessments.

12. Four presentations were made during this session:

(a) Ms. Sangji Lee from UNDP presented UNDP's Climate Promise. Ms. Lee explained that Climate Promise is a support to countries on NDCs as contribution to the NFC Partnership. She also shared the areas of support under Climate Promise. These include qualitative and quantitative assessments, stakeholder engagement, national capacity building, policy engagement, and analytics and knowledge generation/dissemination;

(b) Ms. Carolina Ferreira from ILO presented support for Green Jobs Assessment in Latin America and the Caribbean. Ms. Ferreira shared the ILO's Green Jobs Assessment Institution Network and Rapid Situational Analysis, which a quantitative analysis consisting of a set of tools developed by the ILO to help identify key opportunities for a just transition. She also shared support initiatives that the ILO provides. These includes Partnership for Action on Green Economy (PAGE) which supports nations and regions in reframing economic policies and practices around sustainability, Climate Action for Jobs Initiative and Global Accelerator with main goals of enabling climate action with decent jobs and social justice and supporting countries for a just transition, Development cooperation, and Training and capacity building;

(c) Ms. Nia Hunjan and Mr. Andrzej Blachowicz presented South-to-South Cooperation on Just Transitions. The initiative has been in existence since 2018 and aims at advancing national just transition agenda in each of the partner countries, developing just transition guidelines specific to the Global South, building a south-south knowledge sharing network, and building awareness among finance providers on just transition. Ms. Hunjan also presented opportunities to maximize co-benefits of just transition through south-to-south learning by creating a network of academic/analytical partners in different countries and contributing to regional and international events;

(d) Ms. Annela Anger-Kraavi presented just transitions in the European Union. Ms. Anger-Kraavi shared example of just transition's work in programme for energy efficiency in buildings undertaken by one EU's member states. The example showed the

impacts of the programme on employment. She also shared the lessons learned from this programme which include, among others, its contribution to a paradigm shift in the sector.

E. Interactive sessions

13. Two interactive sessions were organized. In the first interactive session, participants shared their views and experience on assessments which were undertaken in their country. The participants were also invited to share, among others, what tools and methods used for assessing the impacts of their policies, what were the identified impacts, and whether there was any stakeholder engagement process as part of the implementation of their climate policies.

14. The exchange of the views and experience can be summarized as follows:

(a) Participants shared the national development plan of their countries. The plan has key sectors for development and indicators as guiding points throughout the implementation stage. In many instances, the country's NDC is part of the national development plan;

(b) Participants further shared their experience pertaining to development of different strategies, such as renewable energy growth map, framework for just transition, youth engagement strategy, in the context of the preparation of NDC;

(c) Stakeholder engagement process and/or social dialogue were in place. This included tripartite system involving workers, private sectors and government to manage sectoral policies;

(d) Participants also shared their stakeholder engagement process which was conducted virtually and covered a huge number of stakeholders. This process has enabled the country to have gender responsive and social inclusion targets in its updated NDC;

(e) The importance of private sectors was highlighted by participants. They viewed that national targets cannot be achieved without involvement and inclusion of private sectors in the process. In this aspect, participants explained that the countries have developed a program to include private sectors in the management of climate change through certification for carbon zero, and have amended legislations in order to attract investment by private sectors, for example through feed-in tariff;

(f) Participants also highlighted the challenges they encountered which include financing for implementing the plan and engaging local utility companies in order to implement the plan;

(g) The social and economic impacts of the strategies in the NDC need to be assessed. Therefore, the need to have national capacity for assessing impacts of the strategies in country's NDC was highlighted by participants.

15. In the second interactive session, the participants, in three different groups, were given different NDC scenarios and discussed tools and methods that could be used to assess the impacts of the NDCs, policies that could contribute to a just transition, and actors who need to be involved in the design and implementation of the NDCs. Each group brainstormed different scenario. The first group discussed NDC scenario of a SIDS with 20 per cent GHG reduction by 2030 with focus in energy, electricity and transport. The second group discussed NDC scenario of a middle-income country with 30 per cent GHG reduction by 2030 with focus in energy, agriculture, forestry and land use. The third group discussed NDC scenario of a low middle-income country with 35 per cent GHG reduction by 2030 with focus in electricity, energy efficiency in building and appliances and waste management. Each group was also given key national policies that are relevant for the focus.

16. At the end of the session, each group shared its discussion with the other groups. Some key points from the discussion are summarized as follows:

(a) Tools and methods to assess the impacts of the NDCs: There need to be assessment of capacity, institutional, training needs, and stakeholder engagement. Further,

survey on labour force, tool for monitoring and evaluation, modelling for energy system and investment would also be necessary;

(b) Policies contributing to a just transition: National policy on the focused sectors is required. Further, policies pertaining to labour, trade, worker unions, government incentives or tax, education and capacity building, financing, research, and stakeholders impacted by the NDCs need to be in place;

(c) Actors to be involved in the design and implementation of the NDCs: Participants listed a wide range of actors or stakeholders. They included workers (including migrant workers), trade unions, civil society, vulnerable groups, policy makers, ministries, private and public sectors, academia, international agencies, and multilateral development banks.

F. Feedback from participants

17. At the closure of the workshop, participants provided feedback regarding the workshop.

18. The feedback can be grouped into the following:

(a) Emphasis on capacity building which can allow for higher ambition by countries, including capacity building that is tailored to specific region or countries with similar circumstances and capacity building on just transition, in order to better prepared the NDCs;

(b) More hands-on and practical session in order to experience the use of the tools and methodologies, including working with real case studies;

(c) More involvement of participants from different background/departments;

(d) More interactive sessions: more interactions among participants through small group discussion;

(e) To have a session on development of dataset;

(f) To also have a session on impacts of adaptation activities;

(g) Emphasis on the need to have critical examination or validation of the models;

(h) To have case studies that relate to cross-border impacts and economic diversification and transformation, and case studies that include gender impact assessment;

(i) Allocated time not adequate.
