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Matters relating to the forum on the impact of the implementation of response measures serving the Convention, the Kyoto Protocol and the Paris Agreement

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2026 global dialogue on the impacts of the implementation of response measures

Summary report by the secretariat

Summary

This report captures the discussions held during the 2026 global dialogue on the impacts of the implementation of response measures, which took place in Bangkok from 21 to 22 September 2026. The dialogue focused on the topic of economic diversification and structural resilience in global transition pathways to manage impacts on vulnerable populations across sectors. The discussions provided participants with the opportunity to share observations, experience, opportunities and challenges related to the topic.

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Abbreviations and acronyms

AI	artificial intelligence
CCUS	carbon dioxide capture, use and storage
CMA	Conference of the Parties serving as the meeting of the Parties to the Paris Agreement
CMP	Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol
COP	Conference of the Parties
ESCAP	Economic and Social Commission for Asia and the Pacific
GDP	gross domestic product
KCI	Katowice Committee of Experts on the Impacts of the Implementation of Response Measures
LDC	least developed country
LT-LEDS	long-term low-emission development strategy(ies)
NDC	nationally determined contribution
SIDS	small island developing State(s)
UNCTAD	United Nations Conference on Trade and Development

I. Introduction

A. Mandate

1. COP 30, CMP 20 and CMA 7 decided that a two-day global dialogue on the impacts of the implementation of response measures shall be held each year from 2026 to 2029 in conjunction with an intersessional meeting of the KCI, noting that such dialogues should be conducted in hybrid format to allow for both in-person and virtual participation,[1] and requested the secretariat to prepare a summary report capturing the discussions held at each of the global dialogues.[2]

B. Scope

2. This report, prepared under the guidance of the Chairs of the subsidiary bodies, is intended to reflect the presentations made and views expressed by participants, including on experience, opportunities and challenges relevant to the topic, during the 2026 global dialogue referred to in paragraph 1 above.

3. The report does not represent a collective position taken by participants, nor does it represent the views of the secretariat. No judgment has been made on the views expressed by the participants. The report does not provide an exhaustive account of all interventions or attempt to capture every detail or remark.

C. Organization of the 2026 global dialogue

4. The 2026 global dialogue was organized under the guidance of the Chairs of the subsidiary bodies, in partnership with ESCAP and UNCTAD. It was held from 21 to 22 September 2026 in Bangkok, in hybrid format, in conjunction with the 15th meeting of the KCI.

5. The topic for the dialogue, informed by submissions from Parties and observers,[3] was economic diversification and structural resilience in global transition pathways to manage impacts on vulnerable populations across sectors.

6. Following the opening of the dialogue and scene-setting presentations, four sessions were held on different subtopics.

7. Further information on the proceedings of the dialogue is contained in the annex and details of the sessions, including the presentations, are available on the UNFCCC website.[4]

II. Summary of presentations and discussions

A. Opening session

8. Opening remarks were delivered by the Chair of the Subsidiary Body for Implementation and representatives of the secretariat, ESCAP, UNCTAD and the COP 30 Presidency.

9. The transition brings opportunities in some contexts and challenges in others, and does not affect all countries, sectors or communities in the same way. As such, there is no single model for managing the transition or for economic diversification, and related strategies need to reflect national circumstances and development priorities. Furthermore, the impacts of the

[1] Para. 16 of decisions 6/CP.30, 2/CMP.20 and 14/CMA.7.
[2] Para. 17 of decisions 6/CP.30, 2/CMP.20 and 14/CMA.7.
[3] Received in response to the invitation set out in para. 18 of decisions 6/CP.30, 2/CMP.20 and 14/CMA.7. The submissions are available at https://submissions.unfccc.int (in the search field, type "response measures").
[4] https://unfccc.int/event/rm-global-dialogue-2026.

implementation of response measures, including on employment, trade, investment and productive structures, can be felt across economies and borders, and they vary depending on each country's circumstances, level of development and capacity to anticipate and manage change.

10. Climate action and technological innovation are creating opportunities for economic growth and energy security, as well as for new markets and jobs in areas such as renewable energy, clean hydrogen, energy storage, sustainable transport, sustainable and smart agriculture, nature-based solutions, circular economy products, biodiversity-based goods and ocean-based goods and services. Many countries are considering how their next NDCs and LT-LEDS can contribute to broad economic transformation. Workers and communities dependent on carbon-intensive activities and economies with changing demands and new market access requirements face adjustment costs, and many developing countries remain dependent on a limited number of commodities and products.

11. Economic diversification strengthens productive capacities, reduces structural vulnerabilities and broadens sources of income and decent employment, but diversification does not occur automatically. One example of diversification shared took the form of a national plan for economic transformation that combined public policies with financial, fiscal and regulatory instruments to promote productive diversification, low-emission industrialization and quality employment. Enabling conditions for implementation include coherent climate, trade, investment and development policies underpinned by sound evidence, strong institutions and access to financial, technology and capacity-building support.

12. Placing workers, communities and vulnerable populations at the centre of the transition is crucial to leaving no one behind. One regional report found that a shift towards sustainable, smart agriculture could place about 13 million agricultural workers at risk by 2030; called for skills development, gender-responsive policies, social protections and targeted financing; and suggested that policies be in synergy with objectives for environmental sustainability, economic resilience and social inclusion.

13. International and regional cooperation, including on means of implementation and trade, is essential to economic diversification. Examples of cooperation include regional initiatives on the energy transition that also promote economic growth, job creation and social inclusion; social protection initiatives supporting transition; programmes supporting the green transition of small and medium-sized enterprises; promotion of investment in low-emission industries and sustainable transport; and provision of support for identifying sectors strategic to climate action, developing low-emission and sustainable export strategies.

14. The global dialogue was placed in the context of the work of the forum on the impact of the implementation of response measures and previous global dialogues and will also serve to inform the first high-level ministerial round table on impacts of the implementation of response measures planned for COP 31.

B. Scene-setting presentations

15. Two presenters introduced economic diversification and transformation in the context of response measures and the global transition pathway.

16. Economic diversification was described as the strengthening of countries' resilience to market uncertainties and the economic effects of climate-related policies. It was suggested that the meaning extends beyond reducing dependence on particular commodities, given that economies relying on few products or markets remain exposed to policy changes beyond their borders, to expanding productive capabilities and economic choices, including through domestic value addition, participation in more stages of value chains and market diversification.

17. The presenters noted that the climate policies of some Parties can have economic and social consequences for others, particularly developing countries. One of the presenters observed that mitigation efforts are extending from the power sector to industrial production, trade and investment, with energy- and trade-intensive sectors such as steel, aluminium,

cement, fertilizers and chemicals increasingly subject to carbon pricing, product standards, industrial subsidies and other carbon-related measures, including those applied at the border, while many developing economies have limited fiscal, technological and institutional capacity to adjust to response measures. In this context, the question is not only how countries adjust to response measures, but also how the implementation of response measures can support, rather than constrain, diversification, and answering this question requires greater attention to the cross-border and cumulative impacts of such measures.

18. One presenter emphasized that the transition presents both risks and opportunities for developing countries. Changes in global demand, climate-related trade measures, carbon pricing and investment patterns can affect revenue, employment and competitiveness of economies, particularly those dependent on specific energy sources or energy-intensive industries. Transformations in the global economy, including returning industrial policies, changing supply chains, expanding South–South trade and emerging low-emission value chains affect climate policymaking. While those developments can create opportunities for economic diversification, there is a risk that developing country participation will remain concentrated in lower-value activities in value chains.

19. Regarding the roles of trade and international support in economic diversification, with reference to Article 3, paragraph 5, of the Convention, open trading systems were described as a powerful driver of diversification and economic development as essential for climate ambition. Diversification can be pursued with investment, affordable finance, technology, skills, market access, capacity to meet new standards and sufficient policy space, which international cooperation can provide or help create.

20. Energy security was deemed central to economic diversification, and it was noted that transition pathways need to be concurrently aimed towards achieving energy security, affordability and environmental sustainability. Economic diversification and the energy transition were described as mutually reinforcing goals, with diversifying energy supply, including through transitional fuels and regional grids, viewed as part of economic diversification.

21. Just transition was described as integral to achieving a sustainable transition and addressing the impacts of response measures, including on workers and communities in affected industries. Just transition was described as necessary for sustaining support for climate ambition and preventing social and economic tensions.

22. Regarding the work on response measures under the UNFCCC, the relevant provisions of the Paris Agreement, including in Article 4, paragraph 15, were recalled, and the technical work of the KCI specifically in this area was noted.

23. Following the presentations, various views were expressed, including that economic diversification is an ongoing process; the private sector and public–private partnerships have a role in diversification; governments have a role in creating enabling conditions and incentives for the private sector to support economic diversification; carbon pricing can mobilize public revenue that governments may direct towards new transition pathways; carbon pricing is technology neutral but its design, effectiveness and suitability depend on national circumstances and capabilities; and carbon pricing is usually most effective when complemented by other policies.

C. Session 1: pathways and strategies for diversifying economies across sectors

1. National and regional experience

(a) Broadening the national economic and revenue base

24. Economic diversification was widely seen as context specific and long term, to be pursued by adding value within existing sectors and creating new industries. Several participants emphasized that diversification should increase domestic value creation, productivity and economic complexity rather than shift dependence from one commodity to

another. For economies with a narrow revenue base, diversification was described as the main means of creating employment.

25. Many participants highlighted the need for an enabling policy environment, with coherence across industrial, climate, energy, trade, financial and fiscal policies, to support diversification. In this context, they shared experience of national development and transformation plans, long-term targets and sectoral strategies. Diversification strategies outside industrial policy or the national budget are unlikely to be implemented, and finance is ineffective without regulatory certainty, necessary infrastructure, relevant worker skills, commercial viability and institutional coordination. One participant highlighted energy sector reform and electricity system readiness as important for unlocking economic growth, supporting industrial development and capturing opportunities associated with the transition.

26. Public finance, including blended finance, and financial instruments for managing foreign currency exchange risk were described as catalysing mobilization of private investment where capital costs and exchange risks are high. Policy and financial instruments shared by participants included environmental tax reforms, tax incentives for new industries, sustainable finance taxonomies, green bonds and funds, emissions trading systems and carbon market frameworks (including cooperative approaches under Article 6, para. 2, of the Paris Agreement). One participant expressed that carbon market transactions should not be regarded as constituting climate finance. It was noted that market forces alone have proved insufficient to meet national targets. One participant described levies linked to tourism and channelled into green funds as useful, but easier to apply in dominant sectors than in small sectors that countries seek to develop, and cautioned against reliance on levies, as this could hinder a country in the long term.

27. Several participants described special economic zones, industrial parks and export promotion programmes as ways to attract investment and create jobs, sharing lessons learned regarding special economic zones connected with domestic industries and private partner selection for special economic zone projects. In one case, linking export credit guarantees, concessional working capital and quality infrastructure contributed to growth in non-traditional exports. Public–private partnerships were identified as a way of financing infrastructure within fiscal limits and digital tax administration as a way of broadening the tax base.

28. Difficulties in sequencing the diversification process and limited fiscal space were identified as fundamental challenges for economies with a narrow revenue base, which must invest in new sectors while exposing existing revenue sources to changing demands, trade-related climate measures and the transition and being constrained in investment by debt servicing and limited concessional finance. The question of how countries can finance and sequence the transformation while protecting the revenues needed to invest in it was raised, with one participant noting that it cannot be assumed that diversification will happen and the impacts can be managed afterwards. Other participants similarly stressed that disruption of traditional revenues would also disrupt diversification. One participant added that, for landlocked countries, high transit and trade costs and limited connectivity to trading partners were highlighted as particular constraints. Related country-specific experience shared included establishing a natural resource fund for financing infrastructure and social services and, in fuel-importing economies, shifting to domestic renewable energy and electrification to reduce energy imports.

29. Stable, long-term policy frameworks were described as a way to reduce investment risk, with participants emphasizing that policy coherence matters more than individual initiatives. In one example, certainty regarding future electricity revenue helped unlock investment in offshore wind sector and associated economic activity; to retain regional employment, the skills of workers from established energy industries were drawn on and community benefit principles directed gains to local workers and communities. Participants shared challenges in implementing economic diversification, including financing constraints, limited institutional capacity, policy inconsistency across political cycles and institutional fragmentation.

(b) Sectoral diversification pathways

30. Participants emphasized that sectoral diversification is built by linking sectors, often through national industrial programmes that strengthen local content, and is most effective when aligned with NDCs and national priorities and when coordinated across ministries. One participant noted that decarbonization, industrialization and social inclusion need to advance together, and another that it may be difficult for traditional sectors to change by themselves, highlighting the role of national strategies in driving their transition. Some participants noted that priority sectors for diversification will differ according to national circumstances and development priorities.

31. Energy was the most widely discussed sector. Some participants described energy access as the foundation for economic diversification. Participants noted the importance of pursuing diversification alongside existing revenue streams while reducing emissions through carbon pricing, methane regulation, deployment of renewable energy, improvements in energy efficiency and CCUS, and, from an energy consumer perspective, improving energy affordability through improved energy efficiency and electrification. Approaches to energy sector diversification shared included using natural gas to provide reliable power, implementing off-grid solar and mini grids, opening electricity generation markets, improving regional power grids and exploring hydrogen, ammonia and geothermal energy. Several participants stressed the importance of linking renewable energy deployment to domestic value chains, and concentrating manufacturing in industrial zones. It was noted that rising electricity demand from AI use, critical minerals processing and advanced manufacturing requires a major expansion of energy supply, power grids and worker skills.

32. An example of a policy framework for the industrial sector was shared, with the framework combining policies aimed at promoting affordable energy, public procurement of low-emission products (such as steel), investment de-risking, innovation, circularity (including recovery of critical materials), partnerships with raw-material-producing countries aimed at moving beyond extraction to processing, and sector-specific transition pathways developed in consultation with stakeholders. Other participants highlighted efforts to increase domestic processing of minerals, including through restrictions on raw material exports and local revenue-sharing; local assembly of clean technologies; value chains of electric vehicle and green hydrogen; and technologies developed by national universities.

33. Food security was considered central to diversifying the agriculture sector. Participants shared experience of using integrated crop–livestock–forestry systems, biological nitrogen fixation (to reduce dependence on fertilizer imports) and registered bio-based agricultural inputs. Efforts to strengthen agricultural value chains included restricting exports of unprocessed crops, issuing processing grants and establishing cooperatives. Dual land use for solar generation and agriculture was mentioned by one participant to address competing uses of land and water.

34. Regarding the tourism sector, one participant from a SIDS noted the country's focus on high-value, low-impact and locally owned tourism, while other participants shared experience of nature-based tourism.

35. Regarding fisheries, approaches to diversification included processing, cold chains and mariculture, with difficulties in obtaining premium prices for sustainably caught fish being noted.

36. In the waste and circular economy sectors, biogas use, landfill gas recovery and recycling were described as sources of revenue and employment, while extended producer responsibility was highlighted as an approach to managing waste.

37. The services and digital sectors were identified as pathways for economic diversification. Participants noted the particular constraints faced by SIDS, landlocked countries and the LDCs, including concentrated economic bases, high transit costs and limited infrastructure and productive capacity. They also noted the importance of engaging subnational governments and local communities in locations where renewable energy projects are developed.

(c) Building resilience and achieving equity in practice

38. Participants converged on the observation that economic diversification needs to be people-centred, with its success measured not only by GDP growth, but also by the creation of decent jobs, protection of livelihoods and fair sharing of costs and benefits. It was noted that transition policies create risks through increased energy prices, as well as loss of jobs and relevance of skills, all of which fall on workers, particularly informal workers and those in carbon-intensive industries, low-income households and resource-dependent communities. Diversification at the national level does not automatically protect workers in particular sectors or regions; workers in mining or pastoral communities lacking local alternatives may feel forced to move to urban centres.

39. Many participants observed that just transition should inform the design, financing, implementation and evaluation of diversification strategies from the outset rather than the strategies being used as compensatory measures after economic restructuring. Experience shared on just transition approaches included considering just transition as a cross-cutting strategy in national climate plans, paying particular attention to considering gender and human mobility, monitoring energy poverty and guaranteeing basic energy services; developing just transition frameworks for coal-mining regions and just transition guidelines and integrating them into NDCs; implementing a just transition framework underpinned by legislation using a five-year plan; backing subnational transition plans with grant funding and loans; and reinvesting carbon pricing revenues, including in a fund for households facing energy and transport poverty. One participant highlighted the importance of disaggregating the findings of impact assessments to inform targeted policy responses thereto.

40. Social protection policies were described as enablers of diversification and decarbonization, bridging declining and emerging sectors through income security, reskilling support and risk management, using instruments such as cash transfers, input subsidies and health insurance, as well as undertaking public works to generate jobs. Climate and social policies developed without coordination, data on affected groups held in different systems and fragmented financing were noted as leading to reactive policy responses rather than risk anticipation. A review of the NDCs of countries in Asia and the Pacific found that 17 NDCs referred to social protection but only 2 recognized it as a tool to support mitigation, and that less than 10 per cent of global climate finance is directed towards social protection. Some participants noted the fiscal risk from adding climate-related needs to existing social spending.

41. Reskilling workers before facilities close was described as one of the hardest tasks in relation to economic diversification. Participants shared approaches to workforce transition, including vocational training, workforce planning linked to energy infrastructure, institutions supporting workers in moving into clean energy jobs, and cooperation among governments, industry, trade unions and training providers to ensure that new jobs are good jobs. One participant called for decent work, rights at work, social dialogue, a living wage and gender equality to be considered as part of structural transformation. It was noted that volatility in commodity prices raises the cost of essential goods faster than wages can adjust.

42. Stakeholder participation and social dialogue were emphasized as important in decision-making. Mechanisms for participation and dialogue mentioned included a partnership council of representatives of workers, industry, Indigenous Peoples and communities advising on just transition plans; a national energy transition forum bringing together representatives of governments, civil society, academia and the productive sector; and consultations with local communities to identify alternative economic opportunities. One participant noted the importance of consulting Indigenous Peoples in line with the principle of free, prior and informed consent, and applying a gender-based and broader identity-based analysis to all policies in order to address their adverse effects on different groups. Several participants noted that women, young people and persons with disabilities are often underrepresented in the decision-making.

43. Several participants emphasized the importance of considering the informal economy, whose workers are often excluded from social protection systems and national statistics. Participants shared means of broadening local participation in the benefits of diversification, which included cooperatives, agroprocessing, support for small enterprises and mandatory

corporate social responsibility requirements that direct benefits towards local communities, including women; inclusive public procurement; and programmes such as cash-for-work in waste collection and low-interest solar loans for low-income and women-headed households. One participant noted that benefit-sharing from land-based carbon markets is inequitable and another that land tenure systems are often overlooked in benefit-sharing. The need to bridge the digital divide was highlighted as important to economic development.

44. One participant called for KCI work on assessments of the impacts of response measures to reflect disaggregated impacts across vulnerability categories and incorporate the health and food security dimensions of economic disruption, and another participant called for the outcomes of the global dialogue and existing work of the KCI to be linked with that under the United Arab Emirates just transition work programme. It was proposed that KCI work consider job substitution and job creation as core determinants of human mobility, and noted that, where job losses are linked to response measures that are not offset by new employment opportunities, reskilling and diversification, affected communities may migrate in distress.

(d) Cross-cutting issues

45. Many participants highlighted the exposure of developing economies to changes in international trade, standards and market conditions, expressing concern that unilateral climate-related trade measures can narrow diversification pathways by raising costs and restricting market access for certain industries. In this context, reference was made to Article 3, paragraph 5, of the Convention. One participant noted that the progress of diversification is measured over a decade, whereas such trade measures can take effect within a year, potentially reducing the revenues available for finance diversification and just transition. Other participants highlighted the impacts of compliance and certification requirements on competitiveness and market access, calling for the forum and its KCI to address those impacts in their work. One participant highlighted that international cooperation and an open international economic system can facilitate investment in clean technology development and transfer.

46. Participants' views on how economic diversification should be understood differed: some described it as a development objective, linked to industrialization, employment and poverty eradication, rather than a mechanism for absorbing the impacts of response measures, while others described it as a means of strengthening the ability of economies to manage changing climate policies and economic conditions. Participants emphasized that the pace and sequence of diversification and transition are for each country to determine, with some referring to the principle of common but differentiated responsibilities and respective capabilities. Participants also emphasized that diversification depends on means of implementation, with one participant noting that the support pledged for their country's national transition plan covers only part of the estimated needs and is partly provided as loans.

2. Opportunities and challenges

47. Opportunities mentioned by participants included:

(a) Building domestic value addition and productive capabilities, including by linking renewable energy deployment to industrial zones and domestic manufacturing;

(b) Embedding diversification strategies in industrial sector policies and national budgets;

(c) Using financial, fiscal and regulatory instruments to mobilize investment in economic diversification and finance the transition;

(d) Building on the existing skills of industry workers to support their transition into emerging low-emission industries;

(e) Creating demand for low-emission products through public procurement, and promoting the circular economy;

(f) Strengthening agricultural value chains, cooperatives and local agroprocessing;

(g) Integrating just transition and social protection into diversification strategies from the outset, with attention paid to distributional effects and equitable benefit-sharing;

(h) Anticipating skills needs and providing training and reskilling to workers ahead of facility closures;

(i) Establishing mechanisms for social dialogue on and public participation in transition;

(j) Strengthening regional cooperation for economic diversification.

48. Challenges mentioned included:

(a) Limited fiscal space, including pressure on social spending, high debt servicing and capital costs, currency exchange risks and restricted access to concessional finance;

(b) Difficulties in sequencing diversification while existing revenue sources are exposed to the transition;

(c) Infrastructure deficits, including weak power grids, and, for landlocked countries, high transport and trade costs;

(d) Skills shortages, high energy costs and evolving or restrictive regulations;

(e) Policy inconsistency, including limited coordination of efforts under climate and social policies, institutional fragmentation and limited policy implementation capacity;

(f) Competing uses of land and water;

(g) Large informal economies and informal workers being without social protection systems and not captured in national statistics;

(h) Limited participation of women, young people and persons with disabilities in decision-making, and inadequate consideration of land tenure and benefit-sharing therein;

(i) Trade-related climate measures, standards and compliance requirements affecting competitiveness and market access;

(j) Limited access to finance, technology transfer, capacity-building and markets, particularly by the LDCs.

D. Session 2: evidence-based policy design for economic diversification

1. National and regional experience

(a) Modelling and ex ante assessment

49. Participants widely recognized computable general equilibrium, input–output, macroeconomic and energy system models, as well as multi-criteria and cost–benefit analyses, as tools for conducting ex ante assessment of response measures to inform the design or development of budgets, regulations and NDCs. One participant emphasized that no single tool captures all economic, social and territorial impacts of response measures and that methods therefore need to be combined.

50. The scene-setting presentations provided overviews of a spreadsheet-based transport energy and emissions model built from data already collected nationally, which helped set realistic sectoral targets for an NDC, and national macroeconomic models, housed within ministries of economy or finance, which use policy scenario and cost–benefit analyses to identify options for financing policies. The accessibility of modelling tools and their ability to reflect the circumstances of landlocked countries were highlighted as considerations in selecting modelling tools.

51. Participants shared experience of ex ante assessment, which included using a multi-sector input–output model that, under a full-implementation scenario, projected employment

gains without worsening income distribution, noting that the results are estimates rather than forecasts; computable general equilibrium models for assessing effects of response measures on employment, poverty and food security, including one model developed as a case study with the KCI that informed the setting of NDC targets; a simulation assessing the potential impacts of border carbon adjustment, which indicated possible declines in exports of fertilizers and iron and steel; and a framework of indicators, such as workforce exposure, adaptive capacity, urgency and readiness, for identifying regions requiring transition support.

52. Participants identified several limitations in approaches to conducting impact assessments, including high data needs, assumptions that may not reflect developing economies, underrepresentation of the informal economy, and the tendency of computable general equilibrium models to underestimate short-term adjustment costs, including fiscal pressure. Difficulties were also noted in valuing environmental services and obtaining disaggregated data for small economies. Participants called for simple, transparent tools, with explicit assumptions, that can be adapted with national data, with some participants suggesting that local data and models supplement global models.

53. Assessing the cross-border impacts of response measures was described as particularly challenging. Some participants suggested building national capacity to undertake ex ante assessments to reduce reliance on external assessments. Further, one participant noted that revision of non-domestic climate-related measures requires recalibration of models; one suggested that the KCI convene experts from developed and developing countries to work jointly on assessment of response measures, as assessments of the same measure by different experts have produced different results; one expressed the view that developed country Parties implementing measures with cross-border impacts should assess the impacts of those measures on developing countries before and after implementation and share their results transparently; and another noted that their country's impact assessments are published and its public consultations are open, including to stakeholders outside its jurisdiction.

(b) Moving from evidence to legislation

54. Participants shared ways of embedding assessment of the impacts of response measures in policymaking, such as improving regulation frameworks to require public consultations, an assessment of policy options and publication of such assessment, as well as publication of ex post evaluations of policy implementation; assessing Cabinet proposals on response measures to determine their impacts on emissions, the environment and the economy; and establishing an independent expert body to advise on emission targets and report annually on progress in achieving them to the legislature. Assessment results were also mentioned as informing green budgeting, investment planning and the development of just transition guidelines.

55. A recurring message was that assessment findings often do not inform policy decisions, with institutional fragmentation and unclear responsibility for action identified as obstacles to doing so. In this regard, the importance of involving relevant ministries from the impact assessment stage to policy design and implementation was highlighted. One participant noted that subnational data do not consistently feed into national data systems, emphasizing the importance of high-level government support for data exchange across ministries and transparency on how results inform decision-making. Clearly defining the policy question the assessment is intended to address and securing political buy-in from the outset can influence whether assessment results are considered in policymaking. One participant described social dialogue, including via a national forum bringing together government, businesses and trade unions, as a vehicle for moving from evidence to policy, including in developing whole-of-economy responses to external trade-related measures. One participant called for assessing decent work deficits, skills gaps and regional disparities in employment opportunities, noting that green jobs are not automatically good jobs, and for trade unions, young people, informal workers and communities to be supported in engaging with policymakers.

56. Participants noted that acting on findings requires resources: limited fiscal space can prevent action even when affected groups are identified. Furthermore, assessments not followed by action on results or relevant support undermine stakeholders' willingness to participate in future data-collection and assessment processes. One participant suggested

grant-based finance be used to translate assessment findings into legislation. Another noted that external trade-related measures may change in scope before a national planning cycle has ended and emphasized the need for early notice of the change and joint assessment of such measures.

(c) Monitoring, evaluation and data capacity

57. Experience shared in relation to the monitoring and evaluation of diversification policies included using national frameworks with sectoral targets and indicators, regular evaluation cycles linked to budgeting cycles, open data dashboards, digital NDC reporting platforms, remote sensing, and stakeholder participation in monitoring. Several participants stressed the importance of extending monitoring beyond GDP to employment, household incomes, government revenues, domestic value addition and outcomes across regions. One participant noted that the choice of indicators applied in assessing economic performance can influence external evaluations of, inter alia, credit rating.

58. Data constraints were the most frequently raised monitoring-related challenge and included limited availability, quality and granularity of data, and dispersal of data across institutions in incompatible formats. Participants suggested making the informal economy visible in statistics and strengthening the capacity of national institutions to produce data for assessments. One participant emphasized that having access to data is distinct from having the capacity to use it.

59. Participants saw potential in AI, remote sensing and big data, but cautioned that these technologies cannot compensate for weak data systems, and one participant noted that some countries may require electricity and digital connectivity before being able to implement them. Participants highlighted the digital divide, with one participant noting the risk of an AI divide and another noting that tools developed for larger economies may rely on assumptions that do not reflect the circumstances of smaller economies. One participant, emphasizing the importance of data integrity when using AI, suggested that the use of AI be grounded in locally collected data, AI-derived estimates be labelled as such and reviewed by national statistical offices, and the rights of communities from whom data originate be protected. Another participant added that workers' data should be protected. Collecting data and overseeing the use of AI were suggested as decent work that could be performed by young people and workers in sectors at risk of disappearing.

(d) Cross-cutting issues

60. Building national capacity for modelling of impact assessments was described as a long-term effort, hindered by limited pools of modelling experts, high turnover of skilled modellers and reliance on externally owned models. Participants emphasized the importance of national ownership and regular updating of models, sustained and multi-year capacity-building efforts, and exchange of experience and knowledge on modelling among developing countries in this regard, and suggested the embedding of economic modelling in university curricula as a way to build national expertise in modelling.

61. Participants suggested that the forum and its KCI provide capacity-building for data collection and modelling; practical methodologies, including through case studies, and hands-on support for assessing the cross-border impacts of response measures; accessible modelling tools; broad dissemination of KCI products, including its toolbox, e-learning course and findings from its work on co-benefits and distributional impacts; guidance on incorporating data on the informal economy into national statistics; and support that enables developing countries to undertake their own impact assessments for policymaking rather than relying on external analyses. Participants stressed that support provided by the forum and its KCI should be country-driven and aimed at strengthening national capacity. The need for finance, technology transfer and capacity-building for assessment and modelling was emphasized.

2. Opportunities and challenges

62. Opportunities mentioned by participants included:

(a) Combining various assessment methods to capture different types of impact of response measures;

(b) Strengthening national capacity for modelling impact assessments through adaptable and transparent tools and sustained capacity-building;

(c) Developing methodologies for assessing the cross-border impacts of response measures and undertaking such assessments with the involvement of experts from both developed and developing countries;

(d) Embedding assessments of response measure impacts in policymaking through stakeholder consultation, coordination across relevant ministries and mechanisms for incorporating findings into decision-making;

(e) Targeting transition support to beneficiaries on the basis of workforce exposure to emission-intensive industries, adaptive capacity and readiness for transition;

(f) Strengthening national data systems, including for data on the informal economy, and ensuring the responsible use of digital and AI tools for assessment of and monitoring the impacts of response measures.

63. Challenges mentioned included:

(a) Data and modelling constraints, including high-data requirements, fragmented data systems, gaps in data on the informal economy and assumptions applied that do not reflect developing country circumstances;

(b) Difficulties in assessing cross-border impacts of response measures and frequently changing non-domestic response measures;

(c) A limited pool and high turnover of skilled experts in modelling, and reliance on external impact assessments and models;

(d) Institutional fragmentation hindering the use of assessment results in policymaking;

(e) Limited fiscal space to act on assessment findings, and loss of stakeholder trust where assessments are not followed by action or support;

(f) Digital and AI divides, and risks to data integrity and protection associated with AI;

(g) Limited finance, technology transfer and capacity-building for conducting assessment and modelling and strengthening national data systems.

E. Session 3: emerging opportunities, innovation and market shifts towards advancing economic diversification

1. National and regional experience

64. The session commenced with scene-setting presentations. In one, it was noted that opportunities for and risks of economic diversification are both shaped by climate-related policies, market changes, rapid technological advances and broader economic trends, such as rising demand for energy and materials and shrinking fiscal space. Emerging markets include energy storage and grids, digital and AI-enabled services, circular value chains and energy-efficient cooling. Trade in components for solar and wind power is growing faster than trade in other industrial goods, economies diversifying into digital services have experienced more stable inflation than others, and diversification can come from new products and services as well as from new business models.

65. In another presentation, mapping the social value of technology transitions was proposed, as was assessing the benefits, costs, burdens and externalities of those transitions rather than assuming that benefits in one area offset negative impacts in another. Applying such mapping to the electrification of public transport in one country identified the potential for emission reductions and new manufacturing jobs alongside risks to informal transport operators and agricultural employment, indicating the need to consider how diversification

could strengthen co-benefits and address adverse impacts arising from the transition. The importance of applying technologies in sectors where they are most appropriate was also highlighted, with hydrogen use in hard-to-abate industries cited as an example.

66. Participants noted that new industries are already boosting economic diversification and strengthening national economic resilience; examples included manufacturing of electric vehicles and components of solar power systems; domestic nickel processing, creating battery value chains; clean hydrogen; cement production using captured carbon dioxide; sustainable aviation fuels; developing bamboo value chains; and rooftop solar systems for small businesses. One participant stressed that technology adoption involving imported equipment, expertise and finance does not necessarily lead to economic diversification and in such cases, capturing value addition through installation, maintenance and repair of the technology, as well as provision of related services, is crucial. Some participants considered that, for economies with infrastructure and fiscal constraints, diversification opportunities mostly lie in service provision, assembly and processing, supported by incentives linked to local content.

67. Participants identified decreasing renewable energy costs, higher fuel prices, changing requirements in export markets and changing consumer preferences as drivers of economic diversification, while long-term planning and stable institutions were highlighted as enabling conditions. One presenter suggested that circular economy approaches, such as use of recycled materials in construction, could be the next technology for transforming markets. Green public procurement and eco-labelling were described as market signals, with establishing a publicly owned energy company cited as an example of how to reduce risks associated with emerging technologies. Challenges to developing new industries mentioned by participants included a mismatch between projected and actual demand for clean hydrogen; limited demand for low-emission fuels, which cost more than traditional fuels; hydrogen producers being located far from markets; time lags between research and deployment of technologies; high costs of electricity battery storage; insufficient electric vehicle charging infrastructure; high costs of converting to electric vehicles for households; technologies being unsuited to local conditions; and regulation lagging behind activities such as the building of data centres, which require significant water resources to run.

68. Lack of access to technologies was a concern mentioned by many participants. Intellectual property and licensing costs keep many developing countries at the lower end of value chains, while concentrating manufacturing and mineral processing in a few countries may create new dependencies. Participants called for technology-related cooperation that goes beyond the transfer of finished equipment to encompass exchange of know-how, affordable licences, after-sales support and local manufacturing, with one participant noting that without those elements, imported technologies can become unusable when they fail. Health risks arising from informal battery recycling were raised as a concern, with one participant sharing experience of formalizing electronic-waste recycling. It was noted that automation may displace workers if reskilling and social protection are not introduced early in the diversification process. On critical minerals, participants highlighted the difficulties in securing social acceptance of their extraction and the risks that costs fall on local communities, that countries remain locked into low-value extraction and that investment outpaces safeguards on the lands of Indigenous Peoples and local communities.

69. Participants noted that market access requirements, including verifying embedded emissions, add compliance costs. One presenter noted that trade costs for solar and wind power components are higher in some developing country regions than in developed economies and that tariffs on natural substitutes for plastics are often higher than those on the plastics they could replace. One participant considered that cooperative multilateral frameworks combining technical assistance and concessional finance are more effective than measures adopted by individual countries when it comes to adopting and benefiting from technological change, while another observed that creating markets for low-emission products may require domestic carbon pricing, which can in turn create barriers for trading partners.

70. In agrifood systems, diversification at the farm, income and value-chain level was described as a way of building capacity to absorb shocks, including those arising from

implementing response measures. Spatial analysis of crop suitability was highlighted as a way of identifying investment that supports agricultural diversification.

71. Regarding employment, one participant reported that job growth in the renewable energy sector has exceeded job losses in coal mining. While participants reported growth in clean energy employment, they noted that it is too early to quantify the net effects of transitions and that the jobs created may lack security. Participants' views on how to ensure quality employment differed: one noted that CCUS allows existing sectors to continue providing well-paid jobs, while others shared experience of industries that delayed new technologies to protect jobs and then struggled as markets changed.

72. Participants shared experience of skills development and reskilling initiatives, including the co-funding of graduate programmes, sectoral skills academies and a green university, and shared lessons learned from the phaseout of ozone-depleting substances, where training was provided to technicians, including those in the informal economy, throughout the phaseout process and the training infrastructure established could subsequently support other transitions. Participants stressed the importance of embedding rights at work, occupational safety and social protection into emerging industries. Some participants noted that energy subsidy reforms can place a heavy burden on workers and households. One participant described a sustainable job as one that comes with fair income, job security, social protections and opportunity for social dialogue; one noted that workers may need to be aware of new employment opportunities before they are motivated to reskill; one observed that trained staff are moving to large employers; and one explained how presenting the transition in terms of energy security and economic growth helped secure broader government attention.

73. One participant noted that progress in renewable energy deployment in their country would not have been possible without external support; one noted that, for some LDCs, energy access is the immediate priority; one proposed that the outputs of the global dialogue feed into updating existing work of the KCI; and one suggested establishing learning platforms for exchanging experience.

2. Opportunities and challenges

74. Opportunities mentioned by participants included:

(a) Assessing the benefits, costs, burdens and externalities of technology transitions at an early stage;

(b) Building domestic capabilities around new technologies through technology cooperation and incentives promoting local content;

(c) Creating demand for low-emission and sustainable products through green procurement, eco-labelling and recycled content requirements;

(d) Developing value chains for digital and AI-enabled services, circular economy products, energy storage and energy-efficient cooling;

(e) Promoting diversification of agrifood systems;

(f) Establishing safe recycling and disposal systems for batteries and electronic waste;

(g) Implementing programmes for skills development and reskilling that reach all workers, including those in the informal sector;

(h) Applying safeguards on the lands of and consultation with Indigenous Peoples and local communities in critical minerals development.

75. Challenges mentioned included:

(a) A mismatch between projected and actual demand for clean hydrogen and limited demand for higher-cost low-emission products;

(b) Constraints related to technology deployment, including long deployment lags, high technology costs, insufficient infrastructure, technologies being unsuited to local conditions and lack of capacity for maintaining them;

(c) High intellectual property and licensing costs, and risk of technological dependence;

(d) Health, social and environmental risks associated with critical mineral extraction, battery recycling and electronic-waste management, including risks affecting local communities;

(e) Compliance costs and higher trade costs for some low-emission goods;

(f) Regulation that does not keep pace with technological change;

(g) Uncertain effects of transitions on net employment and job security;

(h) Energy access deficits in the LDCs.

F. Session 4: enabling economic diversification through finance, technology development and transfer, and capacity-building

1. National and regional experience

76. The scene-setting presentation outlined the building blocks for just transition and economic diversification, namely impact assessment, stakeholder engagement, institutional capacity, finance, and monitoring and evaluation. Interministerial committees and working groups were highlighted as institutional mechanisms for sustaining coordination on just transition and economic diversification efforts. Approaches shared to supporting those efforts included political economy analysis of transition decisions, guidance on engaging young people, Indigenous Peoples and local communities in the efforts, and combining support for new livelihoods with market development.

77. Participants stressed that the main challenge in diversification lies in moving from planning to implementation. In this context, one participant outlined that it is unclear how NDC commitments can be translated into investment priorities and financing pipelines, in response to which another participant suggested that providing ministries of finance and planning with evidence of the co-benefits of climate action can engage them in implementing NDC commitments. Several considerations were raised in the context of implementation, relating to, for example, ensuring the sustainability of results after projects end, channelling small grants directly to communities, defining the role of legislators in creating predictable frameworks for implementation, and providing tailored support to countries facing exceptional circumstances that have changed their economic and social conditions.

78. On finance, several participants emphasized that the main barrier is not overall lack, but lack of adequate, affordable, predictable and concessional finance, particularly grants. Another participant noted that the type, timing and risk profile of finance matter as much as its amount; that finance should support the wider enabling environment, not only individual projects; and that private capital will need to finance a substantial share of industrial transformation, with public finance addressing risks that private investors cannot bear. One participant shared experience of matching financial instruments, including research grants, guarantees, loans and contracts for difference, to each stage of technology development. Credit ratings, currency fluctuations and risk perceptions were noted as affecting investment behaviour.

79. Finance-related experience shared by participants included that with sovereign sustainable bonds; blended finance platforms; a multilateral climate fund grant for decarbonizing the steel, cement and fertilizer industries; concessional finance for solar irrigation and mini grids; microfinance for smallholders; an outcome bond for clean cooking; consideration of debt-for-climate and debt-for-nature swaps to mobilize private capital while reducing national debt burden; green and transition taxonomies; a pension-backed fund for small enterprises; and an emissions trading system with a carbon registry. Domestic approaches to financing mentioned included mineral revenue reinvestment, citizen and diaspora investment and development of pipelines of bankable projects. One participant noted that their Government has already invested significant domestic resources in climate action and economic diversification and that more grants and concessional finance would enable further investment in these areas. Another expressed lack of clarity regarding how

carbon market revenues could be aligned with NDC investment plans and directed towards social protection and agricultural value chains, with one participant noting in response that revenues from high-integrity carbon markets can be reinvested in local communities and used for social protection. One participant emphasized that countries should determine their own diversification strategies and priorities, with finance enabling their implementation rather than shaping their design, and identified, as bottlenecks to accessing finance for diversification, narrow investment focus of funds, expectations that developing countries make projects suitable for investment, and conditionalities arising from standards applied beyond national jurisdictions.

80. On technology, participants called for cooperation that enables countries supplying raw materials to process them domestically. It was also emphasized that international cooperation should bring technology, finance and capacity-building support as one type of support. One participant called for improving access to new and emerging technologies, and another for strengthening the role of the Technology Mechanism. Experience shared included solar irrigation and solar home systems provided by international development partners, a centre supporting clean technology development, and solar energy systems installed in schools for training purposes. Regional value chains and the protection of Indigenous and local knowledge were emphasized as means of supporting domestic value creation. National innovation systems and appropriate governance and infrastructure were identified as important enabling conditions for the use of emerging technologies.

81. Participants cautioned against treating capacity-building solely as a matter of training individuals, stressing the importance of institutional capacity for implementation. One participant underscored the need to address the gap in translating international commitments into domestic implementation across national ministries, subnational authorities and communities, and called for international cooperation to support the establishment of institutional architecture needed for implementation. Participants shared experience of capacity-building, including on research partnerships that led to bamboo being recognized as a cash crop, training programmes under which companies committed to employing trainees, a just transition framework established between trade unions and businesses, university curricula adapted for local production of agroprocessing equipment, and capacity-building for smallholders and pastoralists for processing agricultural products and accessing markets. The importance of vocational and informal education under capacity-building efforts was highlighted.

82. Participants emphasized that finance, technology and capacity-building are most effective when combined. Some participants called for nationally driven approaches to economic diversification and just transition, with adequate policy space for countries to determine their priorities. One participant expressed uncertainty regarding how an international arrangement for just transition would ensure equity and reflect the psrinciple of common but differentiated responsibilities and respective capabilities.

2. Opportunities and challenges

83. Opportunities mentioned by participants included:

(a) Integrating economic diversification, including investment plans and financing strategies, into NDCs, national adaptation plans and LT-LEDS;

(b) Establishing institutional mechanisms for engaging ministries of finance and planning in implementation and investment planning of NDC commitments;

(c) Developing financing mechanisms and enabling frameworks suited to different investment needs and mobilizing domestic and private investment through bankable project pipelines;

(d) Providing technology, finance and capacity-building support together through international cooperation aimed at supporting economic diversification and domestic value addition of raw materials;

(e) Recognizing and protecting Indigenous Peoples’ and local knowledge;

(f) Linking training and livelihood support to employment and market development.

84. Challenges mentioned included:

(a) Insufficient investment and lack of adequate, affordable and concessional finance for implementing NDC commitments, with overreliance on loans;

(b) Barriers to accessing finance, including as a result of credit ratings, currency fluctuations, risk perceptions and limited technical and institutional capacity;

(c) Narrow investment priorities of funds and financing conditionalities being linked to specific standards;

(d) Institutions lacking clear mandates and resources for translating NDC commitments into implementation;

(e) Difficulties in sustaining results after projects end, and limited access to new and emerging technologies;

(f) Exceptional circumstances that significantly change countries' economic and social conditions and require tailored support.

G. Closing session

85. Representatives of the incoming COP 31 Presidency delivered closing remarks, highlighting that there is no single model for transition; that desired outcomes require deliberate choices, investment and cooperation; that evidence and data that reflect national circumstances need to be translated into policies, plans and investment decisions; and that whole-of-economy and whole-of-government approaches, policy coherence, and complementarity between public and private finance are needed. The representatives stressed that diversification is about building productive capacity, creating greater value and supporting decent work. Bringing communities along, including through education, skilling and reskilling, social protection and workforce support, was described as key to a timely, durable and equitable transition, as communities that see the benefits of climate action support greater ambition. The representatives noted that the discussions at the global dialogue were expected to inform preparations for COP 31.

Annex

Proceedings of the 2026 global dialogue on the impacts of the implementation of response measures*

1. The 2026 global dialogue on the impacts of the implementation of response measures took place at the United Nations Conference Centre in Bangkok, Thailand, on 21 and 22 September 2026, in hybrid format. It was organized under the guidance of the Chairs of the subsidiary bodies, in partnership with ESCAP and UNCTAD, and held in conjunction with the 15th meeting of the KCI.

2. The global dialogue was attended by 69 registered in-person participants and 43 registered virtual participants. Participants represented a wide range of national circumstances, from countries with highly diversified economies to those with economies reliant on a few commodities, on tourism or on imported energy.

3. The dialogue was opened by Agung Adhiasto from UNFCCC, who moderated the opening session. Opening remarks were delivered by Julia Gardiner, Chair of the Subsidiary Body for Implementation (virtual); Daniele Violetti, Senior Director, Programmes Coordination, from UNFCCC (video message); Lin Yang, Deputy Executive Secretary for Programmes, from ESCAP; Luz María de la Mora, Director, Division on International Trade and Commodities, from UNCTAD (video message); and Pedro Luiz do Nascimento Filho, representing the COP 30 Presidency.

4. The scene-setting session was moderated by Kusum Lata from UNFCCC. Presentations were delivered by Peter Govindasamy, an expert from Singapore and a KCI Co-Chair (virtual), and Andrei Marcu, from European Roundtable on Climate Change and Sustainable Transition (virtual), followed by a discussion.

5. Session 1, on pathways and strategies in diversifying economies across sectors, was moderated by Haruna Wadaguchi from UNFCCC. A scene-setting presentation on the role of social protection was delivered by Katinka Weinberger from ESCAP, followed by national reflections from Chile, the European Union, Saudi Arabia and South Africa. Participants then discussed three themes in breakout groups in world café format: (a) broadening the national economic and revenue base, facilitated by Tsaone Mokwatso, a KCI member; (b) sectoral pathways, facilitated by Vintura Silva from UNFCCC; and (c) building resilience and equity in practice, facilitated by Katinka Weinberger from ESCAP. Facilitators reported back to the plenary.

6. Session 2, on evidence-based policy design for economic diversification, was moderated by Vintura Silva from UNFCCC. Scene-setting presentations were delivered by Wei Shiuen Ng from ESCAP and Sebastian Homm from GIZ. Participants discussed, in breakout groups, modelling and ex-ante assessment, the translation of evidence into legislation, and monitoring, evaluation and data capacity in three breakout groups led by Sangji Lee from UNDP, Sebastian Homm from GIZ and Saurabh Biswas from Asian Institute of Technology, followed by a report back.

7. Session 3, on emerging opportunities, innovations and market shifts advancing economic diversification, was moderated by Kusum Lata from UNFCCC. Scene-setting presentations were delivered by Saurabh Biswas from Asian Institute of Technology; Claudia Contreras from UNCTAD (virtual); Janek Toepper from FAO Regional Office for Asia and the Pacific; and Ranga Pallawala from EU SWITCH-Asia. Participants discussed innovation and new industries, technology and market transformation, and new industries and decent work in six breakout groups led by Saurabh Biswas from Asian Institute of Technology, Ranga Pallawala from EU SWITCH-Asia, Sangji Lee from UNDP, Janek Toepper from FAO Regional Office for Asia and the Pacific, Ryan Carvalho from ESCAP and Claudia Contreras from UNCTAD (virtual room), followed by a report back by rapporteurs.

* Not formally edited or formatted.

8. Session 4, on enabling economic diversification through finance, technology development and transfer, and capacity-building, was moderated by Kusum Lata from UNFCCC. A scene-setting presentation was delivered by Sangji Lee, from UNDP, followed by questions and answers and a plenary discussion in three rounds on technology development and transfer, capacity-building and governance, and finance and investment.

9. Closing remarks were delivered by Ethan Wignell and Umut Onat, representing the incoming COP 31 Presidency, followed by concluding remarks from the secretariat.