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Subsidiary Body for Scientific and Technological Advice

Forty-fifth session

Marrakech, 7–14 November 2016

Item 9(a) of the provisional agenda

Impact of the implementation of response measures

Improved forum and work programme

Subsidiary Body for Implementation

Forty-fifth session

Marrakech, 7–14 November 2016

Item 15(a) of the provisional agenda

Impact of the implementation of response measures

Improved forum and work programme

Workshop on views and experiences on economic diversification and transformation and on a just transition of the workforce and the creation of decent work and quality jobs

Report by the Chairs of the subsidiary bodies

Summary

The workshop on views and experiences on economic diversification and transformation and on just transition of the workforce and the creation of decent work and quality jobs was held from 2 to 4 October 2016 in Doha. Representatives of Parties and relevant international organizations and experts at the workshop exchanged information, experiences, case studies and views in relation to: (1) economic diversification and transformation and (2) just transition of the workforce and the creation of decent work and quality jobs, which can serve as input to Parties' in-forum discussions at the forty-fifth sessions of the subsidiary bodies, with a view to proposing priority areas for advancing the work of the improved forum on the impact of the implementation of response measures.

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I. Introduction

A. Mandate

1. The Conference of the Parties (COP), at its twenty-first session, decided to continue and improve the forum on the impact of the implementation of response measures (hereinafter referred to as the improved forum) and adopted the work programme on the impact of the implementation of response measures (hereinafter referred to as the work programme), comprising two areas: (1) economic diversification and transformation and (2) just transition of the workforce and the creation of decent work and quality jobs.¹
2. COP 21 requested the Chairs of the subsidiary bodies to convene the improved forum in order to implement the work programme.²
3. The Subsidiary Body for Scientific and Technological Advice (SBSTA) and the Subsidiary Body for Implementation (SBI) convened the first meeting of the improved forum at the forty-fourth sessions of the subsidiary bodies and agreed to implement the work programme.³ As part of the work programme,⁴ the subsidiary bodies requested the secretariat to organize a workshop on views and experiences, including on case studies, taking into account paragraphs 1 and 6 of decision 11/CP.21, in the context of sustainable development, in order to implement the work of the improved forum, on: (1) economic diversification and transformation and (2) just transition of the workforce and the creation of decent work and quality jobs (hereinafter referred to as the workshop).

B. Possible action by the Subsidiary Body for Scientific and Technological Advice and the Subsidiary Body for Implementation

4. As part of the work programme, SBSTA 45 and SBI 45 will conduct in-forum discussions, including on the report on the workshop, thus providing Parties with the opportunity to identify and possibly agree on priority areas and, as appropriate, to consider establishment of one or more ad hoc technical expert groups so as to advance the technical work in relation to those agreed priority areas.

II. Proceedings

5. The workshop was held in Doha from 2 to 4 October 2016, and was co-chaired by Mr. Carlos Fuller, Chair of the SBSTA, and Mr. Tomasz Chruszczow, Chair of the SBI. Around 40 participants attended the workshop, including representatives of Parties, international organizations and research institutions, and experts.
6. The workshop consisted of five sessions:
 - (a) Status of knowledge on sustainable social and economic transition as part of the implementation of mitigation measures;
 - (b) Integrating economic diversification into national strategies: sharing experiences and lessons learned;
 - (c) Managing social impacts of sustainable development;

¹ Decision 11/CP.21, paragraphs 1 and 5.

² Decision 11/CP.21, paragraph 3.

³ FCCC/SBI/2016/8, paragraph 119, and FCCC/SBSTA/2016/2, paragraph 53.

⁴ Contained in documents FCCC/SBI/2016/8, annex II, and FCCC/SBSTA/2016/2, annex I.

- (d) Just transition of the workforce and the creation of decent work and quality jobs;
- (e) Next steps for advancing work.

7. All documents related to the workshop are available on the UNFCCC website,⁵ including the agenda and presentations made.

8. Mr. Ahmed Mohammad Al Sada from the Ministry of Municipality and Environment of Qatar opened the workshop and welcomed all participants. In their opening remarks, the Chairs of the SBSTA and the SBI expressed their appreciation to the Government of Qatar for hosting the workshop. They stressed that the purpose of the workshop was for participants to share and exchange knowledge, experiences, including from the results of case studies with a view to informing future discussions in the forum.

A. Session 1: status of knowledge on sustainable social and economic transition as part of the implementation of mitigation measures

9. The session was presided by the Chair of the SBI, who gave a short introduction on the state of discussions on the issue of the impact of the implementation of response measures under the UNFCCC.

10. Following the introduction, representatives of the World Bank, the Economic Commission for Latin America and the Caribbean, Panama, Ghana and Poland presented their experiences, including case studies in relation to economic transition and mitigation of their regional economic (on various sectors), as well as social impacts. Additionally, the representative of Cambridge Econometrics presented the outcome from modelling, when a general equilibrium model had been fed with a set of assumed input data relevant for a sustainable development strategy. A diversity of ranges of input data values, depending on the national policies, was also discussed.

11. The representative of the World Bank presented the results of research that analysed a number of economies from all regions and representing different states of development, as well as different levels of carbon intensity. The indicators of vulnerability to impacts that might result from transition into low-carbon economies were first presented, taking into account their dependence on carbon-intensive technologies. The level of the economy's resilience to external pressure and its flexibility, the gross domestic product per capita, the economic complexity and the quality of infrastructure were used as relevant indicators, and resulted in the grouping of the analysed countries into three categories: climate policy leaders, climate policy followers and carbon-dependent countries. An analysis of how economic diversification may help countries in different categories to reduce their vulnerability to various economic, social and political impacts was also presented.

12. The representative of the Economic Commission for Latin America and the Caribbean presented Latin America's regional circumstances: economic (trends in economic growth, structure of trade, commodity prices, foreign direct investment by sector, productivity and fiscal revenues), social (unemployment rate, poverty and inequality and public social spending), and environmental (greenhouse gas emissions). He presented the region's economic growth and energy consumption data, mentioning also the observed shifts from public to private in the sector of education, the health system and transportation, as the public and/or social systems are unable to meet the needs of the people, and so such a trend is problematic both socially and environmentally. Fiscal solutions as well as appropriate industrial policies may help to improve public services without compromising the carbon footprint, thus alleviating the impact of likely development of the trend. A new

⁵ <<http://unfccc.int/9973.php>>.

public-private matrix is needed in Latin America to provide high-quality health, transport and education services with universal coverage.

13. The representative of Panama presented general information about a project aimed at assessing some impacts of economic transition and analysing how adequate policies helped to mitigate these impacts. Climate change mitigation measures may cause intended impacts such as emission reductions, internationalization of environmental externalities through carbon costs, increased energy and fuel costs, etc., as well as unintended impacts such as changes in employment patterns, carbon leakage and changes in trade and investment patterns. Understanding and managing the unintended impacts is critical for sustainable development, as emission mitigation policies and concrete measures to reduce environmental impacts should not necessarily mean slowing the economy down.

14. He introduced a project based on five case studies, including for the three countries (Ghana, Maldives and Poland), which went or are currently undergoing economic transition, one case study for the energy-intensive industrial sector (soda ash manufacturing) and one case study for policy (food labelling).⁶ The project looked into three steps of dealing with impacts of mitigation policies and actions:

(a) **Identifying impacts:** It is important to note that impacts are across three dimensions of sustainable development: economic, social and environmental. Impact identification can be done ex ante and/or ex post using two main tools: impact assessment and stakeholder consultation. Several issues were identified through the case studies:

- (i) Developing countries have little awareness, knowledge and capacity in relation to identifying such impacts;
- (ii) Developed countries have knowledge but a lack of understanding of cross-border impacts;
- (iii) There are difficulties in identifying and separating the impacts of climate change policies from those of other policies;
- (iv) There is a lack of methodology for collecting information and data;
- (v) There is a lack of an international framework for identifying impacts;

(b) **Quantifying impacts:** Having identified the impacts, quantification is necessary in order to address them in a sufficient and efficient manner. Methodologies and tools are needed for quantifying domestic and international impacts, including both ex ante and ex post tools. Another challenge is that the data needed for the quantification are not sufficiently collected in most cases; they are collected sometimes ex ante, seldom ex post and rarely internationally or cross-border;

(c) **Addressing impacts:** Impacts can be managed ex ante and ex post. Examples of such management were presented in the case studies.

15. The representative of Ghana showed Ghana's national circumstances in relation to climate change policies. She introduced the country's climate change policies and programmes by sector of the greenhouse gas inventory, and named some of the challenges that Ghana is facing, such as limited stakeholder participation, inadequate training and public awareness creation, shifting political priorities and long-term vision, and lack of emphasis on climate change in the national budget.

16. To move forward, there are needs that include the following:

- (a) Comprehensive assessment of impacts (in qualitative and quantitative terms);

⁶ The white paper of the project and the case studies are available at < <http://www.ceps-ech.eu/publication/climate-sustainable-growth-white-paper>>.

(b) Development of institutional linkages between mitigation policies, labour, trade and employment policies;

(c) A comprehensive national strategy on the impact of response measures that is gender-responsive;

(d) Mapping and tracking of climate policies and measures.

17. In order to achieve these, Ghana has established a working group on response measures to gather the officials and experts from various institutions.

18. The representative of Cambridge Econometrics focused on economic modelling. Computer modelling makes it possible to carry out macroeconomic experiments, bearing in mind that the simplification of reality is used as the description of complexity of real economic–political–social systems. As there are many types of model, each with its own strengths and weaknesses, and it is important to use the appropriate tools, the assessment of the impact of mitigation policies depends on the national circumstances as well as the policies that reflect the reality to the extent possible. The E3ME general equilibrium model developed by Cambridge Econometrics was presented as a show case to help explain the overall principles of economic modelling. The tools to prepare input data, reflecting real economies as well as policies using (assumed) factors, trends and other indices, were shown.

19. The representative of Poland's focused on the case study of the social and environmental impacts of the country's economic transformation as well as the measures to alleviate them. With the energy sector (fuel combustion) being the dominant emitting sector in the country, since the beginning of the Polish transformation in 1989, environmental protection and reduction of all kinds of pollution have been considered one of the main areas of new policy. The National Fund for Environmental Protection and Water Management was created in 1989. In 2011, the outlays on environmental protection amounted to 12.1 billion Polish zlotys (PLN) (compared with PLN 7.5 billion in 2007), including PLN 3.1 billion for air and climate protection. The transformation of the entire economy, including deep restructuring from mining and heavy industry to services and machine industries entailed huge social costs during the initial period. At the same time, it helped to decouple the economic growth from emissions, leading to the tripling of the industrial output, while greenhouse gas emissions have dropped by more than 30 per cent over the past 25 years. The cost could only be accommodated, without raising social unrest, thanks to the extensive assistance offered by the Government, and thanks to the support from foreign partners, mostly from the European Union (EU) as well as thanks to the very clear messaging that made the entire society well aware of the cost and goals of transition.

20. The study looked at the impacts of transformation on coal mining, the power sector and cement production. Cooperation and support helped the transformation to successfully deliver the results. It is, however, questionable whether the transition took place in a sustainable way. No monitoring tools were available. The main driver to having social consent during the most socially painful stages of transition was the overriding political goal to join the EU as quickly as possible.

B. Session 2: integrating economic diversification into national strategies: sharing experiences and lessons learned

21. This session was facilitated by Mr. Andrei Marcu (Panama). Presentations were made by representatives of the secretariat, the United Nations Conference on Trade and Development, Singapore, the EU, Saudi Arabia, Qatar and Bahrain.

22. The presentation made by the representative of the secretariat was on the technical paper prepared by the secretariat on the concept of economic diversification in the context of response measures.⁷ It covered how technical knowledge on economic diversification has emerged under the Convention since 2000.

23. The major highlights of the various workshops on economic diversification that have taken place indicate that economic diversification goes beyond addressing the impacts of climate mitigation policies: it contributes to sustainable development and reduces vulnerability. Technical assistance is required for good policy formulation. Economic diversification contributes to sustainable development by improving economic tolerance, eradicating poverty, creating more jobs and reducing vulnerability to income loss due to volatility of product price on the international market, among others.

24. The scope for economic diversification is broad in developing countries as they start to specialize in products when their economic status reaches a certain level: a gross domestic product of about USD 10,000 per capita. The analysis and review of various methods available for measuring economic diversification concluded that the Herfindahl–Hirschmann Index is the most reliable method for policymakers, while the Location Quotient alongside extended parameters can also help policymakers to identify the industries that are contributing to the regional economy and can be targeted for economic diversification through exports.

25. The results of reviews of various diversification policies were highlighted, which included extensive versus intensive margins, soft versus hard industrial policies, import substitution versus export-led policy and special economic zones. The product space theory was presented, which suggests that diversification should start in the closest product space. The presentation was concluded with a look at the ‘plan, do, check and act’ cycle used by policymakers to integrate economic diversification into national policies.

26. The representative of the United Nations Conference on Trade and Development emphasized the link between environment and trade policy in his presentation. Although trade is not explicitly mentioned in the nationally determined contributions (NDCs), considering that the NDCs propose a process of collective transformation instead of individual promise, a massive delegation of resources and structural changes at the international level will be required. Those changes will be dictated by the NDCs and will also be applicable to trading partners as the changes are implemented. These changes bring opportunities to the trade and investment world.

27. Trade and economic diversification are linked through the global value chain. Countries are looking for ways to upgrade their production and diversify their economies. Already 80 per cent of world trade is taking place along the global value chain, and about 60 per cent of merchandise trade is in immediate goods. The role that a country plays in the global supply chain is critical, as the material needed as input to the production process is 10 times more than that ending up in the finished product. Trade is also used to externalize environmental effects through exports; for example, a quarter of China’s emissions are from the production of products that are exported to the rest of the world. It is important to see how the global value chain can be used to reduce the total environmental cost.

28. Trade and environmental policies are also highly relevant in the area of renewable energy. There is a need for transferring technology from one country to another, especially from developed to developing countries, as countries are diversifying their energy sectors. The example of the Environmental Goods Agreement was shared, whereby countries are participating in liberalizing trade in environmental goods and services, which includes renewable energy technologies. Trade disputes are happening not because international

⁷ FCCC/TP/2016/3.

trade rules are not being followed, but because disputes in the trade sector are happening. The reason for these disputes is not whether the rules are being followed, but if the rules themselves are correct. However, progress is being made in dealing with these issues outside the trade negotiations.

29. With respect to labour issues, the idea of creating green jobs is in the mind set of policymakers. Countries are actually exporting part of their imports; for example, solar products made in China are using materials imported from Germany and other parts of Europe.

30. In terms of the way forward, trade could provide an enabling environment for the benefit of countries where transformations are taking place and NDCs are being implemented.

31. The session continued with a presentation by the representative of Singapore, who emphasized the importance of the governance of response measures in the context of sustainable development by integrating environmental, economic and social development. Economic development is critical for climate protection and that should also be the focus of the implementation of the Paris Agreement in the context of impacts of response measures. The national circumstances of Singapore were presented and also the path that Singapore has taken for sustainable development, which was a necessity rather than a choice. The second part of the presentation covered the governance related to response measures.

32. The national circumstances of Singapore limit its potential for economic diversification owing to low availability of and limited access to land, water, energy and natural resources, including sources of renewable energy. In order to address the national circumstances, many policy interventions have contributed to sustainable development and the economic path, which included investment in the people and resources via skills development. This remains relevant for increasing Singapore's competitiveness, as Singapore will operate in a carbon-constrained world.

33. Another aspect that has contributed to Singapore's economic growth is good political governance and low corruption. Open markets and social inclusion remain an integral part of development. The sectoral composition shifted as the country's economy developed over 50 years. Markets also diversified in terms of trading partners as the economy diversified. Singapore also diversified its energy sector by shifting from fuel oil to natural gas. As all of its energy sources are imported, Singapore has moved to trading with many countries for energy security. Solar energy is not considered to be a viable option for the country owing to its dense population. With limited resources and constraints, Singapore needs to continue investing in diversifying and increasing the efficiency of using fossil fuels.

34. On the governance of response measures, access to open markets is important for Singapore and therefore trade measures and trading partners are important. The responses to climate change are having impacts on developing countries, and addressing the impacts of such policies is important (border carbon adjustment, carbon tax, etc.).

35. The presenter concluded by emphasizing the need to work together with related agencies such as trade agencies, the International Labour Organization (ILO) for labour-related issues and the World Bank. He proposed three levels of operation: firstly at the national level, secondly at the individual international organization level and thirdly coordination among organizations at the international level. He also presented a framework for cooperation at those levels, which includes transparency and respect for competencies as key components.

36. The representative of the EU presented two main aspects of economic diversification: existing examples of economic diversification, and existing tools and

support schemes that are in place and can be used for capacity-building in relation to economic diversification.

37. The case study of the EU demonstrates that economic growth and emission reduction are possible at the same time. Two policies of the EU, the European Union Emissions Trading System and the effort-sharing decision, contribute to such low-carbon economic growth. The second case study of Czechia demonstrates that economic diversification can take place when the economy is in transition while at the same time reducing emissions.

38. Economic diversification is not always driven by climate policies alone but might be a part of sustainable economic development policy. The previous coal-based economy has diversified into a service-sector-based economy. Shock therapy can work better in the long term than the gradual implementation of policies. In order to attract investment, priorities need to be set by countries. If a country is planning for a boom in its economy, it is important that the country has set the correct priorities for economic diversification.

39. The second part of the presentation included examples of trade policies. Climate change and trade are interlinked, and economic diversification and climate policies will rely on trade policies in the future. The Economic Partnership Agreements of the EU with the African region contribute to sustainable development, poverty eradication and capacity-building. The EU opened its market to the African countries taking part in those partnerships in high-value sectors and in order to support good governance. This support became a driver for economic change in those countries.

40. There is a dialogue taking place for sharing experience on economic diversification. This dialogue resulted in identification of various elements to work with Gulf Cooperation Council (GCC) countries. These elements can also benefit trade and economic relations within the region. The dialogue benefits from the experience of central European economies, identifying how to support investment in the GCC region.

41. There are other ad hoc capacity-building projects on economic diversification for GCC countries, for example, implementing economic diversification strategies, attracting investment without government support, boosting trade and investment understanding the barriers to and opportunities for trade and investment, and developing standards that can make climate policies work.

42. The representative of Saudi Arabia shared the long-term strategic approach to economic diversification in Saudi Arabia. He started by presenting various COP decisions related to economic diversification and then presented the national circumstances of Saudi Arabia.

43. Saudi Arabia faces two challenges: firstly, its revenue is heavily dependent on oil exports and secondly, the oil sector is not able to provide sufficient jobs. Saudi Arabia is the largest GCC country by population, area, oil production capacity and oil reserves (with 23 per cent of the global oil reserves). It is also the world's largest oil producer. But the oil sector provides less than 5 per cent of jobs in GCC countries. Mitigation policies have severe impacts on the economics of Saudi Arabia and therefore the inclusion of economic diversification in international climate change policies is important.

44. In order to address those challenges, Saudi Arabia realized the importance of economic diversification decades ago, and has implemented seven five-year plans since 1970. The objectives of the plans include: reducing dependency on oil as the main source of national income; increasing the value added to oil prior to export; diversifying the sources of national income; and expanding the production base of services, industry and agriculture.

45. Among the important pillars of Saudi Arabia's vision for 2030 are: the transformation of Saudi Arabian companies to be leaders in sectors besides oil; the human

capital programme; strategic partnership programmes; and the public investment and restructuring programme. It is expected that Saudi Arabia's economic diversification activities and its promising integrated approach will create opportunities for sustainable economic growth and lead to several co-benefits (e.g. increasing efficiency in all sectors, employing and developing new clean energy technologies to diversify energy supply, and building resilience to the negative impacts of climate change and response measures).

46. Economic diversification initiatives in Saudi Arabia are leading to efficiency across the sectors of power, building, transport, industry and urban planning.

47. Diversification of the energy sector is being targeted using various approaches. Renewable sources and nuclear energy will be introduced to the power mix. Utility plants have started to shift to using gas. Saudi Arabia is exploring the potential for unconventional gas. The Government announced regional connectivity initiatives with GCC countries and Egypt to allow for load sharing and to improve the security of supply. The country is also working on developing carbon capture utilization and storage technologies.

48. To address the challenge of creating opportunities for sustainable economic growth, Saudi Arabia is creating local jobs by expanding value chains, for example, by: expanding unconventional gas exploration and production, localizing oil and gas equipment manufacturing and services, setting up energy service companies, setting up renewable energy manufacturing clusters, promoting basic anchor industries to support downstream industries, encouraging the creation of polymer and metal conversion parks, and developing downstream industry clusters. Improving the business environment and decreasing regulatory uncertainty can act as enablers to enhance job creation and economic development.

49. The representative of Qatar presented the National Vision of Qatar 2030, which has four pillars: human, social, economic and environmental. Sustainable economic diversification is included as part of the economic pillar, which targets a diversified economy that gradually reduces its dependence on hydrocarbon industries, enhances the role of the private sector and maintains its competitiveness through: (1) the expansion of industries and services with competitive advantages derived from hydrocarbon industries; (2) the design and development of economic activities in which Qatar can specialize, including the technical and human requirements of those activities; and (3) a knowledge-based economy characterized by innovation, entrepreneurship, excellence in education, a world-class infrastructural backbone, the efficient delivery of public services, and transparent and accountable government.

50. The representative of Bahrain presented the country's vision for 2030, which aims at, inter alia, reducing Bahrain's high dependence on oil and gas. Although Bahrain has focused on economic diversification, fossil fuel products remain an important part of its economy. The vision includes three pillars: human capital, strategic location, and business and living. Bahrain shares the view that human capital has driven the growth of the service sector of the economy and, on the basis of its experience, increasing the relative value added by human capital could pave the way to progressing sustainably and diversifying the economy while having mitigation co-benefits.

51. During the first stage of Bahrain's diversification, the largest non-oil sector was created. This relied on hydrocarbons to drive manufacturing as well as to generate liquidity and government revenue. Smaller sectors that are not even indirectly oil-dependent have grown much faster over the past decade. Trade patterns illustrate opportunities for import substitution.

C. Session 3: managing social impacts of sustainable development

52. The objective of this session was to have breakout groups for participants to discuss their ideas on the management of just transition and the creation of decent work and quality jobs alongside enhanced collaboration.

53. The following key points arose from the discussions:

(a) Mitigation measures might have economic and social impacts both nationally and internationally. Early planning of such measures is necessary, including collaboration among countries and among ministries within a country;

(b) When it comes to workers, education and training are needed to ensure just transition of the affected workforce;

(c) The elements of social dialogue and social protection should be included in the decision-making process;

(d) Impacts on countries due to mitigation measures are different depending on national circumstances, but all of them need to be managed (e.g. the Bolivarian Republic of Venezuela is heavily dependent on oil, is less diversified and more socially affected; tourism is affected in the Plurinational State of Bolivia; and the industries of Brazil and Mexico are affected, such as in nitric acid production; which is also one of the reasons for differences in their NDCs);

(e) However, some countries see more opportunities than challenges;

(f) The impact of work on the ground is decreased by weak cooperation at the government level, poor pro-environment policies, no political participation, etc.;

(g) Many of the countries stated that they only have the potential to mitigate (no adaptation) and at the same time also have to bear the economic impacts of mitigation actions;

(h) There is a need for awareness around the topic of the impact of the implementation of mitigation measures in many developing countries;

(i) All EU policies are subject to impact assessment before approval (e.g. trade agreement). This is similar to sustainable development impact assessment. The policies are selected from the available options on the basis of their impacts;

(j) There is a need for cooperation and coordinated work (such as the Green Jobs Assessment Institutions Network of 12 institutions);

(k) Often the results of technical work are not translated into policies. Therefore, decision makers should include ex ante and ex post assessments in the process;

(l) In some countries, it is mandatory to involve trade unions. Therefore, the involvement of trade unions in the just transition process depends on the country's policies;

(m) Within the UNFCCC process, regional workshops should be conducted to raise awareness of the issue of the impact of the implementation of mitigation measures, and for capacity-building of countries, especially developing countries;

(n) A knowledge database would be useful for sharing experiences and case studies.

D. Session 4: just transition of the workforce and the creation of decent work and quality jobs

54. In this session, representatives of the secretariat, ILO, the United States of America, the EU, the International Trade Union Confederation and Poland made presentations.

55. The representative of the secretariat presented the technical paper on just transition of the workforce and the creation of decent work and quality jobs,⁸ which was mandated at the forty-fourth sessions of the subsidiary bodies as part of the work programme. The technical paper starts with an overview of relevant work under the subsidiary bodies and reported in Parties' national reports submitted to the UNFCCC, and then draws upon publications of experts, international organizations and research institutes, and input from ILO, and presents the general concept of just transition, including the drivers and objectives of such transitions.

56. The paper then highlights linkages between just transition and impacts of the implementation of mitigation policies, and provides guidance on how to approach just transition at the national level, which includes the following six major elements:

- (a) Understanding of the impacts of mitigation policies;
- (b) Research and early assessment of the impacts of mitigation policies on the workforce;
- (c) Consultation and social dialogue;
- (d) Training and skills development;
- (e) Social protection and security;
- (f) Ex post assessment of the just transition measures and their sustainability.

57. The presentation made by the representative of ILO gave a very thorough picture of the employment dimension of mitigation measures. In order to show the magnitude of the issue, a simulated increase in job reallocation associated with an ambitious climate change mitigation policy relative to 'business as usual' in 2030 was illustrated.

58. It has been observed across 27 member countries of the Organisation for Economic Co-operation and Development that the share of total employment in the most polluting industries is rather low; however, many under-skilled or low-skilled labourers are found in those industries, so it is more difficult to make transitions for that part of the workforce when countries undertake mitigation measures in those sectors.

59. Some of the main drivers for shifting towards a more sustainable future are: (1) there is unprecedented growth in green investments; (2) investors are pulling out of fossil fuels; (3) carbon pricing is happening; and (4) the production system is changing, for instance from 'produce–use–discard' towards circular production systems such as 'product–service systems'.

60. Looking at the impact on employment, while global net job gains are possible, assessments at the national level and within sectors are needed. The implications of mitigation measures for the labour market depend on:

- (a) The nature and scope of adjustments in economic sectors;
- (b) Shifts in the volume, composition and quality of employment;
- (c) Changes in income distribution;

⁸ FCCC/TP/2016/7.

- (d) Changes in processes and production;
- (e) Effects on productivity of measures to reduce emissions;
- (f) Needs for human skills development and upgrading;
- (g) Needs for social protection to support adaptation for vulnerable groups.

61. Building on the conclusions of the International Labour Conference on green jobs in 2013 and the ILO Tripartite Meeting of Experts in 2015, guidelines for a just transition were prepared, which could provide useful guidance to Parties.⁹

62. The representative of the United States shared the experience of the United States in promoting just transition, which has the aims of: (1) promoting workers sharing in the transition to a greener economy; (2) equipping workers with skills for the transition; (3) encouraging policies and investments that respect the fundamental rights of workers; (4) protecting workers' health and safety; and (5) applying measures to help those affected by the transition, including vulnerable populations.

63. The United States has launched partnerships for opportunity and workforce and economic revitalization, including the YouthBuild programmes and the Job Corps career technical training and education programme.

64. The representative of the EU shared the experience of the EU of just transition of the workforce and the creation of decent work and quality jobs. Transition to a low-carbon economy has been a long-term priority for the EU. It realizes that making the transition presents economic and societal challenges but also offers opportunities to create sustainable growth and new jobs, especially in the green economy. With 20 per cent of the EU budget planned for climate action with a focus on jobs and growth, the EU sees this as one of the most important issues.

65. The representative of the International Trade Union Confederation addressed the active participation of trade unions in the climate change negotiations. In order to advance the work on just transition under the improved forum, it is crucial to involve ILO and to welcome the participation of trade unions and other relevant stakeholders.

66. The final two presentations were given by the representative of Poland to supplement the presentation of the EU, on Poland's legal and institutional framework for social dialogue and on a case study of just transition during a dramatic economic restructuring in the Ruhr area in Germany.

67. The aim of the Polish social dialogue system is to create socioeconomic cohesion legitimized by society as broadly as possible. The dialogue involves employers, employees and governments in the decision-making process on employment and workplace-related issues, and it includes negotiations, consultations and information exchange among representatives of the three groups on issues of common interest related to economic, labour and social policy. The dialogue is conducted at the country, sectoral, regional and enterprise levels.

68. The Ruhr area's economy is based on mining and heavy industry. In the 1960s, the area underwent a successful economic transformation. During the transformation, a number of measures were applied in order to ensure just transition of the affected workforce, including a social dialogue system at the regional level and a network of 'practice' enterprises as a method of training to assist the unemployed in developing the necessary skills in their effort to find new jobs. The practice proved to be very successful and started

⁹ Available at <http://www.ilo.org/wcmsp5/groups/public/---ed_emp/---emp_ent/documents/publication/wcms_432859.pdf>.

to be replicated in other EU countries. As a result, a network of practice enterprises active in various areas has been built.¹⁰

E. Session 5: next steps for advancing work

69. In the final session of the workshop, participants had an open discussion on the lessons learned from the workshop. They exchanged the knowledge and ideas that they considered should be forwarded as input to the in-forum discussions referred to in paragraph 4 above.

70. The major points of the discussion can be summarized as follows:

(a) There is a need to raise awareness and to build capacity on the topic of the social and economic impacts of the implementation of response measures for developing country and subnational regions that are not yet represented in the debate;

(b) The work under the improved forum should be further enhanced and technical expert groups should be established to work on priority areas with regional focus, including areas related to national development, labour, economy and trade;

(c) Workshops are useful for conceptual discussions; however, the work under the improved forum should also allow for having a discussion leading to sharing and developing good practices and principles, including in collaboration with other international organizations;

(d) The perspectives of the countries that are transitioning to a low-carbon economy need to be taken into account, along with identifying how those countries can be delivering solutions. This may include striving to understand:

(i) How the response measures adopted by one country may impact on other countries' diversification strategies;

(ii) How the diversification plan of a country can ensure its resilience to external shocks;

(iii) How the diversification strategies of countries as response measures can make important contributions to the implementation of the Paris Agreement and to achieving the objectives of the Agreement;

(e) The necessity to share best practices and successful experiences;

(f) The cooperation among various actors must be enhanced;

(g) The improved forum could look into conducting advisory work and providing technical assistance to countries in three areas in relation to their economic diversification strategies by:

(i) Assessing the impacts of response measures on economic transformation initiatives in other countries;

(ii) Designing a country's diversification strategy in order for it to be more resilient to the impacts caused by other countries' response measures;

(iii) Assessing how the implementation of diversification strategies as a response measure to climate change contributes to climate change mitigation;

(h) A space for sharing success stories in relation to economic diversification would be very useful;

¹⁰ See <<http://www.penworldwide.org/>>.

- (i) In the area of just transition, there is a need to:
 - (i) Enhance international cooperation in the areas of job creation, developing service sectors, developing communication strategies and skills development;
 - (ii) Conduct assessment of the impact of mitigation measures on the workforce;
 - (iii) Establish a just transition framework;
 - (j) Coherence at both the international level (among international organizations) and the national level (among ministries) should be considered;
 - (k) The participation of observer organizations in the improved forum is important.
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