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Issues relating to agriculture

Workshop on the identification and assessment of agricultural practices and technologies to enhance productivity in a sustainable manner, food security and resilience, considering the differences in agroecological zones and farming systems, such as different grassland and cropland practices and systems

Report by the secretariat

Summary

The in-session workshop on the identification and assessment of agricultural practices and technologies to enhance productivity in a sustainable manner, food security and resilience, considering the differences in agroecological zones and farming systems, such as different grassland and cropland practices and systems, was held in Bonn, Germany, on 23 May 2016 in conjunction with the forty-fourth session of the Subsidiary Body for Scientific and Technological Advice.

In the exchange of views that took place at the workshop, Parties highlighted the important role of such practices and technologies and emphasized the diversity of agricultural systems and the importance of agriculture for economic development. Parties also highlighted the importance of, inter alia, exploring the potential of processes under the Convention in relation to identifying value-adding elements that might contribute to advancing the consideration of issues relating to agriculture.

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I. Introduction

A. Mandate

1. The Conference of the Parties, by decision 2/CP.17, paragraph 75, requested the Subsidiary Body for Scientific and Technological Advice (SBSTA) to consider issues relating to agriculture.
2. SBSTA 40 invited Parties and admitted observer organizations¹ to submit their views² on the following:
 - (a) Identification of adaptation measures, taking into account the diversity of the agricultural systems, indigenous knowledge systems and the differences in scale as well as possible co-benefits and sharing experiences in research and development and on-the-ground activities, including socioeconomic, environmental and gender aspects;
 - (b) Identification and assessment of agricultural practices and technologies to enhance productivity in a sustainable manner, food security and resilience, considering the differences in agroecological zones and farming systems, such as different grassland and cropland practices and systems.
3. The above-mentioned submissions from Parties were compiled by the secretariat into document FCCC/SBSTA/2016/MISC.1 and Add.1.
4. In addition, SBSTA 40 requested the secretariat to organize, subject to the availability of supplementary resources, an in-session workshop that was to be held in conjunction with SBSTA 44 on the issues referred to in paragraph 2(b) above.³ It also requested the secretariat to prepare a report on the workshop for consideration at SBSTA 45.⁴

B. Scope of the note

5. This report provides an overview of the proceedings of the workshop referred to in paragraph 4 above, held in Bonn, Germany, on 23 May 2016 (hereinafter referred to as the workshop) (chapter II), a summary of the introductory presentation and panel discussion (chapter III) and a summary of the plenary discussion that took place at the conclusion of the workshop (chapter IV).

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

6. SBSTA 45 may wish to consider the information contained in this report as part of its consideration of issues relating to agriculture, in accordance with the conclusions of SBSTA 40.⁵

¹ Submissions from admitted observer organizations are available at <<http://unfccc.int/7482>>.

² FCCC/SBSTA/2014/2, paragraph 87.

³ FCCC/SBSTA/2014/2, paragraph 88.

⁴ FCCC/SBSTA/2014/2, paragraph 89.

⁵ As footnote 4 above.

II. Proceedings

7. The workshop was organized by the secretariat and open to all Parties and observer organizations attending SBSTA 44.

8. Mr. Carlos Fuller, the Chair of the SBSTA, delivered opening remarks and introduced the mandate and objectives of the workshop. He requested Mr. Emmanuel Dlamini (Swaziland) and Mr. Heikki Granholm (Finland) to co-facilitate the workshop.

9. On behalf of the two co-facilitators, Mr. Granholm gave an introduction to the workshop and posed the following questions in order to guide the panellists and facilitate discussion:

(a) What experience does your country have with the identification and assessment of agricultural practices and technologies to enhance productivity in a sustainable manner, food security and resilience?

(b) How do various processes under the Convention facilitate the identification and assessment of agricultural practices and technologies to enhance productivity in a sustainable manner, food security and resilience in your country?

(c) What potential areas for synergy are there among various processes under the Convention to facilitate the identification and assessment of agricultural practices and technologies to enhance productivity in a sustainable manner, food security and resilience in your country?

10. The workshop was organized into two parts. Part I featured a framing presentation delivered by an expert from the Food and Agriculture Organization of the United Nations (FAO), followed by a panel discussion with representatives of six Parties. In part II of the workshop, Parties engaged in a plenary discussion, which provided an opportunity for interactive discussion among all participants. In the final phase of the plenary discussion, four representatives of civil-society organizations delivered short statements or interventions on their relevant activities (see paras. 42–45 below).

11. Further information on the workshop, including the agenda, an information note, the presentations made by experts and statements made by the panellists, is available on the UNFCCC website. Upon the request of Parties and UNFCCC constituted bodies, the presentations and written statements submitted by them have also been made available online.⁶

III. Summary of the introductory presentation and panel discussion

12. The introductory presentation made by the representative of FAO provided a broad overview of the concept of productivity in agriculture. Productivity links various dimensions of sustainability, food security and nutrition in a broad variety of contexts, including social dimensions (e.g. gender and tenure) and limiting factors (e.g. availability of land, water and nutrients, the impact of climate change, technologies and inadequate investment).

13. Preserving soil fertility, enhancing resilience and conserving crop diversity decrease the inter-annual variability of harvest and thereby stabilize agricultural productivity over time. The representative discussed the importance of diversity in terms of space (including

⁶ <<http://unfccc.int/9458>>.

the important contribution of marginal land to the productivity of main land by, for example, ensuring the presence of pollinators) to maintaining productivity at the landscape level. He highlighted how enhancing productivity could lead to greenhouse gas (GHG) emission reduction through optimal use of fertilizer, less wastage of resources and reduction in demand for additional land.

14. The increasing interest in assessing productivity on broader scales in a holistic way was noted. In this context, the concepts of productivity along the entire value chain and productivity as an indicator of successful adaptation were deemed essential, as were investments to sustain and increase productivity in agriculture. An enabling environment for investment that is a direct result of the policies and institutions in place can decrease the risks posed by climate change.

15. Robust data, information and knowledge on all dimensions of productivity in very diverse situations form the basis for the consideration of enhancing productivity, in particular given the impact of climate change. Consequently, it is important to enhance the sharing of information and knowledge, including indigenous and local knowledge, in a variety of contexts and situations in order to inform decision-making under changing conditions.

16. The introductory presentation was followed by a panel discussion, in which representatives of six Parties provided responses to the questions referred to in paragraph 9 above. Malawi and Canada responded to the first question, Argentina and the European Union (EU) to the second question and India and New Zealand to the third question.

Experience in the identification and assessment of agricultural practices and technologies to enhance productivity in a sustainable manner, food security and resilience

17. In its response to the question referred to in paragraph 9(a) above, Malawi, on behalf of the African States, informed the workshop participants that agriculture in Africa is predominantly rain dependent and based on smallholder farming. The representative presented an overview of key agroecological zones in Africa and related practices and technologies aimed at enhancing food security and ecological resilience. They include the diversification of crops and integrated management of soil and water resources, livestock and rangeland activities, while taking into account social and cultural elements (e.g. gender) and risk and climate information. Agriculture in Africa faces a significant challenge in adapting to climate change owing to costs and damages rising rapidly with the warming climate.

18. Malawi identified a number of existing forums and initiatives under and outside the Convention that are able to facilitate the identification of agricultural adaptation practices and technologies in Africa. In particular, the Africa Adaptation Initiative involves enhancing climate information services, strengthening policies and institutions, supporting the implementation of concrete adaptation activities on the ground and increasing the flow of finance and investment to support the implementation of adaptation programmes and projects. Enhancing climate information services under the initiative includes the assessment of the types of climate information that are needed to inform decision-making. The initiative also includes the enhancement of the institutional and policy frameworks needed to advance the provision of and access to climate information, including the improvement of early warning system infrastructure at the regional and subregional levels and capacity-building.

19. Responding to the same question, Canada presented the major findings from its national inventory report for 1990–2014. Canada's GHG emissions from agriculture account for 8 per cent of the national total emissions and have remained relatively stable at around 60 million tonnes of carbon dioxide equivalent since 2000. The key factor enabling the stabilization of agricultural emissions is the adoption by Canadian farmers of practices

and technologies that have improved productivity in both cropping and livestock systems, thus allowing agricultural soils to turn from a source to a sink of emissions. Currently, around 80 per cent of all agricultural land in Canada is under some form of conservation tillage, with no till or zero tillage being the most predominant tillage regimes in use. The Canadian cattle sector has made significant improvements in feeding and breeding practices. As a result, in 2011 Canada produced more beef with fewer emissions than in 1981. Similar declining emission intensities (i.e. lower emissions per unit of product) have been observed and measured for dairy and swine production.

20. Canada noted that synergies between enhanced agricultural productivity and the mitigation of GHG emissions contribute to building resilience in the agriculture sector and provide overall net benefits to the sector and the whole economy. Canada recognizes that growth in production will have to be decoupled from the increase in the risk to the environment. This decoupling will require continuing improvement, development and adoption of innovative technologies and management practices, including addressing water and soil conservation and supporting investment in clean and sustainable technologies and processes.

Convention processes that could facilitate the identification and assessment of agricultural practices and technologies to enhance productivity in a sustainable manner, food security and resilience

21. Addressing the question referred to in paragraph 9(b) above, Argentina emphasized that Latin America and the Caribbean is particularly vulnerable to climate change, in particular the increasing frequency and intensity of extreme weather events. Agriculture is one of the sectors most affected by climate change, which is a matter of grave concern considering its role in ensuring food security. The crucial role of food security has been recognized in the Paris Agreement, which refers to the need to ensure that food production is not threatened. In many developing countries, the agriculture sector is of critical importance to economic and social development and the alleviation of hunger and poverty. Consequently, it requires further strengthening of its adaptive capacity and productivity by increasing national capacity and international cooperation in relation to technology development and transfer. In this context, Argentina presented a number of programmes being implemented to address the adverse impacts of climate change on the agriculture sector and to increase agricultural productivity in a sustainable manner.

22. Argentina considers that the SBSTA should continue its technical and scientific work relating to adaptation on the basis of the objective, principles and provisions of the Convention in the following areas: the impact of climate change on pests and diseases and weed distribution; obtaining germ plasm adapted to thermal and water stress; the development and transfer of new technologies; and sharing knowledge on adaptation practices that increase productivity in a sustainable manner and contribute to food security.

23. A representative of the EU and its 28 member States, in its response to the same question, provided a concise overview of their agricultural policy. The representative noted that since 1990 the increase in agricultural productivity in the EU has been accompanied by a decrease in GHG emissions from the sector. Its Common Agricultural Policy includes the implementation of measures aimed at 'greening' as well as cross-cutting measures to reduce emissions, including voluntary schemes to incentivize farmers to carry out new, innovative and sustainable practices containing elements of adaptation and mitigation and other co-benefits (e.g. water quality, increased biodiversity and resilience).

24. In this context, the EU presented several examples of the practical implementation of the policy by its member States, including: the optimization of nutrient flows in agricultural production and the full utilization of the bioenergy potential of biomass flows; a project aimed at promoting agroecology by encouraging the development of farmers

groups to promote innovative practices supported by applied research and educational schemes; a project to reward farmers for carbon sequestration in soil through the application of low- or no-till technologies at degraded pastures; and projects aimed at maintaining and increasing the carbon content of agricultural soils and enhancing the efficiency of nitrogen use in agriculture. The EU concluded by highlighting the importance of international cooperation in promoting agricultural productivity.

Potential areas for synergy among various processes under the Convention to facilitate the identification and assessment of agricultural practices and technologies to enhance productivity in a sustainable manner, food security and resilience

25. India, responding to the question referred to in paragraph 9(c) above, focused on the importance of food security in a country inhabited by more than 1.3 billion people. In this context, the representative emphasized the dominance of marginal land and small and marginal farmers, the declining per capita land availability and the impact of climate change, in particular drought, severely affecting mainly rain-fed agriculture. The country has implemented a number of national actions within various processes under the Convention aimed at: (1) increasing water use efficiency and enhancing water harvesting; (2) preventing soil erosion and improving soil carbon content; (3) developing contingency plans and identifying contingency crops; (4) advancing national and state disaster management (including preparing vulnerability maps); and (5) enhancing research and development and dissemination of knowledge.

26. Addressing potential areas for synergy among various processes under and outside the Convention, India highlighted the following: (1) the implementation of contingency plans as an adaptation mechanism with support from the National Adaptation Fund and the Green Climate Fund (GCF); (2) the contingency template developed for South Asian Association for Regional Cooperation countries; (3) strengthened monsoon forecasting, including by establishing automatic weather stations and downsizing agro-advisories; (4) the expansion of agricultural insurance; (5) indigenous and traditional knowledge and practices and integrated farming systems; (6) national agroforestry policy; (7) national adaptation programmes and regional action plans; (8) strategic research on climate change; (9) local and village-level institutions such as village climate adaptation committees and communication; and (10) capacity-building for adaptation in agriculture.

27. New Zealand, in its response to the same question, stated that, in the agriculture sector, GHG emission reduction can occur relative to a 'business as usual' scenario that may include increasing emissions from food production in response to increasing food demand. Therefore, according to New Zealand, emissions from sustainable agriculture will have different mitigation pathways from emissions from other sectors as non-emitting technologies in agriculture do not exist. For a number of countries this may lead to an increase in the share of agricultural emissions in their total emissions because emissions from the other sectors are expected to decrease to zero in response to mitigation efforts. New Zealand considers it important that the SBSTA provide scientific advice for those countries by expanding its consideration of this issue now.

28. New Zealand noted that mitigation actions in agriculture are necessary to fulfil the goal of the Paris Agreement to limit the increase in global temperature and to achieve low-emission development. This underlines the need for research on new mitigation technologies in agriculture with global applicability. Consequently, the SBSTA has a vital role to play in transmitting this information, inter alia, to the 2018 facilitative dialogue on Article 4, paragraph 1, of the Paris Agreement, the global stocktake under the Paris Agreement, and the multilateral assessment process under the international assessment and review process, the GCF, the Global Environment Facility (GEF) and the Intergovernmental Panel on Climate Change (IPCC) processes. This information may also

facilitate Parties' enhancement of their nationally determined contributions, including the implementation of long-term low-emission development strategies.

IV. Summary of the plenary discussion

29. In part II of the workshop, Parties engaged in a general discussion, adding to and elaborating on the elements included in the presentations, statements and panel discussion that took place in part I. When presenting their views, many Parties highlighted the diversity of agricultural systems, including in relation to: agroecological zones and farming systems; stakeholders (e.g. rural and poor people, smallholders, women and youth); and spatial (e.g. regional, national and local levels; and macro to micro specificities) and temporal scales (e.g. short-, medium- and long-term perspectives). Parties considered it important to take into account all the diversities inherent to agricultural systems in the context of the identification and assessment of agricultural practices and technologies to enhance productivity in a sustainable manner, while emphasizing the importance of agriculture to ensuring food security and resilience, sustainable rural development, economic development, poverty eradication and livelihoods.

30. Developing country Parties highlighted that agriculture plays a fundamental role in their national development as it provides livelihoods and contributes to food security and poverty eradication. It is, therefore, crucial for their economic and social systems. One Party noted that food security is an important part of national security for many developing countries. In this context, many Parties, both developing and developed, referred to the Paris Agreement, which recognizes the fundamental priority of safeguarding food security.

A. Climate change impacts on agricultural productivity

31. All Parties emphasized that agriculture and food production are highly affected by the adverse effects of climate change, climate variability and extreme weather events, particularly in developing country Parties. They highlighted that, despite the diversity of their national circumstances, all Parties face significant impacts stemming from the changing climate. One Party noted that agriculture is more dependent upon and affected by the climate than many other activities and agricultural systems have to build productivity and resilience at the same time.

32. Parties gave many specific examples of climate change impacts on agriculture observed in their countries, including: decline in crop productivity; changing planting dates; displacement of agricultural frontiers; changes in the life cycles of pests and diseases; changes in precipitation patterns (increase in precipitation variability, heavy or erratic rainfall leading to flooding and landslides and/or drought, cyclones or deficient monsoons, periodical water scarcity or stress and devastating hailstorms); and desertification and soil degradation. All these impacts affect productivity, food security and the resilience of agricultural systems.

B. Enhancement of productivity in agricultural systems affected by climate change

33. All Parties recognize that the adverse effects of climate change pose a major threat to the productivity of agricultural systems. Developing country Parties, in particular, stressed the importance of increasing the adaptive capacity and productivity of the agriculture sector in a sustainable manner under the adverse impacts of climate change,

while taking into account agricultural diversity and the close relationship of agriculture with food security and poverty eradication in those countries.

Importance of the enhancement of agricultural productivity in a sustainable manner

34. Parties noted the need to take urgent action, including the identification and assessment of relevant practices and technologies to enhance agricultural productivity in a sustainable manner and to ensure food security and resilience despite the impacts of climate change, thereby increasing the income and reducing the poverty of particularly vulnerable farmers.

35. A group of developing country Parties considered it important to recognize the particularity of agricultural activities, at both the production and the socioeconomic level. Adaptation should include work towards co-benefits, including those relating to ecosystems, biodiversity, water availability and efficiency, which in many cases lead to mitigation. They emphasized the need to find local solutions that contribute to the global climate solution through the use of technology, knowledge transfer and capacity-building, which are all important to ensuring sustainable and resilient agricultural systems.

National experiences in the identification and assessment of agricultural practices and technologies to enhance productivity in a sustainable manner, food security and resilience

36. Parties provided information on institutional arrangements and climate-related measures applied in their agricultural systems, including: (1) autonomous adaptation practices and knowledge-based adaptation options and measures planned by government agencies, including crop production and livestock, fishery and water resource management; (2) national programmes or strategies on climate change and adaptation taking into account climate change impacts in planning, engineering and construction, and the distribution of productive forces and infrastructure; (3) the establishment of an institutional coordinating mechanism for decision-making on crop cultivation and ensuring sustainable food security; and (4) climate vulnerability mapping.

37. Parties shared their experiences relating to particular technologies and practices that enhance productivity and resilience in agriculture while promoting various co-benefits, including: (1) the preparation and implementation of soil use and management plans focused on decreasing soil loss through, for example, decreased intensity of tillage; (2) resilient grassland and cattle management promoting soil restoration; (3) innovative irrigation of crops; (4) controlling soil evaporation; (5) dryland farming practices; (6) increased application of organic fertilizer; and (7) agroforestry and use of forests as reservoirs of water to support agriculture.

38. Parties discussed programmes to assist farmers, ranchers, forest land owners and rural communities in responding to climate change. Such programmes may consist of several blocks covering a range of technologies and practices that enhance productivity, reduce GHG emissions, increase carbon storage and generate clean renewable energy. Thus, they could have both mitigation and adaptation outcomes. Progress in implementation can be measured and reported on the basis of quantitative goals and objectives established for each block. It was noted that, when working on mitigation, it is also possible to ensure adaptation benefits.

39. Several Parties mentioned the national adaptation plan (NAP) process in this context. Some Parties implement their NAPs jointly with other countries within the framework of a global programme coordinated by FAO and the United Nations Development Programme (UNDP) that focuses on increasing the countries' capacity to assess vulnerabilities and risks and to identify and assess technologies and practices that can help in managing climatic risks and adapting to climate change. One Party highlighted that it is also the role of NAPs

to collect actions targeting food security while considering the different agroecological regions and sustainable farming systems.

40. For many Parties, adaptation in the agriculture sector is an important element of their intended nationally determined contributions (INDCs). For example, one developing country Party informed the workshop participants that adaptation is the main component of its INDC because without adaptation measures its grain output could fall by 5–20 per cent by 2050. The Party noted that climate change impacts have led to shifts in the suitability zones for different crops, with some areas seeing declines in yield or shifting cropping structure. As a result, the spatial area, frequency and severity of crop diseases and pests have been increasing year after year, making successful adaptation even more important. Another Party informed the workshop participants that one of its strategies to address climate change impacts is the piloting of an agricultural insurance scheme based on an innovative climate index insurance combined with existing damage-based insurances, which has been developed and tested with the participation of the private sector.

41. Several developing country Parties elaborated on a number of challenges faced in effectively adapting to climate change and ensuring food security, including constraints in relation to research, development and capacity-building and lack of access to advanced technologies and facilities for precision water and fertilization management.

Civil-society interventions

42. A representative of the Climate Action Network noted that climate policies encompassing agriculture must promote food security and the right to food, biodiversity preservation, animal welfare, equitable access to resources, gender equality and the rights of indigenous peoples and local populations. The enhancement of productivity in agriculture should also address poverty, social justice, environmental sustainability and governance and increase climate resilience.

43. A representative of the farmers constituency noted that farmers already aim to improve productivity in a sustainable manner alongside food security and climate resilience. However, they need more investment and financing frameworks (e.g. programmes to incentivize energy efficiency and renewables, research and development and extension services) as well as exchange of information and knowledge and capacity-building to manage existing carbon stocks and sequester additional carbon on their farms.

44. A representative of Caritas Internationalis noted that it is important to discuss under the SBSTA a few sociopolitical and socioeconomic issues, including gender, as they may affect long-term adaptation and mitigation, productivity and food security and thus result in the marginalization of the most vulnerable farmers.

45. A representative of the Union of Concerned Scientists considered that the SBSTA could focus on high-level issues relating to institutional arrangements, research and development, capacity-building and support for those activities, including the necessary means of implementation.

C. Synergies and collaboration

46. All Parties feel that there is wide scope for collaboration among Parties on the identification and assessment of agricultural practices and technologies to enhance productivity in a sustainable manner and the sharing of experience among Parties. Workshop participants welcomed the opportunity to undertake scientific and technical work on the impacts of climate change on agriculture consistent with the mandate of the SBSTA. Parties noted that research and innovation are critical to implementing effective agricultural adaptation to climate change.

47. Some Parties emphasized the fundamental role of national and international institutions in the provision of knowledge and information that could foster the identification, validation, assessment and adoption on the ground of technologies and practices related to climate resilience as well as the enhancement of adaptive capacity and productivity. Parties noted the importance of research focused on the identification of agricultural practices for adaptation that also reduce the contribution of agriculture to climate change.

Potential role of the Convention

48. Many Parties highlighted the potential role of the Convention in supporting cooperation and facilitating the sharing of knowledge and information among Parties and observer organizations and in leveraging existing frameworks under the Convention for capacity enhancement and technology transfer.

49. Parties referred to a potentially broad role of the Convention in the context of issues relating to agriculture, including: (1) the exploration of synergies between research and systematic observation, education, training and public awareness and technology development processes identified by the Adaptation Committee, the Nairobi work programme on impacts, vulnerability and adaptation to climate change, the Climate Technology Centre and Network, the Technology Executive Committee, technology needs assessments and the Adaptation Fund Board; (2) the use of the Financial Mechanism, including the GCF and the GEF, in a more ambitious way; and (3) the exploration of the experiences of both developed and developing countries in relation to nationally appropriate mitigation actions, national adaptation programmes of action, NAPs and national communications.

50. Developing country Parties highlighted the importance of support for the enhancement of their capacity in the area of adaptation and enhancement of agricultural productivity in a sustainable manner. They highlighted the role of assistance and cooperation under the Convention, including access to finance, technologies and know-how on relevant adaptation practices in the agriculture sector. Some Parties noted that the Financial Mechanism can play an important role by channelling finance for Parties to implement and scale up best practices.

How the Subsidiary Body for Scientific and Technological Advice could facilitate collaboration

51. Many Parties shared their views on the potential role of the SBSTA in the context of issues relating to agriculture, which could include work relating to: (1) the exchange of information on efficient water management and irrigation systems; (2) the assessment of ecosystem-based approaches for adaptation and participatory and gender-responsive approaches to climate action; (3) on- and off-farm practices and technologies, together with approaches to landscape-level management, including interaction among various sectors; (4) providing access to integrated technologies for the control of climate change induced pests and diseases; (5) exchange of information and knowledge on adaptation practices and technologies and climate information services; (6) climate-informed agricultural insurance; (7) capacity-building; and (8) the identification of innovative technologies and know-how for distribution through technology transfer mechanisms and international collaboration. A group of developing country Parties added that the SBSTA should undertake scientific and technical work on climate change impacts on agriculture consistent with its mandate, on the basis of the objective, principles and provisions of the Convention.

52. Parties noted the importance of assisting developing country Parties in the effective implementation of local action plans and policies to promote practices and technologies for adaptation to climate change that bring benefits to smallholder farmers by enabling their direct engagement. This includes increasing the availability of, and access to, adaptation

finance to enhance adaptive capacity locally and regionally. A group of developing country Parties noted that financial resources and support should be made available to developing countries to address agricultural climate change adaptation and promote co-benefits in order to ensure the achievement of food security and resilience goals. In particular, the support mechanisms should include: (1) research, development and transfer of technology; (2) financing and budget tracking; (3) assistance with the implementation of pilot projects and scaling up successful strategies to the national level; and (4) capacity-building with a strong emphasis on monitoring, reporting and verification, climate policy integration, improving human resources, methodologies and metrics.

53. A group of developing country Parties also noted that developed countries should play a role in providing adequate and predictable means of implementation to increase the adaptive capacity of agricultural systems and to increase productivity in a sustainable manner in developing countries. Developed country Parties should remove challenges and provide incentives for technology development and transfer to the least developed countries by strengthening private and public institutions, especially those involved in research and development, in those countries.

Linkages with processes outside the Convention

54. Some Parties gave their views on the potential role of processes outside the Convention in the context of issues relating to agriculture, such as: the IPCC, FAO, UNDP, the United Nations Environment Programme, the Global Research Alliance on Agricultural Greenhouse Gases, the CGIAR Research Program on Climate Change, Agriculture and Food Security and the Africa Adaptation Initiative. Parties noted the importance of a more ambitious inclusion of issues relating to climate and agriculture in the portfolios of multilateral and regional institutions.

The way forward

55. In their statements, several Parties reflected on the potential role of the Convention in facilitating collaboration and identifying synergies in the identification and assessment of agricultural practices and technologies to enhance productivity in a sustainable manner, food security and the resilience of agricultural systems. In summary, that role could include the following:

(a) Exploring the potential for synergies among the existing processes under the Convention, including processes related to finance, technology and capacity-building and other adaptation-related processes, in order to identify value-adding elements that might contribute to advancing the consideration of issues relating to agriculture;

(b) Finding practical ways to support Parties in the collaborative identification or development of advanced agricultural practices and technologies to enhance productivity in a sustainable manner, food security and the resilience of agricultural systems at the regional (e.g. among neighbouring countries), national and subnational levels, as appropriate;

(c) Exploring the potential of processes under the Convention to enhance knowledge exchange and the sharing of Parties' experiences in areas of common interest, including: the interaction of climate change with food production and food security; research and development; the implementation of practices and technologies; on-the-ground activities, taking into account the socioeconomic, environmental and gender aspects of agricultural productivity and food security; and learning from each other, with a particular focus on success stories and good practices.