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Item 6 of the provisional agenda
**Issues relating to agriculture**

# Report on the workshop on the development of early warning systems and contingency plans in relation to extreme weather events and their effects such as desertification, drought, floods, landslides, storm surge, soil erosion, and saline water intrusion

## Note by the secretariat

*Summary*

The in-session workshop on the development of early warning systems and contingency plans in relation to extreme weather events and their effects such as desertification, drought, floods, landslides, storm surge, soil erosion, and saline water intrusion was held in Bonn, Germany, on 2 June 2015, during the forty-second session of the Subsidiary Body for Scientific and Technological Advice.

In the presentations and discussions that took place at the workshop, Parties highlighted the important role of early warning systems and contingency plans in relation to climate change and extreme weather events for the agriculture sector. Parties noted the importance of, inter alia, exploring the potential for synergies among existing processes under the Convention in facilitating the development and use of early warning systems and contingency plans, and sharing knowledge and information on good practices and lessons learned relating thereto.

[1] Exact dates within the sessional period are subject to confirmation.

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# Contents

# 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 organizations[2] to submit their views[3] on the following areas:

(a) Development of early warning systems and contingency plans in relation to extreme weather events and their effects such as desertification, drought, floods, landslides, storm surge, soil erosion, and saline water intrusion;

(b) Assessment of risk and vulnerability of agricultural systems to different climate change scenarios at regional, national and local levels, including but not limited to pests and diseases.

3. The above-mentioned submissions were compiled by the secretariat and are contained in document FCCC/SBSTA/2015/MISC.1 and Add.1 and 2.

4. At the same session, the SBSTA requested the secretariat to organize, subject to the availability of supplementary resources, an in-session workshop at SBSTA 42 on the issues referred to in paragraph 2(a) above. The SBSTA also requested the secretariat to prepare a report on the workshop for consideration at SBSTA 43.[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 2 June 2015 (hereinafter referred to as the workshop) (chapter II), a summary of the introductory presentation and the 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. The SBSTA may wish to consider the information contained in this report at its forty-third session as part of its consideration of issues relating to agriculture, in accordance with the conclusions of SBSTA 40.[5]

# II. Proceedings of the workshop

7. The workshop was organized by the secretariat and was open to all Parties and admitted observer organizations attending SBSTA 42.

[2] Submissions from admitted observer organizations are available at <http://unfccc.int/7482>.
[3] FCCC/SBSTA/2014/2, paragraph 86.
[4] FCCC/SBSTA/2014/2, paragraphs 88 and 89.
[5] FCCC/SBSTA/2014/2, paragraph 89.

8. Ms. Lidia Wojtal (Poland), the Chair of the SBSTA, delivered the opening remarks and introduced the mandate and objectives of the workshop. She requested that Mr. Emmanuel Dlamini (Swaziland) and Mr. Peter Iversen (Denmark) co-facilitate the workshop.

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

(a) What experience does your country have in the development of early warning systems and contingency plans in relation to extreme weather events and their various effects in the context of agriculture?

(b) How do various processes under the Convention facilitate the development of early warning systems and contingency plans in relation to the extreme weather events and their effects observed in your country in the context of agriculture?

(c) What are the potential areas for synergies among various processes under the Convention to facilitate the development of early warning systems and contingency plans in in relation to the current and/or predicted extreme weather events and their effects in your country in the context of agriculture?

10. The workshop was organized in two parts. Part I featured a framing presentation delivered by an expert from the World Food Programme (WFP), 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. During the plenary discussion, representatives of two UNFCCC constituted bodies (the Climate Technology Centre and the Network (CTCN) and the Least Developed Countries Expert Group (LEG)) and civil society organizations delivered short statements/interventions on their activities relating to the topic of this workshop (see paras. 42–44 below).

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

# III. Summary of the introductory presentation and the panel discussion

12. The introductory presentation by the representative of WFP delivered during part I of the workshop, informed workshop participants of the characteristics of effective early warning systems (EWS) and highlighted the importance of collaboration at the global, regional and local levels in order to enhance capacity, data-sharing, information and infrastructure in this area. The representative noted that effective EWS integrate multiple hazards and link hazard prediction with analysis of sectoral impacts on people, while taking into account the diversity of agricultural systems. He also noted that contingency planning typically includes preparedness, risk management and response frameworks (e.g. disaster management plans), and is reflected in national adaptation and development plans.

13. The WFP representative highlighted that EWS information should be made understandable at all levels, including to decision makers and local communities, so that

[6] <http://unfccc.int/8935>.

they could effectively apply it. In this context, he elaborated on the elements required to develop and maintain effective EWS that continually provide the necessary information at the right time and are linked to effective contingency plans and actions. These elements include: regular investment in agro-climate capacity and infrastructure such as national meteorological services; sharing information regionally and globally (e.g. by feeding good ground-based data into remote-sensing systems); and implementing effective policy frameworks at the national level in order to translate information into action.

14. Responding to a specific question on EWS and slow-onset events, the representative clarified that EWS do not usually directly provide information on slow-onset events (e.g. desertification and deglaciation). He explained that slow-onset events manifest themselves through a series of extremes and may change the dynamics of risk management in the course of time, and require the integration of interdisciplinary information and approaches in EWS.

15. The introductory presentation was followed by a panel discussion, in which representatives of six Parties provided responses to the questions posed by the co-facilitators as listed in paragraph 9 above. Canada and the Philippines responded to the first question, the European Union (EU) and Gabon to the second question, and Brazil and the Russian Federation to the third question.

*Experiences with the development of early warning systems and contingency plans in agriculture*

16. Responding to the first question posed by the co-facilitators (see para. 9(a) above), Canada informed workshop participants that the Government of Canada provides the agriculture sector with access to the best available information on the climatic factors affecting agricultural production to enable producers to make well-informed decisions when managing weather and climate-related risks. This involves the use of a suite of tools and programmes, including: (1) a website that provides timely weather map-based information, including information specifically targeted at producers to help them to anticipate, mitigate and adapt to the impacts of weather and climate; (2) an ongoing monthly assessment of the extent and intensity of droughts; (3) an online spatial tool for crowdsourcing information that captures the nature and extent of the impacts of weather and climatic events; and (4) a weekly interactive information package on crop and pasture conditions at various spatial resolutions using earth observation data. Canada also has a contingency plan that provides assistance to farmers to enable them to recover from natural disasters. The Government of Canada supports research, development and the appropriate use of safe and science-based agricultural technology and products (e.g. heat and drought-resistant crop varieties) for contingency planning in the agriculture sector.

17. In Canada's view, a key objective of the work of the SBSTA should be the development and sharing of sound scientific and technical information that would help Parties to make informed decisions on approaches in agriculture that increase food security and promote synergies between agricultural productivity and adaptation and mitigation objectives in the context of sustainable development.

18. In its response to the same question, the Philippines noted that its agriculture sector is highly affected by the impacts of climate change resulting in decreasing yields, loss of livelihoods, increased incidence of poverty and possible social unrest. Consequently, there is a need for quality climate information services in that country. In the Philippines, the agro-meteorology and climatology service is responsible for the collection, quality control, processing, storage and retrieval of data as well as the preparation of long-term climate projections, seasonal climate outlooks and advisories on extreme weather events (e.g. drought vulnerability maps for major crops and climate-based crop calendars) for agricultural and other purposes.

19. The Philippines informed workshop participants that it is developing climate hazard maps (e.g. flood hazard maps) and a climate exposure database containing data on population, production areas and infrastructure. These data are used in the planning of the evacuation of people and urgent harvesting of agricultural areas, in cases of anticipated flooding or occurrence of other extreme weather events. The Philippines also informed workshop participants of its climate field schools that are managed by local government in cooperation with central government. The purpose of these schools is to enable farmers to understand climate-related risks in agriculture, including risk management, and to familiarize local and municipal planning officials with climate forecasting parameters and tools.

*Convention processes that could facilitate the development of early warning systems and contingency plans in agriculture*

20. A representative of the EU and its 28 member States addressed the second question (see para. 9(b) above) and informed participants of its adaptation strategy that is linked to the European Climate Adaptation Platform[7] and serves as a knowledge hub for supporting the development of adaptation policies and decision-making. The EU Common Agricultural Policy contains elements of climate risk management, including mutual funds to address the impacts of adverse climatic events such as floods, droughts, plant diseases or pest infestations on farmers.

21. In the view of the EU, several processes under the Convention could facilitate the development of EWS and contingency plans related to extreme weather events, such as the Technology Mechanism, the CTCN, national adaptation plans (NAPs) and the Nairobi Work Programme on impacts, vulnerability and adaptation to climate change (NWP). While noting potentially relevant processes existing outside the Convention, including the United Nations International Strategy for Disaster Reduction, the Global Framework for Climate Services, WFP and the Food and Agriculture Organization of the United Nations, among others, the EU representative said that all these processes could generate knowledge implementable on the ground, identify synergies and facilitate the exchange of best practices.

22. Responding to the same question, a representative of Gabon noted that being a country with high forest cover and with the majority of its population living in low-lying coastal areas, it is vulnerable to several climate change-related factors, including coastal erosion, flooding, saltwater intrusion and forest fires. Consequently, Gabon has developed a strategy to evaluate and analyse the risks of the impacts of climate change on the coast and to propose appropriate action plans to mitigate and adapt to them.

23. Gabon further informed workshop participants that it has recently established a remote sensing centre equipped with a direct reception antenna that can provide satellite data for 23 neighbouring countries (e.g. information on agricultural land, maps to monitor forests using radar, optical and light detection and ranging data, and information on flooding). In the long term, the centre will provide further value-added services, particularly relating to agricultural mapping. Combined with long-term monitoring data from ecological field stations distributed throughout Gabon, this would enable monitoring, modelling and prediction of future climate change impacts. In the view of Gabon, the Convention could play a key role in facilitating access to technologies and expertise in order to develop new services for the agriculture sector. Gabon also noted that it collaborates with international organizations beyond the Convention, including the World Meteorological Organization, the Group on Earth Observations, and the United Nations Platform for Space-based Information for Disaster Management and Emergency Response.

[7] See <http://climate-adapt.eea.europa.eu>.

*Potential areas for synergies among various processes under the Convention to facilitate the development of early warning systems and contingency plans in agriculture*

24. A representative of Brazil, in addressing the third question (see para. 9(c) above), highlighted the importance of the consideration of issues relating to agriculture by the SBSTA, which provided Parties with the opportunity to cooperate constructively towards scientific and technical work on agriculture, in accordance with the agreed mandate of the SBSTA. At the national level, Brazil highlighted the importance of the integration of information relevant to EWS and contingency plans as a key element in addressing the effects of climate change on the agriculture sector. In Brazil, relevant information from various sources is integrated and converted so as to make it widely accessible, including over the Internet and through cellular phones. In this context, Brazil further explained that in order to predict how crop systems will be affected by climate change, EWS depend significantly on the quality of the available ground and remotely-sensed data and downscaled outputs of climate models. In Brazil, scientific efforts in this regard are consolidated and integrated by relevant research institutions.

25. Brazil identified specific actions to facilitate the development of EWS and contingency plans, including: the improved management of water in agriculture; combating desertification; the management of pests and diseases; and the improvement of knowledge on genetic resources. In addition, Brazil noted the importance of: the intensification of the acquisition and use of information, including on land use; risk zoning; the identification of key vulnerabilities; the adaptation of production systems for their economic, social and environmental sustainability; and technology transfer. Furthermore, Brazil explained that the risk zoning, modelling and design of integrated scenarios are key elements that enable strategic investments in agriculture through the adoption of a multi-year perspective.

26. In its response to the same question, a representative of the Russian Federation informed workshop participants that weather impact remains a key factor influencing its agricultural production as extreme weather events cause significant losses in agricultural yields. To mitigate these negative impacts, the Russian Federation has implemented a set of measures for climate risk management and EWS in agriculture both at the federal and regional levels, including: the development of a drought monitoring centre for detection and evaluation of drought; the provision of weather forecasts and the dissemination of warnings to farmers by relevant weather services; and the provision of a State-supported agricultural insurance system.

27. The Russian Federation recently published a scientific assessment of climate change impacts and adaptation in various sectors of its economy. The section on agriculture analyses positive and negative impacts of climate change on agriculture across its regions and identifies some adaptation measures for farmers. In the view of the Russian Federation, potential areas for synergy among the various processes under the Convention include closer cooperation among all the established platforms and bodies for adaptation, for example NWP and the Adaptation Committee, and those established to support research and systematic observation, as well as related international and intergovernmental cooperation in line with Article 5 of the Convention. The synergies could also include improvement of the efficiency of inter-agency cooperation at the country level.

# IV. Summary of the plenary discussion

28. During part II of the workshop, Parties engaged in a general discussion, adding to and elaborating on the elements presented in the presentation, statements and the panel discussion in part I of the workshop. While presenting their views on issues relating to the workshop's topic (as detailed below), many Parties highlighted the diversity of agricultural

systems and emphasized the importance of agriculture in ensuring progress, food security, sustainable rural development, economic development, poverty eradication, and livelihoods. Parties considered it important to take into account all the diversities inherent in agricultural systems in the context of the development of EWS and contingency plans.

## A. Impacts of climate change and extreme weather events on agriculture

29. All Parties emphasized that the agriculture sector is highly affected by the adverse effects of climate change, weather variability and extreme weather events, particularly in developing country Parties. Parties gave concrete examples of increases in the frequency and intensity of extreme weather events, including: abnormal precipitation patterns causing torrential rains leading to intense floods; long periods of drought or late season droughts; weak or late monsoons; saline water intrusion; storm surges and cyclones; El Niño and La Niña weather patterns; and heatwaves and cold waves bringing hailstorms and frost. Many Parties reported that extreme weather events, including landslides and soil erosion, also cause significant damage to their agriculture sectors and their infrastructure. Parties noted that despite the diversity of their national circumstances, they all face significant impacts of a changing climate that adversely affect food production and/or endanger food security particularly in developing country Parties.

30. Developing country Parties highlighted that these extreme weather events exacerbate the existing levels of poverty and reinforce persistent inequity and chronic undernutrition in their countries. Parties gave many examples of agricultural activities affected by extreme weather events, including animal husbandry, poultry farming, fisheries, cropping and horticulture. Parties noted that smallholder and subsistence farming, being predominantly rain and monsoon dependent, is particularly impacted. Policies aimed at ensuring food security require various mechanisms to enable the provision of support from national and international organizations in order to direct adaptation actions in the agriculture sector, including: the development of water capture, storage and irrigation systems; the preservation, strengthening and promoting of traditional and indigenous knowledge related to food production; and the use of native seeds.

31. A group of Parties noted that a major challenge in this area is to produce more food in different climatic conditions when temperature increase makes agricultural production systems even more vulnerable by creating conditions favourable for the proliferation and outbreak of pests and diseases. Urgent action is therefore required to improve productivity and promote the adaptive capacity of agriculture as it may not be possible to return to previous production conditions.

## B. Early warning systems and contingency plans in agricultural systems affected by climate change and extreme weather events

32. All Parties emphasized the importance of the development of EWS and contingency plans to reduce the vulnerability of the agriculture sector to climate change and extreme weather events and increase its resilience to their adverse effects.

*Importance of early warning systems and contingency plans*

33. Many Parties considered EWS as one of the major tools for use in reducing and preventing the damage to agricultural production or production capacity caused by extreme weather events, including those relating to climate change. Parties noted that EWS provide information that enables making decisions that prevent or reduce damage caused by climate change, including: the choice of the appropriate varieties to plant; optimal planting/harvesting dates; and the timing of pest and disease control and other plant

production activities during the cropping cycle. Developing country Parties further noted that EWS coupled with contingency plans contribute to adaptation of their agricultural systems, particularly that of smallholder agriculture. Some Parties felt that EWS and contingency plans may contribute to both climate change adaptation and mitigation.

34. Many Parties were of the view that EWS and contingency plans should be comprehensive and aim to address all possible extreme events that could result in failure of agricultural production, while taking into account the entire diversity of agro-ecosystems, supporting institutions and stakeholders.

*National experiences in the development of early warning systems and contingency plans*

35. Many Parties informed workshop participants that they have developed or are in the process of developing a range of systems, services and tools related to EWS. Parties provided concrete examples of EWS such as national agro-climatic monitoring and forecasting systems in order to monitor weather parameters through weather stations, and develop meteorological forecasts and climate projections that are sometimes used to model agro-climatic risk to identify vulnerable communities and areas. Some Parties noted the existence of combined EWS for predicting the occurrence of insect pests, fungal and bacterial diseases as well as extreme weather events. Parties also informed participants of various tools and platforms being used to disseminate relevant information to users so as to help in local and farm-level decision-making. Parties noted that modern means of communication, including Internet and mobile technologies (e.g. cellular phones) are very efficient in delivering real-time information that is appropriately downscaled and thus understandable to farmers and various end users taking into account their differences, including those relating to gender, age, language, social status, size of holding, educational level, availability of indigenous/traditional knowledge, access to technology and means to react.

36. A Party noted that the development of EWS and contingency plans is a long and complex process involving data, geographical information systems information, calibrated models, scientific knowledge, the identification of farmers' needs and stakeholder participation. The process should include: risk and damage analysis; definition of thresholds; monitoring of threats; dissemination of meaningful information, warnings and alerts; and assessment of response capability. In addition, it should ensure that early warning information is available at the right time and at appropriate scale because, owing to the diversity of the agriculture sector, the information has to be useful both for policy design and for decision-making at the local and farm levels.

37. Some Parties informed workshop participants that they address the development of EWS in the context of national projects, by combining climate forecasting systems, remote data acquisition technologies, development of climate-resilient technologies and promotion of climate-resilient agriculture within their national sustainable development strategies. These also include elements of NAPs, including a comprehensive farmer-centred EWS as its key component, and nationally appropriate mitigation actions under the Convention. EWS-specific services and tools include: bioclimatic risk models; drought monitors allowing for forecasting of soil moisture conditions and drought risk; and an agro-climatic website and online platform to disseminate information enabling more efficient preparation by farmers for extreme weather events.

38. A developing country Party informed workshop participants that the development of its EWS has been funded by the Adaptation Fund, while a group of the least developed country (LDC) Parties stated that 11 LDCs have developed their EWS using funds made available under the Least Developed Countries Fund, with technological support from the United Nations Development Programme.

39. Many Parties provided further details on the national programmes, legislations and projects they have formulated and implemented in order to respond to emergencies and/or agricultural disasters in a timely manner. These include providing financial and technological assistance to help to reduce agricultural losses, rehabilitate productive systems and lessen vulnerability to future extreme events. Parties noted that the best contingency plans are developed at the farm level and enable farmers to become more resilient to an increase in extreme weather events.

40. A group of developing country Parties informed workshop participants that the contingency preparedness of their institutions in responding to various hazards is far from the desired level. A developing country Party noted that some of the possible root causes include inadequate stakeholder commitment, poor coordination among various actors, lack of public participation and awareness in the development and operation of EWS, as well as research not being used to inform government policies. In addition, a group of Parties highlighted some specific challenges, including the lack of data; inadequate investment in quality data collection, data access, data analysis and data monitoring for EWS; lack of capacity particularly with regard to the ability of regional, subregional and national systems/institutions to downscale EWS for local level action; absence of EWS integration into development plans due to inadequate human and financial capacities; and lack of integration and validation of indigenous early warning systems.

41. A developed country Party informed workshop participants that its approach in responding to extreme weather events is centred on the key principle that the primary responsibility for risk management lies with individuals and the best contingency plans are developed at the farm level. This approach allows farmers to become more resilient to an increase in extreme weather events. The role of government in the preparation of contingency plans is to support the ability of farmers to develop such plans by ensuring access to timely information on expected climate change and practices to manage the risk of a changing climate, and therefore their ability to adapt. The government only provides recovery assistance to farmers when the scale of the event is beyond the coping capacity of the community but does not compensate farmers for the climate event. The policy is designed to provide appropriate community assistance without taking away the need and incentive for farmers to adequately manage the risks posed by climate change as part of their regular business practices.

*Non-Party statements*

42. A representative of the CTCN informed participants of its mandate, mission and services, and presented a number of concrete examples of technical assistance provided at request of developing countries. He also provided examples of knowledge-sharing on climate technologies and collaboration/networking among climate technology stakeholders relevant to developing countries.

43. A representative of the LEG provided relevant information on the technical support and advice provided by the LEG to LDCs on the preparation and implementation of national adaptation programmes of action and the LDC work programme, and on its technical guidance and support to the process of formulating and implementing NAPs.

*Civil society intervention*

44. A representative of a civil society organization representing indigenous peoples highlighted how integration of traditional knowledge of indigenous peoples into the development of EWS could reduce the risk and vulnerability of agricultural systems to climate change. He also emphasized the need for enhancement of their capacity to use EWS through technology; consultation with all stakeholders, including indigenous women; and preservation of their traditional agricultural practices.

## C. Synergies and collaboration

45. All Parties felt that there is space for collaboration among Parties on elements relating to EWS and contingency plans adapted to local, national and regional circumstances. A group of Parties noted the opportunities to share information and draw lessons from the experiences of the different Parties in this regard. The group welcomed the opportunity to undertake scientific and technical work on the impacts of climate change on agriculture consistent with the mandate of the SBSTA.

*Potential role of the Convention*

46. Parties envisaged a potential role of the Convention in supporting capacity-building in order to bridge existing knowledge gaps (e.g. variability of rainfall in Africa), and in promoting and broadening the use of EWS through the implementation and enhancement of the systems and institutions involved in the collection, downscaling, analysis and management of climatic and hazard data. Data management includes the development and application of tools and technologies for real-time monitoring and collection, distribution and visualization of data so as to assess the risks and vulnerabilities of agricultural systems at the regional, national and local levels. This could also include the establishment of accessible regional climate databases.

47. Many Parties highlighted the potential role of the Convention in facilitating the sharing of knowledge and information on good practices and lessons learned in climate change-related EWS, contingency planning, risk and vulnerability assessment, tools and approaches to downscale climate models for extreme weather events as well as use of appropriate control and management methods for climate-related pests and diseases, while taking into account diversity in agriculture systems.

48. Parties highlighted the importance of the Convention in enhancing the existing regional EWS and promoting their use by: strengthening the capacity of regional forums/networks for seasonal climate forecasts; removing barriers to the use and uptake of early warning information from regional systems by downscaling and appropriate packaging of regional information for action at local levels; collecting and establishing accessible regional climate databases; and implementing regional systems for the inventory and documentation of early warning systems for food security. Many developing country Parties also highlighted the need to strengthen national systems and institutions for collecting, analysing and disseminating climate and risk and vulnerability data and information, including by providing the means of implementation for EWS and contingency plans. Two groups of Parties noted that synergies under the Convention could include the existing processes (e.g. the Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts, the Cancun Adaptation Framework and NWP) and activities (e.g. the strengthening of linkages with UNFCCC constituted bodies in order to enhance the exchange of technologies for EWS and contingency planning in agriculture and early warning for food security).

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

49. A group of Parties noted that in order to assist developing countries in the development of their EWS, the SBSTA could address several challenges faced by these Parties, while taking into account differences in scale as well as the various short, medium and long-term challenges to their agricultural systems, including: (1) assisting governments and communities with expertise in developing EWS and contingency plans, including the development of models and technologies for early-warning of extreme climatic events; (2) building technical, financial and human capacity in coordinating institutions; (3) promoting and strengthening public–private partnerships in the design and implementation of EWS

and enhancing regional systems that would remove barriers to the use of EWS and ensure timely access to their messages by end users; and (4) encouraging collaborative participation by farmers in any contingency plans and linking indigenous knowledge to scientific EWS. A Party noted the importance of exchanging information and experiences on insurance systems in order to protect agricultural activities from extreme weather and climate events.

50. A group of Parties noted the importance of regional cooperation and coordination, including the development of multinational institutions that could support States in accessing information on EWS. Other Parties emphasized the importance of coordination among national and local programmes and the institutions involved in EWS in order to enable timely and efficient dissemination of information on the magnitude and severity of extreme weather events and appropriate guidance on how to cope with them to responsible agencies, managers, farmers and other stakeholders in the affected areas.

51. A number of developing country Parties emphasized the importance of access to scientific and technical information and support to research related to EWS, contingency plans and assessments of risk and vulnerability of agricultural systems. Many developing country Parties highlighted the linkages between the development of EWS and contingency plans and means of implementation, including finance, capacity-building and technology transfer, while highlighting the role of processes under the Convention in that regard.

*Linkages with processes outside the Convention*

52. A group of Parties also referred to potential synergies with processes outside the Convention, including the Hyogo Framework for Action. In addition, a Party informed workshop participants of ongoing collaboration within the Global Framework for Climate Services.

*Way forward*

53. In their statements, several Parties reflected on the potential role of the Convention in facilitating collaboration on and the identification of synergies in EWS and contingency plans in relation to extreme weather events and their effects on agriculture. In summary, this could include the following:

(a) Systematic assessment of the current situation with regard to EWS and contingency plans, including by sharing information and experiences through data libraries, platforms and hubs on capacity needs, success stories, institutional arrangements, the identification of key factors of success and lessons learned;

(b) Finding practical ways to support Parties in the collaborative development or enhancement of EWS and contingency plans at the regional (e.g. among neighbouring countries), national and subnational levels, as appropriate;

(c) Developing a web platform for exchanging information on, inter alia, experiences gained guidelines, decision support tools and models, databases and lessons learned in the context of the development of EWS and contingency plans.