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Nairobi work programme on impacts, vulnerability and adaptation to climate change

Report on the expert meeting on socio-economic information

Note by the secretariat*

Summary

This note provides a summary of the expert meeting on socio-economic information, held under the Nairobi work programme on impacts, vulnerability and adaptation to climate change. The meeting was held in Port of Spain, Trinidad and Tobago, from 10 to 12 March 2008. Discussions at the meeting focused on how to improve availability, accessibility and effectiveness of information on socio-economic aspects of climate change and on how to enhance integration of socio-economic information into impact and vulnerability assessments, including as they relate to adaptation planning. The note also contains an overview of socio-economic information and approaches, including good practices, gaps and needs, across different spatial scales and sectors, as well as recommendations and issues for follow-up and further consideration.

* This document was submitted after the due date owing to the timing of the expert meeting.

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I. Introduction

A. Mandate

1. The Subsidiary Body for Scientific and Technological Advice (SBSTA), at its twenty-fifth session, requested the secretariat to organize, under the guidance of the Chair of the SBSTA, an expert meeting, before its twenty-eighth session, to exchange information and views on ways and means to improve the integration of socio-economic information into impact and vulnerability assessments, including as they relate to adaptation planning.[1] The SBSTA further requested the secretariat to prepare a report on the expert meeting to be made available to the SBSTA by its twenty-eighth session.

B. Scope of the note

2. This document provides information on the expert meeting referred to in paragraph 1 above. It draws upon the discussions and presentations at the expert meeting, including possible next steps under the Nairobi work programme on impacts, vulnerability and adaptation to climate change.[2]

3. As requested by the SBSTA,[3] this document contains:

(a) An analysis of the issues addressed, including current status and lessons learned (chapter III);

(b) A summary of identified gaps, needs (including any capacity needs), opportunities (including possible synergy among activities), barriers and constraints (chapter III);

(c) A summary of recommendations (chapter IV).

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

4. The SBSTA may wish to consider this report at its twenty-eighth session as part of its general consideration of the outcomes of completed activities and its consideration of future activities under the Nairobi work programme.

D. Background

5. The overall objective of the Nairobi work programme is to assist all Parties, in particular developing countries, including the least developed countries and small island developing States, to improve their understanding and assessment of impacts, vulnerability and adaptation, and to make informed decisions on practical adaptation actions and measures to respond to climate change on a sound scientific, technical and socio-economic basis, taking into account current and future climate change and variability.[4]

6. Activities in the area of socio-economic information under the Nairobi work programme are undertaken in line with the objective stated in the annex to decision 2/CP.11 to advance the sub-theme stated in paragraph 3 (a) (v), "Promoting the availability of information on the socio-economic aspects of climate change and improving the integration of socio-economic information into impact and vulnerability assessments".

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[1] FCCC/SBSTA/2006/11, paragraph 53.
[2] The relevant documentation is available at <http://unfccc.int/4265.php>.
[3] FCCC/SBSTA/2006/11, paragraph 24.
[4] Decision 2/CP.11, annex, paragraph 1.

II. Proceedings

7. The secretariat organized the expert meeting on socio-economic information in Port of Spain, Trinidad and Tobago, from 10 to 12 March 2008. The Governments of Canada, the United Kingdom of Great Britain and Northern Ireland and the United States of America provided financial support for the organization of this meeting. Ms. Helen Plume, Chair of the SBSTA, chaired the meeting.

8. The expert meeting was attended by 60 representatives from Parties and relevant intergovernmental and non-governmental organizations, as well as by individual experts and practitioners working on socio-economic information and climate change.

9. As requested by the SBSTA,[5] discussions at the expert meeting were informed by submissions from Parties and organizations on existing approaches, and by available data on the socio-economic aspects of climate change,[6] including:

(a) Information on the development of socio-economic scenarios and for understanding adaptive capacity;

(b) A background paper containing information synthesized from the submissions as well as relevant information from the Fourth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC),[7] information from national communications and national adaptation programmes of action (NAPAs);

(c) The reports on the workshops on climate-related risks and extreme events held in Cairo, Egypt, from 18 to 20 June 2007,[8] and on adaptation planning and practices held in Rome, Italy, from 10 to 12 September 2007.[9]

10. At the opening, Ms. Emily Gaynor Dick-Forde, Minister of Planning, Housing and the Environment of Trinidad and Tobago, delivered a welcome address. This was followed by an introductory session providing background information on current and future adaptation issues within the broader context of the UNFCCC, the objectives of the Nairobi work programme and the mandate for the expert meeting, and an overview presentation on socio-economic information in the context of impacts, vulnerability and adaptation to the climate change.

11. The discussions at the expert meeting took place in plenary sessions, a panel discussion and two breakout groups. At a stocktaking plenary session, participants discussed data availability, appropriate methods, sources of expertise, and corresponding case studies at regional, national and local scales, as well as the water resources, agriculture and food security, coastal zones, health, and employment and income sectors. These sectors were selected based on their importance to Parties and organizations as highlighted in their submissions and presentations.

12. At the panel discussion, five panellists focused on the application of socio-economic information in the context of adaptation planning. The breakout groups covered two broad areas: ways and means to improve availability, accessibility and effectiveness of information on socio-economic aspects of climate change from the perspectives of information providers and users; and integration of socio-economic information into impact and vulnerability assessments.

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[5] FCCC/SBSTA/2006/11, paragraph 53.

[6] Submissions from Parties are compiled in document FCCC/SBSTA/2007/MISC.21 and Add.1. Submissions from organizations are compiled in document FCCC/SBSTA/2007/MISC.22 and in an online document available at <http://unfccc.int/4118.php>.

[7] The background paper is available at <http://unfccc.int/4265.php>.

[8] FCCC/SBSTA/2007/7.

[9] FCCC/SBSTA/2007/15.

13. In addition, participants provided information on priority issues, gaps, needs and recommendations through questionnaires prepared by the secretariat under the guidance of the Chair of the SBSTA, and shared information on their experience, good practices and sources of expertise during plenary presentations.

14. At the concluding session the outcomes of the breakout groups were summarized in the form of recommendations to address the identified gaps and needs, and possible next steps and follow-up actions were discussed.

III. Analysis of the issues addressed in the expert meeting

15. Following presentations on available data and current practices at different spatial scales and in different sectors, participants discussed data availability, appropriate methods and sources of expertise, and identified gaps and needs. Subsequent discussions underscored two types of gaps to be addressed – lack of data and mismatch of data. Whereas some of the basic data are simply not collected, some are gathered in a way that is not useful for impact and vulnerability assessments. Consequently, there are large gaps in the data, including historical and geo-referenced data, particularly at smaller spatial scales.

16. Participants stressed that much of the existing socio-economic information is in a form that does not facilitate climate change policymaking; it therefore needs to be repackaged to effectively support decision-making. Data priorities are strongly related to the purpose and scope of the assessments as well as to the different approaches taken to perform these assessments. Better frameworks are needed to disseminate existing data and information to target audiences.

17. Quantitative and qualitative socio-economic data are equally important for increasing the effectiveness of assessments. In addition, socio-economic data need to be better integrated with geophysical data. In this regard, participants noted that technological tools such as geographic information systems could assist in combining different types of data for integrated analysis.

A. Availability, accessibility and effectiveness of socio-economic information at different spatial scales and in different sectors

18. Different types and scales of assessment require different data, and participants emphasized the need to identify the common needs across sectors and scales. Shared priorities across scale and sector, and for different uses, may include increasing the availability of geo-referenced data, addressing challenges of aggregating/disaggregating data, and improving ways of linking top-down and bottom-up types of assessments.

19. Participants noted that demographic and economic data are readily available in most countries, but that other types of data, especially qualitative data on, for example, governance, cultural values, indigenous knowledge, community dynamics and gender considerations, are less so. There are still problems in obtaining such data and in incorporating them in the analyses.

20. As impacts of, and vulnerability and capacity to adapt to, climate change are place-specific and multidimensional, spatially differentiated data play a vital role in climate change assessments. Accordingly, participants stressed the needs for geo-referencing socio-economic data and for setting a consistent format for data collecting and reporting in order to identify data gaps and facilitate cross-country analyses.

21. Much of the existing data are collected by statistical/census agencies mainly for purposes other than policymaking relating to climate change. Entities responsible for data collection need to be encouraged to improve the infrastructure for collecting and processing the data, such as in geospatial formats, necessary for climate change vulnerability and adaptation assessments.

22. Data and information sources mentioned during the meeting include censuses, multiple indicator cluster surveys, living standard surveys, labour force surveys, infrastructure surveys, national accounts,

key informants such as communities and labour associations, traditional knowledge systems and local empirical knowledge, and environmental monitoring programmes including satellite remote sensing and in situ monitoring of hydrology and biodiversity.

1. Regional scale

23. As a result of the rising trend of climate-related events such as cyclones, floods, droughts and landslides, increasing amounts of disaggregated data and scenarios are becoming available for impact studies. For instance, the impact of sea level rise or of drought can readily be assessed in terms of area and population affected, gross domestic product (GDP), urban extent and wetlands at regional and global scales. However, there are large gaps, particularly in data for the African region.

24. Participants acknowledged that vulnerability assessment is a data-intensive process requiring a wide range of quantitative and qualitative information ranging from socio-economic status, household characteristics, social networks, historical and institutional inequalities and building codes to disaster preparedness. As a result, it is difficult to effectively assess vulnerability at the regional and global scales.

25. Existing spatial data mentioned during the discussions include information from climate model outputs, scenario results including those identified in the Special Report on Emissions Scenarios (SRES) of the IPCC, maps showing the distribution of deaths caused by climatic events, population dynamics, GDP, gridded income data, and details of water-holding capacity of dams, conflict areas, governance, refugee camps, health infrastructure, age structure, poverty data, infant mortality rate and road networks.

26. Some organizations undertaking vulnerability and adaptation assessments and data development at regional and global scales, mentioned at the meeting, were: the Center for International Earth Science Information Network (CIESIN) and the International Research Institute for Climate and Society of The Earth Institute at Columbia University, the World Resources Institute, the Stockholm Environment Institute, the Netherlands Environmental Assessment Agency, the Potsdam Institute for Climate Impact Research, The Energy and Resources Institute, and the Center for Sustainability and the Global Environment of the University of Wisconsin.

2. National scale

27. Participants highlighted difficulties in generating some national data because only large national institutions may be capable of collecting such data, or the data may be politically sensitive. Some participants argued that only a strong demand for access to such information from within countries can achieve a response from the custodians of the data. Participants also stressed the need to give developing countries more support for collecting basic baseline socio-economic information.

28. In addition, participants suggested that international frameworks such as those of multilateral environmental agreements might facilitate an increase in the amount and quality of data that are collected and, at the same time, guarantee easier access to relevant information. In order to standardize formats for socio-economic data to enable cross-country analysis, participants suggested utilizing the guidance on collection of data provided by the United Nations Statistics Division.

29. In order to increase the effectiveness of impact and vulnerability assessments diverse types of data need to be collected specifically for use in those assessments. For instance, in order to assess vulnerability of a population to a hurricane, the types of demographic data needed may range from standard data on age and gender to complex information on the distribution of the incapacitated population and on the numbers of people with personal vehicles. The latter types of data may become valuable indicators for assessing capacity to respond to an event or to evacuate people from a hazardous area, but they are often not available as they are not part of the standard profiles for data collection.

30. Participants indicated that the UNFCCC process could play a role in facilitating financial support and collaboration between countries and research institutions to prepare information in a usable format, in

increasing documentation and in disseminating experiences on socio-economic cost–benefit analyses of adaptation initiatives. In this regard, some participants suggested expanding the roles of the Least Developed Countries Expert Group and the Expert Group on Technology Transfer, or creating a group of adaptation experts to provide targeted input and advice on bridging gaps in data availability.

31. Socio-economic data are often presented only in aggregated form, such as national statistics. There is a need to disseminate disaggregated data collected at subdistrict level in order to respond to specific assessment needs. Participants also emphasized the importance of increasing the capacity of national governments to estimate the costs and benefits of adapting to climate change within or across key economic sectors.

32. Governments are typically responsible for collecting national demographic data and are also a major information generator, but the private sector (e.g. water companies, insurance sector) may also have specific socio-economic data relevant to impact and vulnerability assessments. However, the private sector still needs to be encouraged to assist in collecting and sharing data. Participants discussed the importance of raising awareness in the private sector that some of this information is a public good that should be made available to all stakeholders.

3. Local scale

33. Participants emphasized the relevance of qualitative data for assessing local coping capacity as well as the ways to reflect them in the assessments. There is a need to effectively integrate qualitative data, as well as quantitative data, into vulnerability assessments.

34. Participants also discussed ways in which local coping capacities could be assessed more accurately in order to improve adaptation at the local level. Although communities have been coping with adverse effects of climate change and variability, traditional knowledge and local empirical knowledge have rarely been formally studied in the context of adaptation to climate change. Inclusion of such knowledge into assessments may contribute to the accuracy of understanding the coping capacity of communities. It was generally agreed that it is a challenge to record or rescue indigenous information and to integrate it with modern science.

35. Although vulnerability and poverty are closely linked, the latter may not suffice as an indicator of vulnerability. Participants highlighted the need for more holistic socio-economic indicators that take into consideration not only monetary income but also other socio-economic assets and sources of income, as well as such factors as household characteristics (whether the head of the household is female, the existence of children under 10 years old), social networks and historical inequalities.

4. Water resources

36. Vulnerability assessments for the water resources sector call for a cross-sectoral approach. Among the diverse types of socio-economic data that are necessary to assess water demand, some demographic data, such as trends in the size and distribution of population centres, are usually readily available. However, they need to be supplemented by additional socio-economic information such as expected migration patterns and future water demand across sectors. Existing needs include information for analysing pricing, allocation and equitable distribution of water, in the context of vulnerability and adaptation.

37. Participants stressed the importance of having both geophysical and geo-referenced socio-economic data as inputs for modelling vulnerability. Available data and their sources mentioned in the discussion include information on environmental conditions such as forest cover and river flows, climate model outputs on projected temperature and rainfall trends, and groun water, water-holding capacity, irrigated areas and agricultural lands.

5. Agriculture and food security

38. Participants emphasized that food security is a major concern, particularly in developing countries. Assessing vulnerabilities in the agriculture sector in terms of food security requires a wide range of socio-economic information. At the macro-level, volatility of global commodity markets, trade impacts and consumption patterns have an effect on a country's capacity to feed its population. However, given the difficulties in predicting movements of commodities, there is a need to develop methodologies for incorporating information on external forces (for instance, commodity prices) that affect national and regional agricultural production. In addition, participants noted that micro-level data, for example, on household food production for self-consumption, are often overlooked in studies that focus on food produced for the export market.

39. Modifying agricultural practices to reduce vulnerability of food production systems requires enhanced capacity of individuals, communities and institutions to plan for and respond to the impacts of climate change. Participants proposed the creation of national vulnerability indices to evaluate vulnerability across sectors. But they said that data should be collected specifically for monitoring vulnerability.

40. Participants highlighted the lack of data on land use, including on historical patterns, and on impacts of land-use change. The Food and Agriculture Organization of the United Nations has initiated a programme on climate and food security and may possess relevant socio-economic information on these subjects. It was also mentioned that the University of the South Pacific has undertaken some work on this area.

6. Coastal zones

41. Participants noted that countries with vulnerable coastal zones often lack the capacity to evaluate environmental/ecosystem services and undertake cost–benefit analyses of response measures in order to make investment decisions and to carry out vulnerability and impact assessments. To encourage exchange of knowledge, data and experiences applicable to specific regions, participants suggested establishing focal points, such as regional networks and centres, to leverage existing information.

42. Work is still needed on downscaling climate models and on spatially referencing disaggregated socio-economic data at smaller scales in order to capture the unique conditions of small island developing States. Participants acknowledged the need to combine geophysical information with analyses on socio-economic costs in order to develop alternative development scenarios, response options and contingencies.

7. Health

43. Socio-economic information typically considered for assessing the vulnerability of human health includes data on economic factors (e.g. income, income inequality, livelihoods), demographics (e.g. population size, age structure, gender, ethnicity), internal migration, infrastructure (e.g. water supply, sanitation, transport), housing standards, behavioural customs (e.g. physical activity, clothing, siesta) and the status of health services (e.g. availability, access, quality, support networks, disease prevention/control, insurance). Noting the diversity of climate-sensitive health risks, participants emphasized the importance of considering the integration of disease-specific socio-economic information into health assessments in order to increase their effectiveness. For instance, socio-economic data needed to assess risks of heat stresses, which are directly caused by extreme weather events, differ from the dataset needed to assess vulnerability to malnutrition, which is an indirect result of the impacts of climate change on other sectors, such as crop production.

44. In assessing vulnerability of people to diseases that are influenced by climate change, historical data are needed to verify whether a particular disease has always been present or was introduced as a result of recent climate change. For example, communities that have not previously been exposed to a particular disease may be more vulnerable than other communities to that disease because they lack

knowledge on how to protect themselves against that disease. In addition, participants emphasized the need to spatially differentiate the data.

45. Participants noted that health assessment guidelines that were produced in the past tended to be based on model results and do not adequately address key issues for policymakers, such as identification of key information needs and assessment of key obstacles to adaptation. More recent guidelines have a strong focus on current vulnerability, and on integrating adaptation to climate change into national policy and current practices. However, they do not adequately address the prioritization of adaptation actions, disease-specific methods and tools, and cross-sectoral integration.

46. Participants also noted the availability of the following data sources: World Health Organization databases,[10] Emergency Events Database from the Centre for Research on the Epidemiology of Disasters,[11] Socioeconomic Data and Applications Center of CIESIN,[12] global socio-economic scenarios including the SRES of the IPCC, the Millennium Ecosystem Assessment, the Global Environmental Outlook of the United Nations Environment Programme and the United Nations World Water Development Report.

8. Employment

47. Participants discussed employment and income in the context of resilience, coping strategies, 'second round' implications (e.g. migration), responses to planned adaptation to climate change and economic diversification. Two categories of vulnerable poor people were identified: individuals who are employed but earn inadequate income and those who are unemployed. The adverse effects of climate change could exacerbate this vulnerability. Therefore, adaptation measures in the employment and income sector may limit the negative effects of climate change.

48. Three categories of data needs were highlighted for assessing vulnerability of employment and income: employment, households and enterprises. Censuses and national accounts are generally available, but other data needed for analysing employment and income are survey-intensive, because data sources or key informants are those with extensive knowledge of how local economies function, such as communities, employers' organizations, business associations and trade unions.

49. Participants discussed the types of data needed within each of the three categories. For employment, relevant data include sector, gender, status (informal, formal), income percentile and percentage of skilled versus unskilled labour. For households, data include characteristics of households such as ethnicity and gender, location, main source of household income, expenditure and assets. And for enterprises, data include location, sector of activity, size and distribution, and assets.

B. Integration of socio-economic information into impact and vulnerability assessments

50. Participants reiterated that effective impact and vulnerability assessments need to take account of diverse case-specific information on socio-economic, biophysical, geophysical, political and cultural factors. But there is no single method to integrate all the necessary social-economic information into impact and vulnerability assessments.

51. The fundamental challenge in integrating socio-economic information into policy processes is policymakers' lack of familiarity with the frameworks within which the development of climate change policy should take place. Participants noted that many policymakers continue to respond to climate change issues in the context of the traditional development frameworks. It is therefore important to increase decision makers' understanding of climate change concerns so that they become aware of the socio-economic information necessary for identifying options for responding to climate change.

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[10] World Health Report <http:www.who.int/whr>, Malnutrition <http//:www.who.int/nutgrowthdb>, Water and sanitation <http://www.euro.who.int/watsan>.

[11] <http:www.em-dat.net>.

[12] <http://sedac.ciesin.columbia.edu/index.html>.

52. Other challenges identified during the discussion on integrating socio-economic information into impact and vulnerability assessments include the lack of data collected specifically to carry out assessments; development of appropriate expertise and methodologies which vary according to the context and purposes of the assessments; difficulties in characterizing vulnerability and socio-economic conditions; integrating complex, multiple and interrelated factors; reliability of data; and scarcity of resources.

53. Participants noted a survey conducted by the International Institute for Environment and Development in southern African countries, which revealed information users' needs for tools and information to integrate socio-economic information into analyses of impacts, with particular attention to the specific context of each user.

54. Participants highlighted that decision makers need socio-economic data to be packaged in such a way that they are policy relevant. Data can be presented to decision makers in various ways, together with statistical descriptions of how they are provided, first-level analyses of the data or summaries of analyses of those data. In this regard, building knowledge-sharing capacity of information providers may enable them to share data more widely and effectively, and in a way that decision makers can understand. Participants also noted the need to complement information with adequate metadata.

55. Equally important is the identification of the skills required by people in the decision-making process. People who engage in data collection, in data analysis and in providing immediate support for decision makers, and the decision makers themselves, all need different skills. In order to facilitate interpretation of socio-economic data in the context of climate change, capacity-building needs to be tailored with a view to maximizing efforts.

56. A number of indices, frameworks, models, scenarios and narratives have been introduced in the assessments of vulnerability and adaptation. However, few are used widely as their data requirement may be quite high or they fail to take into account the complexity of socio-economic aspects of climate change. Participants argued that the study of vulnerabilities requires a comprehensive approach that brings together different types of research. Such an approach would have a holistic view, emphasizing social learning, flexibility and interdisciplinarity, and would manage information according to the local context.

57. In highlighting the importance of socio-economic aspects in the analytical process, participants emphasized the need to demonstrate the value of using an integrated framework. A great deal of climate change analysis is still undertaken by meteorological offices in many countries. There is a need to initiate appropriately balanced interdisciplinary frameworks and methodologies to facilitate integration of different types of data.

58. Participants argued that impact and vulnerability assessments should be integrated into the wider development policymaking processes and be considered together with other policy objectives and priorities. In this regard, information provided must be relevant to development objectives.

59. Some participants suggested that planning and integration of impact and vulnerability assessments into national policymaking processes could be facilitated by establishing a central coordinating body among various agencies and sectors at government level. While such a body may help to increase the availability and accessibility of socio-economic data, as well as efficiency in resource allocation, some participants pointed out that it may marginalize impact and vulnerability assessments in development planning, as this body may be under the ministry of environment, which is generally given a low priority in a government.

60. Participants discussed the importance of enhancing stakeholder involvement in the assessment process in order to facilitate the integration of impact and vulnerability assessments into adaptation planning. Some of the socio-economic information needed for the analyses, such as traditional or local empirical knowledge, is inherently local. Participatory approaches to collecting and disseminating

socio-economic data may help to create ownership among the users of the assessments, capturing community ideas and local knowledge and making the assessments more responsive to community priorities. Finally, enhanced stakeholder involvement may contribute to more effective integration of assessments into development policy.

IV. Summary of recommendations

61. In general, participants emphasized the need to enhance dialogue between the providers and the users of information in order to properly identify what data are needed, and in what format, and to ensure that data are properly packaged to be useful in the decision-making process.

A. Availability, accessibility and effectiveness of information on socio-economic aspects of climate change

62. To address gaps in the availability of data, participants proposed the following:

(a) Identify the target users of socio-economic information in order to present existing data in more user-friendly formats so that the data can be made more useful;

(b) Prioritize data needs according to different usages and scales in order to identify the gaps in data availability;

(c) Collect and store data in a more standardized way in order to facilitate wider dissemination of information at multiple decision-making levels;

(d) Strengthen links among international organizations that are already working in specialized sectors in order to collaborate on information sharing within their respective sectors;

(e) Develop incentive schemes to encourage the private sector to share its data;

(f) Promote efforts by multilateral environmental agreements and international frameworks to encourage the collection and dissemination of basic data;

(g) Develop incentive schemes to encourage generation of data specific to adaptation to climate change. Data on, for example, subsistence crops, water distribution within sectors, migration and remittances are rarely collected as a standard process;

(h) Disseminate original (disaggregated) data collected at subdistrict level, in order to accommodate specific assessment needs at different spatial scales, in addition to aggregated data (e.g. national statistics);

(i) Increase support to help developing countries collect data which could help to bridge the gaps in data availability.

63. To increase accessibility of data, participants proposed the following:

(a) Create and maintain databases to take stock of existing information, sources of expertise, tools and good practices;

(b) Promote guidance on collection of data provided by the United Nations Statistics Division to increase usability and facilitate sharing of information in cross-country analyses;

(c) Increase institutional capacity to manage data and to build a depository of data to bring together co-related yet dispersed information collected by different researchers at different levels and different formats in order to facilitate access by users;

(d) Create alternative ways to supply data to those without broadband Internet access.

64. To enhance effectiveness of information, participants recommended the following:

(a) Facilitate better communication between providers and users of information so that research responds to stakeholders' needs, which leads to better packaging and delivery of data. This could facilitate making political decisions based on evidence;

(b) Develop institutional and human capacity for using information, including statistical skills and geographic information systems, in order to improve cross-sectoral analysis and integration of available information;

(c) Facilitate downscaling of climate models and promote visualization of spatial patterns by ensuring that socio-economic data are available electronically, in time series and spatially differentiated formats to increase their usability;

(d) Promote development of geo-referenced data at high resolutions to support more accurate assessment of local-level adaptive capacity;

(e) Promote use of indicators that are appropriate in terms of temporal and spatial scales to suit specific analyses and to facilitate transformation of data for wider use;

(f) Complement data with adequate metadata to explain the limitations and quality of the data as well as how they are collected;

(g) Strengthen the capacity of government agencies responsible for conducting national censuses, or those that collect baseline socio-economic data, in order to optimize data usability for vulnerability and adaptation assessments;

(h) Strengthen regional centres and networks as clearing-houses to leverage existing human resources, knowledge, data and experiences that are applicable to specific regions or sectors, and to facilitate capacity-building. Similarly, encourage South–South cooperation to facilitate knowledge exchange on lessons learned from local experiences;

(i) Strengthen the role of the UNFCCC process in providing information on methodologies in order to ensure more consistent practices and to expand the role of existing UNFCCC expert groups to provide targeted input into, and advice on, gaps.

B. Integration of socio-economic information into impact and vulnerability assessments

65. To enhance the integration of socio-economic information into impacts and vulnerability assessments, participants recommended the following:

(a) Develop information on costs and benefits associated with the implementation of climate change policies and programmes, and on the economics of climate impacts, in order to address adaptation in the wider perspectives of development objectives;

(b) Encourage policymakers and those responsible for data collection and analysis to plan data collection strategically in order to avoid mismatch of data needs and generation;

(c) Analyse impact and adaptation studies and document good practices in order to identify what has worked, and to improve good practices;

(d) Promote local ownership of the integration process and of the resulting information by increasing stakeholder engagement to ensure rapid and effective dissemination of assessments and adaptation plans;

(e) Establish a national authority on adaptation that could act as a central coordinating body among various agencies and sectors at government level to coordinate adaptation-related responsibilities and facilitate the efficient allocation of resources;

(f) Develop guidance on methods for translating existing data into information that is relevant to climate change policy.

V. Possible next steps under the Nairobi work programme on impacts, vulnerability and adaptation to climate change

66. Participants discussed ways to implement the recommendations from the expert meeting and possible additional activities to be undertaken under the Nairobi work programme. Responding to the needs expressed during the meeting, the International Labour Organization stated that a number of United Nations organizations and agencies intend to collaborate on producing guidance on the use of socio-economic information in the context of vulnerability and adaptation.

67. Participants discussed ways to implement the recommendations by Parties, organizations and other stakeholders engaged in the Nairobi work programme, and to further set the agenda on identifying subsequent actions in the area of socio-economic information under the Nairobi work programme. The recommendations from the expert meeting will serve as input into the summary report and recommendations resulting from the first two years of implementation of the Nairobi work programme, as well as into the general consideration by the SBSTA at its twenty-eighth session of outputs and further activities under the Nairobi work programme.

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