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Item 8 (a) of the provisional agenda

Reports on the work of the Conference of European Statisticians, its Bureau and Teams of Specialists

Implementation of the UNECE Statistical Programme 2016

Addendum

Note by the Secretariat

Report of the Expert Forum for producers and users of climate change-related statistics, 5-7 October 2016, Geneva

Summary

The document presents the key outcomes of the Expert Forum for Producers and Users of Climate Change-related Statistics which took place from 5 to 7 October 2016 in Geneva. The meeting was organized following a decision of the Conference of European Statisticians (CES) in June 2015 and the recommendation of the previous Expert Forum, held from 2 to 3 September 2015.

The report is submitted to the Conference of European Statisticians for information.

I.   Attendance

1.   The Expert Forum was attended by representatives from Australia, Brazil, Canada, Chile, Czech Republic, Estonia, Finland, France, Georgia, Germany, Greece, Ireland, Italy, Kazakhstan, Kyrgyzstan, Lithuania, Luxembourg, Mexico, Mongolia, Nigeria, Netherlands, Norway, Poland, Russian Federation, Slovakia, Slovenia, South Africa, Sweden, Tajikistan, Turkey, Ukraine and United Kingdom.

2.   The meeting was also attended by representatives from Eurasian Economic Commission (EEC), European Union DG CLIMA, Eurostat, European Environment Agency (EEA), Intergovernmental Panel on Climate Change (IPCC), International Energy Agency (IEA), United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP), United Nations Environment Programme (UNEP), United Nations Food and Agriculture Organization (FAO), United Nations Framework Convention on Climate Change (UNFCCC), United Nations Interim Administration Mission in Kosovo (UNMIK), United Nations Office for Disaster Risk Reduction (UNISDR), United Nations Statistics Division (UNSD), University of Geneva and the World Meteorological Organization (WMO).

3.   The following non-governmental organizations participated: Association de l'Education Environnementale pour les Futures Générations (AEEFG), Fondazione Eni Enrico Mattei and Euro-Mediterranean Center on Climate Change, Institute Cadaster, Institute of Hydrology and Meteorology - TU Dresden and Leadership for Environment and Development (LEAD) Pakistan.

4.   From the private sector, the Aether Oxford Centre for Innovation and Aether Espana SL attended the meeting. Independent experts from Canada and Mauritius also participated.

II.   Organization of the meeting

5.   Nina Holmengen (Norway) chaired the meeting.

6.   The participants adopted the provisional agenda of the Expert Forum.

7.   The following substantive topics were discussed on the basis of presentations and papers:

- Opening: Setting the scene
- Session 1:   Outcomes of the COP21 and the Paris Agreement
- Session 2:   Strengthening energy statistics for analysing climate change
- Session 3:   Set of climate change indicators
- Session 4:   Road map and progress towards better climate change-related statistics
- Session 5:   Measurement of disasters and extreme events
- Closing: The way forward

8.   All documents for the meeting are available at: www.unece.org/index.php?id=41299

III. Summary of the discussion and main conclusions reached at the meeting

1. Setting the scene

<u>Opening addresses</u>: Lidia Bratanova (UNECE, Director) and Nina Holmengen (Norway)

<u>Key note speech</u>: "From Climate data to Climate knowledge: how to share and integrate climate data & information", Gregory Giuliani (University of Geneva)

9.   The first session was organized by chair of the Expert Forum and chair of the Steering Group on Climate Change-related Statistics, Nina Holmengen (Norway). The session set the scene for developing climate data to respond to user needs, informed the participants of progress since the previous Expert Forum and introduced the topics of the meeting.

10.   The chair informed participants of the following results of work since the previous Expert Forum:

- The Steering Group developed a narrative[1] to demonstrate the value of official statistics for climate change analysis and distributed it to National and International Statistical Offices that participate in the Conference of European Statisticians.

- UNECE work on climate change-related statistics received broad support at the 47th session[2] of the United Nations Statistical Commission (UNSC) in March 2016. Countries asked UNSD to consider the set of climate change-related indicators, once finalized in the UNECE region, as a basis for developing a global set of indicators applicable to countries at various stages of development.

- The Steering Group has set up a platform for a web repository and will finalize it with good practices from this Expert Forum and other examples on how to implement the *Recommendations on Climate Change-related Statistics[3]*.

- The Steering Group has prepared a document with example road maps[4] at the request of the previous Expert Forum and has invited countries to present first country cases.

- The Steering Group and Task Forces carried out surveys of National Statistical Offices (NSOs) and agencies in charge of greenhouse gas emission inventories to assess countries progress and challenges.

- The UNECE Task Force on a Core Set of Climate Change-related Indicators has developed a set of climate change-related indicators. The set will be finalized based on the feedback from the Expert Forum.

- The UNECE Task Force on Measuring Extreme Events and Disasters and the Open-ended Intergovernmental Expert Working Group (OEIWG) on Indicators and Terminology relating to Disaster Risk Reduction have established close collaboration. Through this collaboration, statisticians are contributing to the development of a measurement approach, concepts and definitions, for assessing progress towards the 2030 Sendai Framework for Disaster Risk Reduction.

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[1] www.unece.org/fileadmin/DAM/stats/documents/sustainable_development/Growing_need_for_official_statistics_in_measuring_climate_change.pdf

[2] unstats.un.org/unsd/statcom/47th-session/documents/Report-on-the-47th-session-of-the-statistical-commission-E.pdf

[3] www.unece.org/stats/publications/ces_climatechange.html

[4] www.unece.org/fileadmin/DAM/stats/documents/ece/ces/2016/mtg/Road_maps_final_for_discussion.pdf

2. Outcomes of the COP21 and the Paris Agreement

Presentations: Sergey Kononov (UNFCCC) and Nina Holmengen (Norway).

11. The session was organized and chaired by Sergey Kononov (UNFCCC) to consider the upcoming changes in data requirements after the Paris Climate Agreement and to discuss the challenges and possibilities of the provision of new data to respond to these needs. The session included a questions and answers session.

12. The following points were raised during the session:

- The Conference of Parties (COP) is only starting to define the technical requirements emerging from the Paris Climate Agreement. Therefore, the data requirements are not fully known yet. The requirements are likely to build on the existing reporting and review processes under the UNFCCC, and therefore the existing experience and established national processes are likely to remain valid, with some necessary changes.

- The reporting will require data on greenhouse gas emission inventories, and data relating to mitigation measures and their effects, vulnerability and adaptation, as well as data on (provided and received) support for climate action. The requirement to prepare and submit Nationally Determined Contributions (NDCs) is a new, important element of the reporting under the UNFCCC.

- The current challenges in obtaining climate-related data are likely to remain valid and will need to be addressed in the post-Paris data reporting. Participants emphasized the need for close collaboration between NSOs, emission inventory agencies and other data producers to address existing methodological and data issues.

- More guidance would be needed on how to estimate the impact of mitigation measures on greenhouse gas emissions. The area is particularly challenging because of the diversity of possible mitigation measures and the varying socio-economic contexts.

- NSOs will need to be closer involved in the planning of climate-related reporting, and in providing the data and preparing the reports through the corresponding institutional arrangements. NSOs' involvement will become even more important than before if more complex data needs emerge under the Paris Agreement.

- The climate reporting requirements, including NDCs, are a cross-sectoral issue and should be addressed accordingly through organizational and institutional arrangements. Some countries have established Memoranda of Understanding or Statistical Advisory Boards with all producers of relevant data. This proved to be very helpful in ensuring understanding and cooperation among stakeholders.

- NSOs are encouraged to contribute to the international negotiation processes through the national UNFCCC and IPCC representatives by providing input from the statistical community on existing statistics and data, gaps, the difficulties encountered and proposals for improvement.

- IPCC is currently reviewing methodological guidance for compiling greenhouse gas emission inventories. NSOs could support this process, in particular by contributing to the development of definitions and methodologies in light of the internationally agreed statistical standards.

- NSOs have expertise and data sets that enable linking the environment and the economy; this is their major asset and it underpins the importance of using solid

statistical data for climate-related purposes. The System of Environmental-Economic Accounts (SEEA) is a very useful tool in that respect.

- The work on climate change-related statistics is closely linked to the work on SDGs. Addressing climate change-related data needs in the context of SDGs may help streamline work in both areas at the national level, making it more efficient.

13. The UNECE Steering Group should follow up on the progress of the negotiations under the UNFCCC relating on the requirements for climate-related data from the Paris Climate Agreement, and keep the network of the Expert Forum participants informed.

3. Strengthening energy statistics for analysing climate change

Presentations: Sergey Kononov (UNFCCC); Silvia Vera Garcia (DG Climate Action); Alessandra Alfieri (UNSD); Olivier Thunus (Luxembourg), Mojca Suvorov (Slovenia) and Julian Prime (United Kingdom).

14. The session was organized and chaired by Roberta Quadrelli (International Energy Agency) and considered how energy statistics would need to be strengthened for analysing climate change. The session included a questions and answers session to discuss current data gaps in energy for the needs of climate change analysis.

15. The following points were raised during the session:

- Energy statistics play a central role in climate change analysis and in the production of emission inventories as energy represents about two-thirds of all anthropogenic greenhouse gas emissions. They are also a key information source for producing early estimates of emissions. In addition, a large share of NDCs relate to energy data, such as on energy use efficiency and move to lower-carbon technologies.

- A number of good practices were shared at the session, for instance on the institutional arrangements and agreements on the collaboration and exchange of microdata between inventory compilers and energy statisticians.

- Some countries regularly exchange microdata between the NSO and the inventory compiler which has led to a greater consistency between national energy statistics, the Emissions Trading System (ETS) data and emission inventories. This is not possible in all countries due to legal constraints related to confidentiality.

- Some countries reported having notably improved data quality through organizing regular meetings between the inventory compilers and energy statisticians and maximising the use of administrative data, including from ETS.

- The key global reference for energy statistics is the International Recommendations for Energy Statistics, adopted by the UNSC in 2011. An integrated approach to energy statistics, balances and SEEA offers many additional benefits, for instance rich analytical possibilities through a combined presentation of monetary and physical flows, possibility to derive a range of indicators, decouple energy use from economic output and link with taxes and subsidies etc.

- By working together energy and climate statisticians can achieve significant benefits and maximize the value of energy data for climate analysis. At least two types of collaboration will be needed: First, organizing training and sharing of good practices across countries on data exchange, collection and reuse, compilation methodologies and communication. Second, enhancing synergies nationally by harmonizing approaches, methodologies, data requirements, concepts and definitions across organizations.

16.   The session confirmed the particular relevance of energy statistics as part of climate change-related statistics. Participants asked the UNECE Steering Group to provide a link between energy and climate statisticians, and continue to develop energy statistics for climate analysis. Countries were encouraged to bring up good examples of developing energy statistics for climate analysis and to share these through the UNECE wiki of good practices.

4.   Set of climate change indicators

<u>Presentations</u>: Roberta Quadrelli (IEA); Roberta Pignatelli (EEA); Maaike Bouwmeester (Eurostat); Alessandra Alfieri (UNSD); Tomas Marques (UNEP) and Olivier Thunus (Luxembourg)

<u>Invited statements</u>: Mark Lound (Australia); Kanykey Orozbaeva (Kyrgyzstan); Ewa Olszewska (Poland) and Rikke Munk Hansen (ESCAP).

17.   The session was organized and chaired by Angelica Tudini (Italy) and discussed the proposed set of 39 key climate change-related indicators, developed by a UNECE Task Force on a Core Set of Climate Change-related Indicators. The session reviewed the relation of this indicator set to existing data, indicator sets and statistical frameworks. The session considered the implementation of the indicator set in UNECE countries and other regions.

18.   The following points were raised during the session:

- The proposed set of key climate change-related indicators will be useful for focusing efforts and ensuring effective response to related national and global reporting requirements. The set of indicators provides a reference and links to indicators of Sustainable Development Goals (SDGs) and the Sendai Framework for disaster risk reduction.

- The set of indicators covers widely the aspects of climate change and builds on existing frameworks, mainly the SEEA Central Framework and the Framework for the Development of Environment Statistics (FDES). Participants asked the Task Force to include references to the SEEA Experimental Ecosystem Accounts as well as to other international datasets where relevant.

- According to a survey of NSOs[5], some indicators are not fully mature for implementation. The greatest concern relates to impact and adaptation indicators, as their methodology requires further development. Given the high relevance of these indicators for policy makers, the Expert Forum encouraged the Task Force to keep these indicators in the set and recommended further work to develop methodologies and data sources.

- As next steps, participants suggested adding operational and explanatory indicators to the set, asked the Task Force to consider developing a communication plan for the dissemination of the set climate indicators and to develop a compendium of indicator methodologies.

- Participants highlighted the following needs related to the forthcoming implementation of the set of indicators:

    a. Involve the relevant national organizations in a coordinated way in implementing the set of indicators since several indicators are produced by organizations other than NSOs;

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[5] A survey of data availability for the set of indicators received 41 replies.

     b.   NSOs should have a role in coordinating the production and release of the set of indicators, including quality assurance and the use of internationally agreed standards and methodologies;

     c.   Countries should aim at regular update of the set of indicators (rather than one-off exercises) in order to ensure that time series will be available.

- Pilot testing of the proposed set of indicators was recognized as an important step to better define the practical methodological issues and capacity building needs.

- As resources are scarce, it would be useful to have national discussions with stakeholders, and the UNFCCC focal points, on the importance of the indicator set for climate policies and for the international reporting requirements, and on the possibility to link the compilation of the set of indicators to a legal obligation.

19.   Many countries expressed interest in testing the set of indicators nationally (such as Finland, Mexico, Mongolia, Kyrgyzstan, Poland, Ukraine and the Russian Federation). The UNECE Task Force will finalize the set of climate change-related indicators taking into account the feedback received from the session, and send its final report to the Conference of European Statisticians (CES) for endorsement in June 2017. The report will be sent to all CES members for electronic consultation in spring 2017. Participants asked UNECE to continue the work in support of implementing the set of indicators in countries and other regions. The next Expert Forum should discuss further methodological work and exchange first experiences in implementing the indicator set.

5.   Road map and progress towards better climate change-related statistics

<u>Presentations</u>: Nina Holmengen (Norway); Carolyn Cahill (Canada) and Zhanna Suleimenova (Kazakhstan)

20.   The session was organized and chaired by Rob Smith (Midsummer Analytics) to discuss countries' progress in developing climate change-related statistics, share latest experience and review the example road maps as tools to identify priorities and practical steps for improving climate change-related statistics in line with the *Recommendations on Climate Change-related Statistics*.

21.   The following points were raised during the session:

- Participants emphasized that the preparation of road maps is an effective way of improving the quality and relevance of statistics. First examples of national road maps for climate change-related statistics provided promising results. Road maps can attract notable investments for the improvement of statistics, as proven by experience in some other statistical areas.

- Many countries plan to prepare a road map for climate change-related statistics to focus the work and give it a higher priority. This requires:

     a.   Thinking about what the real priorities are;

     b.   Understanding what data exist and where the gaps are;

     c.   Discussing with stakeholders to learn about their needs and challenges;

     d.   Realistically evaluating the available resources and competing priorities.

- Countries take various approaches to the preparation of statistical road maps, with some preparing regular (annual or five-yearly) plans covering all areas of statistics and other preparing road maps for particular statistical domains as needed. Either approach could be applied in the case of climate change-related statistics.

- Several countries expressed interest in preparing a road map for climate change-related statistics. To receive the maximum support, NSOs should engage with environment agencies and other key stakeholders, both producers and users of statistics, when developing the road maps.

- Participants asked the UNECE Steering Group to support countries wishing to prepare a national road map for climate change-related statistics, and share the first results at the next Expert Forum.

- A new capacity building programme focusing on statistics and data for SDGs, to be launched by UNEP and UNECE and other partners, will support countries with developing statistical systems wishing to strengthen their environment statistics. This could include support for developing a road map for climate change-related statistics.

- The survey of NSOs and inventory agencies[6] shows that 70 per cent of NSOs have developed new statistics on climate change on air emissions, mitigation expenditure and carbon footprints. Yet, only 7 per cent of NSOs produce statistics on climate adaptation. One in three NSOs are improving georeferencing and two thirds the possibilities for data matching. According to inventory agencies NSOs are not so involved in quality assurance. Still both agencies often consider the coherence of inventory data and other statistics good.

- International work is needed to harmonize classifications on land use and land cover as the conflicting classifications hamper the usefulness of these data.

22.   Participants encouraged the use of the prioritization tool (included in the road map document) for focusing the work to improve climate change-related statistics. The UNECE Steering Group will finalize the example road maps taking into account similar initiatives, such as the national assessment tool for SEEA implementation. Many countries expressed interest in preparing a national road map (such as Finland, Georgia, Italy, Kyrgyzstan, Slovenia and Tajikistan).

6.   Measurement of disasters and extreme events

Presentations: Giovanna Tagliacozzo (Italy); Michael Nagy (UNECE); Rikke Munk Hansen (ESCAP); Marc Gordon (UNISDR); Jochen Luther (WMO); Francisco Javier Jiménez Nava (Mexico) and Ceylan Abdullah (Turkey).

23.   The session was organized and chaired by Angela Ferruzza (Italy). It discussed the findings of the UNECE Task Force on Measuring Extreme Events and Disasters, considered the roles of different organizations in providing these data and the kind of international recommendations that would be needed to support data provision. The session reflected on the collaboration needed to measure progress towards the 2030 Sendai Framework, and shared national experience in compiling the data.

24.   The following points were raised during the session:

- Official statistics are increasingly being used as a multi-purpose information source to monitor progress towards global commitments, such as the Sendai Framework, SDGs and the Paris Climate Agreement. Participants noted the central role of NSOs as a rich source of data and expertise in statistical standards, definitions and methodologies.

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[6] In total, 48 NSOs and 35 inventory agencies replied to the survey on the progress in developing climate change-related statistics and data for greenhouse gas emission inventories.

- Participants pointed out that while NSOs do not typically compile statistics on irregular events, such as extreme events and disasters, the reporting on the Sendai Framework will require a lot of statistical information held by NSOs.

- Official statistics should be more easily available for linking with disaster data to analyse missing or affected people, number of deaths, damaged or destroyed houses, economic and agricultural losses, economic value of damage, impacts on road and railway networks, airports, electricity plants, education and health facilities, cultural heritage sites etc.

- According to the survey[7], most NSOs agree that they should play a bigger role in producing statistics related to extreme events and disasters, including taking up the coordination role and being better placed to serve data needs for emergency response. Currently, NSOs' publicly available statistics may be used, but often without the direct involvement of the NSO to fill gaps.

- Close involvement of the statistical community will be crucial in the process of defining the technical data reporting requirements for the monitoring of the Sendai Framework. This will help ensure that the monitoring will use already existing data and provide meaningful, internationally comparable results.

- The UNECE Task Force is working together with the OEIWG on Indicators and Terminology relating to Disaster Risk Reduction to develop recommended terminology and definitions aligned as much as possible with existing statistical standards and the SDG monitoring. The work should result in comprehensive standards and guidelines for disaster-related statistics.

- The strong institutional basis for the reporting related to disaster risk reduction can only be achieved by effective national coordination. It will be necessary to develop collaboration and data sharing protocols between NSOs, disaster-management agencies and other relevant organizations. This collaboration will be crucial for providing the right information at the right time in the highest quality.

- There is a need to standardize concepts, methodologies and data dissemination platforms for the reporting in disaster risk reduction and the meteorological and statistical communities. This requires a lot of effort, better cooperation of the expert communities and agreement on common standards.

25.   Participants asked the UNECE Task Force on Measuring Extreme Events and Disasters to continue the close collaboration with UNISDR and their OEIWG. The Task Force will present its draft recommendations for feedback at the next Expert Forum. The Task Force aims to send the recommendations for endorsement to the Conference of European Statisticians in 2018. Participants asked UNECE and ESCAP to support their member countries in measuring extreme events and disasters and developing the availability and usefulness of official statistics for this purpose.

7.   The way forward

26.   The session was organized by the chair of the Expert Forum, Nina Holmengen (Norway). The session discussed the conclusions of the meeting highlighting areas for further work and next steps in implementing the *Recommendations on Climate Change-related Statistics*.

27.   UNECE will prepare the next Expert Forum in consultation with the Steering Group on Climate Change-related Statistics. The following three topics were voted as possible new topics to be considered at the next Expert Forum:

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[7] The survey of NSOs' role in measuring extreme events and disasters received 39 replies.

- Statistics for climate adaptation (23 per cent).

- Quality of climate change-related statistics (16 per cent).

- Agriculture and land-use statistics (12 per cent).

28. The UNECE Steering Group will select one of the above topics for discussion. In addition, the Expert Forum may discuss countries' progress in developing climate change-related statistics, updates on the new climate reporting requirements, implementation of the set of climate change-related indicators and recommendations on the role of NSOs in measuring extreme events and disasters.

29. As a conclusion, the UNECE Steering Group and Task Forces will carry out the following activities as requested by participants of the Expert Forum in the previous sessions:

- Follow up on the progress of the negotiations on the UNFCCC reporting requirements after the Paris agreement, and keep the network informed.

- Continue close collaboration on climate change and energy statistics jointly with IEA, and continue to develop energy statistics for climate analysis.

- Review the generic road maps in view of feedback from the Expert Forum and support countries wishing to develop national road maps, with partners including UNEP.

- Continue to promote the *CES Recommendations*, both among NSOs and institutions responsible for greenhouse gas emission inventories.

- Analyse further the results of the survey of NSOs and inventory agencies to highlight good practices and plan activities to address current gaps. The report will be made available on the UNECE website.

- Finalize a wiki repository of good practices in climate change-related statistics with latest case examples and publish it.

- Review the set of climate change-related indicators based on feedback from the Expert Forum, and prepare a research agenda to develop methodologies and provide support to its implementation.

- Develop the role of statistical offices in measuring extreme events and disasters with key partners, including ESCAP, UNISDR and WMO.

30. The Expert Forum encouraged all participants to:

- Establish a contact with the national UNFCCC focal points to discuss how NSOs and other data producers can best contribute to the negotiations with their data and statistical expertise.

- Establish a contact with the national IPCC focal point to discuss how NSOs and other data producers can best contribute to the methodological development of inventories with their statistical knowledge and networks.

- Carry out a pilot test of the set of climate change-related indicators nationally in coordination with the UNECE Task Force on Indicators.

- Use the prioritization tool and prepare a national road map for the development of climate change-related statistics in wide national collaboration and in coordination with the UNECE Steering Group.

- Engage with stakeholders to discuss important data needs of international and national policies and reporting in the area of climate change, considering priorities, resources and obligations.

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