



World Meteorological Organization
Organisation météorologique mondiale

Secrétariat

7 bis, avenue de la Paix – Case postale 2300 – CH 1211 Genève 2 – Suisse

Tél.: +41 (0) 22 730 81 11 – Fax: +41 (0) 22 730 81 81

wmo@wmo.int – www.wmo.int

Weather • Climate • Water
Temps • Climat • Eau

Our ref.: SG/ASG/SPO/M&E

GENEVA, 10 August 2015

Annex: 1

Subject: Questionnaire on Impacts of Achieved Results on Members

Action required: To respond to the survey questionnaire by **11 September 2015**

Dear Sir/Madam,

The Sixteenth World Meteorological Congress (Cg-XVI) emphasized the importance of Monitoring and Evaluation (M&E) as a major component of the WMO Results-based Management system and approved its full implementation in the current financial period. You may recall that you were requested to respond to a questionnaire on impacts of achieved results on Members in the years 2012 and 2013 through my letters PR-6607 of 30 January 2012 and PR-6706 of 2 August 2013 to enable the Secretariat to establish the baselines and progress for each key performance indicator for the period 2012-2015, respectively. The Seventeenth World Meteorological Congress (Cg-17) recognized low and fluctuating levels of response to questionnaires as a challenge to measuring performance progress, and encouraged Members to respond to surveys and provide regular, accurate and comprehensive data that would enable the Organization to identify priority actions and better address Members' needs.

To establish the progress in the achievement of the Expected Results associated with the WMO Strategic Plan 2012-2015 for the sixteenth financial period, we are requesting you to complete the questionnaire on impacts of achieved results on Members available online as indicated in the attached "Guidelines for Participating in the Questionnaire on Impacts of Achieved Results on Members". We would appreciate if you could fill it out at your earliest convenience but preferably not later than **11 September 2015**.

I thank you in advance for your cooperation. Your responses are of invaluable importance for the further development of meteorological, hydrological and climate services.

Yours faithfully,

(J. Lengoasa)
for the Secretary-General

To: Permanent Representatives (or Directors of Meteorological or Hydrometeorological Services)
of Members of WMO (PR-6858)

cc: Hydrological Advisers to Permanent Representatives

WORLD METEOROLOGICAL ORGANIZATION

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SG/ASG/SPO/M&E, ANNEX

Guidelines for Participating in the Survey on Impacts of Achieved Results on Members

Please complete the electronic survey, providing information related to your country or territory. The information gathered will be used to assess the impacts of results achieved on Members against the World Meteorological Organization Strategic Plan (WMO SP) 2012-2015 for the sixteenth financial period.

The results of the survey will be published and presented at the next meeting of the EC Working Group on Strategic and Operational Planning.

We would appreciate your response as soon as possible but preferably not later than **11 September 2015**.

Guidelines for Completion of the Electronic Questionnaire

1. This survey is available in Arabic, English, French, Russian, and Spanish. Please use the following website addresses and passwords to access the survey in the respective languages by copying and pasting the address into your internet browser.

Arabic: <https://www.wmo.int/impacts-survey-2015-ar>

English: <https://www.wmo.int/impacts-survey-2015-en>

French: <https://www.wmo.int/impacts-survey-2015-fr>

Russian: <https://www.wmo.int/impacts-survey-2015-ru>

Spanish: <https://www.wmo.int/impacts-survey-2015-es>

2. You will be prompted to provide a password:

Arabic: wmo15@impactsar

English: wmo15@impacts

French: omm15@impacts

Russian: bmo15@impacts

Spanish: omm15@impactos

Please note that the password is case sensitive and is valid to complete only one survey for your country or territory.

3. Please complete all questions as appropriate. While the survey tool will assist you to detect simple errors, you are responsible for the responses. Please check your responses prior to submitting.
4. You should allow approximately 30-40 minutes to respond to the survey assuming you have all necessary information to answer the questions. You can download a Word version of this survey for your reference after log in. If you wish, you may complete the survey in several sittings. You may log in again using the same website address and password until the survey is complete. Once the survey is complete changes will no longer be possible.

5. You will have the option to print each survey page while browsing. You will not be able to print the survey out after completion and submission.
6. In case you experience difficulties to respond to the questionnaire electronically, please download a Word version from the following website addresses. It can be completed without printing.

Arabic: <https://www.wmo.int/impacts-survey-2015/download-ar>
English: <https://www.wmo.int/impacts-survey-2015/download-en>
French: <https://www.wmo.int/impacts-survey-2015/download-fr>
Russian: <https://www.wmo.int/impacts-survey-2015/download-ru>
Spanish: <https://www.wmo.int/impacts-survey-2015/download-es>

7. Dr Assia Alexieva, M&E Officer, is available to address any questions you might have in the process of completing the survey.

Dr Assia Alexieva
World Meteorological Organization
7 bis, Avenue de la Paix
P.O. Box 2300
CH-1211 Geneva, 2
Switzerland
Telephone: 41 (22) 730-8390
E-mail: aalexieva@wmo.int

Thank you in advance for your valuable contribution.



World Meteorological Organization

Questionnaire on Impacts of Achieved Results on Members

This survey is to be completed by each Member. The results will be used to assess the impacts of the achieved results on Members in the sixteenth financial period.

COUNTRY:

PERMANENT REPRESENTATIVE:

SIGNATURE:

DATE:

Please fill out the following table with the contact information of the individuals who contributed to this questionnaire.

	Title	First Name	Last Name	Phone Number	E-Mail address
Contributor 1					
Contributor 2					
Contributor 3					
Contributor 4					

August-September 2015

Expected Result 1: Enhanced capabilities of Members to deliver and improve access to high-quality weather, climate, water and related environmental predictions, information and services in response to users' needs and to enable their use in decision-making by relevant societal sectors

Key Outcome 1.1.: Improved access to seamless weather, climate, water, and related-environmental products and services (e.g., warnings, forecasts and supporting information)

KPI 1.1.1: Number of Members demonstrating quantitative measurements of the socio-economic benefits of their products and services

1. If your NMHS has conducted analysis of social and economic benefits in the period 2012-2015, please indicate in which of the following sectors the products and services of your NMHS are considered beneficial:

- i. General public ☐
- ii. Emergency management ☐
- iii. Aviation industry ☐
- iv. Marine industry ☐
- v. Agriculture ☐
- vi. N/A ☐
- vii. Other sectors (please specify)

KPI 1.1.2: Percentage of NMHSs with regular access to products provided by global and regional centres

2. How would you classify the access your NMHS has to products provided by WMO global and regional centres?

- i. No access ☐
- ii. Intermittent access ☐
- iii. Mostly reliable access ☐
- iv. Highly reliable access ☐

3. Has the level of access of your NMHS to products provided by global and regional centres improved during the last two years?

Yes ☐ No ☐

4. Identify which of the following communication systems you use to access data and products?

- i. WMO Information System (WIS) dedicated networks (World Weather Watch Global Telecommunication System (GTS)) ☐
- ii. WIS via Internet ☐
- iii. Internet (Other) ☐
- iv. Private or dedicated lines to centres (other than GTS links) ☐
- v. Other (please specify)

Key Outcome 1.2: Delivery of weather, climate, water and related environmental products and services to users' communities is improved

KPI 1.2.1: Number of NMHSs expressing user satisfaction with (a) the availability, (b) reliability and (c) range of products that are (d) received in time and are (e) an essential contribution to decision making

5. Based on surveys or other relevant information available, how would you rate user satisfaction with the following aspects as relates to the provision of weather, climate, water and related environmental products and services provided by your NMHS:

1=very dissatisfied; 5=very satisfied

- | | |
|---------------------------------|--|
| Availability | 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> |
| Reliability | 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> |
| Range | 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> |
| Timeliness | 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> |
| Contribution to decision-making | 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> |

Expected Result 2: Enhanced capabilities of Members to reduce risks and potential impacts of hazards caused by weather, climate, water and related environmental elements

Key Outcome 2.1: Multi-hazard early warning systems are implemented

KPI 2.1.1: Number of NMHSs contributing to the implementation of multi-hazard early warning systems

6. Is your NMHS contributing to the implementation of a multi-hazard early warning system in your country?

Yes ☐

No ☐

7. If yes, is your contribution recognized under a formal agreement, Memorandum of Understanding or other government mandate?

Yes ☐

No ☐

8. Is your NMHS part of a national disaster risk reduction platform?

Yes ☐

No ☐

Key Outcome 2.2: National integrated flood management plans are developed

KPI 2.2.1: Number of Members establishing flood management plans

9. Does your country have a flood management plan(s) established or under development?

Yes ☐

No ☐

10. If yes, which agency is responsible?

KPI 2.2.2: Number of NMHSs participating in regional hydrological forecasting systems for transboundary river basins

11. Does your NMHS participate in a regional hydrological forecasting system for a transboundary river basin?

Yes ☐

No ☐

N/A ☐

12. If yes, which basin(s)?

13. In which year was it established?

Expected Result 3: Enhanced capabilities of Members to produce better weather, climate, water and related environmental information, prediction and warnings to support, in particular, disaster risk and climate impact and adaptation strategies

Key Outcome 3.1: Improved climate monitoring, long-range forecasts and long-term projections

KPI 3.1.1: Number of Members issuing (a) monthly predictions, (b) seasonal predictions, (c) climate watch bulletins, and (d) long-term projections

14. Please indicate which of the following regional or national-scale products are issued by officially mandated institution(s) in your country:

a) Monthly predictions ☐

b) Seasonal predictions ☐

c) Climate watch bulletins ☐

d) Long-term projections ☐

KPI 3.1.2: Perceived quality of the issued (a) monthly predictions, (b) seasonal predictions, (c) climate watch bulletins, and (d) long-term projections

15. On a scale of 1-5 as shown below, how would you rate the current quality of the following products in your country?

1=very low; 5=very high

a) Monthly predictions 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

b) Seasonal predictions 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

c) Climate watch bulletins 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

d) Long-term projections 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

KPI 3.1.3: Perceived timeliness of the issued (a) monthly predictions, (b) seasonal predictions, (c) climate watch bulletins, and (d) long-term projections

16. On a scale of 1-5 as shown below, how would you rate the timeliness of the following products in your country?

1=very untimely; 5=very timely

a) Monthly predictions 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

b) Seasonal predictions 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

c) Climate watch bulletins 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

d) Long-term projections 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Key Outcome 3.2: Climate information and prediction products for climate adaptation and risk management are improved

KPI 3.2.1: Perceived quality of the products of WMO Regional Climate Centres used at the national level

17. On a scale of 1-5 as shown below, how would you rate the current level of quality of the following WMO RCC* products available in your region, based on their use by your NMHS?

1=very low; 5=very high

a) Long range forecasts 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ N/A ☐

b) Regional climate monitoring products 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ N/A ☐

c) Regional data 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ N/A ☐

d) Guidance material on regional products 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ N/A ☐

* A WMO RCC is an operational Regional Climate Centre formally designated by WMO as such through the Technical Regulations, but for purposes of this survey could also include candidate WMO RCCs currently in demonstration phase.

KPI 3.2.2: Number of Members operationally developing and disseminating climate products and information for national needs

18. Does your country operationally develop and disseminate the following climate information and products for national needs?

- | | | |
|---|------------------------------|-----------------------------|
| i. Basic climate products derived from national climate data | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| ii. Climate diagnostics and climate analysis (to describe climate variability and change) | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| iii. Hazards and extreme value analysis | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| iv. Contribution to national and local climate assessments | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| v. Monthly and longer climate predictions (empirical/dynamical) including seasonal climate outlooks, both statistical and model-based | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| vi. National climate watch advisories and bulletins | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| vii. Specialized climate products to meet the needs of major climate-sensitive sectors | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| viii. Downscaled long-term climate projections | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| ix. Risk identification/risk assessment products | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| x. Adaptation-oriented climate information and products | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| xi. Policy-oriented climate information and products | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| xii. Regional-scale climate model products | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| xiii. Global-scale climate model products | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| xiv. Products based on interdisciplinary (climate/sector) models | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| xv. New models and/or analytical tools | Yes <input type="checkbox"/> | No <input type="checkbox"/> |

19. Do the products and information developed and disseminated by your NMHS for national needs take into account global and regional products and their related guidance material?

Yes ☐ No ☐

20. Does your country participate in Regional Climate Outlook Forums (RCOF) and the development of regional climate outlook consensus statements?

Yes ☐ No ☐

21. Do the providers of climate information and products in your country have technical training in the development of climate products?

Yes ☐ No ☐

KPI 3.2.3: Perceived quality of the national climate information and products available in Member countries

22. On a scale of 1-5 as shown below, how would you rate the current level of quality of the national climate information and products available in your country?

1=very low; 5=very high

- | | |
|---|---|
| i. Basic climate products derived from national climate data | 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> N/A <input type="checkbox"/> |
| ii. Climate diagnostics and climate analysis (to describe climate variability and change) | 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> N/A <input type="checkbox"/> |
| iii. Hazards and extreme value analysis | 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> N/A <input type="checkbox"/> |
| iv. Contribution to national and local climate assessments | 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> N/A <input type="checkbox"/> |
| v. Monthly and longer climate predictions (empirical/dynamical) including seasonal climate outlooks, both statistical and model-based | 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> N/A <input type="checkbox"/> |
| vi. National climate watch advisories and bulletins | 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> N/A <input type="checkbox"/> |
| vii. Specialized climate products to meet the needs of major climate-sensitive sectors | 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> N/A <input type="checkbox"/> |
| viii. Downscaled long-term climate projections | 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> N/A <input type="checkbox"/> |
| ix. Risk identification/risk assessment products | 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> N/A <input type="checkbox"/> |
| x. Adaptation-oriented climate information and products | 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> N/A <input type="checkbox"/> |
| xi. Policy-oriented climate information and products | 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> N/A <input type="checkbox"/> |
| xii. Regional-scale climate model products | 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> N/A <input type="checkbox"/> |
| xiii. Global-scale climate model products | 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> N/A <input type="checkbox"/> |
| xiv. Products based on interdisciplinary (climate/sector) models | 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> N/A <input type="checkbox"/> |
| xv. New models and/or analytical tools | 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> N/A <input type="checkbox"/> |

KPI 3.2.4: Number of Members providing targeted/tailored climate information, products and services, through formal mechanisms including National Climate Outlook Forums, to support user requirements in their countries for adaptation and climate risk management in key socio-economic sectors

23. To which of the following sectors are targeted/tailored climate information, products and services provided in your country?

- i. Agriculture/food security including fisheries and livestock ☐
- ii. Water resource management ☐
- iii. Public health ☐
- iv. Energy ☐
- v. Tourism and recreation ☐
- vi. Urban design/management ☐
- vii. Industry (i.e. construction, manufacturing, etc) ☐
- viii. General public ☐
- ix. Emergency management ☐
- x. Government, policy, agencies, NGOs, etc. ☐
- xi. Transportation (land, air, marine) ☐
- xii. Other (please specify) ☐

24. In your country, does liaison between the climate providers and users, and those involved in the dissemination of climate outlooks occur through the following mechanisms?

- | | | |
|---|------------------------------|-----------------------------|
| Regional Climate Outlook Forum | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| National Climate (Outlook) Forum | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| User-organized forum | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| Web based dissemination with feedback loop | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| Web-based dissemination with no feedback from users | Yes <input type="checkbox"/> | No <input type="checkbox"/> |

25. Do the providers of climate services in your country measure performance statistics related to user satisfaction?

Yes ☐ No ☐

Key Outcome 3.3: Hydrological information and products, including water resources, are improved

KPI 3.3.1: Number of Members using a Quality Management Framework for Hydrology based on current guidance materials

26. During the past two years, has a Quality Management Framework for Hydrology been in use in your NMHS?

Yes ☐ No ☐

KPI 3.3.2: Number of regional hydrological databases developed in transboundary river basins

27. During the past two years, have new regional hydrological data bases been developed in Transboundary river basins?

Yes ☐ No ☐

28. If yes, for which river basins?

Expected Result 4: Enhanced capabilities of Members to access, develop, implement and use integrated and interoperable Earth- and space-based observation systems for weather, climate and hydrological observations, as well as related environmental and space weather observations, based on world standards set by WMO.

Key Outcome 4.1: WMO Integrated Global Observing System implementation phase is completed

KPI 4.1.1: Percentage of progress in achieving the key implementation tasks, milestones and deliverables specified by the WIGOS Implementation Plan (WIP)

29. Have you initiated / implemented a WIGOS demonstration national project?

Yes ☐ No ☐

30. If yes, how do you rate the progress in achieving the key implementation tasks, milestones, and deliverables specified by the WIGOS Implementation Plan?

1=no progress; 5=great progress

1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

KPI 4.1.2: Increased availability of observations for users

31. During the past two years, has your NMHS been able to increase the availability of observations for users/user groups?

Yes ☐ No ☐

32. If yes, specify the type of observations

Key Outcome 4.2: WMO Information System is developed and implemented

KPI 4.2.1: Progress in the implementation of WIS by NMHSs as measured by (a) percentage of registered WIS centres that have been endorsed as WIS compliant; and (b) Number of NMHSs with improved observational data and products as a result of implementation of WIS functions

33. During the past two years, has your NMHS implemented any functions of the WIS defined in the Manual on WMO Information System (WIS), WMO-No. 1060?

Yes ☐ No ☐

34. If yes, please specify

35. Through the implemented new WIS functions, has the NMHS been able to improve the data access by obtaining more:

i. Observational data Yes ☐ No ☐

ii. Products Yes ☐ No ☐

36. Through the implemented new WIS functions, have users been able to improve the data access by obtaining more:

i. Observational data Yes ☐ No ☐

ii. Products Yes ☐ No ☐

37. On a scale of 1-5 as shown below, please rate the maturity of the WIS functions implemented at your NMHS.

1=basic implementation of some functions;

3=full implementation of functions appropriate to centre;

5=systematic continuous improvement of full functionality appropriate to centre

1 ☐

2 ☐

3 ☐

4 ☐

5 ☐

KPI 4.2.2: Number of NMHSs whose data processing and management capabilities have enhanced as a result of implementation of WIS functions

38. In your assessment if you have implemented some WIS functions, have the functions enhanced the data processing and management capabilities in your NMHS?

Yes ☐ No ☐

39. On a scale of 1-5 as shown below, please rate your level of data processing and data management capabilities.

1=basic implementation of some functions

3=full implementation of functions appropriate to centre

5=systematic continuous improvement of full functionality appropriate to centre

1 ☐

2 ☐

3 ☐

4 ☐

5 ☐

Key Outcome 4.3: Progress in implementing the Global Climate Observing System (GCOS)

KPI 4.3.1: Percentage of progress in achieving the tasks of the GCOS implementation plan

40. Has the national climate user community had access to data archives at national or global climate data centres operated by your NMHS?

Yes ☐ No ☐

41. How would you rate the quality of climate observations provided by your NMHS in meeting user needs?

1=very low; 5=very high

1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Key Outcome 4.4: Data rescue and data management systems improved

KPI 4.4.1: Number of NMHSs undertaking data rescue or being involved in regional collaborative data rescue initiatives such as MEDARE

42. Has your country benefited from a WMO-coordinated data rescue project?

Yes ☐ No ☐

43. During the past two years, has a data rescue project been carried out in your country?

Yes ☐ No ☐

44. Is there still a need for your country to benefit from a WMO coordinated data rescue project?

Yes ☐ No ☐

KPI 4.4.2: Number of Members implementing modern climate data management systems and/or climate monitoring systems

45. On a scale of 1-5 as shown below, please rate the level of adequacy of the Climate Data Management System in use at your NMHS.

1=very inadequate; 5=very adequate

1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

46. Are the climate monitoring and/or watch systems in use in your country?

Yes ☐ No ☐

47. If yes, which is the responsible agency?

Expected Result 5: Enhanced capabilities of Members to contribute to and draw benefits from the global research capacity for weather, climate, water and the related environmental science and technology development

Key Outcome 5.1: Research in climate prediction/ projection to improve the skills of seasonal, decadal, and longer time scales is enhanced

KPI 5.1.1: Number of new activities advancing climate research capacity at the global and regional level, especially for early career scientists and scientists from developing and least developed countries

To be completed by the WMO Secretariat using other sources.

KPI 5.1.2: Number of early career scientists and scientists from developing and least developed countries that WCRP funded to participate in activities to advance climate research

To be completed by the WMO Secretariat using other sources.

KPI 5.1.3: Degree of satisfaction among NMHSs with the skill of climate predictions

48. How would you rate the current level of skill of climate predictions issued by your NMHS or any other mandated institution in your country?

1=very low; 5=very high

1 ☐

2 ☐

3 ☐

4 ☐

5 ☐

Key Outcome 5.2: Research in the prediction of high-impact weather on time scales of hours to seasons is enhanced

KPI 5.2.1: Number of total research projects (new, ongoing and completed) on operational products and services

To be completed by the WMO Secretariat using other sources.

KPI 5.2.2: Number of Members whose operational products and services have improved as a result of WMO research projects

49. Please indicate in which of the following areas the operational products and services provided by your NMHS have improved in the past two years as a result of WMO research projects:

- i. Operational nowcasting service ☐
- ii. Design and operational use of mesoscale prediction systems ☐
- iii. Access and use of outputs of operational ensemble modeling systems ☐
- iv. Other (please specify)

KPI 5.2.3: Number of NMHSs in developing and LDCs participating in regional and international research initiatives on high impact weather or severe weather forecasting demonstration projects

50. If you are a developing or least developed country, has your NMHS participated in regional or international research initiative on high-impact weather or a severe weather forecasting demonstration project in the past two years?

Yes ☐

No ☐

N/A ☐

51. If yes, how would you rate improvements in the capabilities of your NMHS in forecasting high-impact weather resulting from your participation in these activities?

1=very low; 5=very high

1 ☐

2 ☐

3 ☐

4 ☐

5 ☐

Key Outcome 5.3: Atmospheric chemistry observations and assessment meet needs of environmental conventions and policy assessments

KPI 5.3.1: Degree of Member satisfaction with the (a) usefulness and (b) timeliness of Global Atmospheric Chemistry Bulletins

52. On a scale of 1-5 as shown below, how would you rate the Global Atmospheric Chemistry Bulletins in terms of their:

i. Usefulness 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

(1=not useful at all; 5=very useful)

ii. Timeliness 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

(1=very untimely; 5=very timely)

KPI 5.3.2: Degree of Member satisfaction with the usefulness of (a) GAW measurement guidelines and reports, (b) Sand-and-Dust storm forecasting, and (c) the chemical weather activities of GURME

53. On a scale of 1-5 as shown below, how would you rate the usefulness of the following:

1=not useful; 5= very useful

i. Measurement guidelines and measurement procedures developed in the GAW Programme for improving quality of chemical observations 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ N/A ☐

ii. Sand-and-Dust storm forecasting system or information provided by it 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ N/A ☐

iii. Chemical weather activities of GURME 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ N/A ☐

Expected Result 6: Enhanced capabilities of Members' NMHSs, in particular in developing and least developed countries and Small Island Developing States, to fulfil their mandates

Key Outcome 6.1: Visibility and relevance of NMHSs in national and regional development agendas is improved, particularly in developing and least developed countries

KPI 6.1.1: Number of NMHSs with (a) increased contribution to national policy setting, (b) improved awareness by users on types of services NMHS can deliver, (c) improved user accessibility to forecasts and warnings, (d) improved timeliness of forecasts and warnings; and (e) increased accuracy of forecasts and warnings

54. On a scale of 1-5 as shown below, how would you rate the change in the past two years in the visibility and relevance of your NMHS in the national development agenda as relates to the following items:

1=significant decrease; 3= no change; 5=significant increase

- | | |
|--|---|
| (a) Contribution to national policy setting | 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> N/A <input type="checkbox"/> |
| (b) Awareness by users on types of services NMHS can deliver | 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> N/A <input type="checkbox"/> |
| (c) User accessibility to forecasts and warnings | 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> N/A <input type="checkbox"/> |
| (d) Timeliness of forecasts and warnings | 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> N/A <input type="checkbox"/> |
| (e) Accuracy of forecasts and warnings | 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> N/A <input type="checkbox"/> |

KPI 6.1.2: Number of NMHSs with (a) increased contribution to regional policy setting, (b) improved awareness by regional users on types of services that can be provided by Regional Centres (RCs), (c) improved regional user accessibility to forecasts and warnings from RCs, (d) improved timeliness of forecasts and warnings delivered from RCs; and (e) increased accuracy of forecasts and warnings delivered from RCs

55. On a scale of 1-5 as shown below, how would you rate the changes in the past two years in the visibility and relevance of the regional services delivered by your NMHS in the regional development agenda as relates to the following items:

1=significant decrease; 3= no change; 5=significant increase

- | | |
|--|---|
| (a) Contribution to regional policy setting | 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> N/A <input type="checkbox"/> |
| (b) Awareness by regional users on types of services that can be provided by RCs | 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> N/A <input type="checkbox"/> |
| (c) User accessibility to forecasts and warnings delivered from RCs | 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> N/A <input type="checkbox"/> |
| (d) Timeliness of forecasts and warnings delivered from RCs | 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> N/A <input type="checkbox"/> |

- (e) Accuracy of forecasts and warnings delivered from RCs 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ N/A ☐

Key Outcome 6.2: Infrastructure and operational facilities of NMHSs and Regional Centres are improved, particularly in developing and least developed countries

KPI 6.2.1: Number of NMHSs with improved infrastructure and operational facilities

56. During the last two years has your NMHS made improvements to its service delivery capacity?

- | | | | |
|--|------------------------------|-----------------------------|------------------------------|
| i. In the surface observing network? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | N/A <input type="checkbox"/> |
| ii. In the upper-air observing network? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | N/A <input type="checkbox"/> |
| iii. In equipment for meteorological / environmental satellite data? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | N/A <input type="checkbox"/> |
| iv. In numerical weather prediction and data-processing? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | N/A <input type="checkbox"/> |
| v. In early warning and hazard risk assessments | Yes <input type="checkbox"/> | No <input type="checkbox"/> | N/A <input type="checkbox"/> |
| vi. In forecasting (please specify sector) | Yes <input type="checkbox"/> | No <input type="checkbox"/> | N/A <input type="checkbox"/> |

Key Outcome 6.3: Education and training development facilities at national and regional levels are improved, especially in developing and least developed countries

KPI 6.3.1: Number of Regional Training Centres (RTCs) providing education and training support for GFCS related activities

To be completed by WMO Secretariat using other sources.

KPI 6.3.2: The degree to which Members are getting value for money from the WMO Fellowship Programme

57. Has your NMHS requested one or more fellowships under the WMO Fellowships Programme in the past four years?

Yes ☐ No ☐

58. If yes, how would you rate the value your NMHS has been getting from the WMO Fellowship Programme during the past four years?

1= very low; 5= very high

1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

KPI 6.3.3: Degree of Member satisfaction with the RTCs in use

59. If you sent staff to a WMO Regional Training Centre(s) in the past two years, please indicate by inserting 'X' in the appropriate box the WMO Region(s) where the RTC(s) are located:

WMO Regions

I ☐ II ☐ III ☐ IV ☐ V ☐ VI ☐ N/A ☐

60. From your perspective, how would you rate the degree of satisfaction with the RTC(s) you used?

1= very low; 5= very high

RTCs in Region I	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
RTCs in Region II	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
RTCs in Region III	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
RTCs in Region IV	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
RTCs in Region V	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
RTCs in Region VI	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>

Key Outcome 6.4: Capacities of NMHSs are enhanced through cooperation and partnerships with other national and regional organizations
KPI 6.4.1: Development projects and activities funded through voluntary contributions

61. Has your NMHS received development funding or assistance from international partners to support projects and activities?

Yes ☐

No ☐

62. If yes, how would you rate the overall success of such projects and activities in enhancing the NMHS capacities?

1=not enhanced at all; 5=significantly enhanced

In the short-term	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
In the long-term	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>

Expected Result 7: New and strengthened partnerships and cooperation activities to improve NMHSs' performance in delivering services and to increase the value of WMO contributions within the United Nations system, relevant regional organizations, international conventions and national strategies
Key Outcome 7.1: WMO leadership and contribution in relevant UN system and other international partners' initiatives and programmes is improved

KPI 7.1.1: Number of reports of WMO and its co-sponsored programmes submitted to UN and other international conventions, particularly the UNFCCC, UNCCD, and UNCBD

To be completed by WMO Secretariat using other sources.

KPI 7.1.2: Number of contracts/cooperation agreements within which WMO is engaged with partners

To be completed by WMO Secretariat using other sources.

KPI 7.1.3: Number of NMHSs implementing projects with the UN and other international and/or regional organizations

63. In the last two years, has your NMHS implemented projects or activities in partnership with UN and other international organizations?

Yes ☐

No ☐

64. If yes, which organizations (Please specify)

65. Is your NMHS actively contributing to the work of IPCC?

Yes ☐

No ☐

66. If yes,

By nominating and supporting authors and review editors? Yes ☐ No ☐

By contributing to government/expert review of IPCC reports? Yes ☐ No ☐

Key Outcome 7.2: Public, decision-makers and other stakeholders are increasingly aware of key WMO and NMHSs issues, activities and priorities through enhanced communication

KPI 7.2.1: Uptake of WMO public information outputs as measured by (a) the number of unique visitors on the WMO website, (b) the number of times WMO was mentioned in press articles, (c) the number of Facebook, fans and (d) the number of Twitter followers

To be completed by WMO Secretariat using other sources.

KPI 7.2.2: Degree to which NMHSs make use of WMO public information outputs

67. How frequently do you use non-technical, public information outputs (website, press releases, videos, World Met Day materials, In the Media, Facebook, Twitter, etc.) that you produce yourself or obtain from the Secretariat or other sources?

1=never; 2=occasionally; 3=regularly; 4=frequently; 5=always

1 ☐

2 ☐

3 ☐

4 ☐

5 ☐

KPI 7.2.3: Number of NMHSs that have provided training to senior managers and/or communication officers in media relations, social media or other aspects of communications

68. During the past two years, have senior managers and/or communications officers at your NMHS received training in media relations, social media or other aspects of communications?

Yes ☐

No ☐

Expected Result 8: Promote Quality Management Systems in NMHSs and within the WMO Secretariat for efficient and effective use of resources

To be completed by WMO Secretariat using other sources.

And a few more general questions

69. On a scale of 1-5 as shown below, how useful have WMO services and activities been to your NMHS over the last two years?

1 ☐

2 ☐

3 ☐

4 ☐

5 ☐

70. Indicate the five WMO activities or services that have been most beneficial to your NMHS in the past two years.

i.

ii.

iii.

iv.

v.

71. Has your participation in any WMO activities in the last two years facilitated improvement in your ability to respond to users' needs and to contribute to decision makers?

i. Not at all ☐

ii. A little ☐

iii. Significantly ☐

72. Describe briefly a major success or failure from leveraging off WMO activity in changing your influence on decision-makers or users of services provided by your NMHS.

73. Which are the five services or programme activities that need to be improved for WMO to meet your needs?

- i.
- ii.
- iii.
- iv.
- v.

74. Please indicate five areas in which your NMHS achieved highest improvements over the last two years.

- i.
- ii.
- iii.
- iv.
- v.

75. Please indicate five areas in which your NMHS needs more development.

- i.
- ii.
- iii.
- iv.
- v.