

# PROGRESS REPORT ON DELIVERABLES

July-December 2014

## PART 1: BACKGROUND

### 1. Purpose and Scope

The WMO Monitoring and Evaluation System calls for the biannual self-evaluation of progress on deliverables, or the extent to which the Organization is delivering what it has committed itself to deliver. Contrary to the Key Performance Indicators which measure performance at the *outcome* level for the whole of WMO, the progress on deliverables report is focused on the Secretariat and the *outputs* of its activities.

The purpose is to ensure that implementation of the Strategic Plan, as relates to activities in the WMO Operating Plan, is on track, that issues are detected early, and that corrective actions are taken. The report covers regular budget and some extra-budgetary activities.

### 2. Methodology

The current report measures progress on deliverables for July-December 2014 in accordance with the Programme Activities Planned and Funded for Implementation in the period 2014-2015. To this end, the Departments at Secretariat reported against 409 activities planned for the biennium along the following parameters:

- (1) *Status of activities* (completed, in progress, not started yet, recurrent, cancelled);
- (2) *Timeliness* (on time, ahead of schedule, behind schedule, rescheduled, N/A);
- (3) *Cost* (within budget, under budget, over budget, N/A)

Departments were also asked to indicate the *type of activity* in accordance with the following generic categories:

- (a) Organize, prepare documents, participate in and report on meetings and workshops;
- (b) Provide or support development of working papers/plans (workplans, implementation plans, etc.)/guidelines/questionnaires/surveys, etc.
- (c) Maintain, develop and publish technical regulations / manuals / scientific and technical reports;
- (d) Support TC, RA and EC/WGs, monitor, review and follow-up on activities and provide technical and scientific advice;
- (e) Organize training, capacity building and infrastructure development activities;
- (f) Internal activity in support of Secretariat functions and infrastructure.

Departments further identified constraints and risks encountered in the course of implementing activities and assigned *alert status* to each activity, using the traffic lights to indicate:

-  Green: smooth activity implementation;
-  Yellow: a problem/hindrance in implementation, which can potentially escalate but the Department is working on resolving it; and
-  Red: a problem/hindrance in implementation, which requires the intervention of the Executive Management.

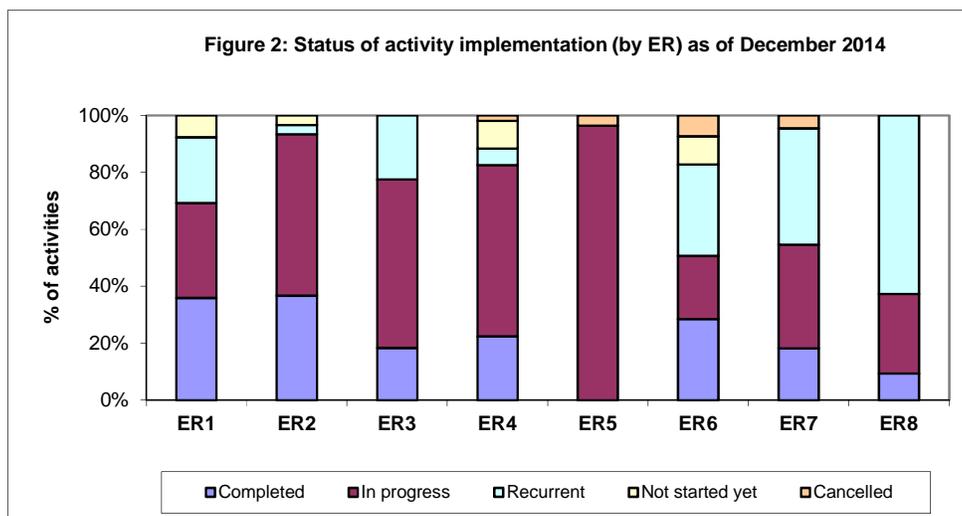
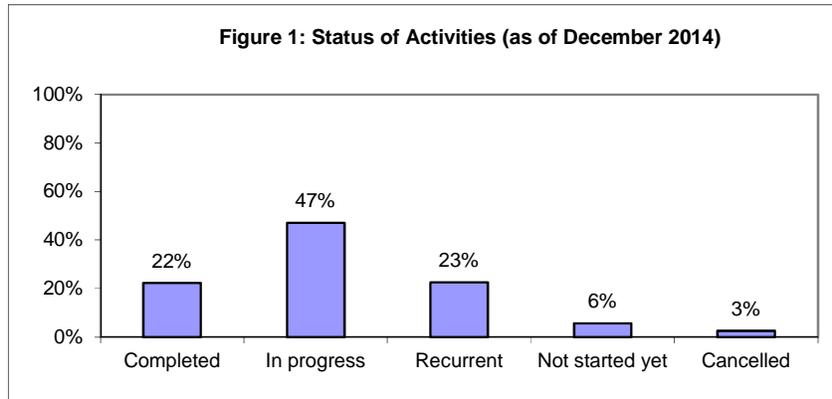
## PART 2: Overall Performance

The following are only highlights of the Secretariat's overall performance in implementation of the activities in the Operating Plan 2014-2015 for the period July-December 2014. A summary of progress and issues concerning the status, timeliness and costs related to implementation of activities associated with specific Expected Results (ERs), as listed in Annex 1, is also presented below. A detailed account of progress along the three categories for each ER is contained in Part 3, which also features highlights of deliverables/outputs achieved in the reporting period.

### 1. Status of Implementation

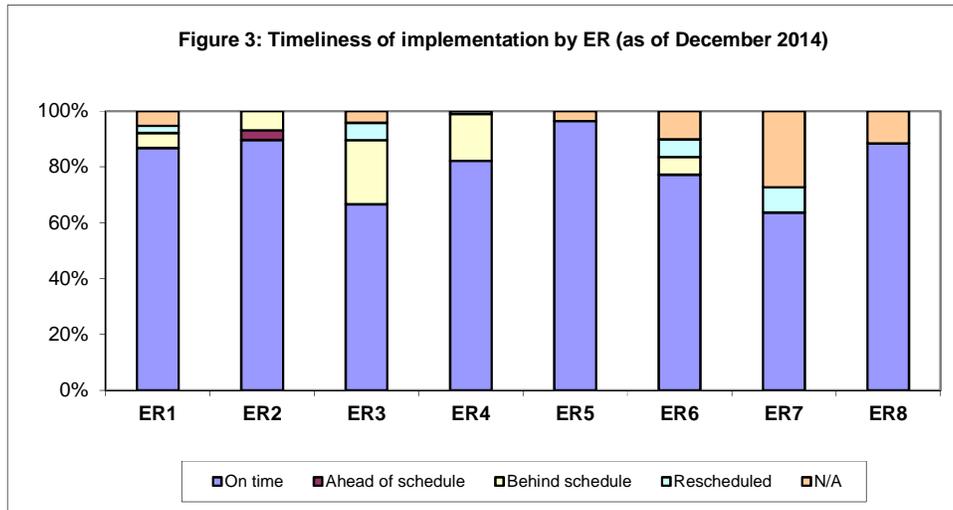
Figure 1 presents the status of implementation of all activities listed in the Operating Plan 2014-2015 as of December 2014. Completed activities increased from 10% in June to 22% in December 2014. Likewise, the portion of activities which had not started yet was brought down from 11% to 6% in the same reporting period. About half of activities were in progress and close to a quarter were of recurrent nature (e.g. support to the presidents of technical commissions, operating expenses, etc.). Three percent were cancelled for reasons discussed in Part 3.

It should be noted that many activities contain multiple components planned for each year of the financial period. For this reason, the majority of activities appear as "in progress" and fewer are indicated as "completed."



## 2. Timeliness of Implementation

As evident from Figure 3, most activities were implemented on time. Between 82% and 96% of the ER 1, ER 2, ER 4, ER 5 and ER 8 activities were executed according to schedule. Whereas this proportion was lower for ER 7 (64%), the remaining 27% were activities of recurrent nature for which timeliness was not of relevance (marked as N/A on Figure 3). Nine percent of ER 7 activities were further rescheduled, as were 6% of ER 3 and ER 6 activities. In the case of ER 6, over three-quarters of activities were implemented as planned.

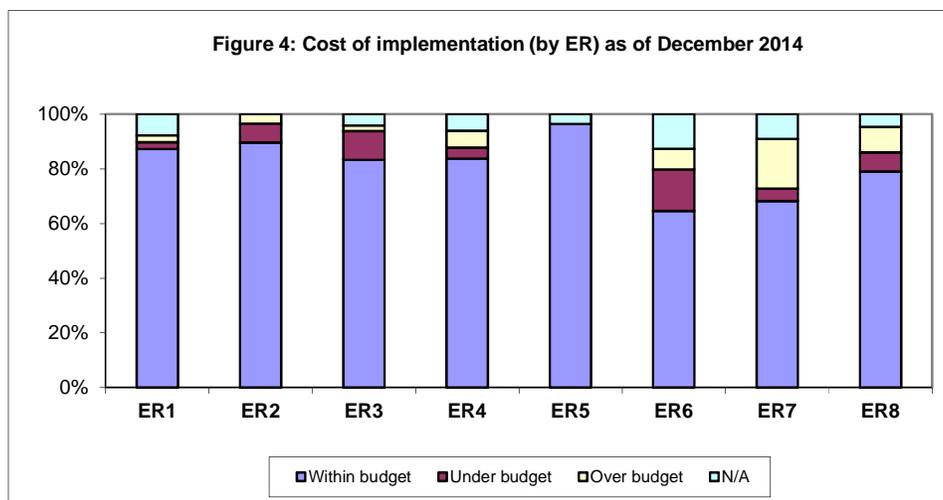


There were no activities behind schedule with respect to ER 5, ER 7 and ER 8. The highest percentage of late activities was under ER 3 (23%) and ER 4 (17%). Activities lagging in terms of timeliness ranged between 5% and 7% for ER 1, ER 2 and ER 6.

Work was undertaken ahead of schedule on a small portion of ER 2 activities (3%). On Figure 3, 'not applicable' refers to recurrent activities and activities that have not been started yet. More details on the factors affecting timeliness are available in Part 3 (see 'Constraints/Risks').

## 3. Cost of Implementation

80% of the planned activities were implemented within the allotted budget. This number was highest for ER 5 (96%), ER 2 (90%) and ER 1 (87%), as presented on Figure 4. For ER 3 and ER 4, it stood at 83% and 84%, respectively.



ER 7 had the highest share of overspending activities (18%). Eight percent of ER 6 and 9% of ER 8 activities exceeded their budget but any excess expenditure was compensated by comparatively equivalent savings (15% of ER 6 and 7% of ER 8 activities spent less than envisioned). The same was true for ER 4, with 6% of activities 'over budget' and 4% 'under budget.' Savings were also realized on 10% of ER 3 activities, which was likely due to late activities for which costs had not been incurred yet. Overspending for ER 1, ER 2 and ER 3 was minimal, between 2%-3%. N/A refers to forthcoming and cancelled activities.

#### 4. Alert Status

The large majority of WMO activities did not encounter any constraints or faced risks, as demonstrated by the green status assigned to 80% of activities (Table 1). Only 14% experienced some hindrances which could potentially intensify, but Departments were working towards their resolution and estimated that they could be overcome in due course (marked with a yellow alert status). These were primarily related to budget constraints, insufficient staff, coordination issues involving multiple stakeholders, and implementation delays. More detail is provided in the Constraints/Risks section of each ER in Part 3 below.

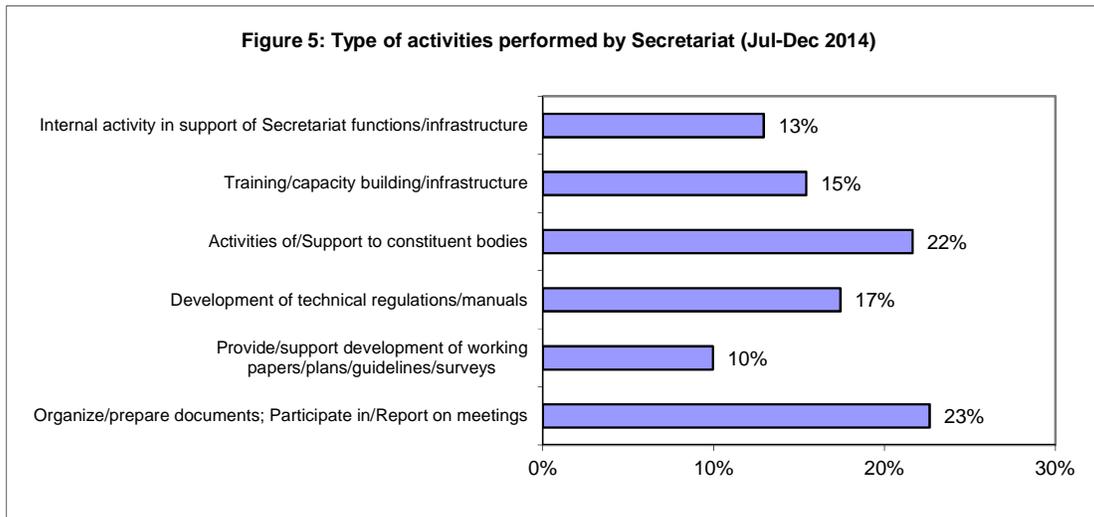
No activities received a red alert status requiring the attention of the executive management.

Green	80%
Yellow	14%
Red	0%
N/A	6%

Table 1: Alert Status of Activities (Jul-Dec 2014)

#### 5. Type of Activities Implemented

Figure 5 presents the type of activities implemented by the WMO Secretariat in July-December 2014 along the six generic categories listed in Part 1, Section 2 (Methodology).



The largest percentage of WMO activities (22%) were related to the preparation of documents/reports and participation in meetings, followed by activities of or in support to technical commissions, regional associations and working groups of the WMO Executive Council. Seventeen percent involved the development of technical regulations and manuals, while 15% were linked to training, capacity building and infrastructure development. Fewer activities fell within the remaining two categories. Specifically, 13% were related to internal activities in support of Secretariat functions and infrastructure and 10% provided or supported the development of working papers, plans, guidelines, questionnaires, etc.

Table 2 presents the percentage of activities which fell within these six categories per ER.

Table 2: Type of Activities Implemented (by ER) in %

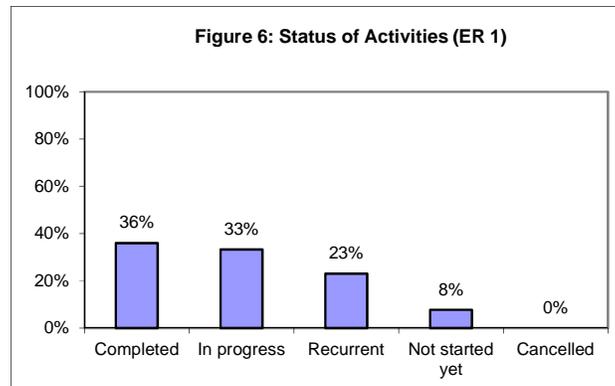
Type of activity (%)	ER 1	ER 2	ER 3	ER 4	ER 5	ER 6	ER 7	ER 8
1. Organize, prepare documents, participate in and report on meetings and workshops	50%	52%	15%	21%	11%	18%	45%	0%
2. Provide or support development of working papers / plans / guidelines / surveys, etc.	15%	20%	27%	8%	0%	4%	0%	7%
3. Maintain, develop and publish technical regulations / manuals / scientific and technical reports	0%	8%	21%	25%	68%	7%	23%	5%
4. Support TC, RA and EC/WGs, monitor, review and follow up on activities and provide technical and scientific advice	25%	4%	21%	32%	14%	14%	5%	33%
5. Organize training, capacity building and infrastructure development activities	3%	12%	4%	8%	4%	50%	5%	2%
6. Internal activity in support of Secretariat functions and infrastructure	8%	4%	13%	7%	4%	7%	23%	53%

### PART 3: Performance by Expected Results

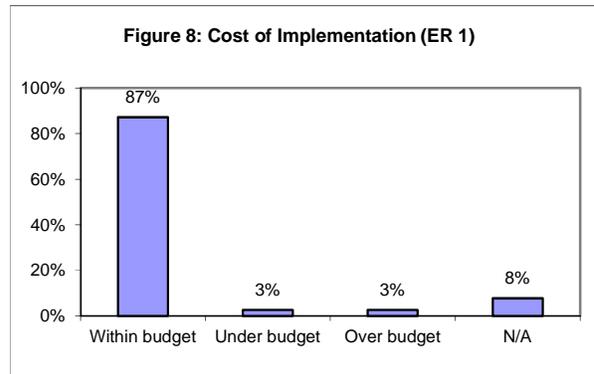
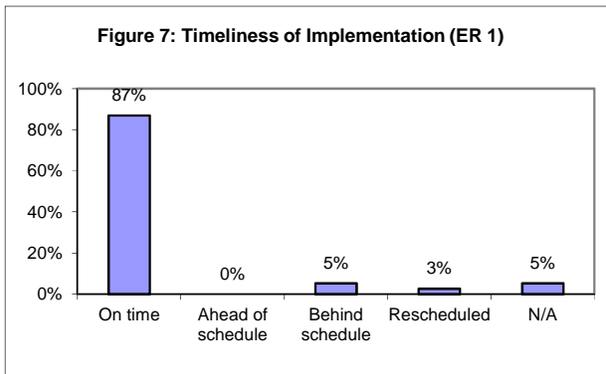
#### EXPECTED RESULT 1

##### a. Status of Activities, Timeliness and Cost

As presented on Figure 6, over a third of the ER 1 activities planned for the 2014-2015 biennium were completed by December 2014. Another one-third were ongoing and 22% were recurrent. The latter involve activities of continuous, periodic nature, such as support to the presidents of technical commissions, operating expenses, etc. Only 8% of ER 1 activities remain to be implemented. These include the organization of a meeting on the revision of the Agricultural Meteorology Programme and the formation of expert teams on emerging issues with the Commission of Aeronautical Meteorology (CAeM). The holding of two meetings on air transport modeling was rescheduled for 2015, standing for the 3% of rescheduled activities on Figure 7.



The large majority of activities (87%) were implemented on time and within the budget, as demonstrated by Figures 7 and 8. The “Advisory services on emerging issues of Emergency Response Activities (ERA)” continued overspending and lagging behind in terms of implementation (see Constraints below). Whereas over half of the planned activities of the CBS Expert Team on Nuclear Power Plant Sitting and Operations were completed, they were behind schedule as of December 2014. On Figures 7 and 8, N/A refers to forthcoming or recurrent activities for which measuring timeliness is not relevant.



### **b. Constraints/Risks**

Six activities received a yellow alert status due to the following risks and constraints identified:

#### **🟡 Staffing constraints:**

- The GFCS Office requires more staff to respond to the increasing needs for support from Members and partners. However, given that only two posts are covered under the regular budget, additional staff can only be hired subject to availability of voluntary contributions.
- The staff of the Marine Meteorology and Oceanography Programme is insufficient to be able to conduct the four workshops related to the Coastal Inundation Forecasting Demonstration Project (CIFDP) and the nine Expert Team meetings on emerging issues of the Joint WMO-IOC Commission for Oceanography and Marine Meteorology (JCOMM).

#### **🟡 Budget constraints:**

- There is potentially insufficient budget to ensure support to the JCOMM co-presidents.

#### **🟡 Coordination issues:**

- The “Advisory services on emerging issues of Emergency Response Activities” and the “CBS Expert Team on Nuclear Power Plant Siting and Operations” involve experts from different technical commissions, which requires further coordination and resources.

### **c. Highlights of Outputs/Deliverables**

#### Global Framework for Climate Services (GFCS)

- The experts seconded by China and the Republic of Korea to the GFCS assumed duties at the end of September 2014.

#### Public Weather Services

- Expert Teams reported on their deliverables which included a service delivery survey, development of guidelines to NMHSs on various Public Weather Service (PWS) aspects, and a PWS Media Survey. They also reviewed their Terms of Reference.

#### Data Processing and Forecasting System (DPFS)

- A meeting on surface verification organized in October 2014;
- The work plan for the DPFS re-developed;
- A meeting of the Expert Team on Operational Forecasting Process and Support (including Ensemble Prediction Systems) organized in October 2014;
- An outline of the DPFS vision and strategic document prepared.

## Emergency Response

- A second draft of revised WMO Technical Note 170 developed;
- Two exercises conducted in July and October 2014 to test the operational arrangements for non-nuclear ERA;
- Regular exercises conducted with the International Atomic Energy Agency to ensure the readiness of the system for nuclear ERA.

## Agricultural Meteorology

- A meeting of the Management Group of the Commission for Agricultural Meteorology (CAGM) held in September 2014;
- A meeting of the World AgroMeteorological Information Service (WAMIS) Expert Team conducted in October 2014;
- Draft version of brochures on roving seminars and rain gauges completed.

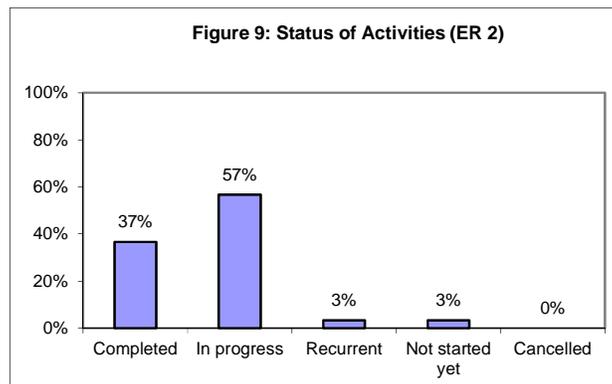
## Aeronautical Meteorology

- The report of the Conjoint ICAO-CAeM Meeting published;
- The number of QMS-certified Members steadily improving.

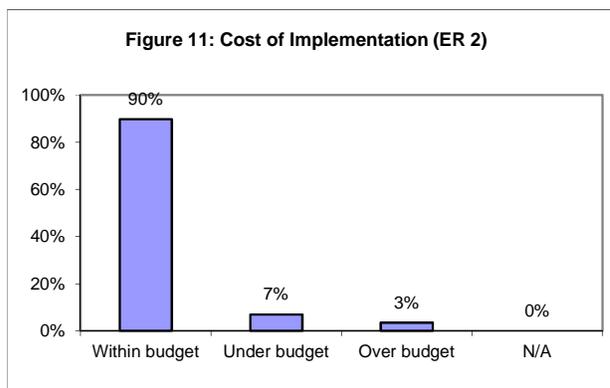
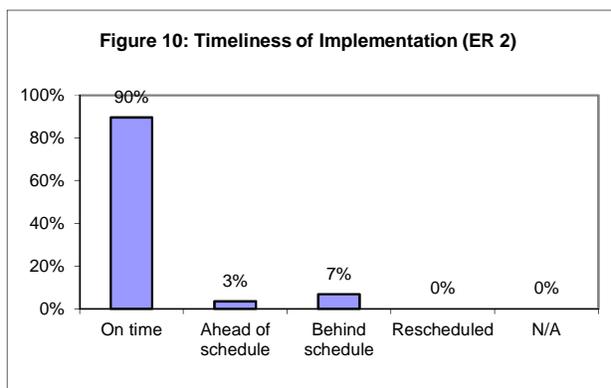
## **EXPECTED RESULT 2**

### ***a. Status of Activities, Timeliness and Cost***

All ER 2 activities were either completed (37%) or in progress (57%) as of December 2014. Only one activity remained to be implemented, standing for 3% of 'not started yet' on Figure 9. It involved a survey and symposia on disaster risk reduction. "Helpdesk services and technology transfer in flood management" was the only activity marked as recurrent.



Regarding timeliness, 90% of ER 2 activities took place as scheduled, as indicated on Figure 10. The meeting of the Steering Group of the Severe Weather Forecasting Demonstration Project (SWFDP) took place ahead of schedule. Only two activities were running behind schedule as of December 2014, representing 7% on Figure 10. One included secondments of NMHSs staff to address emerging issues of DPFS; the other one involved guidance on and monitoring of the Flood Forecasting Initiative (FFI). A second meeting of the FFI Advisory Group was requested but did not take place in 2014. Together with the four regional SWFDP projects, this activity represents the 7% of ER 2 activities on Figure 11, which absorbed fewer funds than anticipated. The RA I Tropical Cyclone Committee session was the only activity which exceeded its budget, accounting for 3% on Figure 11.



### **b. Constraints/Risks**

A yellow alert status was marked for three ER 2 activities due to:

- ⬢ **Coordination issues**
  - “Secondments of NMHSs staff to address emerging issues of DPFS” involves experts from different Technical Commissions and requires further coordination and resources;
- ⬢ **Budget constraints**
  - Guidance on and monitoring of the FFI through International Advisory Group (FFI-AG);
  - Sessions of the RA-I Tropical Cyclone Committee.

### **c. Highlights of Outputs/Deliverables**

#### Severe Weather Forecasting

- 42 forecasters trained on severe weather forecasting and warning services in 2014;
- 23 forecasters in RA IV and 15 in the Southern hemisphere trained on hurricane forecasting;
- Participants from RA V Members trained in Southern hemisphere tropical cyclones;
- Typhoon Operational Manual completed;
- The Eighth International Workshop on Tropical Cyclones (IWTC-VIII) and the Third International Workshop on Tropical Cyclone Landfall Processes (IWTCLP-III) held in Jeju, Republic of Korea, 2-10 December 2014;
- A workshop on tropical cyclone forecasting held for the Panel on Tropical Cyclones region (the Bay of Bengal and the Arabian Sea);
- Regional Operational Plans developed for RA I and RA V Tropical Cyclone Committees, the RA IV Hurricane Committee, and the Panel on Tropical Cyclones.

#### Flood Management

- Flash Flood Guidance Systems (FFGS) User Guide for Black Sea and Middle East compiled;
- Joint workshop on FFG and SWFDP conducted to sensitize NMHSs on issues related to flash flood forecasting, warning development and dissemination;
- Stakeholders workshops held in Malawi and Zambia to raise awareness and increase efficiency of warnings among the local population;
- The Flash Flood Hydrometeorologist Training finalized;
- Upgrades to the FFG procedures (watershed determination, precipitation bias) implemented and a methodology for climatology analysis defined;
- National Consultation Workshop on “Integrated Flood Management with Focus on Coastal Zones of Bangladesh: Development of a Pilot Project on Coastal Flood Management in Selected Areas of Bangladesh” attended by 100 participants, including the Minister of Water Resources, directors from the government agencies dealing with water, national and

international civil society organizations, academia and potential financial partners. The workshop led to the first draft of a project proposal.

- Assessment of advances made in the framework of PRONACCH (Mexico’s national programme on flood management), and identification of a work plan for the year 2015 including training workshops for CONAGUA (National Water Commission of Mexico) and IMTA (Mexican Water Technology Institute) staff in charge of PRONACCH activities.

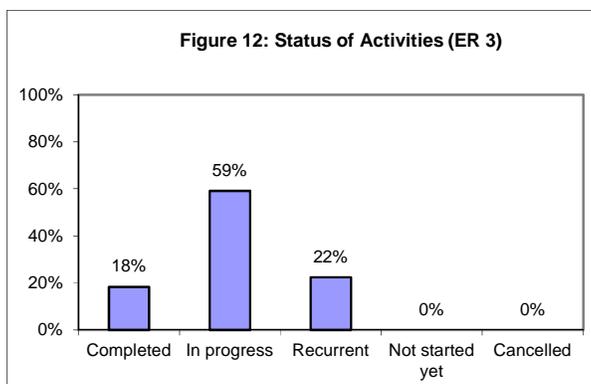
### Disaster Risk Reduction

- A user workshop on “Requirements for Weather, Climate and Hydrological Services to Support Loss and Damage Data Collection and Risk Modelling ” conducted (London, 4 July 2014);
- WMO participated in the Understanding Risk Forum 2014 (30 June - 4 July 2014, London).

## **EXPECTED RESULT 3**

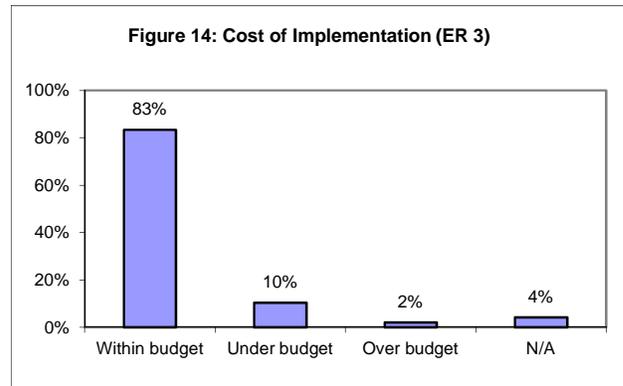
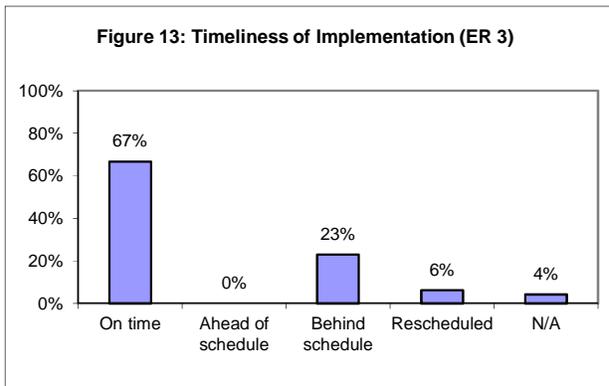
### **a. Status of Activities, Timeliness and Cost**

As of December 2014, 81% of ER 3 activities were in process of implementation, including 22% of recurrent activities, such as coordination support to expert teams and panels, and 59% of activities in progress. About a fifth were entirely completed, and none remained to be undertaken, as presented on Figure 12.



Whereas over two-thirds of ER 3 activities were implemented on time, close to a quarter (23%) had experienced delays, as illustrated on Figure 13. Over half of the late activities concerned the Hydrology and Water Resources Programme (HWRP), including publication of manuals according to the QMF-Hydrology; development and support to regional activities in climate variability on water resources; development of new and support to the existing WHYCOS components (in particular WHYCOS Senegal); support to water resources assessment activities, including water quality and groundwater aspects; and support to regional association activities related to hydrology and water resources. The development of guidance material on best practices in the use of climate information for agricultural risk management was also behind schedule, as well as the development of a High Quality Climate Data Set.

As of December 2014, the World Climate Services Programme (WCSP) was lagging behind with the publication of manuals, guidelines and technical documents related to climate information products and climate risk management and adaptation, as well as the translation and publication of the Guide to Climatological Practices (WMO No100). WCSP had also rescheduled several activities. The Climate Information and Prediction Services (CLIPS) toolkit and the demonstration of showcase projects would be taken up under the new Commission for Climatology (CCI) structure. The development of Global Seasonal Climate Update was also deferred. These activities account for the 6% of rescheduled activities on Figure 13.



In terms of expenditure, most activities (83%) were implemented within their allotted budget. The growing number of Regional Climate Outlook Forums (RCOFs) resulted in more costs than initially foreseen, accounting for the 2% indicated as 'over budget' on Figure 14. Nevertheless, 10% of the ER 3 activities absorbed less than estimated. Most savings were related to activities behind schedule, so spending is expected to increase as implementation progresses. The organization of CCI-XVI absorbed fewer funds than anticipated.

### **b. Constraints/Risks**

12 activities (accounting for 25% of all ER 3 activities) were assigned a yellow alert status:

- Delayed finalization of guidelines on National Climate Monitoring Products (NCMP);
- Perceived lack of enthusiasm among Members in sharing data (in relation to the development of High Quality Climate Data Set);
- Other activities with a yellow alert status (unspecified reasons) included: (1) Development of CLIPS toolkit; (2) CLIPS showcase projects to demonstrate the benefits of climate services; (3) Development of Global Seasonal Climate Update; (4) Support to users of climate services through regional workshops and RCOFs; (5) Publication of manuals and technical documents related to climate information products; (6) Standardization of Regional Climate Center (RCC) product presentation and dissemination; (7) Support for World Climate Applications and Services Division (WCAS) participation in UN agency activities; (8) Publication of guidance on climate information for climate risk management and adaptation; (9) Publication of manuals according to the QMF-Hydrology; (10) Development and support to regional activities in climate variability on water resources.

### **c. Highlights of Outputs/Deliverables**

#### Climate Data Processing and Management

- A meeting on surface verification organized in October 2014;
- CCI-16 Recommendations on the Climate Data Management Specifications and on National Climate Monitoring Products provided;
- EC-66 decision made, followed by CCI-16, to establish a collaboration mechanism on climate data modernization;
- CCI-16 endorsed the workplan on climate change indices developed by the Expert Team on Climate Change Detection and Indices.

#### Climate Prediction and Risk Management

- Heat/Health Warning Systems guidance document in process of finalization;
- CCI Technical Conference and CCI-16 successfully held in July 2014;
- The first CCI Management Group meeting held;

- EC Working Group on Climate Water and Environment completed its tasks and proposed a revised ToR for the next period;
- New OPACEs started their work;
- El Niño/La Niña Update prepared.

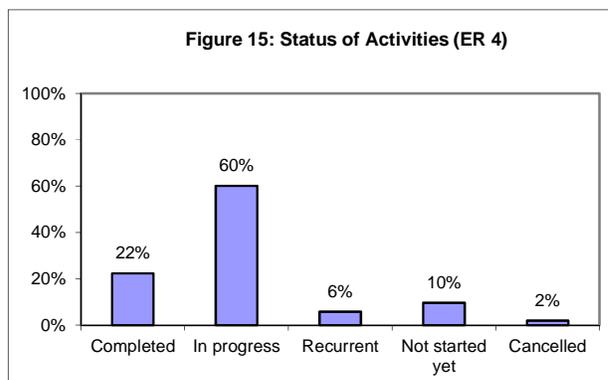
#### Hydrology and Water

- Sava River basin data exchange policy adopted;
- A manual on Water Resources Assessment under preparation;
- French translation of the Manual on Flood Forecasting and Warning made available;
- Technical guidance on application of climate information for water managers published and in use in GFCS activities.

### EXPECTED RESULT 4

#### **a. Status of Activities, Timeliness and Cost**

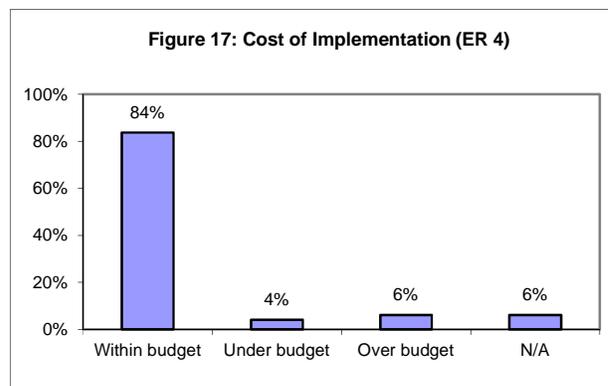
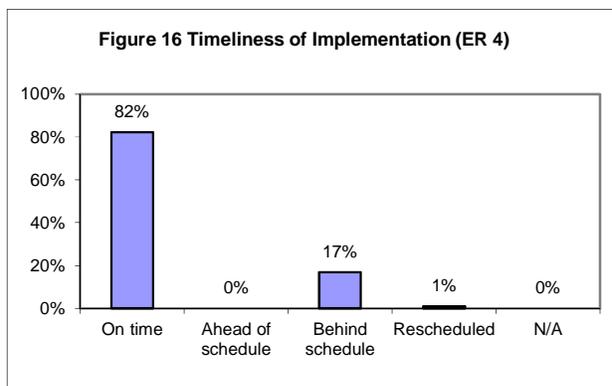
As evident from Figure 15, work was in progress or involved activities of recurrent nature for about two-thirds of ER 4 activities. The portion of completed activities increased from 12% in June to 22% in December 2014. Likewise, the percentage of activities which had not started yet was reduced from 14% to 10%. Of these, several were related to the work of the Commission on Instruments and Methods of Observation (CIMO), including meetings of the Task Team on ISO Standard, the Intercomparison Project Team, and the Expert Team on Aircraft-based Observations. The secondment of experts for intercomparison also remained to be initiated. All these activities were running behind schedule in terms of implementation, standing for about a quarter of the late activities indicated on Figure 16.



Other delayed activities whose implementation had not started yet involve the organization of technical workshops in RA-I and RA-II related to the global Aircraft Meteorological DATA Relay (AMDAR) programme and the meeting of the Task Team on Weather Radar Data Exchange of the Commission for Basic Systems (CBS). The latter was postponed due to illness of the Task Team Chair. Preparation for the meetings of the Expert Team on Aircraft Based Observing Systems and the Expert Team on Surface Based Observations went according to schedule; both will take place in 2015.

Two ER 4 activities were cancelled, accounting for 2% of the total on Figure 15. Both involve meetings of the IPET-WIFI Task Team on Information Resource (WIFI-IR). The Port Meteorological Officers Workshop was moved to 2015, representing the 1% of 'rescheduled' activities on Figure 16.

Overall, more than 80% of the ER 4 activities were implemented on time, though as many as 17% were lagging behind schedule as of December 2014 (see Figure 16). Apart from the few late activities listed above, work did not sufficiently progress on several WIGOS activities mostly due to inadequate resources available. These include staff missions and advisory services related to WIGOS implementation, support to meetings of other technical commissions and RAs, development of the WIGOS Operational Information Resource (WIR), development of IMOP standards, and work of the ICG-WIGOS Task Team on Metadata. The latter is both running behind schedule and overspending. Regarding WIS, the preparation of technical reports on potential opportunities and threats to WMO Members ICT strategies encountered similar timing and cost issues. The holding of meetings of expert teams on training needs was also delayed.



In terms of costs, the large majority of ER 4 activities (84%) were implemented within budget, as shown on Figure 17. Activities which exceeded their allotment amounted to 6% of the total. In addition to the two activities mentioned above (ICG-WIGOS Task Team on Metadata and preparation of technical reports on ICT strategies), the meetings of the International Organizing Committees for Intercomparisons were more costly than planned. So was the establishment of the GCW Office and provision of support to polar observations, research and services.

Savings were realized on 4% of activities. The number of CBS meetings was reduced in the run-up to CBS-Ext 2014, thus cutting expenditure. The CIMO Management Meeting also cost less than budgeted. In other cases, the economies might be temporary as the activities in question were running behind schedule (i.e. development of WIR and consultancy for IMOP mentioned above). Their spending is expected to pick up as implementation progresses.

The holding of meetings and the provision of advisory services related to the WMO Space Programme experienced delays but spending was kept within the allotted budget. The enhancement of the space-based observing systems within WIGOS was behind schedule owing to insufficient staff.

N/A on Figure 17 stands for activities that have not started yet and cancelled/rescheduled activities.

### ***b. Constraints/Risks***

A total of 17 activities received a yellow alert status due to:

#### **🟡 Budget constraints**

- Lack of voluntary contributions to move ahead with WIGOS support to TCs and RAs;
- Insufficient resources available to meet all requests from Members with regard to WIGOS implementation;
- Insufficient resources to complete OSCAR.

#### **🟡 Staffing constraints**

- Insufficient staff available to support the enhancement of the space-based observing systems within WIGOS;
- Departure of key personnel for the development of the WMO Satellite Programme website;
- Lack of staff availability for advancing on the preparation of technical reports on potential opportunities and threats to WMO Members ICT strategies;
- Loss of access to MS Access on PCs led to significant workload and frustration of staff as OBS relies on databases to automate many work functions for which junior staff was no longer available.

## *Implementation issues*

- Limited feedback received from Chile in relation to the organization of the Port Meteorological Officers Workshop;
- Ocean Data Portal not widely used in IOC;
- A large number of stakeholders across TCs involved in ICG-WIGOS Task Team on Metadata, leading to competing input and ideas;
- Potential redundancies of CBS Inter-Programme Expert Team on WIGOS Framework Implementation (IPET-WIFI), the IPET-WIFI Task Team on Regulatory Material, the Task Team on Metadata, and the Task Team on Quality Management. Relatively little output was achieved which was distinct from ICG-WIGOS. There is a need to reconsider the future of these task teams.
- CIMO TECO had lower attendance than usual due to political problems in the region. Quorum was achieved, though with difficulty.
- CIMO TECO is normally held in conjunction with Meteorex. However, the Meteorological Technology World Exhibition (MTWE) was now "competing". In the future, it would be beneficial to combine efforts with MTWE to ensure a successful exhibition is held with TECO.
- Limited progress achieved on WIR portal; SORT postponed.

### ***c. Highlights of Outputs/Deliverables***

#### Instruments and Methods of Observation

- A new CIMO working structure and expected tasks established at CIMO-16 in July 2014;
- New edition of CIMO Guide and Manual approved at CIMO-16;
- A strategy for developing an update of the International Cloud Atlas agreed at a CIMO-WIGOS meeting;
- Capacity building provided to approximately 200 instrument experts at TECO-2014.

#### Availability and Use of Satellite Data and Products

- Draft Four-Year Plan developed with CAeM and CBS on cooperation in space weather;
- A Vision of Space-Based Observation in 2040 initiated by the Expert Team on Satellite Systems;
- Good progress achieved on observation requirements for atmospheric composition;
- Visible and microwave channel calibration methods developed;
- Report on case studies and benefits from climate information developed with respect to Space Architecture for Climate Monitoring;
- VLAB Strategy updated;
- CIMO Guide on Satellites prepared;
- Input provided to African Space Programme (RA I) and transition issues (RA-III).

#### Global Observing System (GOS) and WMO Integrated Global Observing System (WIGOS)

- Manual on GOS, Vol. II, Part Antarctica, updated and resolution submitted to Cg-17;
- AntON network updated and resolution submitted to Cg-17;
- Global Cryosphere Watch Implementation Plan developed and resolution submitted to Cg-17;
- Support provided to Cote d'Ivoire in WIGOS implementation;
- WIGOS Draft regulatory material submitted for Members' review by ICG-WIGOS Task Team on Regulatory Material;
- Draft WIGOS metadata standards incorporated into draft regulatory material;
- CBS TECO held in Paraguay with RA III TECO;
- CBS-Ext Session held.

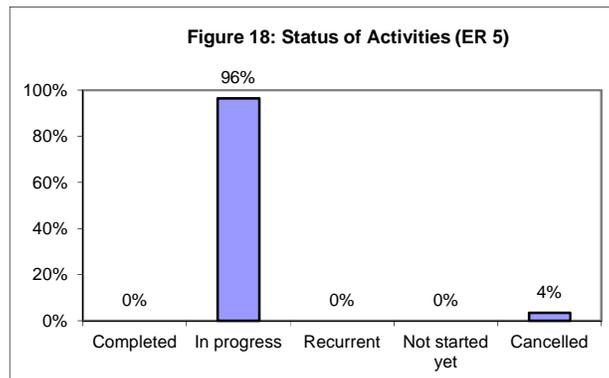
WMO Information System (WIS)

- Implementation/Coordination Team on Information Systems and Services met and approved all amendments to Technical Regulation 49 for review of CBS and approval by Cg-17;
- Aviation XML (IWXXM) ready for Congress to approve. IPET-DMRD proposed that the WIGOS metadata and CCI station information requirements form a single data representation that is compatible with the IWXXM implementation and also use components from WaterML2. ISO has not yet agreed the technical implementation details of the next ISO metadata standard, so the work of WMO to conform to that awaits the ISO decision.
- CBS-Ext 2014 approved WIS competencies and learning guides and relevant updates to technical regulations.
- The Inter-Programme Expert Team on Data Representation Maintenance and Monitoring is maintaining the code tables supporting BUFR and GRIB. It is currently focusing on what needs to be done to ensure migration to TDCF is completed.
- WMO position on WRC-15 agenda was updated at a meeting of the Steering Group on Radio Frequency Coordination in November based on draft CPM report and regional updates.

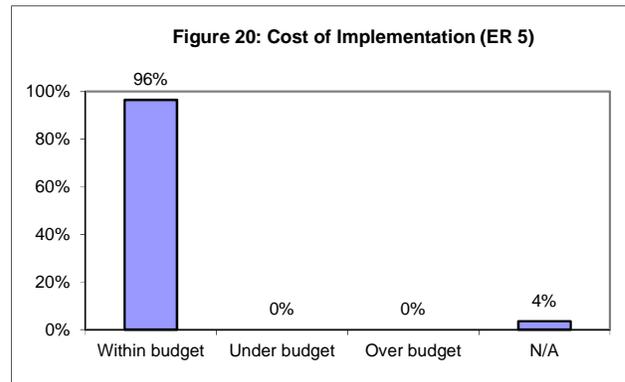
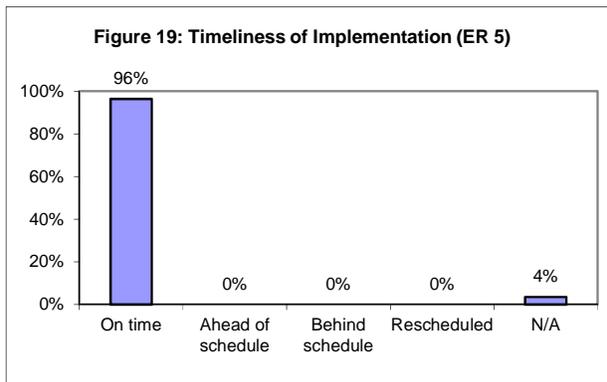
**EXPECTED RESULT 5**

**a. Status of Activities, Timeliness and Cost**

As of December 2014, work was ongoing on all ER 5 activities, as demonstrated by Figure 18. One activity – “Nowcasting research working group, project and other technical meetings with JONAS, PWS and related publications” was cancelled, accounting for 4% of activities.



Figures 19 and 20 illustrate the timeliness of activity implementation and the cost of implementation relative to the planned budget. All ongoing activities related to ER 5 were executed on time and within the assigned budget. N/A stands for the cancelled activity mentioned above.



## ***b. Constraints/Risks***

- All ER 5 activities were assigned a green alert status indicating that no risks or constraints were identified in the current reporting period.

## ***c. Highlights of Outputs/Deliverables***

### Climate Research

- The 35th Session of the Joint Scientific Committee of the World Climate Research Programme (WCRP) discussed implementation of WCRP plans, cooperation with various WMO-affiliated programmes and planning of research on the WCRP Grand Science Challenges (30 June-4 July 2014, Heidelberg, Germany).

### Weather Research

- Action plans for 2014-2015 developed by the Sand and Dust Storm Steering Group;
- Understanding and Prediction of Rainfall Associated with landFalling Tropical cyclones (UPDRAFT) project proposal endorsed;
- Action Plan for 2014-2015 developed by:
  - o World Weather Research Programme Scientific Steering Committee (WWRP SSC);
  - o Working Group on Data Assimilation and Observing Systems (WG DAOS);
  - o Working Group on Predictability and Ensemble Forecasting (WG PEF);
  - o Working Group on Societal and Economic Research Applications (WG SERA);
  - o Working Group on Numerical Experimentation (WGNE);
  - o Working Group on Nowcasting and Mesoscale Weather Forecasting Research (WGNMWFR).

### Atmospheric Chemistry Observations

- Project plans for CMA/WMO Near-real-time China Project completed;
- Supported the participation of:
  - o 17 scientists to two workshops related to air quality observation and forecast systems;
  - o 4 experts to European Research Course on Atmospheres; and
  - o 9 scientists to 3 training courses of the Global Atmosphere Watch Training & Education Centre (since 2012).
- Action Plan for 2014-2015 developed by:
  - o Expert Team on Global Atmosphere Watch World Data Centres;
  - o Scientific Advisory Group for Aerosols;
  - o Scientific Advisory Group on Reactive Gases.
- Awarded 2014 WMO Research Award for Young Scientists to Dr Chen Feng (China).

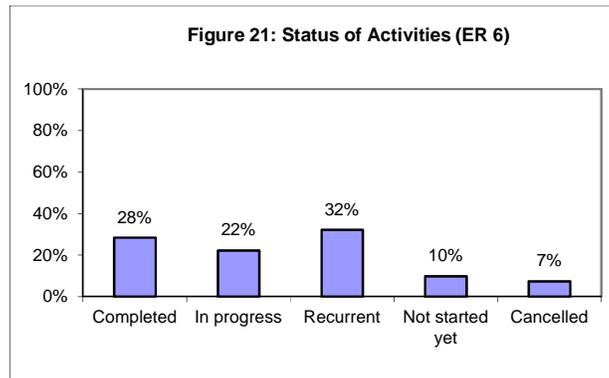
### Commission for Atmospheric Sciences

- Action plan for 2014-2015 developed by CAS Management Group.

## EXPECTED RESULT 6

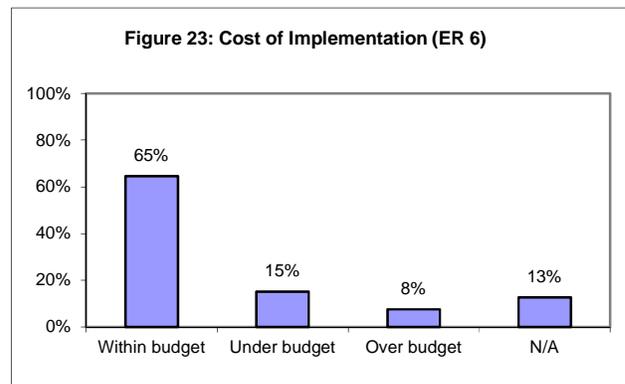
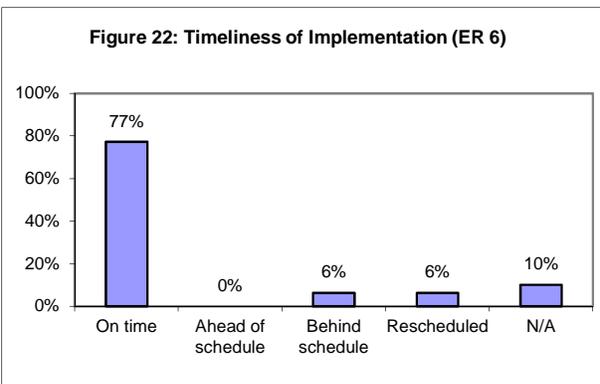
### a. Status of Activities, Timeliness and Cost

As indicated on Figure 21, work was completed on 28% of the ER 6 planned activities. As of December 2014, over a fifth were in progress, and only 10% remained to be initiated. Activities of recurring nature, such as assistance to the presidents of RAs, regular training activities, and various operating expenses accounted for 32% of the reported work. Cancelled activities amounted to 7%, and included a regional technical conference in RA IV, two trainings on the new Terminal Aerodrome Forecast system, a training seminar on instruments, the development of climate curriculum modules for use in Regional Training Centres (RTCs), a symposium on seasonal climate outlooks, and the development of WMO certification procedures for climate specialists. Regarding the latter, competency-based approaches were explored instead of certification; the symposium was integrated with the RCOF sessions.



Over three-quarters of ER 6 activities were implemented on time, as exhibited on Figure 22. Only 6% were lagging behind and an equivalent percentage had been rescheduled. Late activities included roving seminars in hydrology and water resources, regional/national workshops on QMF-Hydrology, regional workshops on climate monitoring and climate watch systems in RA-IV and RA-V, provision of guidance on climate monitoring and climate watch systems to support GFCS implementation, and workshops and meetings of the Regional Meteorological Data Communication Network.

Several activities had been rescheduled due to the outbreak of Ebola in Western Africa: the Sixteenth Session of RA-I, the Regional Technical Conference in RA-I, and three national workshops on the strategic plan. Two other activities which were postponed to 2015 include a regional cost recovery workshop and a training seminar on curriculum development.



No spending issues were evident from the information presented on Figure 23. Two-thirds of ER 6 activities were implemented within their allocated budget. About 8% absorbed more resources than planned but were all delivered on time. Any excess in spending was compensated by

equivalent savings in implementation of activities running in parallel. As of December 2014, savings were realized on 15% of ER 6 activities, which is well over the 8% excess expenditure registered. This 'balancing costs' approach was applied with a view to saving time and cutting administrative costs.

The ER 6 activities which exceeded their budget allocation were all related to education and capacity building. These included the production and exchange of training materials; advisory services for manpower development; promotion and support of distance and e-learning; regional training seminars for national trainers; specialized training in applications; and training workshops on climate forecasting. The equivalent cuts in spending were realized in implementation of other capacity building events, such as the training course on hurricane forecasting and the training seminar on satellite meteorology, as well as from the provision of fellowships (some fellows could not take up offers) and the promotion of schools and popular education. The meeting of the EC Panel of Experts on Education and Training was less costly than anticipated. The Education and Training Office further saved resources from operating expenses and the provision of advisory services to the RTCs.

N/A in Figures 22 and 23 stands for forthcoming and cancelled activities for which timeliness and cost are irrelevant.

### ***b. Constraints/Risks***

🟡 A yellow alert code was assigned to several ER 6 activities due to the following risks and constraints encountered:

- Severe budget constraints related to WIGOS/WIS implementation in RA-I and the work of its working groups;
- Delays in conducting regional workshops on climate monitoring and climate watch systems in RA-IV and RA-V;
- Delays in conducting roving seminars in hydrology and water resources;
- Inadequate progress by Members in implementation of climate watch systems at the national level (follow-up workshops might be needed);
- Support to participants in World Climate Programme workshops (unspecified reasons);
- The GFCS consultation in South Eastern Europe was attended by technical as opposed to managerial staff. Follow-up actions might therefore not be properly communicated to the Permanent Representatives with WMO of the countries represented at the meeting.

🟢 Whereas no implementation risks were encountered, it was reported that ensuring the participation of RA-I, RA-III, RA-IV and RA-V in Regional Meteorological Data Communication Network workshops and meetings proved difficult. Special attention might be required to ensure that all GISCs are connected to the WIS Core Network.

### ***c. Highlights of Outputs/Deliverables***

#### Training

- Guide to the operation and management of RTCs in preparation;
- 15 forecasters trained at co-sponsored training events with the European Centre for Medium-Range Weather Forecasts and Deutscher Wetterdienst;
- Roving seminars for farmers conducted with 140 participants in Croatia and 90 in Moldova;
- 2 forecasters trained on storm surge;
- Better understanding of how international partners could contribute to the Education and Training Programme as a result of coordination with UN and other organizations;
- The online delivery of Regional Training Seminars for National Trainers trialed, followed by a face-to-face course. 38 people completed the online section.

- Participants from Least Developed Countries assisted to attend the Open Science Conference (Montreal, August 2014);
- Participants to the Seventh Virtual Laboratory Management Group meeting in July 2014 in Saint Petersburg, Russian Federation, supported;
- A side event on Climate Watch organized in RA-VI as part of the European Conference on Applied Climatology;
- The Indian Ocean Data Rescue Initiative (INDARE) Steering Committee agreed on INDARE implementation plan, structure and workplan for 2014-2015;
- Marine Weather Forecaster Competencies established (to be presented to Cg-17);
- RA IV Members benefited from the Training on Hurricane Forecasting through training more staff forecasters for the respective Services.

### Fellowships

- 116 fellows commenced their studies in 2014, with almost half of these from RA-I;
- 276 requests for fellowships were received in 2014 and 120 fellowships awarded, of which 28 to women. The lower number of female fellows is due to the lower number of female applicants generally. Otherwise, fellowships were granted on an equitable basis, with 44% of requests for fellowships from women awarded as compared to 43% for men.
- Better understanding of how fellowships handled elsewhere in the UN system and specific fellowship opportunities for women identified.

### Regional Offices

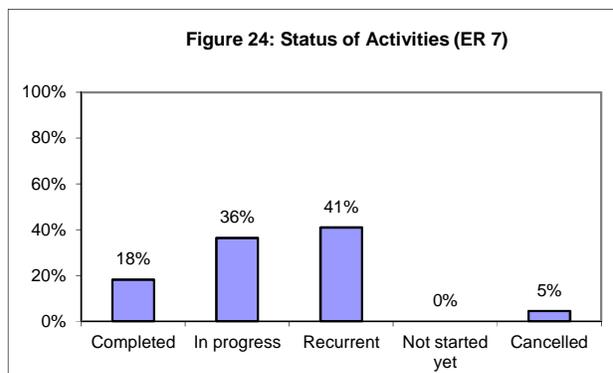
- Regional Strategic Plans approved, regional priorities identified, and WIGOS/WIS Implementation Plans endorsed at RA III-16 in Paraguay, 8-12 September 2014;
- Progress reports and work plans developed for RA-II and RA-V Working Groups, the RA-IV Working Groups on Hurricanes, and the RA-V Working Group on Tropical Cyclones;
- The Strategic and Operating Plans 2012-2015 of RA-II and RA-V refined and those for 2016-2019 developed, ascertaining priorities and challenges.

### Global Framework for Climate Services

- National consultation in Dominica held;
- Regional consultations for Latin America and South Eastern Europe held.

## **EXPECTED RESULT 7**

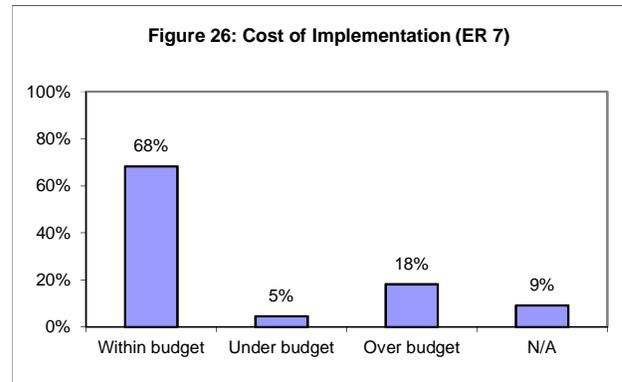
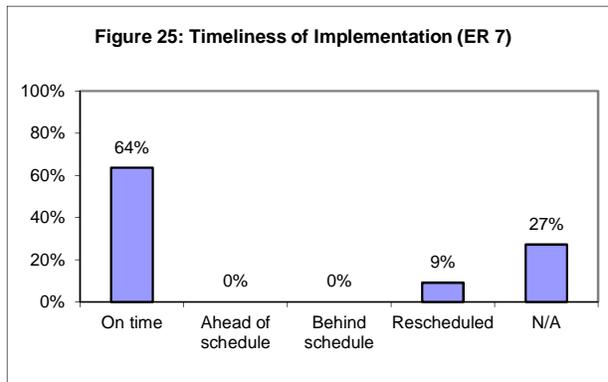
### **a. Status of Activities, Timeliness and Cost**



As illustrated by Figure 24, no ER 7 activities remained to be initiated in December 2014. Close to a fifth were completed, 36% were in progress, and 41% were of recurrent nature linked to the execution of continuous functions of the Secretariat (e.g. representation and coordination functions, support to UN-Water activities, support to meetings of UNFCCC, contribution to IPCC and the UN system, organization of press conferences, etc.). One activity – the ICAO-WMO Conjoint Workshop – was cancelled, standing for 5% on Figure 24.

Judging from the results presented on Figure 25, close to two-thirds of ER 7 activities were implemented on time. Timeliness was irrelevant for over a quarter of activities (marked N/A on Figure 25). These involved expenses of the WMO New York Liaison Office and the

WMO/EUMETNET Joint Office in Brussels, organization of press conferences, dissemination of press materials, etc. The cancelled activity mentioned above was also included in this category. Two activities were rescheduled: preparation of WMO/WHO guidance on implementation of Heat Health early Warning Systems (HHWS) and WMO participation in meetings of ICAO due to the ongoing restructuring of the latter. These stand for the 9% of 'rescheduled' activities on Figure 25.



Whereas 68% of ER 7 activities were implemented within budget, close to a fifth had absorbed more funds than envisioned (Figure 26). These involve support to UN-Water activities, WMO contribution to the United Nations system, participation in hydrology and water resources meetings of UN bodies, and the production of WMO bulletins. The celebration of World Meteorological Day was less costly than expected, accounting for the 5% 'under budget' activities on Figure 26. N/A stands for cancelled and a few recurrent activities.

### ***b. Constraints/Risks***

🟡 A yellow alert status was assigned to the following two ER 7 activities:

- Risk of a request for higher WMO contribution to the UN System;
- Delays in the development of climate-related guidance materials and publications (WMO/WHO HHWS Guidance).

In addition, the participation of NMHSs in UNFCCC meetings and conferences is not considered balanced across the RAs. Ad hoc initiatives by other UN organizations further hamper WMO participation in climate-related meetings.

### ***c. Highlights of Outputs/Deliverables***

#### Leadership and Partnerships

- Larger WMO input provided in the United Nations Development Group process and the review of the Millennium Development Goals (MDGs);
- Contribution to the National Adaptation Plan process, the Nairobi Work Programme and capacity building meetings and documents;
- Documents approved by the UN Framework Convention on Climate Change (UNFCCC) refer to WMO, GFCS, GCOS and WCRP and ask for further reports in future COP/SBSTA/SBI sessions;
- Strong WMO engagement in SES, Copernicus, and work with EUMETSAT on assistance to the African, Caribbean and Pacific countries;
- Draft brochure on climate and biodiversity developed, further editing and revision needed;

- WMO forged a successful partnership with UN and other international organizations<sup>\*</sup> in the organization of the Conference on the Gender Dimensions of Weather and Climate Services (Geneva, 5-7 November 2014). About 280 female and male participants from 93 countries and 31 international organizations attended the event. One of its key outcomes was the formulation of actions and mechanisms on how to make weather and climate services more gender-sensitive so that women and men can make equally informed decisions with respect to food security, disaster risk reduction, water resources management, and public health.

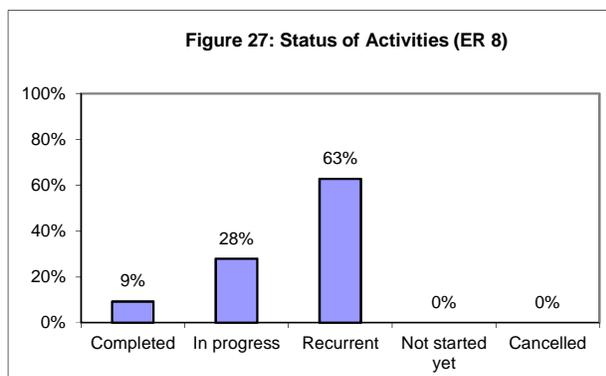
### Communications and Outreach

- Several highly successful press launches conducted on greenhouse gases and global temperatures;
- Two films on the impact of climate change on Small Island Developing States (SIDS) produced ("Storm Islands" and "Weather Together") and shown on TV stations around the Pacific region;
- WMO exhibits organized at the International Conference on SIDS (Samoa, September 2014) and the Twentieth Session of the Conference of the Parties (COP-20) to the UNFCCC (Lima, Peru, December 2014);
- Over twenty "2050 weather reports" commissioned and produced, painting a compelling picture of what life could be like on a warmer planet;
- Vol. 62(2) of the WMO Bulletin published;
- The editorial team of "How the UN system supports action on climate change," coordinated. The publication is a brochure on climate change action by UN specialized agencies, funds, programmes and other bodies.

## EXPECTED RESULT 8

### **a. Status of Activities, Timeliness and Cost**

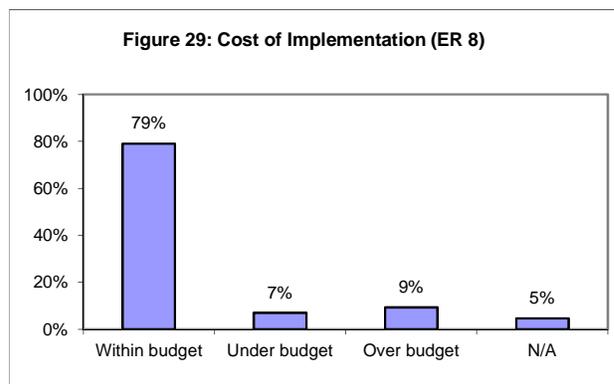
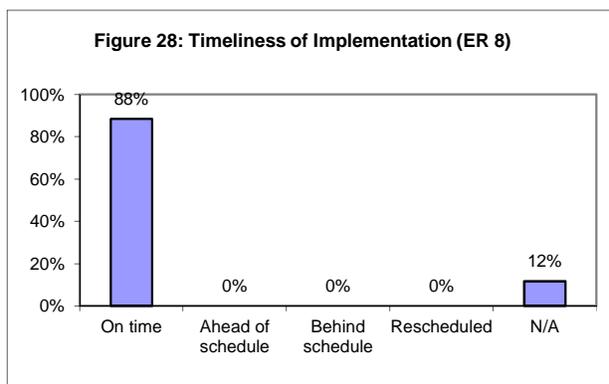
Given the continual nature of work implemented under ER 8, the status of almost two-thirds of activities (63%) was recurrent, as presented on Figure 27. Nine percent of activities were completed, and over a quarter were in progress, including preparation of the Seventeenth WMO Congress and EC-67.



As evident from Figure 28, all planned activities were implemented, or continued being implemented on time. Figure 29 further indicates that 79% of the ER 8 activities were implemented within their planned budget.

Nine percent absorbed more funds than initially allocated. These included assistance to the President of WMO, the three full sessions of the Executive Council, and communication and information technology expenses of the Internal Oversight Office (IOO). Several activities (external audit fees, WMO contribution to the Joint Inspection Unit (JIU), and operating expenses of IOO, accounting for 7% of ER 8 activities, effectuated savings as of December 2014. On both Figures 28 and 29, N/A stands for activities for which timeliness or cost are irrelevant (e.g. executive direction of the Secretariat, operating expenses, management and maintenance of the WMO Conference Centre).

<sup>\*</sup> The Food and Agriculture Organization of the United Nations (FAO), the International Union for the Conservation of Nature (IUCN), UN Women, the United Nations Educational, Scientific and Cultural Organization (UNESCO), the United Nations Office for Disaster Risk Reduction (UNISDR), the World Health Organization (WHO) and the World Bank.



### ***b. Constraints/Risks***

Three activities were marked with a yellow alert status indicating issues in implementation which the respective Department was in the course of resolving:

- Need to improve budget management in relation to assistance to the President of WMO;
- The budget allocation for EC-66 was generally underestimated; additional difficulties arose from the erroneous allocation of requisitions by Departments to the EC-66 budget line for the translation of documents unrelated to EC, such as RA Management Group meetings. While the mistake was rectified after the fact, it created considerable confusion and required a series of administrative actions.
- Low level of contributions to the GFCS Trust Fund, which puts at risk the organization of IBCS related meetings.

### ***c. Highlights of Outputs/Deliverables***

#### Strategic Planning, Monitoring and Evaluation (M&E)

- Revisions proposed by EC-66 and individual Members were reflected in the WMO Strategic Plan 2016-2019 which was in its final stage of preparation as of December 2014;
- The draft Operating Plan 2016-2019 was revised to reflect changes in the Strategic Plan. The Operating Plans of RAs and some TCs were yet to be received as of December 2014;
- The three meetings of the EC Working Group on Strategic and Operational Planning (WG/SOP) were held as planned. The Task Team on M&E established by WG/SOP-3 made recommendations on further improvements of the WMO M&E system, including the Key Performance Indicators (KPIs) and data collection and analysis;
- The Strategic Planning and Risk Management Officer made a presentation at RA I RECO, which included capacity development.
- 83 Members appointed M&E focal points in implementation of the EC-66 recommendation;
- A gender database was created to facilitate monitoring of the set of indicators designed to assess progress in implementation of the WMO Policy on Gender Mainstreaming.

#### Internal Oversight

- The external auditor provided unqualified opinion on the financial statements for 2013. The report was submitted to FINAC and EC.
- The Report on JIU activities and the Annual Accountability Report of the IOO submitted to EC-66.

### Global Framework for Climate Services

- The second session of the Intergovernmental Board on Climate Services (IBCS) held in November 2014;
- Meeting of the IBCS Management Committee held;
- First meeting of the Partner Advisory Committee held.

### Conference, Interpretation and Documentation Services

- Documentation and translation services provided to one meeting of RA, four meetings of TCs and IBCS-2.

### Issuance of WMO publications and other written material

- 47 numbered publications issued in a total of 92 language versions;
- 18 flyers/brochures/posters issued in a total of 68 language versions;
- Designs for 21 products/publications/programmes developed (highlights include the WMO Bulletin, Vol. 63(2); WMO Style Guide, 2014 edition; MeteoWorld No. 4/November 2014).

### Sales and distribution of WMO published material

- Two more subscriptions for the WMO Bulletin received;
- 619 copies of 266 different titles sold, with classification by language as follows:
  - o English: 475 copies
  - o French: 26 copies
  - o Russian: 0 copy
  - o Spanish: 25 copies
  - o Arabic: 1 copy
  - o Chinese: 1 copy
  - o Multilingual: 91 copies.

## **ANNEX 1:**

### **LIST OF EXPECTED RESULTS**

- ER 1: Enhanced capabilities of Members to deliver and improve access to high-quality weather, climate, water and related environmental predictions, information, warnings and services in response to users' needs, and to enable their use in decision-making by relevant societal sectors
- ER 2: Enhanced capabilities of Members to reduce risks and potential impacts of hazards caused by weather, climate, water and related environmental elements
- ER 3: Enhanced capabilities of Members to produce better weather, climate, water and related environmental information, predictions and warnings to support in particular disaster risk reduction and climate impact and adaptation strategies
- ER 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
- ER 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
- ER 6: Enhanced capabilities of NMHSs, in particular in developing and least developed countries, to fulfill their mandates
- ER 7: New and strengthened partnerships and cooperation activities to improve NMHSs' performance in delivering services and to increase the value of the contributions of WMO within the United Nations system, relevant international conventions and national strategic issues
- ER 8: An effective and efficient Organization