

PROGRESS REPORT ON DELIVERABLES

January-June 2015

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 extrabudgetary activities.

2. Methodology




The current report measures progress on deliverables for January-June 2015 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 390 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 technical commissions, regional associations, the Executive Council and its working groups as well as monitor, review and follow-up on related 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

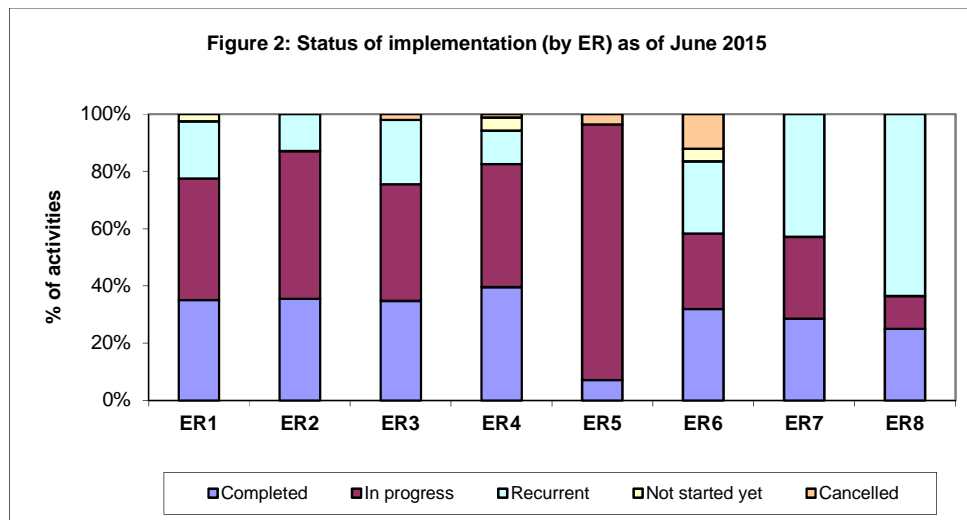
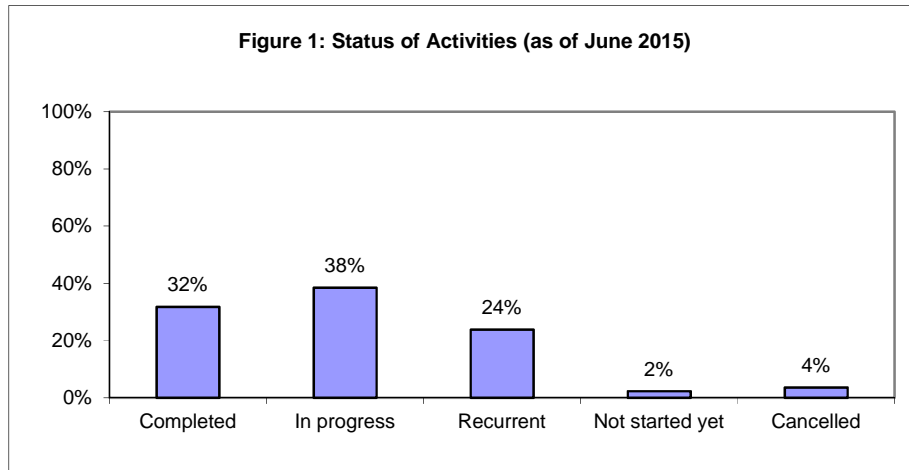
The following are only highlights of the Secretariat's overall performance in implementation of the activities in the Operating Plan 2014-2015 for the period January-June 2015. A summary of progress and issues concerning the status, timeliness and costs related to implementation of activities associated 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

As presented on Figure 1, 70% of activities were either completed or in progress as of June 2015. The remaining share comprised of recurrent (24%) and cancelled (4%) activities. Only 2% of activities remained to be implemented.

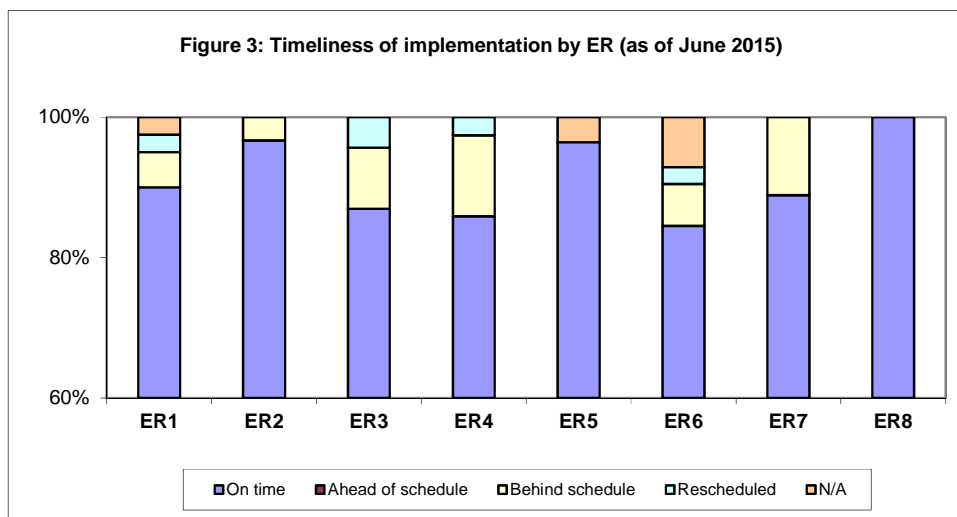
The status of implementation by ER is presented in Figure 2. ER5 had most activities either completed or in progress, and ER8 had the highest percentage of recurrent activities.

It should be noted that many activities contain multiple components planned for each year of the financial period. For this reason, many activities still appear as "in progress," regardless of the approaching end of the financial period.



2. Timeliness of Implementation

As evident from Figure 3, most activities were implemented on time. Between 89% and 100% of ER 1, ER 2, ER 5, ER 7 and ER 8 activities were executed according to schedule. This proportion was slightly lower for ER 4 and ER 7, which had the highest share of activities behind schedule, at 12% and 11%, respectively. For comparison, ER 7 had no activities behind schedule in the prior reporting period. For ER 4, late activities decreased from 17% in December 2014 to 12% in June 2015. However, this change may be due to the incomplete reporting on ER 4 activities.¹



ER 3 marked considerable improvement in terms of timeliness, with the share of late activities dropping from almost a quarter in December 2014 to 9% in June 2015. Activities lagging behind schedule ranged from 3% to 6% for ER 1, ER 2 and ER 6. No ER 5 and ER 8 activities were running behind schedule as of June 2015. There were also no activities which were implemented ahead of schedule for any of the ERs.

On Figure 3, 'not applicable' refers to recurrent and cancelled activities or activities that have not been started yet. These accounted for 7% of ER 6 activities. More details on the factors affecting timeliness are available in Part 3 (see 'Constraints/Risks').

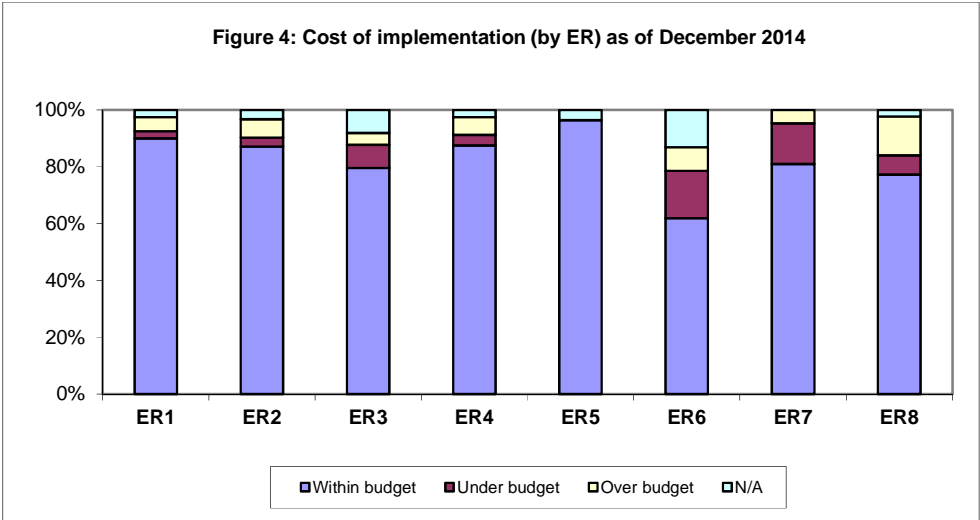
3. Cost of Implementation

80% of the planned activities were implemented within their allotted budget. This number was highest for ER 5 (96%) and ER 1 (90%), as presented on Figure 4. For ER 2, ER 3, ER 4 and ER 7, the share ranged from 80% to 88%.

ER 8 had the highest portion of overspending activities (14%), though the effect was partially mitigated by equivalent savings realized on 7% of activities. The share of overspending activities under ER 7 dropped significantly from 17% in December 2014 to 5% in June 2015. In the current reporting period, most savings were in effect realized on ER 7 and ER 6 activities, at 17% and 14%, respectively. These compensated for costlier activities which accounted for 8% and 5%, respectively. The same was true for ER 3, though at a lower scale (8% savings vs. 4% surplus spending).

Overspending for ER 1, ER 2 and ER 4 was minimal, between 3-4%, though a slightly higher share of activities (5-6%) absorbed more resources than initially envisioned. No ER 5 activity was exceeding its budget as of June 2015. N/A refers to forthcoming and cancelled activities.

¹ Not all WIGOS and WWW activities were reflected in the analysis due to incomplete submission in the current reporting period. This may create inaccuracies in the analysis, especially in the case of comparisons to the previous reporting period.



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 83% of activities (Table 1).

One ER 4 activity received a red alert status due to the lack of human and financial resources for its implementation, and requires the attention of the executive management (see Part 3, ER 4, Constraints and Risks).

Close to 12% of activities experienced some hindrances which could potentially escalate 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 coordination issues involving multiple stakeholders, implementation delays, insufficient staff, budget constraints and insecurity with respect to the availability of extrabudgetary funds. More details are provided in the Constraints/Risks section of each ER in Part 3 below.

Green	83%
Yellow	11.8%
Red	0.3%
N/A	4.9%

Table 1: Alert Status of Activities (Jan-Jun 2015)

5. Type of Activities Implemented

Figure 5 presents the type of activities implemented by the WMO Secretariat in January-June 2015 along the six generic categories listed in Part 1, Section 2 (Methodology).

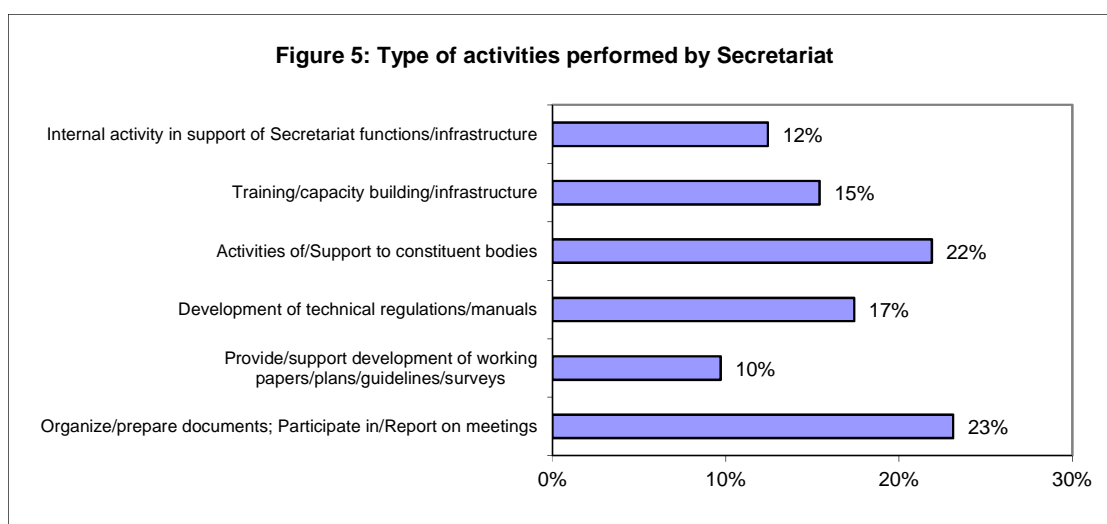


Table 2 presents the percentage of activities which fell within these six categories per ER.

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%	54%	17%	21%	11%	18%	43%	0%
2. Provide or support development of working papers / plans / guidelines / surveys, etc.	15%	19%	26%	8%	0%	4%	0%	7%
3. Maintain, develop and publish technical regulations / manuals / scientific and technical reports	0%	8%	22%	24%	68%	7%	24%	5%
4. Support TC, RA and EC/WGs, monitor, review and follow up on activities and provide technical and scientific advice	25%	4%	22%	33%	14%	14%	5%	33%
5. Organize training, capacity building and infrastructure development activities	3%	12%	4%	7%	4%	49%	5%	2%
6. Internal activity in support of Secretariat functions and infrastructure	8%	4%	9%	7%	4%	8%	24%	52%

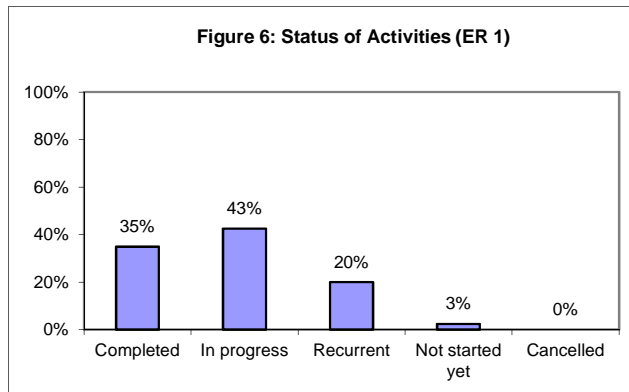
PART 3: Performance by Expected Results

EXPECTED RESULT 1

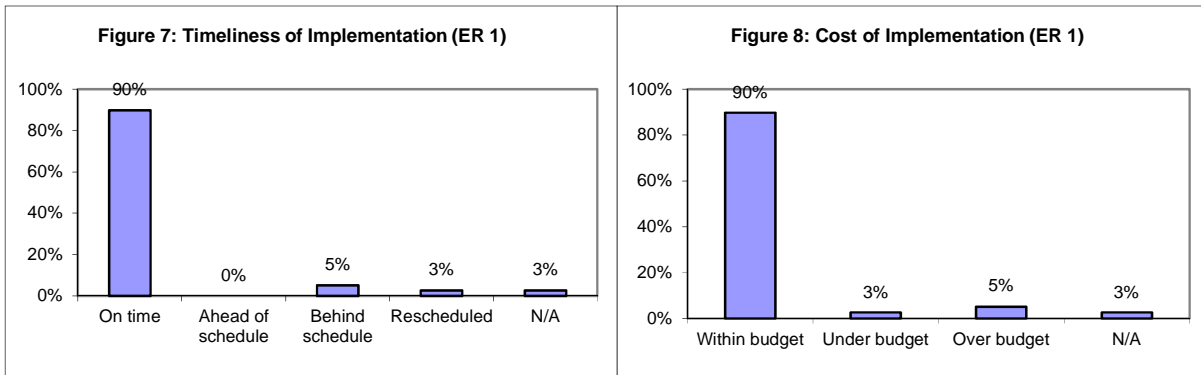
a. Status of Activities, Timeliness and Cost

As presented on Figure 6, the percentage of ER 1 activities in progress increased by ten percentage points, reaching 43% in the current reporting period. The proportion of completed and recurrent activities remained roughly the same: 35% and 20%, respectively.² The two scheduled meetings on air transport modelling were rescheduled to a later date in 2015, standing for the 3% of activities that were not started yet on Figure 6 and the 3% rescheduled activities on Figure 7.

² Recurrent activities involve activities of continuous, periodic nature, such as support to the presidents of technical commissions, operating expenses, etc.



Almost all ER 1 activities were implemented on time and within budget (90%), 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). Support to the co-presidents of the Joint Technical Commission for Oceanography and Marine Meteorology (JCOMM) was provided on time but absorbed more resources than originally planned. The difference was covered by savings realized on other activities. The work of the Expert Team on Nuclear Power Plant Sitting and Operations of the Commission for Basic Systems (CBS) continued to lag behind schedule, though completion increased from 50% to 70% since the last reporting period. On Figures 7 and 8, N/A refers to forthcoming or recurrent activities for which measuring timeliness is not relevant.



b. Constraints/Risks

Six ER 1 activities were assigned a yellow alert status due to the following constraints in the course of implementation:

⚠ Coordination issues:

- The “Advisory services on emerging issues of Emergency Response Activities,” the “CBS Expert Team on Nuclear Power Plant Sitting and Operations” and “CBS Implementation Coordination Teams” involve experts from different technical commissions, which requires further coordination and resources.
- The “Advisory services on emerging issues of aeronautical meteorology” and the establishment of expert teams, including definition of Terms of Reference, were delayed due to the restructuring of the International Civil Aviation Organization (ICAO) in late 2014.

⚠ Staffing constraints:

- More staff is needed at the GFCS Office in the area of communications and outreach; interns and other short-term staff are also required to cope with the increasing workload of national level activities.

In contrast to earlier reporting periods, no staffing constraints were reported by the Marine Meteorology and Oceanology Programme (MMOP) in January-June 2015. The excess spending in support to the JCOMM co-presidents was adjusted from other department activities.

c. Highlights of Outputs/Deliverables

Public Weather Services (PWS)

- Members of the CBS OPAG on PWS Coordination Team (ICT) met in Melbourne, Australia (2-6 June 2014). The ICT transformed the three PWS expert teams into new ones with new Terms of Reference to better facilitate the implementation of the WMO Strategy for Service Delivery.

Data Processing and Forecasting System (DPFS)

- Standard verification procedures finalized for incorporation into the new Manual on the Global Data Processing and Forecasting System (GDPFS) (WMO-No. 485).
- Vision for a future seamless data-processing and forecasting system developed and endorsed by Cg-17.
- Following the meeting of the Expert Team on Operational Forecasting Process and Support in October 2014, a workshop was held in June 2015 to gather lessons learned and best practices and start developing guidelines on operational implementation of nowcasting techniques, including those using Ensemble Prediction Systems, for the benefit of all WMO Members.

Emergency Response

- A third draft of the revised WMO Technical Note 170 being prepared.
- A consultant hired to compile the various inputs for the revised WMO Technical Note 170.

Agricultural Meteorology

- Management Group of the Commission for Agricultural Meteorology (CAgM) established and 2014-2018 workplan approved.
- CAgM report published.
- A meeting of the Implementation Coordination Team took place in May 2015.

Aeronautical Meteorology

- ICAO Met Panel Working Groups formed in April 15.
- The Management Group of the Commission on Aeronautical Meteorology (CAeM) met in South Africa in May 2015 and report published.
- The number of Members certified in Quality Management Systems slowly improving in RA-I and RA-III.

Marine Meteorology

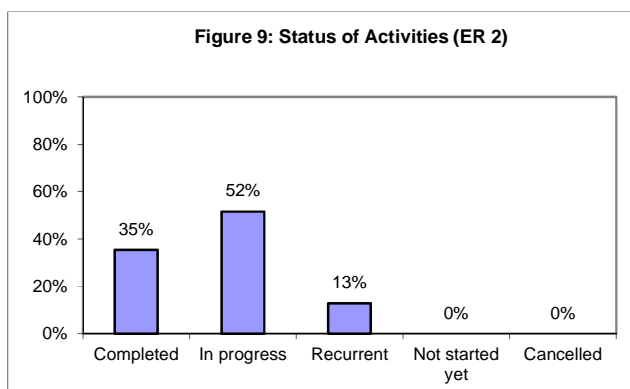
- Ad-hoc drafting group convened on revision of marine climatology chapters of WMO publications No 558 and 471.
- The Coastal Inundation Forecasting Demonstration Project (CIFDP) in the Caribbean kicked off in April 2015 with funding from the U.S. Agency for International Development (USAID) for a period of 2.5 years.

Global Framework for Climate Services (GFCS)

- Three staff were recruited at the GFCS Office with extrabudgetary funds (one-year fixed-term contracts): Project Officer (as of 1 July), Project Officer for the WHO-WMO Joint Office (as of 1 August), and Project Officer for West Africa.

EXPECTED RESULT 2

a. Status of Activities, Timeliness and Cost

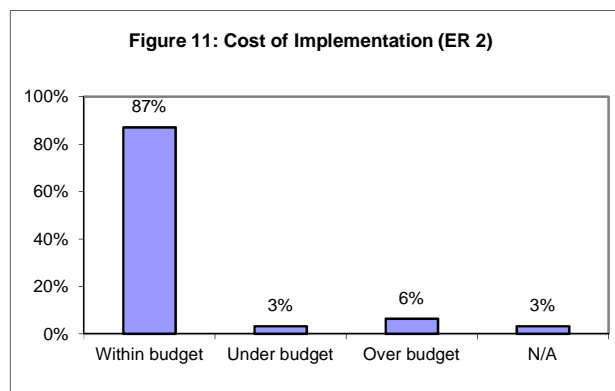
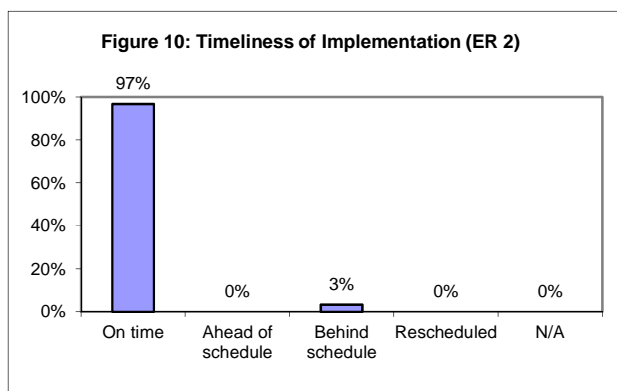


As shown on Figure 9, all ER 2 activities were either completed (35%) or in progress (52%) by June 2015. Of those in progress, two-thirds were close to finalization, with 80-90% of the work concluded. The rest were at an earlier implementation stage (30-40% of completion) but being executed on time: disaster risk financing, hazard risk analysis and mapping, hazard risk in changing climate, implementation of the Strategy and Action plan of WMO's Flood Forecasting Initiative (FFI), and helpdesk services and technology transfer in flood management. Thirteen

percent of ER 2 activities were recurrent, including regional workshops on climate, assistance to the president of RA-V, and advisory services on meteorology.

Almost all ER 2 activities were implemented in accordance to schedule (97%), as indicated on Figure 10. Only one ("Secondments of National Meteorological and Hydrological Services (NMHS) staff to address emerging issues of DPFS") was slightly lagging behind but close to finalization, with 90% of the work completed by June 2015. This activity stands for the 3% "behind schedule" represented on Figure 10.

In terms of expenditure, the large majority of activities were implemented within budget, as illustrated on Figure 11. Two activities (6%) were lagging behind, both related to FFI. Of these, one was close to completion, while the other one (Implementation of the FFI Strategy and Action Plan) had absorbed more resources than envisioned, regardless of its relatively early stage of implementation (work completion stood at 30% as of June 2015). Savings were realized on one ER 2 activity – Four Regional Projects on Severe Weather Forecasting Demonstration Project (SWFDP) – which stands for 3% on Figure 11.



b. Constraints/Risks

- A yellow alert status was indicated for two 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.
 - Two Meetings of the Steering Group Severe Weather Forecasting Demonstration Project (SWFDP).

c. Highlights of Outputs/Deliverables

Disaster Risk Reduction (DRR)

- Global Assessment Report on DRR 2015 (GAR 2015) *Contributing Paper: Synthesis of the Status and Trends with the Development of Early Warning Systems* published.
- Zero-Draft WMO DRR Roadmap completed and shared with Members for comments.
- Significant input provided to the organization of the Third UN World Conference on DRR (13-18 March 2015, Sendai, Japan), including preparatory negotiations, 3rd Preparatory Committee, and UN-System coordination meetings.
- WMO International Symposium on Multi-Hazard Early Warning Systems and Services held (16 March 2015, Sendai, Japan) with 127 participants mostly from NMHSs from around the world.
- Input provided to the update of the “2009 UNISDR Terminology on DRR” (especially on early warning-related terms) and to the draft targets and indicators for monitoring the implementation of the Sendai Framework for DRR 2015-2030 and the Sustainable Development Goals.

Severe Weather Forecasting

- "Manual on the GDPFS" near completion.
- Implementation Plans for the SWFDP-Southeast Asia, and SWFDP-Bay of Bengal reviewed;
- Initial integration of the Flash Flood Guidance System (FFGS) into the SWFDP-Southern Africa.
- Database for SWFDP reporting developed and tested.
- Storm surge warning services implemented in three of the five regional bodies.

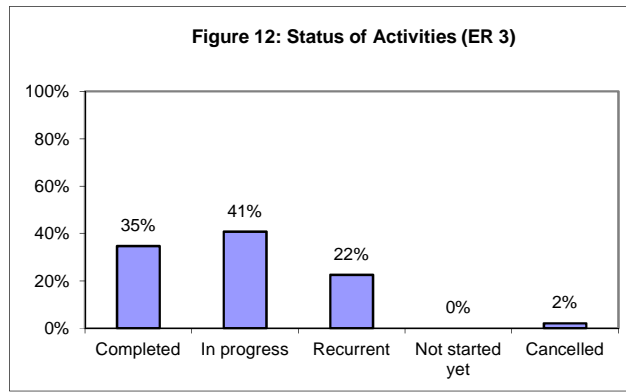
Flood Management

- Support missions on helpdesk services and technology transfer in flood management conducted to Cuba and Paraguay.
- Support on the Central Asia Region Flash Flood Guidance provided.
- Trainings on FFGS conducted for South Eastern Europe and Southern Africa at the Hydrologic Research Centre headquarters.

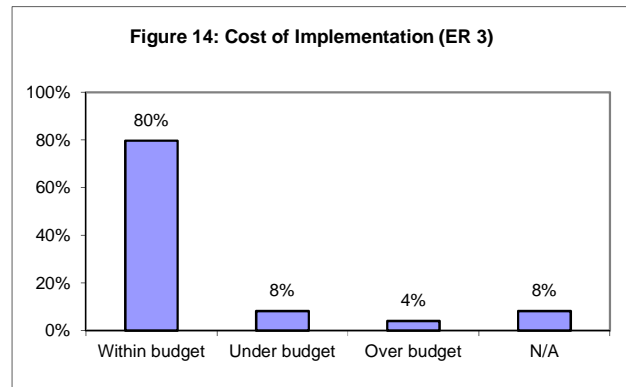
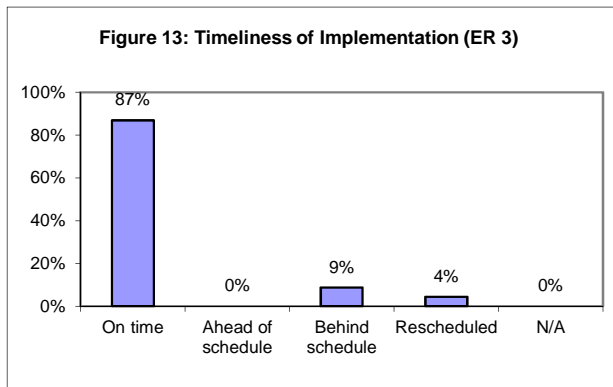
EXPECTED RESULT 3

a. Status of Activities, Timeliness and Cost

Implementation of ER 3 activities progressed steadily in January-June 2015. The proportion of completed activities almost doubled from 18% in December 2015 to 35%, as presented on Figure 12. Activities in progress accounted for 41%, while the share of recurrent activities remained the same (22%). Implementation of capacity development activities on climate change adaptations was subsumed under CHy activities. It stands for the 2% cancelled activities on Figure 12.



The share of late ER 3 activities fell dramatically in six months from almost a quarter in December 2014 to 9% in June 2015 (see Figure 13). Only one of the remaining overdue activities was seriously lagging behind schedule, with only 20% of the work completed: “Support to joint activities of the Commission on Climatology (CCI) and the World Climate Research Programme (WCRP) on regional climate predictions and projections.” The World Hydrological Cycle Observing System (WHYCOS) website migration was halfway through as of June 2015, pending decision on WMO’s new content management system. A brochure on best practices on the use of climate information for agricultural risk management was drafted but requires further editing. Lastly, support to water resources assessment activities was slightly running behind schedule but 80% of the work had already been completed.



The large majority of ER 3 activities continue being implemented within their assigned budget, as demonstrated by Figure 14. The proportion of overspending activities rose by 2%, reaching 4% in June 2015. These involve support to Regional Climate Outlook Forums (RCOFs) and the website updates mentioned above. Activities which spent less than anticipated dropped by an equivalent percentage to 8%, including the Sixteenth Session of CCI, Secretariat staff participation in UN activities, publication of manuals according to the QMF-Hydrology, and support to joint CCI-WCRP activities on regional climate predictions and projections. Delays in implementation of the latter explain the lower level of expenditure realized. Cancelled, rescheduled and a few recurrent activities appear as N/A on Figure 14.

b. Constraints/Risks

- The number of activities with a yellow alert status dropped from 12 to 3 as of June 2015.
 - Joint CCI-WCRP activities are considered at risk due to structural changes within their bodies. Collaboration needs to be improved.
 - The establishment of Implementation Coordination Team on the Climate Services Information System (ICT-CSIS) took longer than expected, thus holding up the

- development of a toolkit on Climate Information and Prediction Services (CLIPS). Nevertheless, future risks are believed to be under control.
- o Pending decisions related to the new WMO content management system are affecting the planned migration of the WHYCOS website.

c. Highlights of Outputs/Deliverables

Climate Data Processing and Management

- Standard verification procedures finalized for incorporation into the new Manual on the GDPFS (WMO-No. 485).
- Resolutions approved by the Seventeenth World Meteorological Congress (Cg-17) on (1) regulations of climate data management specifications as standard within the WMO Information System (WIS) and (2) the designation of focal points on national monitoring products.
- Inter-Programme Expert Team on Climate Data Modernization Programme set up.
- Workplan developed for CCI/WCRP-Clivar/JCOMM Expert Team on Climate Change Detection and Indices (ETCCDI).

Climate Prediction and Risk Management

- WMO Annual Statement on the Status of Global Climate released in March 2015.
- Four RCOFs held:
 - o 38th RCOF for South Eastern South America (Mar del Plata, Argentina, 26-29 May), with participation from Argentina, Brazil, Paraguay and Uruguay;
 - o Second RCOF for the Gulf of Guinea Countries (Cotonou, Benin, 9-13 March), including Guinea-Conakry, Liberia, Sierra-Leone, Cote d'Ivoire, Ghana, Nigeria, Togo, Benin, Cameroon and Equatorial Guinea;
 - o Eighth RCOF for Northern Africa (Algiers, Algeria, 22-26 March), involving 5 countries: Morocco, Algeria, Tunisia, Libya and Egypt;
 - o Second RCOF for West Africa, Chad and Cameroon (Dakar, Senegal, 4-8 May), involving 17 countries from West and Central Africa.
- ClimPACT software improved and draft publication developed.
- Global Seasonal Climate Update improved for the trial phase and external peer review process initiated within the CCI new structure.
- CCI/CBS Expert Team on Regional Climate Centres (ET-RCC) established and engaged in the work.
- Joint CCI-WCRP statement published.
- Joint WMO/WHO Guidance HHWS finalized and published.

GFCS

- An energy exemplar drafted, including input from World Meteorological Day Private Sector Energy Partnership Forum.

Hydrology and Water

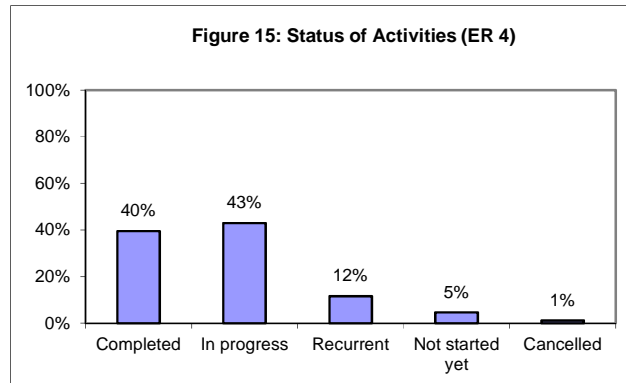
- Lake Chad-HYCOS project document endorsed by countries.
- Arctic-HYCOS second meeting held.
- Regional meetings held in RA-II and RA-IV.

EXPECTED RESULT 4

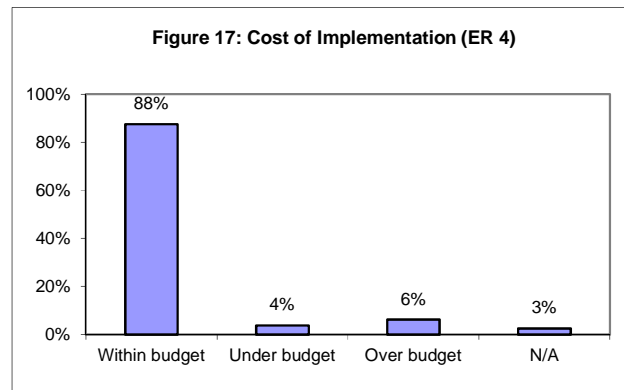
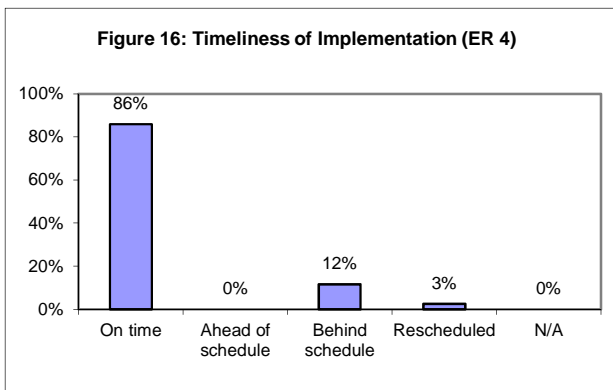
Note: Not all WIGOS and WWW activities were reflected in the analysis due to incomplete submission in the current reporting period. This may create inaccuracies in the analysis, especially in the case of comparisons to the previous reporting period.

a. Status of Activities, Timeliness and Cost

The share of completed ER 4 activities rose from 22% in December 2014 to 40% in June 2015, as illustrated on Figure 15. A similar portion of activities were in progress and 12% were of recurrent nature, such as operating expenses and coordination with other UN entities. Of the activities in progress, two-thirds were at an advanced stage of implementation, with 70-90% of the work completed. Implementation was halfway through for 13% of the activities in progress. About a quarter were still at an early implementation phase, with 10-30% completion reported. Several of these are linked to the WMO Integrated Global Observing System (WIGOS): implementation of WIGOS instrument standards in the regions, metadata support for WIGOS implementation, and consultancies and seconded experts for Instruments and Methods of Observations (IMOP) standards development and implementation in WIGOS context. The rest concern the establishment of Global Cryosphere Watch (GCW) Office and meetings/technical workshops, including those of the Expert Team on Aircraft-based Observations of the Commission for Instruments and Methods of Observations (CIMO), the Data Buoy Cooperation Panel, CBS/OPAG-IO ET on Surface Based Observations (ET-SBO) and Aircraft Based Observing Systems (ET-ABO), Port Meteorological Officers Workshop, and the RA I Technical Workshop on Aircraft Meteorological Data Relay (AMDAR).



Five percent of ER 4 activities remained to be initiated as of June 2015. These involved the RA II Technical Workshop on AMDAR, the meeting of CBS TT on Weather Radar Data Exchange, and the meeting of the CIMO Task Team on ISO Standards. The Expert Team Meetings on Satellite Systems and the RA I Technical Workshop on AMDAR were rescheduled, as indicated on Figure 16. The level of timeliness in activity implementation was sustained, with 86% of ER 4 activities delivered according to schedule. The portion of late activities went down from 17% in the prior reporting period to 12% in June 2015. Activities running behind schedule included meetings and advisory services on architecture of climate monitoring from space, partnerships with space agencies in support of GFCS, meeting of the CBS Lead Centres for the Global Climate Observing System (GCOS), the establishment of GCW Project Office, preparation of technical reports on potential opportunities and threats to WMO Members ICT strategies, and the WIGOS-related activities mentioned above.



Budget discipline was also sustained, with 88% of ER 4 activities implemented 'within budget,' as indicated on Figure 17. The level of savings and excess expenditures also remained the same. Six percent of activities exceeded their allotment, including meetings of expert teams on training needs, meetings of the International Organizing Committees for Inter-Comparisons, and the

development of WIGOS Operational Information Resource (WIR). Though significantly running behind schedule, the establishment of the GCW Project Office absorbed more resources than envisioned. Halfway through implementation, the preparation of technical reports on potential opportunities and threats to WMO Members ICT strategies was also costlier than expected. Savings were realized on 4% of activities, including the CIMO Management Meeting and several late activities.

b. Constraints/Risks

● One ER 4 activity was assigned a red alert status requiring the attention of the WMO executive management:

- Advanced Coordination in Space Weather: CAeM and CBS need to jointly endorse the Four-Year Plan for WMO Coordination of Space Weather Activities. No Secretariat resources are available to support its implementation.

Eighteen ER 4 activities received a yellow alert status in June 2015, up from 17 in the prior reporting period. The following risks and constraints affected activity implementation:

● *Financial constraints:*

- Increased development cost of WIR.
- Insufficient resources to finalize the Observing Systems Capability Analysis and Review Tool (OSCAR)/Space, OSCAR/Analysis, and operations and long-term maintenance.

● *Staffing constraints:*

- Lack of staff resources hinders GCOS full engagement with WMO experts and bodies.
- Little staff availability to support all UN meetings relevant to satellite matters.

● *Implementation Issues:*

- With current level of support, there is a risk of not being able to maintain OSCAR/Space content and implement its next version.
- 2nd phase of the Sustained and Coordinated Processing of Environmental Satellite Data for Climate Monitoring (SCOPE-CM) requires enhanced monitoring and a SCOPE-CM implementation plan is pending.
- Training on satellites and other activities may be insufficient to prepare users, thus increasing the risk of interruptions in service delivery.
- Satellite operators in the Joint Working Group on Climate of the Committee for Earth Observation Satellites (CEOS) and the Coordination Group for Meteorological Satellites (CGMS) do not engage in systematic gap analyses and planning of the Architecture for Climate Monitoring from Space at the level of sensing and Fundamental Climate Data Record.
- Lack of clarity on how to realize the CM recommendation to study the impact of observing systems on climate and other applications.
- The WIS Branch has supplemented staff deficiencies by automation based on WMO's IT infrastructure. This involves a strong dependence on databases but no solid migration strategy is in place for WIS Branch to migrate. This is an increasing risk of exposure to the branch. The associated risks are increasing as a consequence of the web project proceeding before these other issues have been addressed.

- Work, such as cloud solutions, is under way in the Expert Team on Telecommunications Infrastructure (ET-CTS) and the Expert Team on WIS Centres (ET-WISC) but now aiming for 2016 for main progress, as opposed to 2015.
- The next meeting of CBS Lead Centers for GCOS should have been arranged in late 2015 but will likely be delayed to 2016 and combined with the meeting of the Advisory Group on GCOS Surface Network and GCOS Upper Air Network.
- The Ocean Data Portal is not widely used in the Intergovernmental Oceanographic Commission.
- The CIMO Technical Conference (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.

🟡 *Coordination Issues:*

- With respect to partnerships with space agencies, no structured process is in place to identify user requirements in the GFCS priority areas for climate observations and products.

🟡 *Unspecified reasons:*

- Establishment of the GCW Project Office.
- Support to the polar observations, research and services.
- JCOMM Observation Coordination Group Meetings.

c. Highlights of Outputs/Deliverables

Instruments and Methods of Observation

- A strategy for developing an update of the International Cloud Atlas agreed upon at a CIMO-WIGOS Meeting.
- Improved collaboration with international organizations, in particular with Meteomet and the International Organization for Standardization (ISO).
- Data quality of the Solid Precipitation Intercomparison Experiment (SPICE) controlled, issues identified, and site managers contacted for clarification/action.
- Plans for completion of SPICE data analysis reviewed and plans for drafting the SPICE final report completed.
- New edition of CIMO Guide in pre-publication stage.

Availability and Use of Satellite Data and Products

- Resolution 38 (Cg-17) agreed on WMO's coordinating role in space weather. A four-year plan was drafted and active contact with ICAO and the international science community maintained.
- Upgraded version of Observing Systems Analysis and Review Tool (OSCAR)/Space in support of the Rolling Requirements Review developed.
- Report analyzing the value of satellites for climate services published: "Climate service support from space: Establishing an Architecture for Climate Monitoring from Space through Climate Service Case Studies."
- 2nd "Climate from Space Week" held in March 2015 where Joint CEOS/CGMS Working Group Climate recognized the importance of gap analyses at all levels of the Architecture for Climate Monitoring from Space.
- Satellite chapter for the WIGOS Manual and a volume on satellite observation for the CIMO Guide completed.

- Draft Guide to DBNet completed.
- WMO Satellite Data Dissemination Strategy drafted to support satellite data exchange through WIS and the Integrated Global Data Dissemination Service.
- Regional Requirements Group for RAIII/IV formally constituted with 14 Members and satellite operators to address major regional user issues.
- A training event on the first new-generation satellite Himawari-8 organized by the Virtual Laboratory for Training and Education in Satellite Meteorology (VLab).
- Satellite User Readiness Navigator (SATURN) website established to inform users.
- Enhanced satellite support to SWFDP as a result of SCOPE-Nowcasting activity.
- New Terms of Reference for the Inter-Programme Expert Team on Satellite Utilization and Products developed; first session led to actions regarding essential data, data exchange, regional user activities, and training.

Global Observing System (GOS) and WIGOS

- GCW Implementation Plan developed and submitted to Cg-17.
- OSCAR prototype demonstrated at Cg-17.
- Manual on GOS updated.
- New Manual on WIGOS drafted.
- Requirements for application areas and statements of guidance updated and observing design principles finalized as a result of the meetings of the Expert Team on the Evolution of the Global Observing Systems (ET-EGOS) and the Inter Programme Expert Team on the Observing System Design and Evolution (IPET-OSDE).
- The quality of data from the Regional Basic Climatological Network and the GCOS Surface Network monitored.
- Marine Climate Data System strategy and implementation plan updated.
- Review of Manual on Marine Meteorological Services (WMO No-558) and Guide to Marine Meteorological Services (WMO No-471) initiated.
- Implementation Strategy and workplan of Ship Observations Team updated.
- New JCOMM Observations Programme Area Workplan drafted.

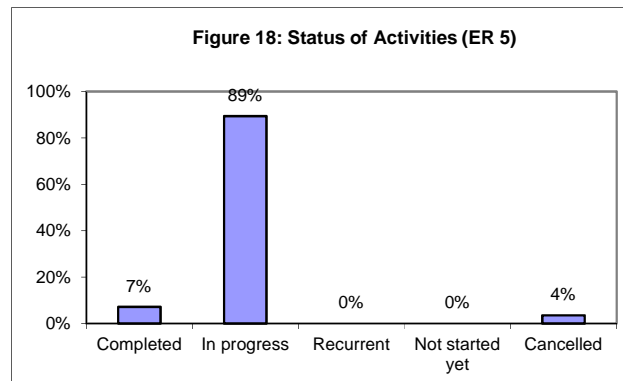
WIS

- ICT-ISS/CBS Ext 2014 Recommendations approved by Cg-17 and new technical regulations in the process of being published.
- The new WIS Global Information System Centre (GISC) based monitoring system developed from the WIS monitoring workshop demonstrated by GISCs Beijing, Tokyo and Brasilia at Cg17 and well received.
- Code tables supporting BUFR (Binary Universal Form for the Representation of meteorological data) and GRIB (GRIdded Binary) maintained by the Inter-Programme Expert Team on Data Representation Maintenance and Monitoring (IPET-DRMM) which is currently focusing on what needs to be done to ensure migration to TDCF (Table Driven Code Forms) is completed.
- Recommendations of the Inter-Programme Expert Team on Metadata and Data Representation Development (IPET-MDRD) approved by Cg-17 and the Manual on WIS being updated accordingly.
- The work on Aviation XML (IWXXM) approved by Cg-17.
- A working draft of a representation of WIGOS/Climate station metadata being reviewed and updated by IPET-MDRD.
- WIS competencies and training needs approved by Cg-17. The agreed competencies need to be integrated into the technical regulations along with other competency material.
- Review of WMO Technical Regulations No. 49 and updates of WIS related manuals and guides approved by Cg-17 and in the process of being published.
- Significant progress made on work supporting OSCAR but more support from WIS needed.
- A working draft of a data representation model to support WIGOS metadata prepared.

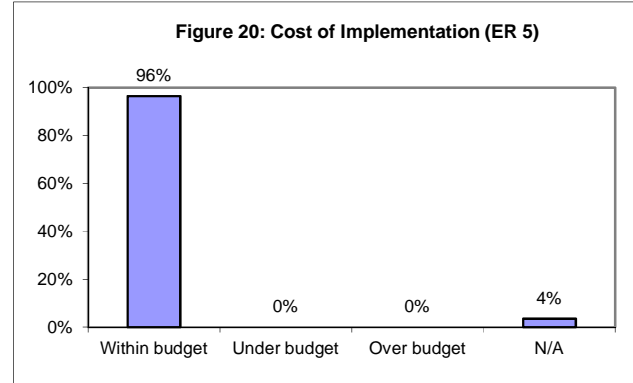
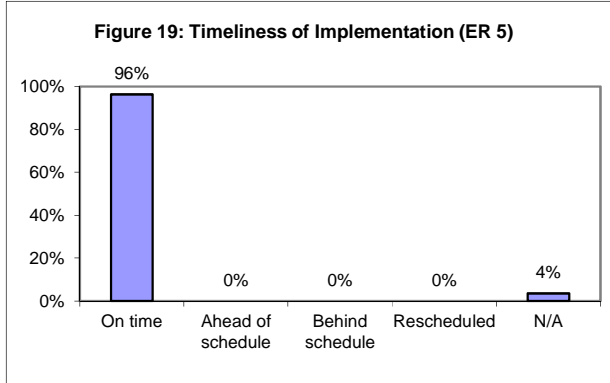
EXPECTED RESULT 5

a. Status of Activities, Timeliness and Cost

Figure 18 below shows that all ER5 activities were either completed (7%) or underway (89%) as of June 2015. For comparison, they were all in progress in the previous reporting period. Of those underway, the majority were at an advanced stage of implementation, with 80% of the work completed. One activity was cancelled, namely "Nowcasting research working group, project and other technical meetings with Joint Nowcasting Applications and Services (JONAS), PWS and related publications," which contributed to 4% of overall activities.



There was no change in terms of timeliness and cost of implementation as compared to December 2014. All ER 5 activities continued being carried out within the expected time and according to budget, as evident from Figures 19 and 20. N/A stands for the cancelled activity mentioned above.



b. Constraints/Risks

🟡 WMO Contribution to the Joint Climate Research Fund (JCRF) was marked with a yellow alert status:

- The major risks reside with the financial support from other WCRP co-sponsors (UNESCO's Intergovernmental Oceanographic Commission (IOC) and the International Council for Science (ICSU)) as well as from individual countries' contributions to the JCRF to support WCRP activities. There is also a risk of ensuring the sustainability of some WCRP core project offices.

c. Highlights of Outputs/Deliverables

Climate Research

- The 36th Session of the Joint Scientific Committee discussed implementation of WCRP plans, cooperation with various WMO-affiliated programmes and planning of research on the WCRP Grand Science Challenges (8-10 April 2015, WMO, Geneva).
- Support provided to over 100 early career scientists and researchers, including from developing countries, to participate in climate research activities such as the meetings of the Modelling and Data Councils, working groups, science steering committees of core projects, workshops, training and capacity building efforts.

Weather Research

- "Seamless Prediction of the Earth System: From Minutes to Months" published.
- The Sand and Dust Storm Warning Advisory and Assessment System (SDS-WAS) Implementation Plans for 2015-2020 published.
- Multi-model products of SDS-WAS and the International Cooperative for Aerosol Prediction made available online.
- A new photometer set up at the AERONET station in Cairo.
- New Research and Development Projects and Forecast Demonstration Projects established: Understanding and Prediction of Rainfall Associated with landFalling Tropical cyclones (UPDRAFT) , Aviation Research Demonstration Project (AvRDP) and Lake Victoria Project;
- UPDRAFT project's Implementation Plan 2016-2018 developed.
- The Typhoon Landfall Forecast Demonstration Project extended to 2018 to include the Experiment on Typhoon Intensity Change in Coastal Area (EXOTICA) Project in the Western North Pacific.
- Contribution to the World Bank Report on Valuing Weather and Climate.
- Working Group for Numerical Experimentation (WGNE) Exercise on Evaluation of Aerosol Impacts on Numerical Weather Prediction implemented.
- "WGNE Blue Book (2014): Research Activities in Atmospheric & Ocean Modelling" published;
- Special issue of Mausam published on forecast verification.
- Report of the FROST-2014 (Forecast and Research in the Olympic Sochi Testbed) Project released.
- Awarded 2015 WMO Research Award for Young Scientists to Dr Amos Pui Kuen Tai (Hong Kong, China).

Atmospheric Chemistry Observations

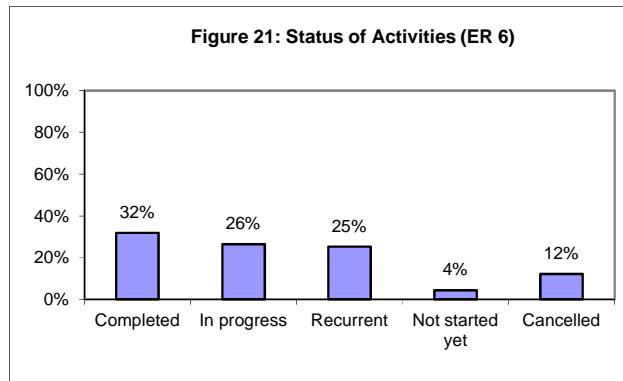
- WMO/UNEP *Scientific Assessment of Ozone Depletion: 2014* published.
- Absorption Cross-sections of Ozone Status Report published.
- The Puy de Dome station (France) inaugurated as a Global Station in the Global Atmosphere Watch (GAW) Programme.
- Report on the system and performance audit of the Izana GAW station (Spain) published.
- Supported the participation of:
 - o 10 scientists to 2 training courses at the Global Atmosphere Watch Training and Education Centre;
 - o 6 experts to the European Research Course on Atmospheres;
 - o 20 experts and young scientists to three GAW workshops.
- Annotated Outline for an Integrated Greenhouse Gas Information System (IG3IS) Implementation Plan published.
- GAW Implementation Plan for 2016-2019 published.

EXPECTED RESULT 6

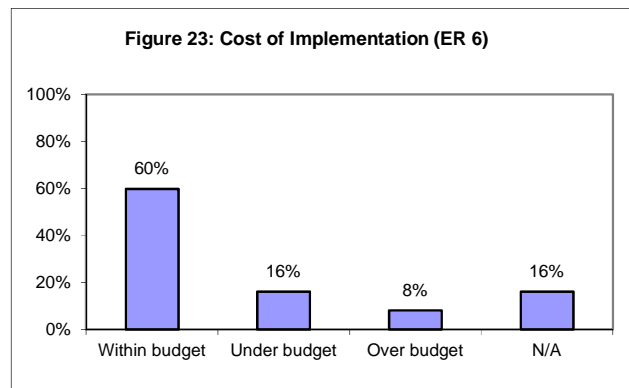
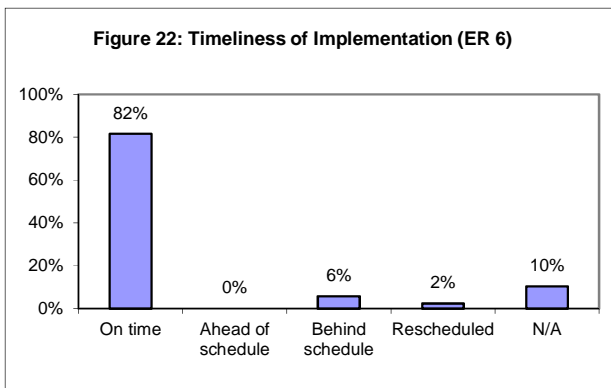
a. Status of Activities, Timeliness and Cost

By June 2015, more than half of ER 6 activities were either completed (32%) or in progress (26%) and a fifth were of recurrent nature, as presented on Figure 21. The latter included operating expenses of a number of WMO regional offices, assistance to presidents of regional associations, development and support to regional activities in agricultural meteorology, as well as different training activities and seminars on WMO Strategy on Education and Training.

Compared to the previous six months, the portion of cancelled activities increased from 7% to 12%. Recently annulled activities include a regional technical conference in RA-III, training workshops on climate forecasts, a training course on aeronautical meteorology, and training seminars on Global Data Processing System and SWFDP. At the same time, the number of activities that had not started yet went down to 4% as compared to 10% in December 2014. These involved the RA-I working groups, three national workshops for the strategic plan, development and enhancement of websites of Least Development Countries (LDC), and four training seminars on industry requirements.



As shown on Figure 22, the large majority of ER 6 activities (82%) were executed within the expected time frame. A couple of activities were rescheduled, including working groups of RA-I and three national workshops for strategic plan. Implementation of several activities was late, which amounted to 6% of ER 6 activities. For example, the implementation of Regional Meteorological Data Communication Network (RMDCN) activities was advancing well during the reporting period but two GISCs had not yet been connected to the WIS core network, thus causing a slight delay. Similarly, updates of guidance material to assist regionalized service provision were not done, which pulled back implementation of the cost recovery workshops. Other late activities included the provision of guidance on climate monitoring and watch systems to support GFCS implementation and the development and enhancement of LDC websites. N/A on both Figures 22 and 23 reflects those activities whose implementation was cancelled or not started yet.



The status of expenditure did not change significantly from one reporting period to another. Three-fifths of ER 6 activities were implemented within their assigned budget, as demonstrated by Figure 23. Less than a tenth exceeded their allocated funding, which was matched by savings realized on 16% of activities. For instance, the meeting of the EC Panel of Experts on Education and Training and the development of training materials absorbed fewer resources than envisioned. These were used to finance deficits of other activities, such as funding of participants to attend Regional Training Centre (RTC) courses, coordination of fellowships, and Education and Training (ETR) matters with UN and international organizations. Similarly, the development of a competency handbook for RTCs was slower than expected, which freed up funds for distance learning training. Several fellows could not take up the WMO offers, which allowed using the funds to assist participants from LDCs to the Open Science Conference and other meetings and trainings.

b. Constraints/Risks

Seven ER 6 activities were assigned a yellow alert status due to:

Implementation constraints:

- Delays in updating guidance material to assist regionalised service provision.
- Need for more sensitization on implementing climate watches at the national level.

Financial constraints:

- More funds are required for additional regional workshops on climate monitoring and climate watch systems in RA-I and RA-V.
- Most GFCS outputs and deliverables are funded through extrabudgetary funds, with travel costs being the largest category of expenditure. Balancing expenditures between the different funds and across the range of activities is a challenge.

Coordination issues:

- Letter of Agreement needs to be created for the transfer of ETR Programme funds to Statistics in Applied Climatology course in 2015, using funds from other ER 6 activities.
- With respect to RMDCN workshops and meetings, Cg-17 approved making Members' communication activities essential services. Approval by other UN-related entities is now pending, such as the UN Security Council.

c. Highlights of Outputs/Deliverables

Training and Guidance

- Online delivery of "Regional Training Seminars for National Trainers" trialed, with 38 participants completing the online section (a follow-up face-to-face course is being organized in September 2015).
- New RTC handbook under development.
- Survey on Members' training needs completed using individual surveys on member staff numbers and profiles. Reported to Cg and EC.
- Distance learning promoted and support provided for RTC personnel to participate;
- 3 participants sponsored to participate in Prohimet Workshop on Hydrology and Water Resources (HWR).
- A distance learning course on advanced topics in hydrology conducted for RA II in January-March 2015.
- A course on stream gauging held in the Hindu Kush-Himalaya region.
- A capacity building workshop on data rescue, digitization and homogenies as well as a regional workshop on climate monitoring and climate watch systems in the Mediterranean under development.

- A training course on Manual on Stream Gauging held in Benin.
- Observers' training conducted in Lebanon.
- 12 forecasters trained at the German Meteorological Service.
- Drought Meeting in South Eastern Europe held in April 2015.
- A meeting of the Task Team on the Definition of Extreme Weather and Climate Events held in April 2015.

Fellowships

- Nearly 180 applications considered in the first six months of 2015. More than 40 applications recommended for fellowships including countries such as Algeria, Barbados, China, France, India, Kenya, the Netherlands, Peru, the Russian Federation, the United Kingdom of Great Britain and Northern Ireland and the United States of America.

Regional Offices

- Draft Strategic and Operational Plan (SOP) 2016-2019 developed for RA-VI.

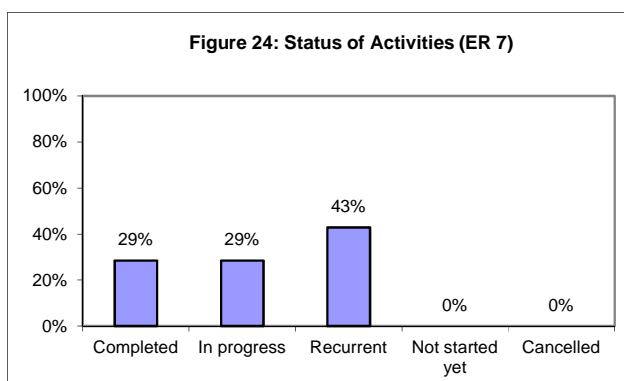
GFCS

- National level implementation of climate services advanced in West Africa, the Caribbean and the Pacific through national consultations, the development of work plans and the instauration of National Climate Outlook Forums as a User Interface Platform mechanism.
- Climate services use and necessity advocated for in a variety of scientific and technical for a.
- Outreach material in print, video and online produced and widely disseminated.
- Training material and training courses on climate services developed and road-tested.

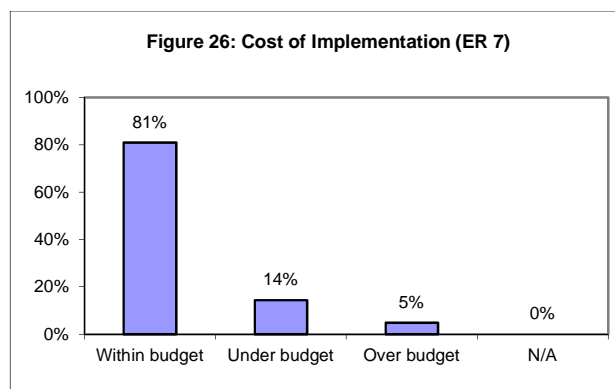
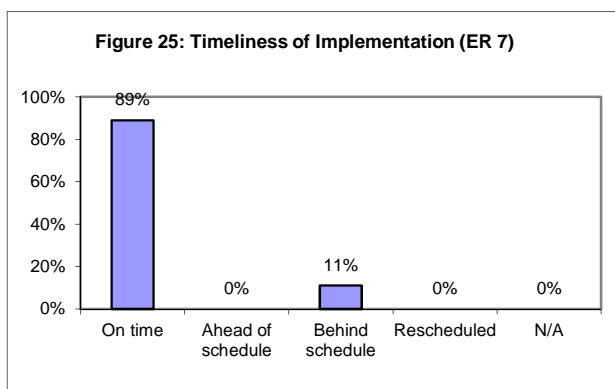
EXPECTED RESULT 7

a. Status of Activities, Timeliness and Cost

All ER 7 activities were underway by June 2015, as indicated on Figure 24. The share of completed activities increased from 18% in December 2014 to 29% in the current reporting period. Roughly a third of activities were in progress and 43% were of recurrent nature. The latter mainly consisted of Secretariat functions, such as participation in meetings for regional coordination, expenses for the WMO Liaison Office in New York and the WMO/EUMETNET Joint Office in Brussels, celebration of World Meteorological Day, and WMO contribution to the UN system.



As evident from Figure 25, the majority of ER 7 activities were accomplished on time. Two activities, accounting for 11% of the overall ER 7 activities, were behind schedule as of June 2015: (1) development of climate-related guidance materials and publications and (2) ICAO-WMO Conjoint Workshop which was rescheduled to a later date to allow for better organization.



Whereas 81% of ER 7 activities were implemented within budget, several absorbed fewer resources than projected. These are portrayed as ‘under budget’ on Figure 26 and include participation in meetings of the United Nations Convention to Combat Desertification (UNCCD) and the Convention on Biodiversity (CBD), participation in HWR meetings of UN bodies, and co-sponsoring of HWR activities organized by non-governmental and intergovernmental organizations. Only one activity exceeded its budget allocation – the production of two issues of the WMO Bulletin – and stands for the 5% “over budget” on Figure 26.

b. Constraints/Risks

🟡 Three activities were marked with a yellow alert status due to:

- Inadequate funding for the production and dissemination of press materials, brochures, information kits, and audio-visual materials, which requires Communications and Public Affairs Division to raise funds from other Departments and donors.
- Organizational and coordination issues concerning the ICAO-WMO Conjoint Workshop.
- Time constraints related to the development of climate-related guidance materials and publications.

c. Highlights of Outputs/Deliverables

Leadership and Partnerships

- Meeting of WMO/UNESCO Liaison Committee for Hydrology held in January 2015.
- Participation in and contribution to:
 - o Third United Nations World Conference on Disaster Risk Reduction (Sendai, Japan, March 2015);
 - o 26th General Assembly of the International Union of Geodesy and Geophysics;
 - o International Association of Hydrological Sciences (IAHS) Bureau meeting.
- With respect to UNFCCC, contribution to National Adaptation Plans, Nairobi Work Programme and capacity building meetings and documents.

Communications and Outreach

- Successful press launch of the WMO Statement on the Status of the Global Climate in 2014.
- Workshop organized for 80 weather presenters by WMO and the Intergovernmental Panel on Climate Change (IPCC) (Paris, France, March 2015).
- WMO Exhibit organized at Cg-17.
- Vol. 64(1) of the WMO Bulletin published and two issues of MeteoWorld (March and June).
- Launch of Series 3 of "Weather Reports from 2050."
- Launch of UK and Tanzania GFCS videos.
- Brochure on climate, drought and desertification developed but further editing and revision needed.

EXPECTED RESULT 8

a. Status of Activities, Timeliness and Cost

The portion of completed ER 8 activities rose from 9% in December 2014 to over a quarter in June 2015. Only 9% were still in progress and at a very advanced stage of implementation, with 90% of the work completed. These included the publication of the WMO Strategic Plan and WMO Operating Plan 2016-2019 as well as the definition of GIS requirements. Close to two-thirds of ER 8 activities are of continual nature, marked as “recurrent” on Figure 27. The majority involve implementation of support functions of the Secretariat, such as monitoring and evaluation, internal audit, provision of conference services, operating expenses, etc.

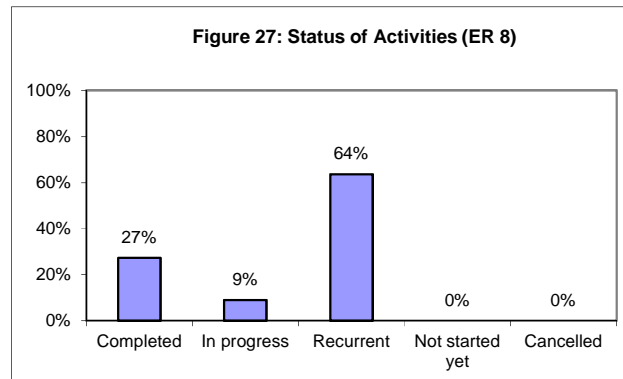
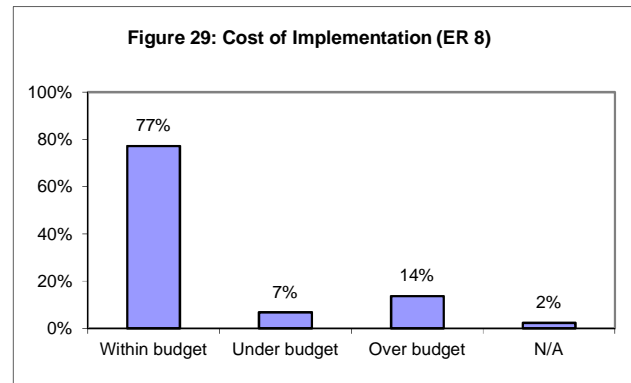
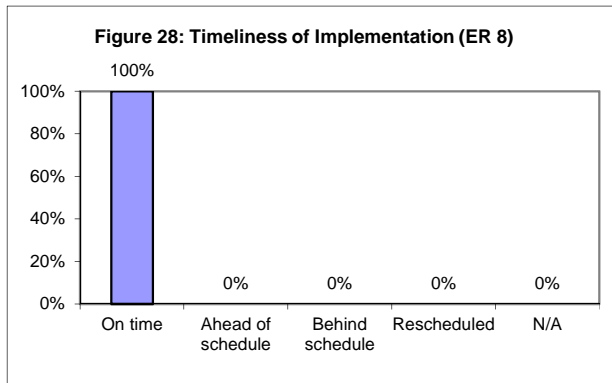


Figure 28 shows that all ER 8 activities were completed within the expected time frame and that over three-quarters were effectuated within their planned budget (Figure 29). Seven percent absorbed fewer resources than initially planned, including external audit fees, WMO contribution to the financing of JIU activities, and operating expenses of the Internal Oversight Office (IOO).



A number of activities surpassed their budget allocations, amounting to 14% of all ER 8 activities, as presented on Figure 29. These involved expenses related to the organization of the Seventeenth World Meteorological Congress, the Executive Council sessions, assistance to the WMO President, and information and communication technology charges.

b. Constraints/Risks

Three ER 8 activities were assigned a yellow alert status due to:

🟡 *Coordination risks:*

- Implementation success of the GFCS Operation and Resource Plans which are being developed is contingent upon clear definition of the roles and responsibilities of the GFCS Office versus other WMO Secretariat divisions and Partners Advisory Committee (PAC) members. Activities need to be designed in a way that they can and will be implemented in the next intersessional period.

 *Financial constraints:*

- Short EC session following Cg-17.
- Assistance to the WMO President.

c. Highlights of Outputs/Deliverables

Strategic Planning, Monitoring and Evaluation (M&E)

- The WMO Strategic Plan 2016-2019 and WMO Operating Plan 2016-2019 finalized and adopted by Cg-17.
- Presentation on integrated strategic planning made by the Strategic Planning and Risk Management Officer at RA I Regional Conference (RECO).
- Report on M&E activities, including Mid-Term Monitoring and Performance Evaluation Report, presented to Congress.
- Report on the status of risk and implementation of Enterprise Risk Management submitted to the Audit Committee and Cg-17.
- Progress Report on Implementation of the WMO Policy on Gender Mainstreaming produced, establishing baselines for over 40 gender-related indicators.

Internal Oversight

- The external auditors provided unqualified opinion on the financial statements for the year 2014. The report was submitted to the Financial Advisory Committee (FINAC) and EC.
- Report on Joint Inspection Unit activities submitted to Cg-17.
- Annual report of IOO submitted to Cg-17.
- Smooth election process for Audit Committee members conducted by e-means.
- Full compliance with audit recommendations.

Global Framework for Climate Services

- Sessions of the Management Committee Working Groups and the PAC held.
- Six countries designated as pilot countries to demonstrate proof of concept for the GFCS (Bhutan, Burkina Faso, Dominica, Malawi, Moldova, and Papua New Guinea).
- Early work on the GFCS Operation and Resource Plan and M&E Framework started.

Conference, Interpretation and Documentation Services

- Documentation and translation services provided to 3 constituent body meetings, namely of RA I, Cg-17 and EC-67.
- Conference and/or interpretation services provided to 3 constituent body meetings and 49 meetings of IPCC, WCRP, GCOS and other extrabudgetary programmes.

WMO publications and other written material

- 19 numbered publications issued in a total of 48 language versions.
- 14 flyers/brochures/posters and other publication products issued in a total of 32 language versions, all designed to promote WMO branding.
- 266 copies of 59 different titles sold, with the following distribution by language:
 - English: 169 copies;
 - French: 5 copies;

- Russian: 3;
 - Spanish: 9
 - Chinese: 0;
 - Arabic: 0;
 - Multilingual: 80 copies.
- Subscriptions to the Bulletin and MeteoWorld were sold too, which reached for each issue 95 copies in English, 25 copies in French and 2 copies in Spanish.

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