

WORLD METEOROLOGICAL ORGANIZATION

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COMMISSION FOR BASIC SYSTEMS
OPEN PROGRAMME AREA GROUP ON
INTEGRATED OBSERVING SYSTEMS

ITEM: 6.1

**IMPLEMENTATION-COORDINATION TEAM
ON INTEGRATED OBSERVING SYSTEM
(ICT-IOS)**
Eighth Session

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GENEVA, SWITZERLAND, 7 – 10 APRIL 2014

REPORTS OF THE OPAG-IOS EXPERT TEAMS AND RAPPORTEURS

REPORT OF THE INTER-PROGRAMME EXPERT TEAM ON WIGOS FRAMEWORK IMPLEMENTATION MATTERS (IPET-WIFI)

(Submitted by Jochen Dibbern (Germany), Chair, IPET-WIFI)

SUMMARY AND PURPOSE OF DOCUMENT

This document provides a report of the work of the Expert Team on WIGOS Framework Implementation Matters (IPET-WIFI) since the seventh Session of the ICT-IOS, together with subsequent progress, and recommendations.

ACTION PROPOSED

The Meeting is invited to note the information contained in this document when discussing how it organises its work and formulates its recommendations.

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- Appendix I** Terms of Reference of the Expert Team on WIGOS Framework Implementation Matters (IPET-WIFI) and its Sub Groups
 - Appendix II** Timeline for Updating the Manual on the GOS for Approval by Cg-XVII
 - Appendix III** Template of Draft Recommendation to CBS
 - Appendix IV** Proposed changes to the Terms of Reference of the Inter Programme Expert Team on WIGOS Framework Implementation Matters (IPET-WIFI)
 - Appendix V** Updated Work Plan of the Expert Team on WIGOS Framework Implementation Matters (IPET-WIFI)

DISCUSSION

1. Introduction

1.1 The Terms of Reference (see Appendix I), Work Plan and membership of IPET-WIFI are sufficiently flexible to accommodate the work assigned to it by ICG-WIGOS and its task teams. IPET-WIFI and its Sub Groups are concentrating on addressing overall integration aspects of WIGOS, and on contributing to the work of the ICG-WIGOS Task Teams, by providing the GOS-related elements of WIGOS.

1.2 The first session of the Expert Team on WIGOS Framework Implementation Matters (IPET-WIFI) took place in Geneva, Switzerland from 10 to 14 June 2013. The first session focused on refining the work plan, assigning tasks and responsibilities, and commencing work on the major topics under IPET-WIFI responsibility: namely drafting of GOS-related WIGOS Regulatory Material, provision of GOS-related input for the WIGOS Core Metadata Standard, and initial discussion on the GOS-related contribution to WIGOS Quality Management guidance. Since that first session of IPET-WIFI, significant progress has been made in each of these areas, and with respect to inclusion of GOS standardization material in the WIGOS Regulatory Material and provision of a GOS-related review of the WIGOS Capacity Development and Outreach strategies. The second session of IPET-WIFI was held (primarily by teleconference) in Geneva from 17 to 21 March 2014. At the second session the IPET's progress against each task was reviewed, the Work Plan was updated to reflect that progress and incorporate minor changes proposed to better address the tasks and, significantly, work commenced on updating the Manual on the GOS to harmonize it with the WIGOS Regulatory Material.

2. Achievements

2.1 In relation to its Terms of Reference (Appendix I), IPET-WIFI achieved the following:

2.1.1 **WIGOS Regulatory Material:** A major contribution has been made to preparation of the WMO Technical Regulations, Volume 1, Part 1 and the draft WIGOS Manual. Significant contributions were provided from each of IPET-WIFI's Sub Groups: the Sub Group on Regulatory Material (SG-RM), the Sub Group on MetaData (SG-MD) and the Sub Group on Quality Management (SG-QM). Corresponding updates for the Manual on the Global Observing System are in preparation. Detailed timelines have been prepared for further work by SG-RM, which will enable submission of the updated WMO Regulatory Material to Cg-XVII. (See Appendix II)

2.1.2 **WIGOS Metadata:** A major contribution was made on behalf of CBS to the work ICG-WIGOS TT-WMD, specifically in the development of the semantic standard for WIGOS Core Metadata. GOS-relevant examples have been provided for many of the metadata that have been classified in the draft standard.

2.1.3 **WIGOS Quality Management:** Terms of Reference for TT-WQM were proposed to ICG-WIGOS by the Chair and Co-Chair of IPET-WIFI, as requested, and review of a proposal from CBS ET-SBO for development of a WIGOS monitoring and fault management system has been performed. This latter initiative will be discussed further at the first session of TT-WQM-1, to be conducted in April 2014.

2.1.4 **WIGOS Information Resource (WIR):** Feedback has been provided by IPET-WIFI to the WIR development team on the draft WIR Functional Specification. The status of WIR development was discussed at IPET-WIFI-2 and the importance of priority development of this tool as part of the WIGOS framework implementation was agreed. Advice has been provided by IPET-WIFI to ICG-WIGOS regarding the planned cooperation between WMO Secretariat and MeteoSwiss in the development and ongoing management of the OSCAR component of the WIR.

2.1.5 **Internal and External Collaboration:** A brief discussion paper has been developed which addresses how to develop guidance information on external cooperation at national, regional and global levels. After some discussion at IPET-WIFI-2, the IPET concluded that this item should focus on collaboration at the national and regional levels, and in cooperation with WIGOS Project Office, regional workshop session planned for RA III to develop a more detailed regional concept.

2.1.6 **Capacity Development, Education and Outreach:** A review was performed by IPET-WIFI of the WIGOS Capacity Development and Outreach Strategies, and suggested revisions from the GOS perspective were provided to ICG-WIGOS.

3. Issues

3.1 The Expert Team on WIGOS Framework Implementation Matters (IPET-WIFI) has identified the following issues for consideration by the ICT-IOS:

3.1.1 There is currently no mechanism for ensuring CBS input and advice is directly available to the team developing the WIR, in particular OSCAR (WMO/MeteoSwiss).

3.1.2 Regarding the development of a WIGOS quality monitoring and fault management system, while this activity might be led by ICG-WIGOS TT-WQM, that TT is focusing on the provision of WIGOS QM input to the WIGOS Regulatory Material, so, as suggested by ET-SBO, provision of the lead for this activity by IPET-WIFI may be preferred.

3.1.3 With regard to progression of the IPET-WIFI contribution the WIGOS Capacity Development and Outreach, the WIGOS strategy has now been developed but there is a need now to put that strategy into action. IPET-WIFI requires further guidance from ICG-WIGOS on how best to contribute to that action.

3.1.4 SG-MD has reported the continuing lack of a satellite expert in its WIGOS Metadata activities. The Secretariat will continue to pursue the nomination of an appropriate expert.

3.1.5 The key steps and timeline for preparation of regulatory material (as shown in Appendix II) include some assumptions that may need checking by ICT-IOS. Also, it should be noted that some new provisions emerging from IOS experts/teams are destined for WIGOS regulatory material hence will need to follow the WRM steps and timeline rather than the Manual on the GOS steps and timeline (OSND principles and specifications of the RRR process are examples).

4. Recommendations

4.1 The Expert Team on WIGOS Framework Implementation Matters (IPET-WIFI) proposes the following recommendations to the ICT-IOS, the last of which is for potential referral to CBS-Ext (Paraguay, 2014):

4.1.1 IPET-WIFI to take responsibility for provision of GOS input and advice to the team developing OSCAR (WMO/MeteoSwiss), in consultation with other CBS ETs.

4.1.2 IPET-WIFI SG-QM to take the lead, with support of ET-SBO, in development of a WIGOS monitoring and fault management system, with initial focus on the land-based component of the GOS.

4.1.3 Considering the requirement for member states to have access to a process to submit and maintain WIGOS metadata, IPET-WIFI-2 recommends that ISS take responsibility for the technical implementation of the WIGOS Core Metadata Semantic standard in consultation with IPET-WIFI and TT-WMD.

4.1.4 The draft updated Manual on the GOS to be discussed during ICT-IOS and recommended to CBS-Ext (Paraguay, 2014) for its endorsement (See the Template of Draft Recommendation to CBS, at Appendix III).

5. Proposal for Modification of the Terms of Reference of IPET-WIFI and its Sub Groups

IPET-WIFI proposes some small changes to its Terms of Reference (noting that such changes would only be submitted at the next CBS sixteenth Session in 2016). These are provided in Appendix IV.

6. Work plan

The updated Work Plan with status for the Expert Team on WIGOS Framework Implementation Matters (IPET-WIFI) for the period 2014-2016 is at Appendix V.

APPENDIX I

TERMS OF REFERENCE OF THE EXPERT TEAM ON WIGOS FRAMEWORK IMPLEMENTATION MATTERS (IPET-WIFI) AND ITS SUB-GROUPS

1. TERMS OF REFERENCE OF THE INTER PROGRAMME EXPERT TEAM ON WIGOS FRAMEWORK IMPLEMENTATION MATTERS (IPET WIFI)

Last updated: 30/07/2013

(Approved by CBS-XV)

- (a) Address integration aspects of WIGOS as defined in the WIGOS Framework Implementation Plan;
- (b) Provide technical advice, guidance, practices and procedures for WIGOS Framework Implementation; with priorities to be given to:
 - (i) WIGOS Regulatory Material (such as WIGOS Manual, GOS Manual and Guide), in collaboration with the relevant WMO Programmes and TCs;
 - (ii) Standards for basic WIGOS metadata (e.g., those agreed for international exchange and for WIGOS Operational DB), including the access to WIGOS metadata;
 - (iii) WIGOS Quality Management Framework, including monitoring;
 - (iv) WIGOS Information Resource, i.e. WIGOS databases, web portal;
 - (v) In collaboration with CIMO, development of Guidance for WIGOS standards and best practices;
 - (vi) Capacity development, education and outreach strategy;
- (c) The IPET WIFI is envisaged to encompass three sub-groups (SGs), each to be activated as/when required:
 - (i) Sub-group on Regulatory Material;
 - (ii) Sub-group on Metadata;
 - (iii) Sub-group on QM.

2. TERMS OF REFERENCE OF THE SUB-GROUP ON REGULATORY MATERIAL

Contribute to the development and maintenance of WIGOS regulatory material, both GOS-related material and provisions common to all component systems, as follows:

1. Coordinate with ICG-WIGOS TT WRM regarding requirements for GOS-related provisions and provisions common to all component systems for the WIGOS Regulatory Material
2. Make proposals to ICG-WIGOS TT-WRM for GOS-related provisions and provisions common to all component systems for the WIGOS Regulatory Material
3. Review Manual and Guides on GOS and make proposals to IPET-WIFI for updates
4. Collaborate with TT-WRM on the transition and eventual phasing out of the GOS Manual
5. Collaborate with TT-WRM on development of the WIGOS Guide
6. In close cooperation with ICG-WIGOS TT-WRM, contribute to the creation of mechanisms for the future ongoing review and update of the Regulatory Material

NOTE:

In tackling the above activities, compile input from:

- technical experts across all areas of OPAG IOS;
- the other task areas of IPET-WIFI.

3. TERMS OF REFERENCE OF THE SUB-GROUP ON METADATA

1. Coordinate with ICG-WIGOS TT-WMD on requirements for a WIGOS Core Metadata Standard
2. Contribute to the TT-WMD development of specifications for WIGOS metadata by provision of input on GOS sub-systems
3. Develop proposals, in collaboration with TT-WMD, for GOS-related practices and procedures for implementation of WIGOS metadata standards and for maintenance of WIGOS Metadata
4. Through IPET-WIFI contribute to WIGOS capacity development initiatives in regard to gathering, storing and exchanging GOS-related metadata, consistent with overall WIGOS metadata practices.

NOTE:

1. Will require active collaboration of other OPAG-IOS ETs and Rapporteurs.
2. Representation in the work of those TCs not directly represented on IPET-WIFI will be via ICG-WIGOS TT-WMD

4. TERMS OF REFERENCE OF THE SUB-GROUP ON QUALITY MANAGEMENT

1. Review current QM practices used within the GOS

2. Review material from the WMO Quality Management Framework
3. Coordinate with ICG-WIGOS TT WQM the content of a WIGOS-QMS Implementation Plan
4. Compile GOS-related QM practices, including a proposal for a Fault Management System, to be included in the WIGOS Regulatory Material
5. Submit contributions to the IPET-WIFI for coordination

NOTE:

1. Will require active collaboration of other OPAG-IOS ETs and Rapporteurs.
 2. Representation in the work of those TCs not directly represented on IPET-WIFI will be via ICG-WIGOS TT-WQM
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APPENDIX II TIMELINE FOR UPDATING THE MANUAL ON THE GOS FOR APPROVAL BY CG-XVII

WIGOS technical regulations: longer term timeline for new editions and updates of TR Vol. I Part I, Manual on WIGOS, in sync with Manual on the GOS
[as at March 2014]

		<u>M-GOS:</u>	<u>TR-M-WIGOS:</u>	<u>TR-M-WIGOS:</u>
2013	May	EC-65	2013 update to 2010 edition approved	structure decided for the first (2015) edition
	Nov	CAS		
2014	Dec			
	Jan			
	Feb			
	Mar	CAGM		
	Apr		ICT-IOS endorse draft 2015 edition	SYNC finalise proposed draft 2015 edition review by Presidents of TCs, EC-PORS (3 months)
	May	EC-66 reduced scope	No updates, progress report on new 2015 edition for Cg-17 decision.	progress report (no decision required)
	Jun	CAeM	translation of proposed 2015 edition; post on web site for general review	
	Jul	CCI	finalise agenda paper for CBS-Ext(14)	revise draft in response to feedback
	Aug	CIMO	ICG-WIGOS review, check synchronisation of M-GOS and TR-M-WIGOS	
	Sep	CBS	CBS-Ext(14)	CBS endorse draft 2015 edition
2015	Oct		revise draft if needed by CBS; translation of revised draft	consult with Members (3 months)
	Nov			
	Dec			
	Jan			
	Feb		finalise agenda paper for Cg-17	SYNC revise draft; then ICG-WIGOS final endorsement; translation of revised draft
	Mar			SYNC finalise agenda paper for Cg-17
	Apr			
	May	Cg-17	decision to adopt the proposed 2015 edition	decision to adopt the WIGOS tech regs, first (2015) edition
	Jun	EC-67		establish arrangements for future updates and 2019 edition
	Jul			
Aug		finalise proposed draft 2016 update to 2015 edition (available in synchronisation with proposed update to TR-M-WIGOS). ICT-IOS endorsement (out of session)	SYNC finalise proposed draft 2016 update to 2015 edition; ICG-WIGOS endorsement (out of session).	
Sep				
Oct			review draft 2016 update (Pres TCs, 3 months)	

M-GOS = Manual on the Global Observing System (WMO-No. 544), Volume I

TR-WIGOS = WIGOS technical regulations contained in Vol.I Part I
M-WIGOS = (prospective) Manual on the WMO Integrated Global Observing System
TR-M-WIGOS = abbreviation

SYNC = synchronisation is important at this step

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	Oct				
	Nov				
	Dec		President CBS fast track endorsement	SYNC	revised draft 2016 update, then ICG-WIGOS endorsement
2016	Jan		translation of proposed 2016 update		translation of proposed 2016 update
	Feb		finalise agenda paper for EC-68 (to Members 3 months before EC)	SYNC	finalise agenda paper for EC-68 (to Members 3 months before EC)
	Mar				
	Apr				
	May	EC-68	decision to adopt 2016 update to 2015 edition		decision to adopt 2016 update to 2015 edition
	Jun		finalise proposed draft 2017 update to 2015 edition (available in synchronisation with proposed update to TR-M-WIGOS). ICT-IOS endorsement (out of session). translation of proposed 2017 update.	SYNC	finalise proposed draft 2017 update to the 2015 edition; ICG-WIGOS endorsement (out of session)
	Jul		finalise agenda paper for CBS-16		review draft 2017 update (Pres TCs, 3 months)
	Aug				
	Sep	CBS	CBS-16 CBS endorse draft 2017 update	SYNC	revised draft 2017 update, then ICG-WIGOS endorsement
	Oct		revise draft if needed by CBS; translation of revised draft		translation of proposed 2017 update
	Nov				
	Dec				
2017	Jan				ICG-WIGOS initiate/oversee preparation of 2019 edition.
	Feb		finalise agenda paper for EC-69 (to Members 3 months before EC)	SYNC	finalise agenda paper for EC-69 (to Members 3 months before EC)
	Mar				
	Apr				
	May	EC-69	decision to adopt 2017 update to 2015 edition		decision to adopt 2017 update to 2015 edition
	Jun				
	Jul				
	Aug		finalise proposed draft 2018 update to 2015 edition (available in synchronisation with proposed update to TR-M-WIGOS). ICT-IOS endorsement (out of session)	SYNC	finalise proposed draft 2018 update to 2015 edition; ICG-WIGOS endorsement (out of session).
	Sep				review draft 2018 update (Pres TCs, 3 months)
	Oct				
	Nov				
	Dec		President CBS fast track endorsement	SYNC	revised draft 2018 update, then ICG-WIGOS endorsement
2018	Jan		translation of proposed 2018 update		translation of proposed 2018 update
	Feb		finalise agenda paper for EC-70 (to Members 3 months before EC)	SYNC	finalise agenda paper for EC-70 (to Members 3 months before EC)
					progress report to ICG-WIGOS on 2019 edition

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Year	Month	Event / Meeting	Topic / Action	Notes / Status	Outcomes / Reports	
2018	Dec		President CBS fast track endorsement	SYNC	revised draft 2018 update, then ICG-WIGOS endorsement	
	Jan		translation of proposed 2018 update		translation of proposed 2018 update	progress report to ICG-WIGOS on 2019 edition
	Feb		finalise agenda paper for EC-70 (to Members 3 months before EC)	SYNC	finalise agenda paper for EC-70 (to Members 3 months before EC)	
	Mar					
	Apr					
	May	EC-70	decision to adopt 2018 update to 2015 edition, information about proposed cessation for decision at Cg-18		decision to adopt 2018 update to 2015 edition	progress report on 2019 edition
	Jun					
	Jul		finalise agenda paper for CBS-Ext(18)	SYNC		finalise proposed draft 2019 edition review by Presidents of TCs, EC-PORS (3 months)
	Aug					
	Sep	CBS	CBS-Ext(18)	CBS endorse the proposed cessation of M-GOS to Cg-18		
2019	Oct					
	Nov					revised draft 2019 edition in response to feedback
	Dec					review and endorsement by ICG-WIGOS
	Jan					translation of draft 2019 edition
	Feb		finalise agenda paper for Cg-18 (to Members 3 months before Cg)	SYNC	finalise agenda paper for Cg-18 (to Members 3 months before Cg)	finalise agenda paper for Cg-18 (to Members 3 months before Cg)
	Mar					
	Apr					
	May	Cg-18	M-GOS cessation for decision			decision to adopt 2019 edition of the WIGOS tech regs
Jun	EC-71				establish arrangements for future updates and 2023 edition	

APPENDIX III

TEMPLATE OF DRAFT RECOMMENDATION TO CBS

[delete/update/add items below as appropriate, and complete with relevant information;
include annex(es) if/as needed]

DRAFT RECOMMENDATION NO. ??? (CBS-EXT.(2014))

TITLE

THE COMMISSION FOR BASIC SYSTEMS,

Noting:

- (1)
- (2)
- (3)
- ...

Considering that:

- (1)
- (2)
- (3)
- ...

Recommends that:

- (1)
- (2)
- (3)
- ...
- ...;

Requests that the Secretary-General to ...;

Authorizes the Secretary-General to

Annex 1 to Recommendation No. ??? (CBS-Ext.(2014))

TITLE

APPENDIX IV

**UPDATED WORK PLAN WITH STATUS FOR THE EXPERT TEAM ON WIGOS FRAMEWORK IMPLEMENTATION MATTERS
(IPET-WIFI) FOR THE PERIOD 2012-2014**

Updated 20 March 2014

No. 1	Task	Deliverable/Activity	Due	Responsible	Impacted ETs	Statu s	Comment
1.	Contribute to the development and maintenance of WIGOS regulatory material, both GOS-related material and provisions common to all component systems.	<p>1) input to TT-WRM, to assist and review the inclusion of material from GOS Manual and TRs into the WIGOS Manual and TRs (particularly for sections 2, 3 and 7)</p> <p>2) proposals for updated or new regulatory material to the TRs, WIGOS Manual and/or GOS Manual (as appropriate)</p> <p>3.1) clear plans (with TT-WRM) for the transition and eventual phasing out of the GOS Manual</p> <p>3.2) lay foundation for completion of transition, after CBS-XVI (2016), from GOS Manual to WIGOS Manual</p>	<p>1) Oct 2013</p> <p>2) 2016 (for next edition of WIGOS Manual), & ongoing.</p> <p>3.1) Nov 2014</p> <p>3.2) 2016</p> <p>4) Jun 2013</p>	Stringer SG-RM Members	TT-WRM ICT-IOS	90% 15% 30% 10%	<p>Interactions and feedback provided for TT-WRM on first drafts. Further input possible on next drafts.</p> <p>Some WIGOS and GOS updates obtained from across CBS. Need further work on GOS Manual.</p> <p>Done some planning, more needed on timeline for GOS Manual.</p> <p>Coordination established, initial changes drafted. Need more work on GOS Manual through a few stages.</p> <p>Initial concepts only.</p>

¹ Corresponds with WIGOS Activity Area Number.

No. 1	Task	Deliverable/Activity	Due	Responsible	Impacted ETs	Statu s	Comment
		4) Collaboration with TT-WRM on development of the WIGOS Guide	and ongoing			5%	
2.	Contribute to the development of guidance, mechanisms and procedures for engagement, coordination and collaboration with partner organizations.	1. Contribute GOS-related input to, and review, ICG-WIGOS-developed document on strategy for WIGOS engagement with partner organizations ^a .	Dec 2014	Arimatea , All IPET members	ICT-IOS	5%	^a Partners will need to ensure compliance, to some extent, with WMO Technical Regulations in relation to data provision, quality, etc.
3.	Network Planning / RRR	Close cooperation between IPET-WIFI and IPET-OSDE, feedback to IPET-OSDE as required.	Ongoing	Dibbern Stringer	IPET-OSDE	20%	Stringer and Dibbern are both contributing to IPET-OSDE activities.
4.	Develop guidance on: 1) mechanisms and procedures for improved integration of GOS observational data and products, 2) process of sharing, between GOS and other component observing systems, operational experiences, sharing of	1) As a Regional WIGOS implementation project, identify groupings within RA I which could share experience and procedures in the areas of operation and maintenance ¹ 2) Contribution to guidance documentation on best practice for operations and maintenance 3) Document listing issues that need to be addressed ² by	1) May 2014 2) Mar 2015 3) Dec	Ngamini All IPET Members Ngamini All IPET Members Ngamini All IPET Members	ICT-IOS ET- WISC- OM ICT-IOS	0% 0% 0%	¹ Proposed Method: Arrange for a session on this topic to be conducted as part of a WIGOS RA I workshop that is planned under ICG-WIGOS. ² procurement, instrument maintenance, spectrum management, etc

No. 1	Task	Deliverable/Activity	Due	Responsible	Impacted ETs	Statu s	Comment
	expertise and guidance for resourcing joint activities	regional cooperation, suggesting solutions (e.g., distributed Regional WIGOS Centre), and providing examples of best practice.	2014				
5.	<p>Provide advice to ICG-WIGOS via CBS on GOS Quality Management practices and procedures:</p> <p>1) Finalise SG-QM Work Plan</p> <p>2) Establish a group of GOS observing sub-system focal points that can provide expertise and knowledge on QMon practices and regulations to SG-QM.</p>	<p>[Work Plan]</p> <p>2a) Finalise list of sub-systems to be reviewed by SG-QM;</p> <p>2b) Finalise list of GOS OS-S focal points. 2c) Create a FP email list for collaboration.</p> <p>[Group of OS-S FPs established.]</p>	<p>Mar 2014</p> <p>Aug 2014</p>	<p>Secretariat Schrab</p> <p>Secretariat Schrab</p>	<p>TT-WQM</p>	<p>80%</p> <p>50%</p> <p>a) 100%</p> <p>b) 20%</p> <p>c) 0%</p>	<p>SG-QM to review and reach agreement on work plan. Ch-TT-WQM to review and agree on work plan. Summarised plan to be updated in IPET-WIFI work plan (Final Report IPET-WIFI-2)</p> <p>Participation of Chair SG-QM required in WIGOS Quality Workshop (Apr 2014)</p> <p>Likely list of 6 GOS OSS for review of QM:</p> <p>(a) Surface synoptic stations (Land and Sea stations);</p> <p>(b) Upper-air synoptic stations (Land and Sea stations);</p> <p>(c) Aircraft meteorological stations;</p> <p>(d) Aeronautical meteorological stations;</p> <p>(l) Weather radar stations; and</p>

No. 1	Task	Deliverable/Activity	Due	Responsible	Impacted ETs	Statu s	Comment
	<p>3) Review the status of WMO and Regional quality monitoring systems with a view to identifying areas for improvement and efficiency</p> <p>4) For the land surface-based observing system, develop and document the concept of extending global quality monitoring to include a "Global Fault Management System"</p>	<p>3a) In consultation with TT-WQM determine the scope and requirements for the review to be undertaken by OS-S FPs. 3b) Review existing regulatory material related to QMon for GOS sub-systems. 3c) Review existing regional QMon systems and their procedure in place, for example ECMWF, EUCOS, etc. 3d) Prepare recommendations on new or improved QMon procedures in relation to GOS sub-systems.</p> <p>[Document that can be used as input to the deliverable of TT-WQM]</p> <p>4a) Review the outcomes of the ECMWF Workshops on NWP data monitoring requirements 4b) Revise, update and finalise the draft proposal developed by ET-SBO to define the scope and deliverable of this activity. 4c) Liaise with ET-SBO and ICT-GDPF regarding revision of the Manual on the GDPFS re requirements for monitoring of the GOS by NWP. 4d) Develop an updated plan and procedures for quality and quantity</p>	<p>2016 (CBS)</p> <p>2016 (CBS)</p> <p>a) Aug 2014 b) Aug 2014 c) Feb 2015 d) Dec 2015 e) Feb 2015 f) Jun 2016</p>	<p>Schrab SG-QM</p> <p>Schrab SG-QM ET-SBO</p>	<p>ET-ABO ET-SBO</p> <p>TT-WQM ET-SBO ICT-GDPF ICT-ISS</p>	<p>0%</p>	<p>(n) Wind profiler stations.</p> <p>Can the scope for this task be expanded to quality management rather than just QMon?</p> <p>This task is a contribution to a parent task of TT-WQM and related to Activity 5.1.2 of the WIP.</p> <p>Include consideration of the possibility of combining the roles of global quality and quantity monitoring.</p> <p>To improve the feedback mechanisms and process so as to better ensure the identification and rectification of missing data, station outages and specific quality issues.</p> <p>Include consideration of the possibility of combining the roles of global quality and quantity monitoring.</p> <p>2nd workshop to be held in 3rd quarter 2014 – Ch-ET-SBO will attend.</p>

No. 1	Task	Deliverable/Activity	Due	Responsible	Impacted ETs	Status	Comment
	<p>5) In consultation and collaboration with TT-WQM, develop and revise QM and QMon regulatory material and guidelines for inclusion in WIGOS and GOS regulatory materials.</p> <p>6) Contribute to the drafting work of TT-WRM in collaboration with SG-RM and provide GOS-related feedback through SG-RM on TT-WRM documentation.</p>	<p>monitoring of land, surface-based observing systems of the GOS. 4e) Update appropriate manuals and guides based on the outcomes of this activity. 4f) Assist IPET-WIFI in reporting to CBS</p> <p>[1. Revised international structure and framework for international observations monitoring 2. Updated regulatory material on Qmon of land surface-based system of the GOS]</p> <p>5a) Liaise with ET-SBO and ICT-GDPF re appropriate location for regulatory material relating to monitoring of the GOS by NWP.</p> <p>6a) Provide feedback to TT-WRM on current draft version of the Manual on WIGOS with respect to quality monitoring aspects.</p>	<p>2016 (CBS)</p> <p>Mar 2014</p>	<p>SG-QM</p> <p>SG-QM</p>	<p>ET-SBO ET-ABO IPET-GDPF</p> <p>TT-WRM</p>	<p>5%</p> <p>50%</p>	<p>Take the lead in drafting QM material on GOS for Tech Regs (incl Common Elements of Surface.Based Obs Systems) and WIGOS Manual.</p> <p>Task leader will participate in TT-WRM teleconferences.</p> <p>This task is a contribution to WIP Activity 5.1.1</p>

No. 1	Task	Deliverable/Activity	Due	Responsible	Impacted ETs	Status	Comment
6.	1) describe the standard practices and recommended practices for collecting observations, applicable to instruments and methods of observation with a focus on the GOS	1.1) existing standard practices and recommended practices, described in a manner suitable for inclusion in WIGOS regulatory material (TRs or Manual on WIGOS)	Nov 2013	Kurz IPET-WIFI Members	CIMO ETs (CIMO Guide Ed Board, Standardization)	100%	An annual Activity
		1.2) proposed new standard practices and recommended practices, described in a manner suitable for inclusion in WIGOS regulatory material (TRs or Manual on WIGOS)	Dec 2014		TT-WRM SG-RM	ongoing	
	2) provide guidance to Members on how to implement those standard and recommended practices	2.1) identify and if necessary further develop guidance on how to implement those existing standard and recommended practices, described in a manner suitable for inclusion in a relevant Guide (WIGOS, GOS, CIMO or other guidance material).	Nov 2013			100%	
		2.2) guidance on how to implement the proposed new standard and recommended practices, described in a manner suitable for inclusion in a relevant Guide (WIGOS, GOS, CIMO or other guidance material).	Dec 2014			Ongoing	
		2.3 maintain a watching brief on existing guidance material	Dec 2014				An annual Activity

No. 1	Task	Deliverable/Activity	Due	Responsible	Impacted ETs	Status	Comment
		with a view to identifying candidates which have become ready to be elevated to the WIGOS regulatory material as observing systems mature.				Ongoing	
7.	Provide technical advice and guidance on the GOS-related content requirements of the WIR with emphasis on SORT.	1 Review overall GOS-related content of the WIR and provide feedback as required. 2 Provide input to SORT, with emphasis on GOS-related WIGOS regulatory and guidance material. 3. Coordinate guidance on WIR content with other OPAG-IOS ETs	Dec 2014 Dec 2014 Dec 2014	Dibbern Members of IPET-WIFI	ICT-IOS and relevant ETs	Ongoing 10% Ongoing	
8.	1) Compile and provide input to the development of WIGOS (interpretation) metadata, focusing on the GOS component. 2) Compile and provide input to the development of	1.1 GOS input provided to ICG-WIGOS TT-WMD 1.2 Review and provide feedback on the Core Metadata list developed by TT-WMD, prepare populated examples (e.g. for surface station, radar, etc.) 1.3 Seek feedback on 1.2 from the technical experts across all areas of OPAG IOS. 2.1 drawing on input from the technical experts across all areas of OPAG IOS, present proposals or options to TT-WMD for approaches for	1.1 Jun 2013 1.2 Nov 2013 1.3 Sep 2014 2.1 Jun 2014	Monnik Members of SG-WMD	TT-WMD	DONE 80% 50% 0%	

No. 1	Task	Deliverable/Activity	Due	Responsible	Impacted ETs	Status	Comment
	approaches for gathering, storing and exchanging WIGOS metadata, focusing on the GOS component. This should lead to a number of standard practices and recommended practices for Members to follow.	gathering, storing and exchanging WIGOS metadata, focusing on the GOS component. 2.2 suggest options for standard and recommended practices, and for specific arrangements for (meta)data entry to the WIR. 2.3 Consider options for a staged approach for the submission and making available of metadata.	2.2 Nov 2014 2.3 Mar 2015				With a view to inclusion in the 2016 version of the Manual on WIGOS
9.	1) Contribute to the development of a WIGOS capacity development strategy. 2) Contribute to WIGOS capacity development, as required.	1) Review and provide feedback to ICG-WIGOS on draft WIGOS Capacity Development Strategy. 2) Assist in the organization and conduct of WMO seminars/workshops on the benefits of regional cooperation (such as for design, implementation and management of observing systems).	Oct 2013 2014-2015	Zhao IPET-WIFI Members	ICT-IOS	100% 0%	

No. 1	Task	Deliverable/Activity	Due	Responsible	Impacted ETs	Statu s	Comment
10	1. Contribute to the development of a WIGOS Communications and Outreach Strategy (WCOS) and plan 2. Contribute to WIGOS communication and outreach activities	1. Provide feedback to ICT- IOS on the WIGOS Communications and Outreach Strategy (WCOS) and plan 2. Enhance understanding of WIGOS and its benefits at appropriate WMO meetings.	Jun 2013 Ongoing	Zhao All IPET-WIFI Members		100% ongoi ng	

NOTES:

1. More work required on Impacted ETs column. Indicate the way in which the impact occurs (e.g. Consult, Inform, Advise, Consider Input from). Action for Task Leaders.

APPENDIX V

PROPOSED CHANGES TO THE TERMS OF REFERENCE OF THE EXPERT TEAM ON WIGOS FRAMEWORK IMPLEMENTATION MATTERS (IPET-WIFI)

Last updated: 21/03/2014

(To Be Submitted for Approval by CBS-XVI)

- (a) Address integration aspects of WIGOS as defined in the WIGOS Framework Implementation Plan, **based on advice from ICG-WIGOS**;
 - (b) Provide technical advice, guidance, practices and procedures for WIGOS Framework Implementation, in collaboration with CIMO; with priorities to be given to **the GOS-related component of:**
 - (j) WIGOS Regulatory Material (such as WIGOS Manual, GOS Manual and Guide), in collaboration with the relevant WMO Programmes and TCs;
 - (ii) Standards for basic WIGOS metadata (e.g., those agreed for international exchange and for WIGOS Operational DB), including the access to WIGOS metadata;
 - (iii) WIGOS Quality Management, including monitoring;
 - (iv) WIGOS Information Resource **in collaboration with other OPAG-
IOS Expert Teams (e.g. IPET-OSDE, ET-SUP, ET-SBO)**;
 - (v) , WIGOS standards and best practices;
 - (vi) Capacity development, education and outreach strategy;
 - (c) The IPET WIFI is envisaged to encompass three sub-groups (SGs), each to be activated as/when required:
 - (i) Sub-group on Regulatory Material;
 - (ii) Sub-group on Metadata;
 - (iii) Sub-group on QM.
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