Rolling Review of Requirements (RRR)
1st Introductory workshop

(RRR-Wrkshp-1, Virtual meeting, 17 May 2023)

Reference Guide for PoC and Coordinators

(Krunoslav Premec, SO/ONM)

WORLD METEOROLOGICAL ORGANIZATION

1873 2023 IMO-WMO

Introduction

- *RRR process strongly depends and relies on a **dedicated engagement of PoC and Coordinators**.*
- *PoC and Coordinators **play vital roles** in the RRR process.*
- *Coordinator is a **lead author** and PoCs **co-authors** of SoG.*
- *PoC is **the conduit** to the RRR for input and feedback from the entire stakeholder community for AA, through AA owner.*
- *Information on input and feedback processes must **be provided to the stakeholder community, including Members, RAs, and TCs**.*
- ***Contribution of the relevant communities** to the compilation of the observational requirements is **the key** to **the effective implementation** of the RRR process.*

RRR AA PoC - Terms of Reference

The **PoC of an Application Area** is tasked to:

(a) Collect, record and maintain observational user requirements of the Application Area in the OSCAR/Requirements database;

(b) Conduct a critical review and gap analysis for the Application Area by comparing observing capabilities with the observational user requirements of the Application Area, as well as by considering the results from impact studies and applying their own expert judgement;

(c) As a representative of the Application Area owner, promote and maintain active and effective communication mechanisms to obtain input and feedback from across the Application Area stakeholder community including in particular Member countries and Regional Associations;

(d) Liaise in her/his work with the body, which is the RRR owner of the Application Area, and seek concurrence of that community with the observational user requirements in OSCAR/Requirements and the result from the critical review and gap analysis;

(e) Provide input to the Coordinator of the Earth System Application Category to which the Application Area belongs, and contribute to the development of that Earth System Application Category SoG, including the critical review;

(f) Respond to requests for information from the JET-EOSDE as needed.

- The PoCs are designated by the bodies identified as the owners of the Application Areas.

RRR ESAC Coordinator - Terms of Reference

The **Coordinator for an Earth System Application Category** is tasked to:

(a) Coordinate with and guide the PoCs of the relevant Application Areas, to obtain their expert contributions to the development of the SoG (gap analysis with recommendations on how to address the gaps) of the Earth System Domain;

(b) As lead author, complete the drafting and submission of the SoG of the Earth System Application Category;

(c) Consult with relevant bodies and respond to requests for information from the JET-EOSDE as needed;

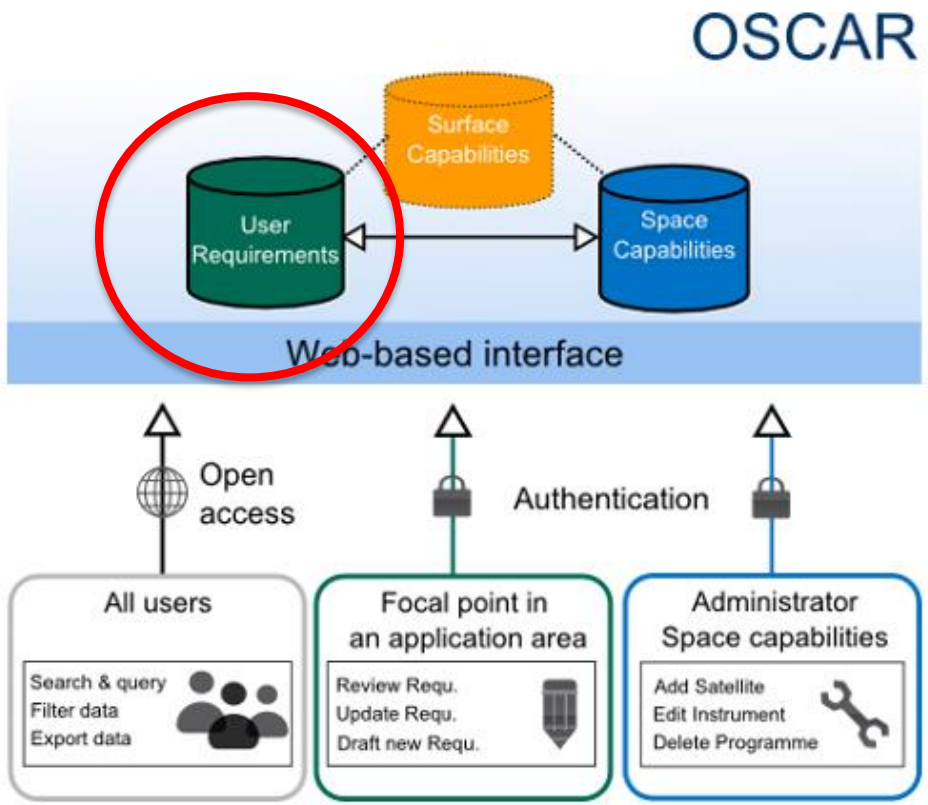
(d) Submit the SoG and future updates to the Chair of the INFCOM Joint Expert Team on Earth Observing System Design and Evolution (JET-EOSDE) for his/her review and submission to the JET-EOSDE for discussion; SoGs are eventually recommended by the Chair of JET-EOSDE and/or the JET-EOSDE meetings to the president of INFCOM, who in consultation with the management group will approve it.

- The Coordinator is selected from amongst the PoCs of the Application Areas in the relevant Earth System Application Category, proposed by them through JET-EOSDE and SC-ON, and then appointed by the Infrastructure Commission President in consultation with the management group.

OSCAR

The Observing System Capabilities Analysis and Review (OSCAR) tool provides three separate databases:

- OSCAR/Requirements,
- OSCAR/Space, and
- OSCAR/Surface.



OSCAR/Requirements

OSCAR

Observing Systems Capability Analysis and Review Tool

Home | Observation Requirements | Space-based Capabilities | Surface-based Capabilities | Analysis

Overview | Variables | Requirements | Layers | Themes | Application Areas

Application areas

The table below lists all application areas and the respective focal points maintaining requirements for these. For any enquiries or questions on particular requirements recorded in OSCAR, please contact the focal points directly, where an email-address is provided.

Name	Focal Point	Respons. Org.	Description	Earth System Application Category
1.1 Sun, Heliosphere and Solar Wind Forecasting and Monitoring	Nicole Vilmer nicole.vilmer@obspm.fr	WMO		1. Space Weather Applications
1.2 Energetic Particle and Magnetosphere Forecasting and Monitoring	Sergio Dasso sergio.dasso@gmail.com	WMO		1. Space Weather Applications
1.3 Ionosphere, Thermosphere and Geomagnetic Field Forecasting and Monitoring		WMO		1. Space Weather Applications
2.1 Global Numerical Weather Prediction and Real-time Monitoring	Kozo Okamoto kokamoto@mri-jma.go.jp	WMO	Global Numerical Weather Prediction	2. Atmospheric Applications
2.10 Atmospheric Disaster Risk Reduction	Taoyong Peng tpeng@wmo.int	WMO		2. Atmospheric Applications
2.2 High-Resolution Numerical Weather Prediciton	Alexis Doerenbecher alex.doerenbecher@meteo.fr	WMO	High Resolution Numerical Weather Prediction	2. Atmospheric Applications

OSCAR/Requirements

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OSCAR/Requirements/AA

OSCAR

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Overview | Variables | Requirements | Layers | Themes | Application Areas

Application: 2.1 Global Numerical Weather Prediction and Real-time Monitoring

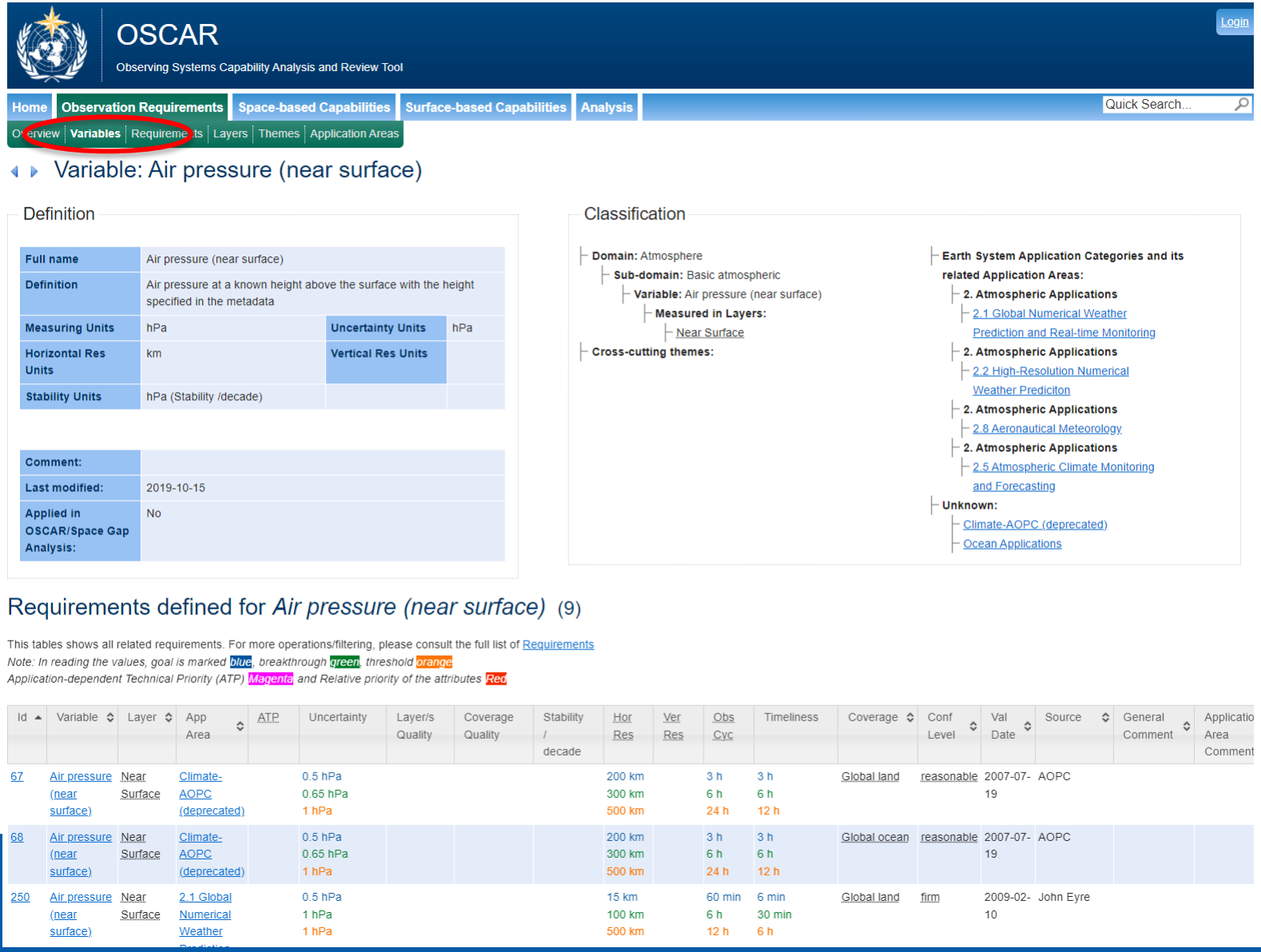
Details

Name	2.1 Global Numerical Weather Prediction and Real-time Monitoring
Description	Global Numerical Weather Prediction
Corresponding Institution	World Meteorological Organization
Contact Person	Kozo Okamoto kokamoto@mri-jma.go.jp
Earth System Application Category	2. Atmospheric Applications

Variables measured in this Application Area

Subdomain	Variables		
Basic atmospheric	Air pressure (near surface) Atmospheric temperature Wind (horizontal) Wind vector (near surface)	Air specific humidity (near surface) Specific humidity Wind (vertical)	Air temperature (near surface) Integrated Water Vapour (IWV) Wind speed (near surface)
Clouds and precipitations	Accumulated precipitation (over 24 h) Cloud drop effective radius Cloud liquid water (CLW) Precipitation intensity at surface (liquid or solid)	Cloud base height Cloud ice Cloud liquid water (CLW) total column Precipitation intensity at surface (solid)	Cloud cover Cloud ice Total Column Cloud top height Cloud type
Aerosols and radiation	Aerosol column burden Downward long-wave irradiance at Earth surface Short-wave cloud reflectance	Aerosol mass mixing ratio Earth surface short-wave bidirectional reflectance Upward short-wave irradiance at TOA	Downward short-wave irradiance at Earth surface Fraction of Absorbed PAR (FAPAR) Long-wave Earth surface emissivity Upward spectral radiance at TOA Upward long-wave irradiance at TOA

OSCAR/Requirements/Variable



OSCAR

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Variable: Air pressure (near surface)

Definition

Full name	Air pressure (near surface)		
Definition	Air pressure at a known height above the surface with the height specified in the metadata		
Measuring Units	hPa	**Uncertainty Units**	hPa
Horizontal Res Units	km	**Vertical Res Units**	
Stability Units	hPa (Stability /decade)		

Comment:	
Last modified:	2019-10-15
Applied in OSCAR/Space Gap Analysis:	No

Classification

- **Domain:** Atmosphere
  - **Sub-domain:** Basic atmospheric
    - **Variable:** Air pressure (near surface)
      - **Measured in Layers:**
        - Near Surface
- **Cross-cutting themes:**

- **Earth System Application Categories and its related Application Areas:**
  - **2. Atmospheric Applications**
    - 2.1 Global Numerical Weather Prediction and Real-time Monitoring
  - **2. Atmospheric Applications**
    - 2.2 High-Resolution Numerical Weather Prediciton
  - **2. Atmospheric Applications**
    - 2.8 Aeronautical Meteorology
  - **2. Atmospheric Applications**
    - 2.5 Atmospheric Climate Monitoring and Forecasting
- **Unknown:**
  - Climate-AOPC (deprecated)
  - Ocean Applications

Requirements defined for *Air pressure (near surface)* (9)

This tables shows all related requirements. For more operations/filtering, please consult the full list of Requirements

Note: In reading the values, goal is marked blue, breakthrough green, threshold orange

Application-dependent Technical Priority (ATP) Magenta and Relative priority of the attributes Red

Id	Variable	Layer	App Area	ATP	Uncertainty	Layer/s Quality	Coverage Quality	Stability / decade	Hor Res	Ver Res	Obs Cyc	Timeliness	Coverage	Conf Level	Val Date	Source	General Comment	Application Area Comment
67	Air pressure (near surface)	Near Surface	Climate-AOPC (deprecated)		0.5 hPa 0.65 hPa 1 hPa				200 km 300 km 500 km		3 h 6 h 24 h	3 h 6 h 12 h	Global land	reasonable	2007-07-19	AOPC		
68	Air pressure (near surface)	Near Surface	Climate-AOPC (deprecated)		0.5 hPa 0.65 hPa 1 hPa				200 km 300 km 500 km		3 h 6 h 24 h	3 h 6 h 12 h	Global ocean	reasonable	2007-07-19	AOPC		
250	Air pressure (near surface)	Near Surface	2.1 Global Numerical Weather Prediction		0.5 hPa 1 hPa 1 hPa				15 km 100 km 500 km		60 min 6 h 12 h	6 min 30 min 6 h	Global land	firm	2009-02-10	John Eyre		

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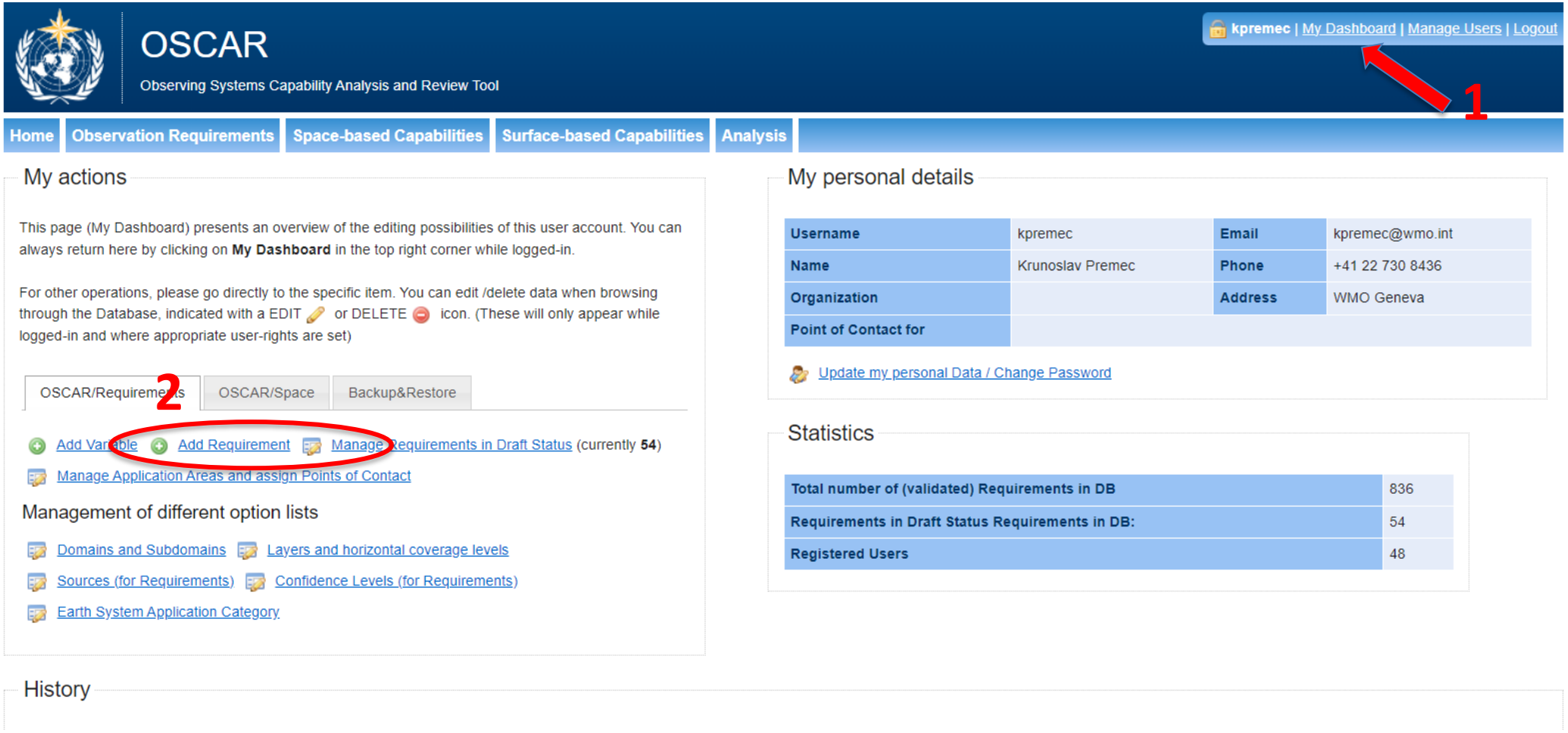
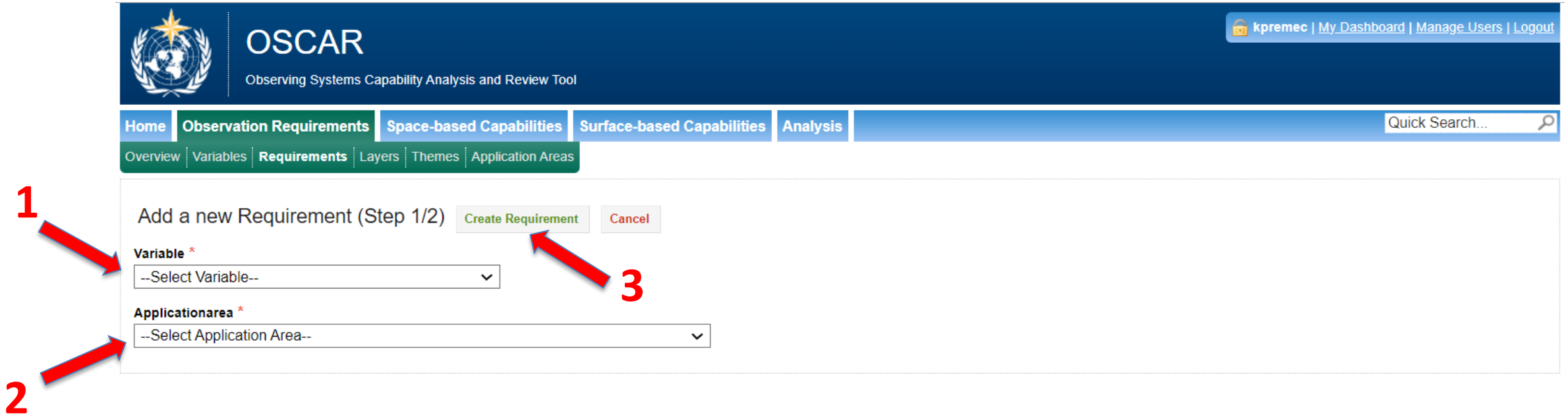
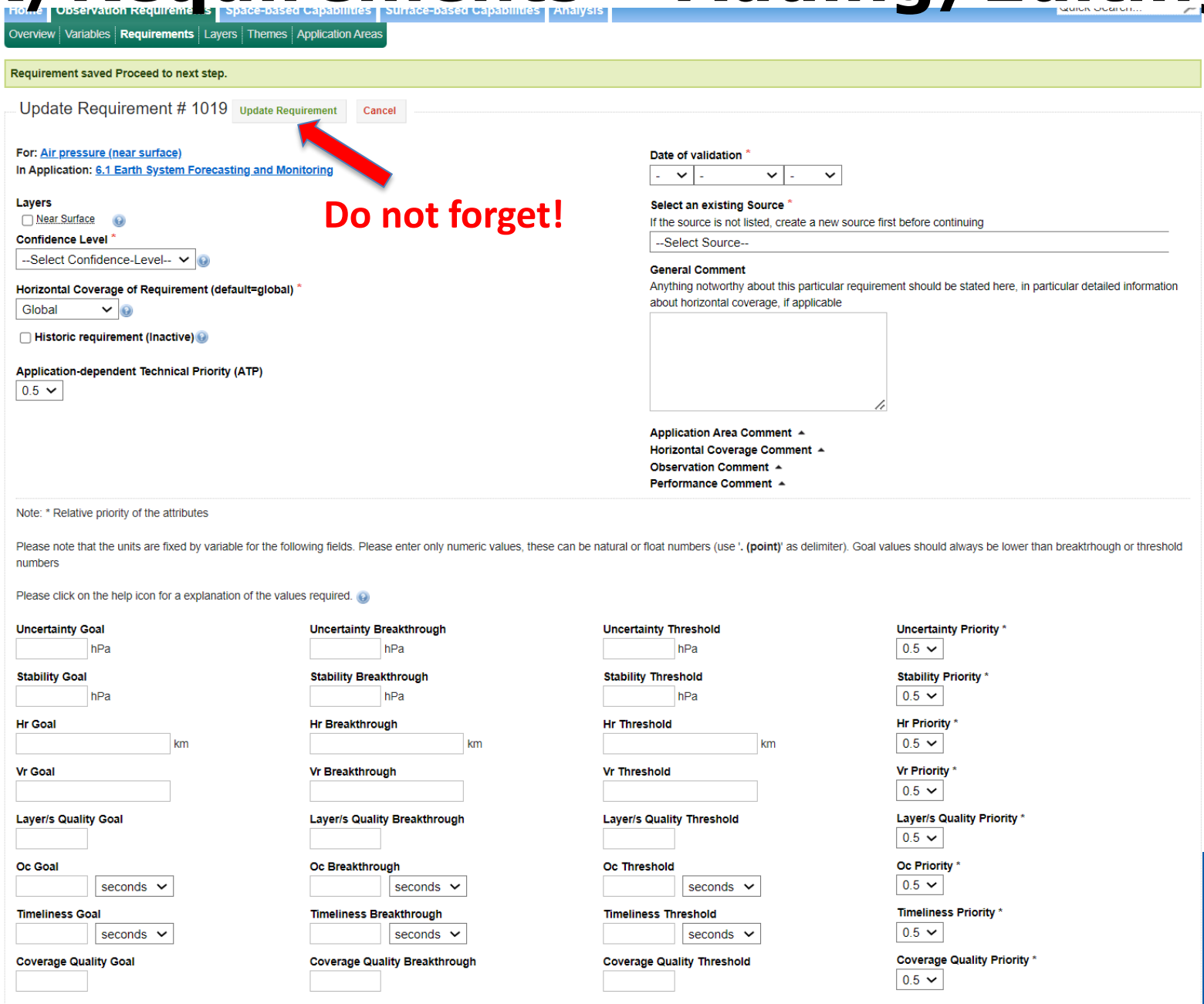
OSCAR/Requirements - Adding/Editing (1)



OSCAR/Requirements – Adding/Editing (2)

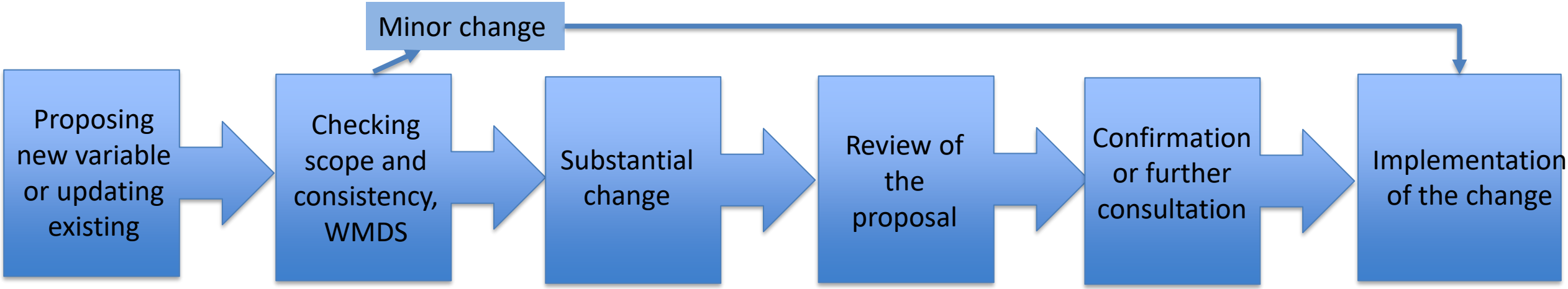


OSCAR/Requirements – Adding/Editing (3)



OSCAR/Requirements updating Process

(New variables or changes to the attributes of a variable)



PoC, (AA Owner)

OSCAR/Req Admin

OSCAR/Req Admin
Consult WMDR, JET-EOSDE chair

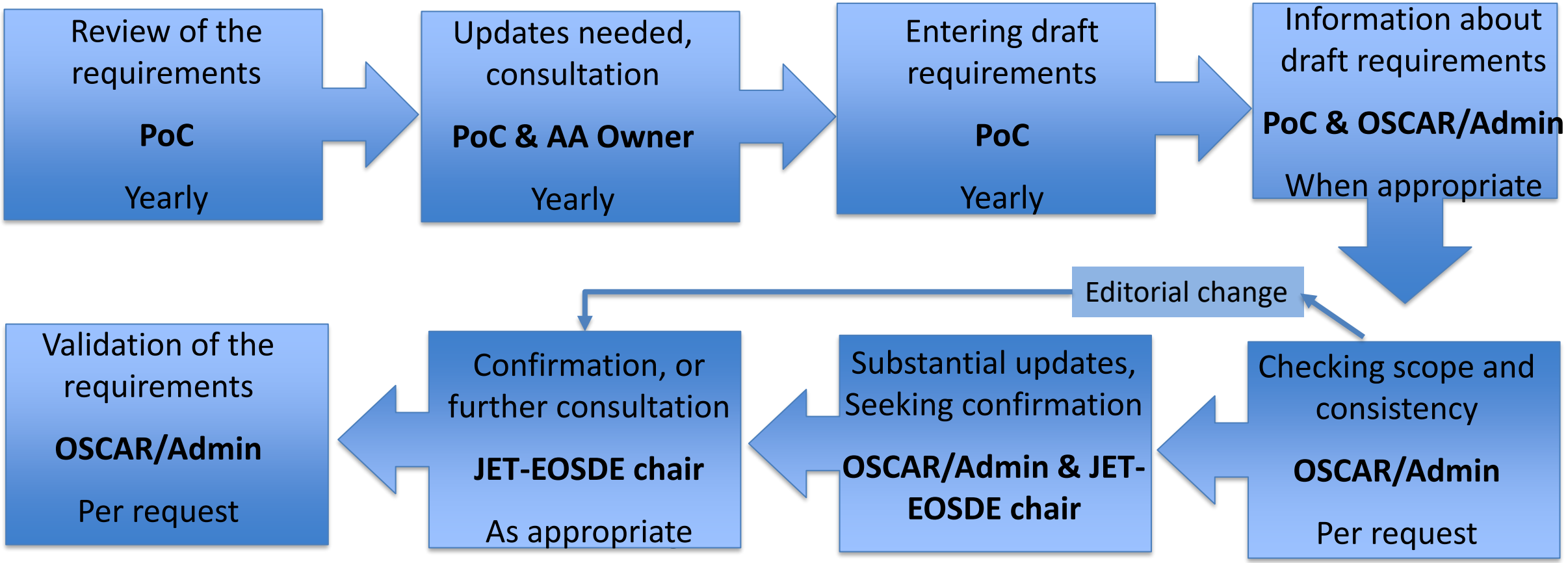
JET-EOSDE chair,
JET-EOSDE,
TT- WIGOSMD chair

TT- WIGOSMD chair,
TT-WIGOSMD

OSCAR/Req Admin

OSCAR/Requirements updating Process

(Requirements of existing variables)



Procedure for update, validation and approval SoG within RRR

1) ESAC Coordinator, in consultation with PoCs, reviews existing or drafts new SoG;
2) ESAC Coordinator refers draft SoG to JET-EOSDE Chair, with copy to the WMO Secretariat;
3) JET-EOSDE chair decides on the review process (at JET-EOSDE meeting or by correspondence);
4) JET-EOSDE chair refers the comments to ESAC Coordinator;
5) ESAC Coordinator, in consultation with the PoCs, updates the draft accordingly;
6) ESAC Coordinator refers draft SoG to JET-EOSDE Chair, with copy to the WMO Secretariat;
7) JET-EOSDE chair concurs with the revised draft, or requests further revision from ESAC Coordinator;
8) JET-EOSDE chair requests SC-ON Chair submission of SoG to P-INFCOM for review/approval on behalf of INFCOM-MG;
9) P-INFCOM approves SoG or requests further revisions via JET-EOSDE;
10) WMO Secretariat updates the WMO documentation (website, etc.) with the new SoGs; and
11) At each JET-EOSDE meeting, the WMO Secretariat reports on changes since the last meeting.

ESAC SoG - Template

(Contributors: name of Coordinator and PoCs who contributed to the SoG)

(Version number, approval status, and date)

1. Introduction [1/2 to 1 page]

2. AAs

2.1 The considered AAs and their prioritization [1/2 page]

2.2 Summary of key variables and identified key gaps [1/2 page]

3. Recommendations on how to address the gaps [1 page]

Annex 1: Gap analysis for ESAC AAs

Annex 2: References

GAP Analysis for AA - Template

Type of Application Area (tick one or more boxes)	Forecasting	☐
	Monitoring	☐
	Integrated product	☐
	Direct use of observations for services	☐
Point of Contact (Name, Country)		
Application owned by (group/body)		
Status of observational user requirements in OSCAR/Requirements		
Date of gap analysis		

This box shall briefly describe the application area and its observational user requirements.

No.	Required Variable (and vert./horiz. domain/s)	Type of gap	Gap description, impact and how it could be addressed	Comments, clarifications, phenomenon observed
1				
2				
3				
4				
5				

Useful Templates

(Available in the Reference Guide for PoC and Coordinators, but also directly from RRR website)

Annex 2. PoC and Coordinator roles: Work planning

Annex 3. PoC and Coordinator roles: Communicating with your Application Area “owner”

Annex 4. PoC and Coordinator roles: Coordination amongst PoCs

Annex 5. PoC and Coordinator roles: Consulting with Stakeholders

Annex 6. PoC and Coordinator roles: Assessing observation impact studies

Annex 9. PoC and Coordinator roles: Further notes

Useful Links

- The Rolling Review of Requirements process (2023 update)
- OSCAR / Requirements database
- Terms of Reference for Points of Contact (PoCs) and Coordinators
- Statement of Guidance (SOG) template
- Gap Analysis for ESAC Application Area template
- Example for Analysis (Global NWP)
- Reference Guide for PoCs and ESAC Coordinators
- RRR process (legacy version; until May 2023)

Contact us

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kpremec@wmo.int

Thank you

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