

Working group 5: Verification/Calibration

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Number of participants: ~15

Recommendations on:

- 1. Datasets**
- 2. Verification-Calibration processing**

I. Datasets

1. Additional variables (**model outputs**, ie model levels) needed for specific applications
2. New products required: model **climatologies** and anomalies
3. Observations are crucial: better **observation coverage**/access to the data
4. Encourage convergence between forecast and **reforecast** methodologies
5. Explore **optimal balance** number of members/number of years for different applications

II. Verification-Calibration

1. Need for WMO **guideline** on sub-seasonal verification (including necessary calibration steps)
2. Define **best practices** for both verification and calibration
3. Encourage **communication with the users** about product definition, target, limitation of the forecast, systematic errors, meaning of the verification metrics, risk,... but start with defining the **question to be answered**
4. Inform about the quality of the **observation** dataset: estimate of uncertainties and methodology to account for them
5. Encourage the share of **software**
6. Promote seamless verification with (spatial and temporal) scale adaptation as a function of the lead time and “**seamless** calibration” with blending/post-processing possibly at different steps of the product generation
7. (Re)Explore **machine learning** for calibration and model diagnostics (with care)