



WMO



# WMO DATA CONFERENCE

EXCHANGE OF EARTH SYSTEM DATA  
IN THE 21<sup>ST</sup> CENTURY

#WMOData

16 - 19 NOVEMBER 2020  
VIRTUAL CONFERENCE

## Key Messages (preliminary) from the workshop on theme “Data exchange for earth system monitoring and prediction” on 28 October 2020:

- Need for sharing all observations, need to increase ocean data coverage, including data from shelves and coasts, vertical constituent profiles, boundary currents, etc.; land (especially snow ob exchange); atmosphere (especially composition and wind, but other variables in data sparse areas), etc.
- As ocean observations are not centrally coordinated and include many gaps, integration of observing systems need to involve diverse communities including fisheries, posing technological and organizational challenges
- Enhanced communication and coordination between modelling/data assimilation experts and observation/network experts is essential for the design and interpretation of observing system evaluation, especially to extract messages on the ability of the ocean observing system to resolve different spatio-temporal processes
- Observing system evaluation requires infrastructures and resources --> importance to strengthen the capabilities of operational & climate centres to assess the impact of present & future observations & improve observations in models
- There is need to get covered consistently for key variables by involving regional/local communities --> essential role of WMO to demonstrate potential value of monitoring and predicting living ocean and advocating and convincing diverse communities to get on board



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## Key Messages (preliminary) from the workshop on theme “Data exchange for earth system monitoring and prediction” on 28 October 2020:

- Data policy actions must be taken to guarantee the continued availability of all essential observational data to all WMO Members, and to ensure a continued adherence to WMO data sharing principles irrespective of the data origin [from the WMO Implementation Plan for the Evolution of Global Observing Systems]
- In addition to Observing System Simulation Experiments (OSSEs), Earth System Ensemble of Data Assimilations enables us to assess impact of future systems and networks and can be used to inform decision making on where to invest resources
- Difficult to impose strict limitation on «Earth system» to encompass physical components alone; impact-based forecasting is driving us in a different direction. We need to distinguish between physical impacts that are closely related to the Earth System variables, and societal impacts that are not.
- WMO encouraged to provide recommendations also on national data exchange
- WMO requirements would be helpful in the articulation of an “OBON” extension of GBON into the marine domain
- Strong partnership among diverse communities at international/regional/local levels is required --> WMO network of national weather services and connections to academia, other organizations, e.g. IOC-GOOS, etc is crucial here