

Met Office Seamless Global Modelling workshop

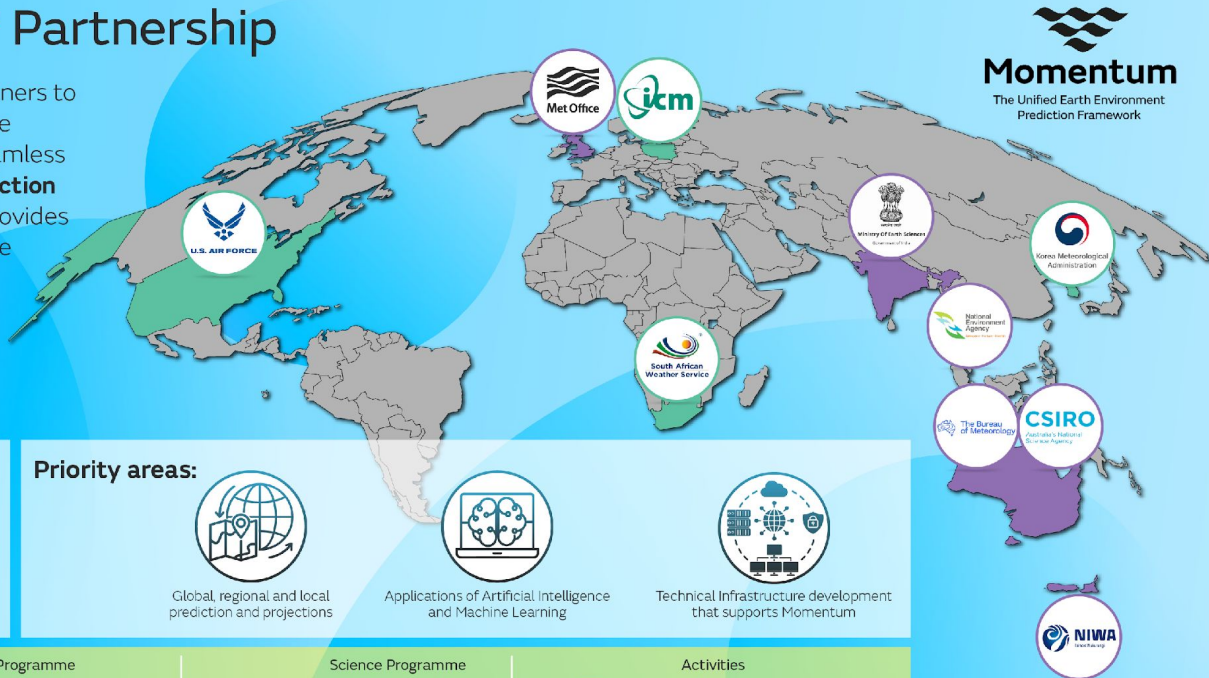
Bristol, 3-6 June 2025

Welcome – Katy Hill, Met Office Foundation Science Associate Director



The Momentum[®] Partnership

Bringing together international partners to use and effectively contribute to the development of a world leading seamless **Unified Earth Environmental Prediction Framework, Momentum[®]**, which provides foundations for weather and climate science and services



Momentum
The Unified Earth Environment Prediction Framework

Benefits:

By leveraging the diverse strengths and specialisations of all partners we enable a faster rate of improvement of Earth System prediction services than any single organisation can make

Priority areas:



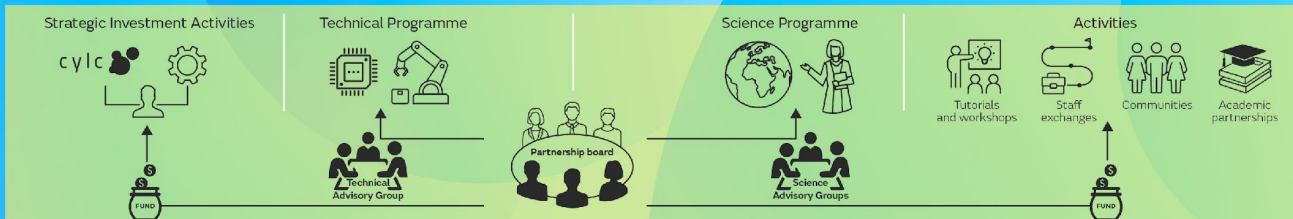
Global, regional and local prediction and projections



Applications of Artificial Intelligence and Machine Learning



Technical Infrastructure development that supports Momentum



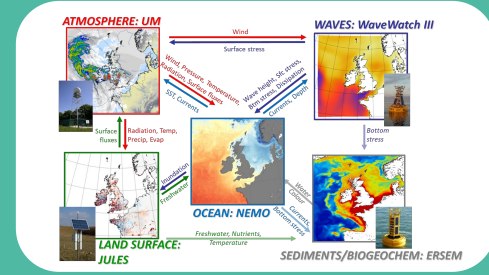
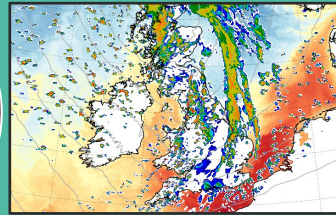
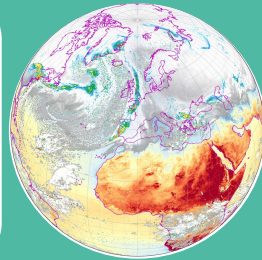
Key
■ Core partner
■ Associate partner

Through funding of Strategic Investment and Leadership Activities, we build a robust Partnership with both scientific and technical infrastructure programmes

Foundational Capability

Improved Seamless Environmental Prediction Frameworks

Contribution from GC, RAL/RC, NGMS & modelling/observation frameworks



...to develop underpinning seamless **global and regional model frameworks** for use in ensemble predictions/projections across weather and climate timescales

Seamless modelling - now and into the Future

- The goal of seamless prediction has driven approaches for the last 5-15 years. Does it still hold as an aspiration?
- It has been shown to be really useful in model development but what about further along the delivery pipeline? Are seamless services across timescales a useful aspiration?
- Will AI/ML based prediction cause a divergence in approaches e.g. between weather and climate timescales?

Aims of the workshop

- Review the seamless model development and evaluation approach to ensure a sustainable and relevant process for the future of Seamless modelling across a range of modelling centres
- Share perspectives and solutions about upcoming challenges: evolving user requirements, ML, km-scale, capturing uncertainty...
- The workshop aims to result in a position paper for the status and future of Seamless Modelling

Practical information - Charline

- Fire evacuation: when a fire alarm sounds please head for the nearest fire exit which is lit up with a green sign and evacuate the building. Test fire alarm at 11:00AM on Tuesday morning.
- Wi-Fi is free of charge and can be connected when choosing Radisson Guest, this is also a secure network.
- The toilets can also be found on the second floor by the lifts where we have accessible toilets too.
- Coffee breaks provided in the hall, lunch on 1st floor in the restaurant
- Posters in breakout rooms during coffee breaks and lunch
- Social events:
 - Street art tour Tuesday at 17:30, Radisson Blu reception
 - Workshop Dinner Wednesday 19:00 Zaza Bazaar
- Interaction: hybrid event, exchange positively and encourage all to participate, meet new people!
- Discussion groups: 4 onsite, and 2-3 online
- Position paper outcome
- Organising committee: Julia, Harley, Alistair, David, Debbie, Andy, Charline