HPC for climate prediction

- **Global dynamical climate prediction** (time scales from months to several decades) requires the simulation of **large ensembles and a large number of start dates** (capacity).
- Skilful forecast systems also require **appropriate** (and expensive) **initialisation** (capability).
- **High resolution benefits climate prediction**, but more realistic climate models do not necessarily lead to more skilful predictions, additional experimentation is required.
- The ensemble and start date dimensions of climate prediction call for **simultaneous use of both capability and capacity**.
- **Operationalisation and timeliness** are major components of climate-prediction research.
- **Data sizes and dissemination are a major issue** due to the ensemble, start date and resolution dimensions.