



ECMWF: progress and plans

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The ECMWF 2016-2025 strategy sets out ambitious goals for the coming years, with plans to move towards seamless ensembles based on more complete Earth-system models and assimilation systems. Progress in this direction will be described, and some of the outstanding science challenges identified. Recent highlights, consistent with the seamless strategy include the incorporation of the same coupled ocean to all of the ECMWF forecast configurations from medium-range to seasonal, and the new seasonal system (SEAS5) now uses an atmospheric configuration which is more closely aligned than ever before with that used for medium-range and monthly prediction. The next upgrade, planned for summer 2019 promises significant improvements in forecast accuracy. These arise from a number of major developments, including the introduction of continuous data assimilation, enhancements to the ensemble of data assimilation and upgrades to the model physics. Looking further ahead, ECMWF also has a major focus on the adaptation of codes and techniques to work efficiently on computer architectures of the future. This effort will require continued close collaboration and partnerships across the traditional NWP community, but also an increased linkage between physical and computational science disciplines.