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Climate reanalysis developments at ECMWF

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We will review past and current reanalysis activities at ECMWF and describe our strategy for future climate reanalysis development. Traditionally ECMWF's global reanalyses of the atmosphere, ocean, land surface, and atmospheric composition have been closely tied to the development of its Integrated Forecast System (IFS), but have also served numerous users world-wide. ERA-Interim, an atmospheric reanalysis of the modern observing period from 1979, is widely used for research, climate monitoring, and model development. ERA-Interim gridded data products can be downloaded from the internet and continue to be updated close to real time. An ensemble of reanalyses of the 20th century based on surface-pressure and marine-wind observations is being produced in the context of the EU-funded ERA-CLIM project, in collaboration with many partners in Europe and elsewhere. Plans for a continuation of ERA-CLIM include the development of a coupled reanalysis of the Earth system, using a coupled atmosphere-ocean model, which will provide a consistent climate data set for atmosphere, land, ocean, cryosphere, including the carbon cycle.