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Progress on the implementation of the ECMWF Open Data roadmap and its challenges

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The European Centre for Medium-Range Weather Forecasts (ECMWF) is a major provider of weather information, and its products and weather data contribute to a broad range of activities in service provision and research. The use of this data is also crucial for the activities of protection of life and property by National Weather Services and, in case of emergencies, humanitarian agencies.

ECMWF recognises that open data is an essential tool to maximise socio-economic benefits of investments in weather and climate data production. Open data is also important to promote shared actions to mitigate the effects of climate change.

ECMWF has agreed a move to an open data policy, and this is taking place gradually. Over the last few years, a number of steps have been taken, such as:

- Applying the Creative Commons CC-BY-4 licence to all non-valid (historical) data in the Archive Catalogue for MARS as well as to static charts,
- Reducing the information cost for data,
- Introducing a limited redistribution scheme,
- Introducing small business discount for micro-organisations
- Releasing a subset of the real-time catalogue with open data policy and available through a free access service with supporting software and tools to adapt to FAIR principles.

The process toward an open data policy presents different challenges, for example the aspect connected to the reduction in the information cost revenue, but also the growing amount of data volume that will be served, leading to the need for an improvement of the types of accesses to data, the need to guarantee data interoperability, and the need for the data to be distributed together with the appropriate documentation and self-help information, to help the users to process data, derive information and form valuable conclusions.

ECMWF is committed to continue proceeding further towards an open data policy in the coming years. We will illustrate the proposed changes and associated challenges related to this transition, such as new open datasets and reductions in the cost of data. The general aim of these changes is

to continue promoting collaboration, innovation, and advancement within the meteorological and climate science communities while aligning with WMO guidelines.