



The New European Wind Atlas

Erik Lundtang Petersen
DTU Wind Energy, Denmark (erlu@dtu.dk)

Erik Lundtang Petersen, Ib Troen, Hans E Jørgensen, Jakob Mann,
Wind Energy Department, Technical University of Denmark,
Campus Risø, Frederiksborgvej 399, Roskilde Denmark, erlu@dtu.dk
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1. European wind resource assessment through a ERA-NET Plus project

1.1 The new EU Atlas

The Commission decided earlier this year to issue an ERA-NET Plus call for the creation and publication of a new EU wind atlas. The atlas will cover Member states as well as Member states' exclusive economic zones, both onshore and offshore. It involved the launch of a single joint call for proposals by promoters of national and/or regional programmes, thereby allowing a more efficient use of existing financial resources. Therefore the funding scheme is that of ERA-NET Plus which implies that at least 5 MS shall commit at least 1 million Euros each and the Commission tops up with on third of the MS contribution. Basically it is the MS research programmes that will execute the project but an important part of the project is to create "open project development platforms" with associated protocols allowing a wider range of scientists worldwide to contribute. The project has a duration of 5 years.

The decision on the new wind atlas was taken after several years of work by the European Wind Energy Technology Platform and the European Energy Research Alliances' Joint programme for Wind Energy.

2. Structure of the project

The project will be structured around three areas of work, to be implemented in parallel:

2.1 Creation and publication of a European wind atlas in electronic form, which will include the underlying data and a new EU wind climate database.

The database will at a minimum include: Wind resources and their associated uncertainty; Extreme wind; Turbulence characteristics; Adverse weather conditions; Predictability for short term prediction; Guidelines.

2.2 Development of dynamical downscaling methodologies and open-source models.

The developed downscaling methodologies and models will be fully documented and made public available and will be used to produce overview maps of wind resources and relevant data at several heights and a horizontal resolution down to 100 m. Uncertainty estimates for the models and the model chain will also be published and predictability analysis will be performed for short term forecasting predictability.

2.3 Measurement campaigns to build and validate the EU wind atlas.

At least five coordinated measurement campaigns will be undertaken and will cover at least complex terrains (mountains and forest), offshore, large changes in surface characteristics and cold climates. The campaigns will deliver high quality reference data on essential siting and load parameters.

3. Expected impact

Reduce technical risk and uncertainty in complex terrain and offshore conditions.

Create a standard for site assessment.

Develop a basis for improved spatial planning tools.

4. References

[1] A new EU Wind Energy Atlas: Proposal for an ERANET+ project.

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