

Deutscher Wetterdienst
Wetter und Klima aus einer Hand



The German Meteorological Service
Deutscher Wetterdienst





One stop-shop for weather and climate

The weather - and the climate, too, these days - is a favourite everyday topic of conversation around the world. Everyone is interested in the weather, and almost all areas of our lives are directly affected by the weather and climate. The staff of the Deutscher Wetterdienst (DWD), Germany's national meteorological service founded in 1952, are renowned experts in their field. The DWD has a nationwide, state-of-the-art infrastructure, with which it records, analyses and monitors the physical and chemical processes in the atmosphere. It also provides information on the entire range of meteorological and climatological developments and events in Germany to its partners and customers.

The core tasks are weather forecasting, issuing warnings on weather-related hazards, climate monitoring throughout Germany as well as the assessment of climate change and the provision of advice and guidance on climate change adaptation. As a federal authority under the department of the Federal Ministry of Transport and Digital Infrastructure (BMVI), the DWD offers both the general public and special user groups a great wealth of specialist services 24 hours 365 days a year. The DWD also operates the national climate archive, where long-term data series and climate records are stored as a basis for climate change research and monitoring.

The DWD's work is essentially founded on recording all accessible data on weather and climate. With more than 180 primary weather stations, both staffed and automatic, plus close to 1,800 stations run by

voluntary weather observers, the DWD's measuring network is one of the densest in the world. It also includes 48 stations that take continuous measurements for monitoring radioactivity in the air and in precipitation. Add to this a further 17 weather radar systems and the data collected by meteorological satellites, and weather observation coverage over Germany is quasi-complete. Day after day, the DWD's supercomputing centre receives, processes and stores more than half a million weather bulletins from Germany and all over the world, preparing them for use by public institutions, the industry, the media and, of course, the general public.

Meteorological warning management in Germany

One of the DWD's main tasks is to ensure constant improvement of meteorological prediction models. To this end, the DWD runs a research section of its own, making our forecasts increasingly reliable - a vitally important factor in order to best meet our statutory duty to protect the lives and property of the citizens in Germany. At the same time, the Deutscher Wetterdienst is responsible for co-ordinating the warning of meteorological hazards in the whole of Germany. The DWD's weather forecasts as well as its severe weather warnings are key components of the complex warning management system, which is primarily designed to warn disaster management organisations, such as fire brigades and the Federal Agency for Technical Relief (Technisches Hilfswerk, THW), and to support them with advice and information. This helps them to plan aid operations at an early stage to protect the population against weather hazards.

Quality, reliability and customer orientation

As the sole provider of the full range of services related to weather and climate, the DWD is a competent and reliable partner in Germany for both public and private partners. In winter, for example, weather forecasts and severe weather warnings from the DWD have a great impact: the road and motorway maintenance services use information provided by the DWD to prepare for snow and other winter hazards in good time and thus minimise the number of traffic jams and accidents. The same applies to the safety of aviation and shipping: knowing the weather conditions at the point of departure, at the destination and along the whole route is indispensable to ensure a safe flight or journey. Nowhere in Germany does a ship leave its port or an aircraft take off the ground without first checking the DWD's weather forecasts.

The DWD's biometeorologists issue heat warnings, pollen forecasts and UV index warnings. Being forewarned about weather-related threats to health enables people to take appropriate precautions. Agriculture is highly dependent on the weather - there is no doubt about that. The DWD's detailed forecasts allow for better planning of harvest dates, irrigation measures or pest and plant disease control. The data are available via the Internet, by fax or via the DWD's telephone call services.

DWD on the web

Detailed information about the DWD, the weather and severe weather situations as well as climate and climate change can be found on the Internet. Here is a short selection of links:

- www.dwd.de
- www.dwd.de/wetter
- www.dwd.de/warnungen
- www.dwd.de/klimaatlas
- www.dwd.de/gesundheit
- www.dwd.de/agrarwetter

You can also subscribe free of charge to receive our severe weather warnings: www.dwd.de/newsletter

The DWD not only is the number one address for weather forecasts, it also provides the fundamental climatological data required for long-term planning in the areas of construction and water management or the effective use of renewable energy sources. Authorities and institutions at all levels, local, regional and national, find here the scientifically sound advice and expert knowledge they need to ensure economical and ecologically sustainable planning, especially during times of climate change.

The increasing quality demands of our customers not only oblige us to supply high-value products and services, but also give us the daily incentive for further improvement of product quality, flexible customer orientation and profitability - to the benefit of the people and economy in Germany.

Internationally linked

Since weather does not stop at national borders, meteorology as well as the monitoring of weather and climate is not only a national issue. Pursuant to its statutory mandate, the DWD collaborates with the major meteorological institutions and research centres around the world. In close agreement with the Federal Government, it defends Germany's meteorological and climatological interests in the various intergovernmental and international organisations, such as the United Nations' World Meteorological Organization (WMO).

▼ View into DWD weather forecasting centre



The DWD at a glance

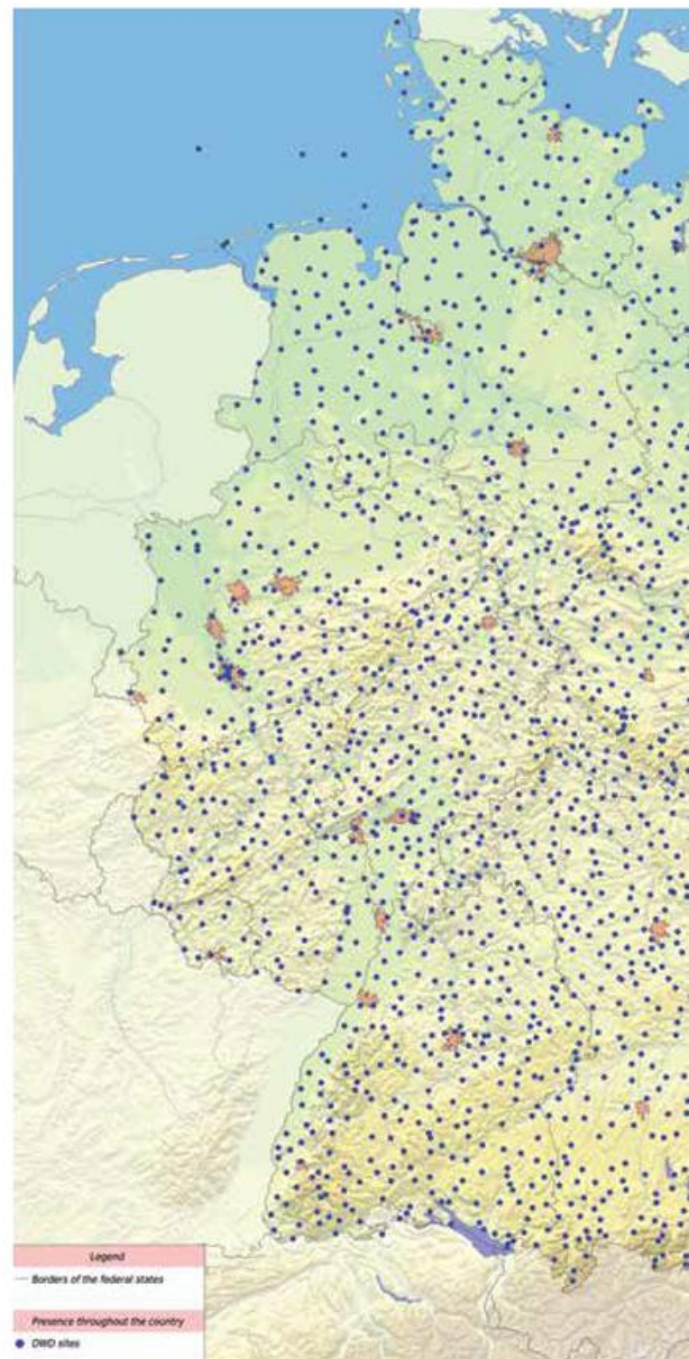
Presence

- Headquarters in Offenbach am Main
- 6 major branch offices (Hamburg, Potsdam, Leipzig, Essen, Stuttgart, Munich), some with more than 100 staff members
- 183 main weather stations (staffed and automatic)
- 48 stations where radioactivity is measured
- Approx. 1,780 stations run by voluntary weather observers
- More than 1,270 phenological observation sites
- 17 weather radar sites in Germany
- 2 meteorological observatories
- 2 staffed primary weather stations aboard research ships
- Close to 650 weather reporting stations aboard merchant ships
- 9 upper-air stations with around 7,500 radiosonde launches per year
- Use of several meteorological satellites

Budget in 2014

- Total budget (expenditure): the planned amount is more than 300 million euros (of which 114 million are contributions to international organisations, such as EUMETSAT).
- Available budget: 186 million euros
- Investments: more than 31 million euros
- Expenditure on staff: around 108 million euros
- Revenues (go directly to the federal budget): more than 51 million euros, of which some 43 million are fees for aeronautical meteorological services
- Around 2,500 staff members (civil servants and employees)

Due to the formation of the new German government in late 2013, the federal budget for 2014 will not come into force before July 2014 at the earliest. Therefore, the planned figures given here are provisional and may be subject to change.



FACTS

Showpiece Supercomputing centre

The Deutscher Wetterdienst and the Bundeswehr Geoinformation Centre jointly operate the German Meteorological Computing Centre at the DWD's headquarters in Offenbach. In its final configuration, which is scheduled to be completed in December 2014, the supercomputer, a Cray XC30 machine, will deliver a peak performance of 2×550 teraflops (which is the equivalent to 2×550 trillion computations per second or a capacity of over 30,000 standard PCs).



Work Results

- 90,000 forecasts and 30,000 weather and severe weather warnings
- More than 14,000 advisory statements on weather and climate as well as expert reports for public authorities, disaster control units and other customers
- Some 490,000 forecasts and warnings for aviation
- Around 43,000 individual telephone briefings for pilots
- Around 200,000 reports, warnings and advisory statements for marine shipping, coastal protection and offshore projects
- Participation in 50 large national and international climate and weather research projects
- Production of more than 15,000 products for climate monitoring
- Around 300 million climate data sets for research and teaching purposes

As of 2014

FACTS

Deutscher Wetterdienst - an attractive employer

The DWD offers a variety of interesting and challenging jobs in meteorological research and technology, weather forecasting, climate consultancy and administration. The DWD attaches great importance to helping its employees find a good balance between work and family in all phases of life. In 2011, the DWD was awarded with the 'job and family' (berufundfamilie®) certificate of the Hertie Foundation. The DWD's work-family balance package so far includes a multitude of working hours schemes, part-time and telework contracts, a parent-child office at the headquarters in Offenbach and two childcare places in a non-profit nursery at Offenbach. The DWD is committed to further optimising this range.

Job offers: www.dwd.de/stellen

Service provider with an international perspective

Data acquisition and data management

Observing weather and climate, recording, collecting and analysing all related data - all these activities form the basis of the DWD's work. Thanks to our measuring network providing full coverage of Germany, we can ensure a consistently high level of quality. In addition, we use weather bulletins and reports from all over the world. In return, of course, the DWD makes its data available to other national meteorological services and to the international meteorological scientific community for climate research purposes.

Weather forecasting and warning services

Based on both the wealth of data collected and all the intensive research activities, the experts at the DWD compile weather analyses and forecasts. Observing the atmosphere around the clock, they warn the public of any weather hazard that might be threatening. Furthermore, the DWD supplies not only Germany's armed forces, the Bundeswehr, but also research institutes, industry and the public with all the meteorological information they need.

Climate monitoring

One of the key statutory duties of the Deutscher Wetterdienst is to monitor and document climate and climate change. Among other things, the DWD hosts the national climate archive to store long-term climate data for the purpose of climate change research and which serves as a basis for the DWD's calculations of future climate change.

Consultation services

From meteorological expert reports to seasonal forecasts and individual, scientifically sound advice, the DWD offers a wide and varied range of services covering all of its areas of responsibility. Be it citizens, policy-makers or business people, anyone can receive the support they need from the professional experts at the DWD's weather forecasting, aeronautical meteorology, marine meteorological services, climate and environment consultancy, hydrometeorology, human biometeorology and agrometeorology units. Particularly in times of climate change, the expert reports from the DWD on the future climate in towns and cities are in great demand, above all in large conurbations. With their help, towns and cities will be able to take action on adaptation to climate change as early as possible.

International activities

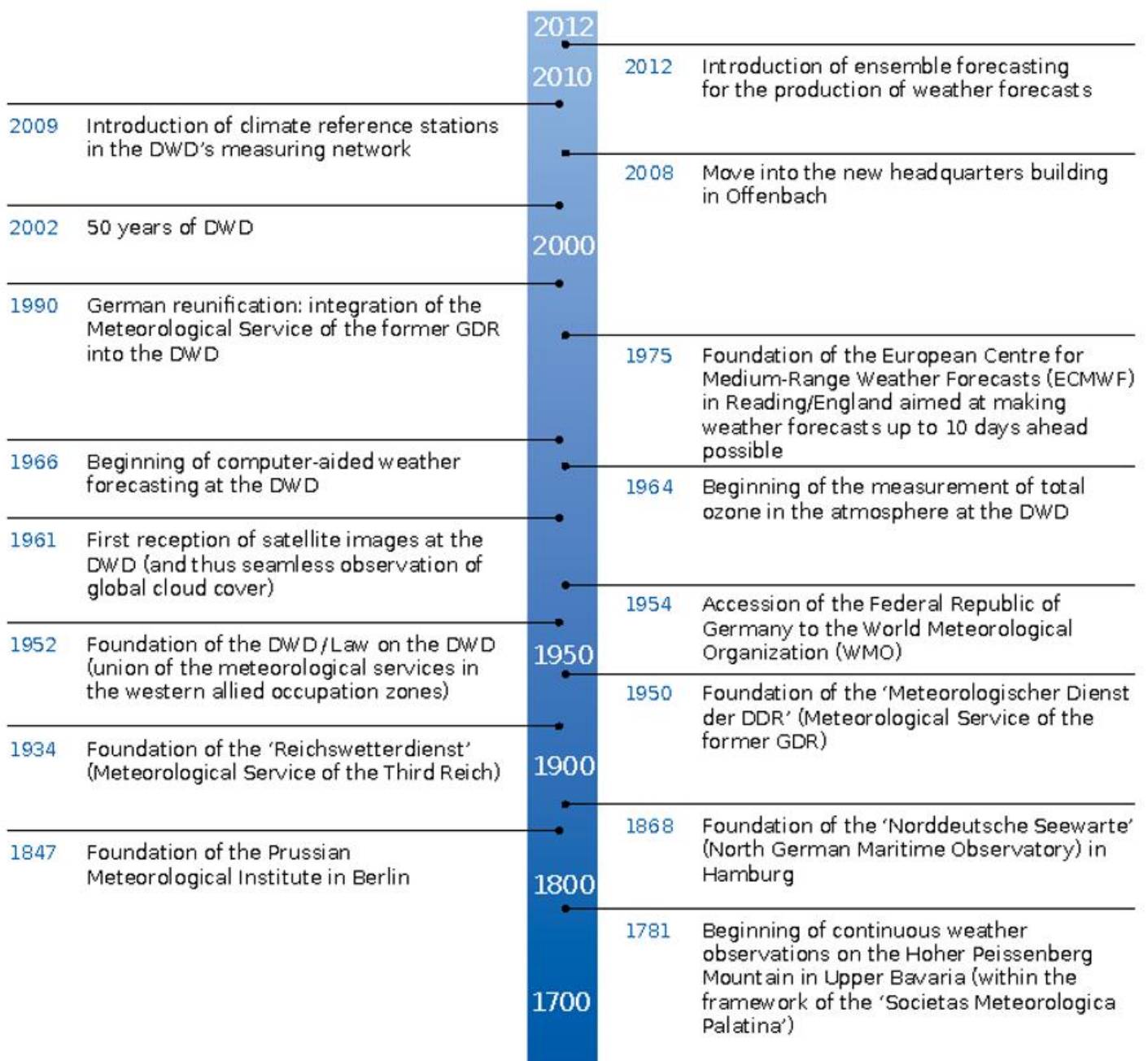
In its role as Germany's national meteorological service, the DWD is deeply involved in a large number of international working groups, programmes and institutions. It plays a particularly active role at the European Organisation for the Exploitation of Meteorological Satellites (EUMETSAT), the European Centre for Medium-Range Weather Forecasts (ECMWF, which also deals with seasonal weather forecasting) and the World Meteorological Organization (WMO). Acting as a Regional Telecommunication Hub for the worldwide exchange of data and operating a reference station within the Global Environment Monitoring Programme, the DWD fulfils important tasks for the international meteorological community. In addition to these tasks, the DWD hosts the Global Precipitation Climatology Centre (GPCC), which it operates in the name of WMO.





▲ DWD headquarters in Offenbach

Historical milestones



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