

# Weather and safety

DMI prepares forecasts that help enhance safety in many parts of society. DMI thus prepares around 200,000 weather forecasts and warnings each year.

## **THIS IS YOUR CAPTAIN SPEAKING...**

The airline captain's apparently simple information to passengers about the forthcoming flight is based on thorough preparations in DMI's Aviation Weather Service concerning the weather en route, the most comfortable, safest and most economical route, and the weather at the destination.

## **COASTAL RADIO STATIONS PROVIDE GALE WARNINGS**

For decades, the coastal radio stations have communicated DMI's forecasts and warnings to fishermen, the merchant navy and pleasure boats – a service that is still utilized despite newer more modern forms of communication.

In 1972, yet another service was launched – namely a ship routing service known internationally as World Wide Weatherrouting. This guides hundreds of ships on the seven seas, ensuring more rapid and safer journeys while concomitantly minimizing consumption of costly fuel – a clear advantage, especially on long journeys. In Greenland, DMI's Ice Observation and Warning Service is responsible for charting the sea ice and piloting ships through the icy marine waters.

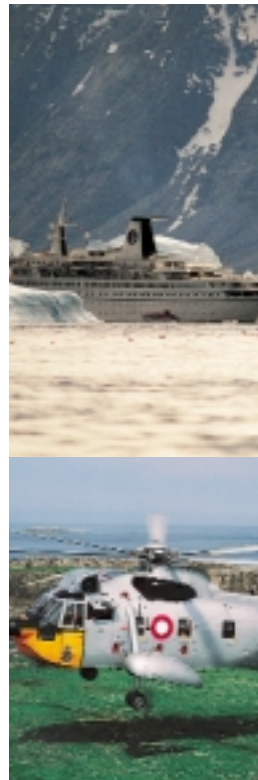
The offshore industry uses weather and wave forecasts to ensure safety and to avoid operational disturbances. The offshore industry also utilizes DMI's oil slick dispersion forecasts to determine their environmental impact and to combat pollution.

## **DANISH DEFENCE**

The Danish Navy Operative Command and the Danish Air Force Rescue Squadron are responsible for search and rescue operations in Danish marine waters. Information supplied by DMI helps ensure the safety of the helicopter missions, which are often carried out under extreme weather conditions. All other national and international operations carried out by the Danish armed forces also rely on meteorological services from DMI.

## **WARNINGS PREVENT ACCIDENTS**

The west coast of Denmark is the part of the country most at risk when ravaging storms raise the sea level. DMI helps minimize the damage by warning of storms several days in advance and calculating the maximum sea level up to a day in advance. During winter, DMI is always on the spot with warnings of slippery road conditions. Cooperation with the Danish Roads Directorate and the county authorities ensures that motorists are warned on the first day of winter frost. The slippery road warnings do not just enhance safety – they also protect the environment by reducing consumption of road salt.



*in the air*



## THE WEATHER AND COMMERCE

One of the commercial sectors most dependent on the weather is agriculture. The sector advantageously utilizes information from DMI to assess when to water, sow, plough, fertilize, combat pests, harvest, etc. The building and construction sector also relies on DMI's knowledge and forecasts, for example when designing bridges, planning weather-critical operations and determining responsibility for construction project delays.

Wind and weather forecasts are supplied to power and gas utilities and other energy sector companies to enable them to assess energy consumption 5–7 days in advance. Weather and climate information from DMI is also particularly useful when planning and holding major outdoor arrangements such as sporting events and concerts. In insurance cases, DMI often supplies decisive documentation about the weather in connection with road accidents, lightning strikes and storm damage.

## THE WEATHER AND THE ENVIRONMENT

DMI works with the phenomena that threaten our environment, among others the effect of increasing pollution on the climate. The research provides public authorities with an improved basis for making decisions about intervention and prevention. Marine pollution is an increasingly urgent problem, and assessment of algal blooms and dispersal of oil slicks is part of the service DMI provides in support of preventative efforts.

DMI is also part of the nationwide contingency system for warning of biological, chemical and radiation risks. This requires continual updating and maintenance of advanced models for calculating dispersal of substances in the atmosphere.

An increasing proportion of the population is allergic to pollen. In cooperation with the Danish Asthma and Allergy Association, DMI has been counting air pollen and issuing air pollen forecasts since 1977. Both doctors and allergy sufferers benefit from the pollen counts for diagnosing and preventing pollen allergy.

