

#### Prepare for the future

Strategy 2022 - 2031 Norwegian Meteorological Institute



#### Contents

Background Vision and purpose Main goals and strategic moves

3-6

7-20

Since the Norwegian Meteorological Institute (MET Norway) was established in 1866, we have contributed greatly to the development of meteorology. Due to our expertise, we play an important role internationally. This is the foundation for our strategy for the next 10 years.

At the same time, we take into account the changes we can expect in weather, climate and environment, social and business development and technology. These changes will have an impact on which services we will deliver and how we will deliver the services. Our ambition for the strategy period is to contribute to solving the major societal challenges associated with climate and natural hazards.

By providing relevant services, we will contribute to a safe and climate-adapted society. Our research will ensure that our services are relevant in the future as well. Highly competent employees and the ability to take advantage of future professional and technological opportunities are imperative in order to succeed.

The strategy will give us direction and the necessary room for maneuver to meet the opportunities and challenges we face, and to develop MET Norway based on our unique characteristics. On a daily basis, the strategy will help us make good operational choices. It will balance the development of MET Norway with the need for stable and safe operation.



#### We protect life and property, with world-class services.

MET Norway is responsible for the public meteorological service for civilian and military purposes. MET Norway will monitor and forecast the weather with high quality and regularity and calculate the climate in the present and future.



#### We create value for society through our value chains. The value chains are characterized by;

- The values are developed in several links that are connected in a chain
- The chain is not stronger than the weakest link
- The links in the chain can be developed independently of each other
- The development of each individual link provides increased value for the end user

MET Norway's value chains range from observations to useful user-oriented services. Each of the links in the chain can provide data and products that are in themselves useful to the users, at the same time as the individual link contributes to increasing the value further in the chain. The value chains contribute to improving and streamlining public meteorological services both nationally and internationally, and put the end user in focus.



## MET Norway's unique characteristics

Our basis for further development is good. Individually, our characteristics are not unique, but the combination of them is unique. We will further develop these characteristics during the strategy period:

- Our ability to collaborate internally, with users and partners, nationally and internationally is crucial to our success
- A corporate culture characterized by professional skill, trust and room for maneuver
- Employees with high competence in all stages of the value chain
- Our business is international, and our ability to develop and deliver good services is based on close cooperation across national borders and with various actors
- Proximity to users and ability to operationalize services based on research makes us attractive as a collaborative partner



Our basis for further development is good. Individually, our characteristics are not unique, but the combination of them is unique. We will further develop these characteristics during the strategy period:

- Research and development will contribute to solving major societal challenges
- · Development of digital twins
- The importance of the Arctic is increasing
- Strong user orientation
- Technological development involves opportunities and challenges
- · Sustainability in everything we do
- The value of data is dependent on its use
- Flexibility in working methods and requirements for competence
- Economic development and changes in regulations

### Main goals and strategic moves

MET Norway has five main goals for the strategy period. The goals are based on our vision and purpose, and are intended to address the trends that will affect us.



### We contribute to a safe and climate resilient society

We provide the best possible basis for preparing for natural hazards in the short and long term. We support the Armed Forces and other agencies in securing the country. We develop climate scenarios for Norway and offer services that provide a basis for climate adaptation.

Our data and self-developed software are open and can be reused and further developed by others. Our aid projects contribute to digital public goods and to make other countries better equipped to handle extreme weather events and climate change. The competence of our employees, supported by good architectural principles and systematic quality and risk management, ensures that our services are robust and reliable.

We will provide a professional basis for the formulation of climate policy, weather forecasting, air quality and ocean management

We must communicate the consequences of climate change clearly and help in society's planning for the future

We will provide users with relevant services for all time scales from past to seasonal forecasts, from 1850 to 2100

We will further develop cooperation with the Armed Forces and continue to play an important part in Norway's preparedness

We will include climate projections and further develop our impact-based forecasts

We will contribute to competence building in developing countries (forecasting, climate, ocean).

We will contribute to our tools being developed into UNapproved digital public goods

We will establish and implement a plan for programming interfaces and data services

We will ensure that our key deliveries are resilient

We will strengthen our ability to handle crises and digital attacks

We will systematically evaluate all danger warnings



### MET Norway's services are of great value for our users

Our insight into user needs' and work processes enable us in providing services of high value. We are the dominant provider of weather services for the public, and develop our communication platforms in order to connect with our users.

Through dialogue with users, the quality of data, products and services that MET delivers improve constantly. We cooperate with commercial actors through public-private partnerships to develop and improve our data and products.

Our emergency preparedness models for the sea and atmosphere will provide a basis for knowledge-based decisions among users

Our data and services will contribute to the development of renewable energy

We must have systematic insight into the users' needs

We will increasingly use social science methods to increase the value of our services

We will include user-oriented methods in our verification activities

We must be relevant as a provider of weather forecasts to the public, also towards a young and digital population

We must understand important societal changes and contribute to solve challenges

We will both influence the design of, and utilize the funding from, external programs

We will participate internationally in a way that contributes to better and more relevant services in Norway



# Our research transforms science into operational services of high international quality

MET Norway's research activities are of high quality and are utilized according to our purpose. Accordingly, our services, climate projections and forecasts for weather, sea, climate and environment maintain a high international quality.

Our research gives us increased competence, the best operational model systems and the best utilization of existing and new observations for warning and monitoring of weather, sea, coast and air quality for Norway and nearby areas. We have a particular focus on the Arctic and the cryosphere.

We are in front in the development of numerical models for the Earth system and play an important part in the development of digital twins. We are an active collaborating partner in international and national programs, projects and organizations, and utilize the results in our operational services.

We will transform research into climate services and climate information through well-coordinated value chains

We will contribute to better forecasts and climate projections through the use of earth system modeling

We will maintain and develop expert competence in key systems and models

We engage in partnerships and collaborations with universities, the institute sector and end users

We will utilize big data technology (ML, AI) to develop all links in our value chains

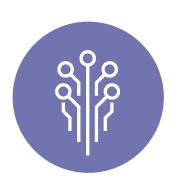
We will lead the development of hyperlocal modeling to support forecasting in Norway and the surrounding areas

We will develop new methodology for the use of observations

We will take a leading position in service development for the Arctic

We will consolidate and further develop our central role in Copernicus

We will achieve closer collaboration between scientists and meteorologists



## We exploit relevant technological opportunities

Our technological solutions support research, development and forecasting, and are an important part of our infrastructure. Rapid technological changes require that we have a high level of expertise in current technologies and make assessments in collaboration with other meteorological institutes.

Our requirements and opportunities, together with the maturity and security of technology, will determine our choice of technology.

We monitor the possibilities for increasing the number of observations through the use of new technology and new platforms (for example microsatellites and drones) and old technology in new ways (for example standard sensors connected to the Internet of Things).

We actively participate in the European development of IT infrastructure for weather and climate services, and further develop a standardized IT infrastructure that is linked to research and meteorological solutions in Norway and Europe. We develop self-service solutions that provide easy access to IT infrastructure.

We work along geoscientific production chains and choose cost-optimal and long-term IT solutions

We will increase the number and use of observations

We will develop and improve systems that can process our observations

We will facilitate uniform processing

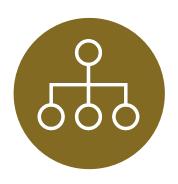
We will collaborate regarding IT infrastructure

We will explore, develop and utilize the e-infrastructure of the future

We will modernize our geoscientific visualization and presentation tools

We adapt our delivery methods and formats to new and safer technology

We will ensure future collaboration and sharing of data and tools by using international standards



### We make environmentally conscious choices within an efficient organization consisting of highly competent employees

We make environmentally conscious choices, based on clear environmental goals for our agency. We facilitate digital collaboration and reduce travel when appropriate, and emphasize environmentally friendly solutions in the design and operation of our premises.

Good and efficient work processes enable us to utilize the employees' competence and to utilize our financial framework in the best possible way.

MET Norway has a good reputation. It enables us to recruit and develop the best expertise in the areas that are important to us. Our culture is characterized by a strong dedication to our purpose, high professional ambitions, trust and room for maneuver.

We will establish a system for environmental management and choose solutions that limit MET's environmental footprint

We will further develop working methods that facilitate interdisciplinary collaboration

We must streamline and digitalize support processes

We will adjust MET Norway's organizational structure

We will strengthen our ability to strategically recruit and develop competence

We will facilitate diversity in order to attract and retain the best competence

We will strengthen MET Norway's position as a great place to work

