



Royal Netherlands
Meteorological Institute
Ministry of Infrastructure
and Water Management

People and
organization

SOURCE DOCUMENT

KNMI AMBITION 2035

Multi-annual Strategic Plan 2025-2035

Services and products

Models and data

AI

Observations

Core values



COOPERATION

WEATHER

CLIMATE

SEISMOLOGY

Kralendijk

Schiphol

Herwijner

De Bilt

Together with our
partners we form an
**Early Warning
Centre**

September 2024



Introduction

- › Ambition 2035 is the successor to KNMI's Multi-annual Strategic Plan 2020-2025. Ambition 2035 deliberately looks ahead not 5, but 10 years, as a dot on the horizon for the choices of the coming years. A formal update of this long-term strategy will take place by 2030.
- › Ambition 2035 addresses KNMI's mission and outlines how KNMI contributes to the societal challenges facing the Netherlands. In line with the Ministry of Infrastructure and Water's Compass, KNMI provides public value not just by itself but in close cooperation with the Ministry (policy, implementation and inspection), other ministries, knowledge institutes, companies and international organisations in the fields of weather, climate and seismology, in order to continuously provide the best possible services for the Netherlands.
- › Ambition 2035 also demonstrates that KNMI contributes to the Strategic Knowledge and Innovation Agenda (SKIA) of the Ministry of Infrastructure and Water Management, for instance in relation to climate adaptation and living environment. In this way, KNMI is helping to prepare for the issues of tomorrow and beyond.
- › A key ambition is continuity, such as the continuity of measurement infrastructures (radars, weather stations, seismic stations, satellites, etc.) and the measurement series that KNMI has been maintaining since 1854. Change is driven by more erratic weather in a changing climate and the lightning-fast development of artificial intelligence. The urgency of reliable, independent information of high scientific quality is increasing. Not only for the Netherlands but collectively in Europe. This requires attention for international cooperation, (cyber-)security and cooperation with the safety chain in the Netherlands. KNMI data, information and warnings are openly available and reach the whole of society, including young people, with a single tone of voice. This is very important for safety in the event of extreme weather and other threats.
- › Ambition 2035 is formally our MSP: Multi-annual Strategic Plan. The Ambition provides a global outline that requires elaboration in parts. It is complemented by a Multiannual Investment Plan (MIP), a Multiannual Evaluation Plan (MEP) and a Multi-annual Activities Plan (MAP), as well as sub-strategies for specific parts of KNMI's work. These will be adapted and developed in line with Ambition 2035.



> Mission

KNMI contributes 24/7 to a safe and liveable Netherlands by providing society with independent knowledge, advice and warnings about risks in the field of weather, climate and seismology.

> Vision

The climate is changing, the weather is becoming more erratic, the ground is shaking. Keeping the Netherlands safe and liveable is becoming an increasingly challenging task. KNMI therefore wants to gain more insight into the impact of weather, climate, seismology and other geophysical phenomena on society, in both the short and long term. In cooperation with our societal partners and from a solid position in a strong international network, we generate and combine the best observations, scientific analyses and top-grade technology to provide the Netherlands with timely information, advice and warnings.

> Values

Development: we continuously develop our knowledge and skills

Collaboration: we work together, with each other and with others

Relevance: we are of great importance to society



Trends

The importance of information about weather and climate risks is increasing

- More extreme weather is increasingly impacting our daily lives, creating new safety risks and having major economic and legal consequences.
- There is an increase in complex and compound risks and concern about tipping points in the climate system.
- It is becoming increasingly important and sensitive to attribute emissions and impacts to countries, companies or individuals.
- The energy transition leads to opportunities and new risks.
- Active climate intervention is increasingly seen as a possibility.

The society around us is changing, with consequences for our work

- Society is polarising, trust in science is eroding, disinformation is a growing challenge.
- There is increasing pressure on scarce space, whether on land, at sea or in the ether, for digital and measurement infrastructures.
- AI/ML is dramatically changing our work, with unique new opportunities for improving observations, models/data and services/products and also leading to new actors in our field (mostly from the US and China).
- There are increasing geopolitical tensions: A changing world order affects the position of the Netherlands and Europe regarding climate and security. The availability of open data, models, knowledge exchange and technology are under increasing pressure. The importance of European cooperation is increasing, also in the context of the rise of Artificial Intelligence and Machine Learning (AI/ML).
- Information needs are fragmenting: it is more challenging to reach people - especially young people - unambiguously

The context of our organisation is changing

- Employees stay in the organisation for a shorter time, with implications for continuity and renewal of the knowledge base.
- New ways of working (including working in agile teams) require extra attention to internal cooperation between individual employees, teams and departments.
- Attention to diversity, generational differences and social safety is essential for a successful organisation.

Observations



Since 1854, KNMI has been making observations to determine weather, climate and seismological risks, thereby contributing to the safety and quality of life in the Netherlands.

KNMI ensures that the Netherlands (including the Caribbean) continues to have access to the best observations of meteorology, seismology and atmospheric composition as a source for reliable analyses, advice and warnings.

We focus on an optimal combination of our own measurement networks, national and international partnerships and third-party data, with an eye for impact, societal questions and scientific innovations.

The continuity of unique long measurement series is a high priority.

We do this by:

- > Maintain a high-quality measurement network both for operational purposes and for the continuity of our unique long measurement series. Make the best use of observations from satellites, by integrating data and by actively contributing to international space collaborations. Enriching our observations with data from second and third parties including from citizen science.
- > Taking a turn from aiming primarily for 'undisturbed measurements' to adding measurements in densely populated areas, where the impact is often greatest.
- > To rapidly operationalise Artificial Intelligence and Machine Learning (AI/ML) to ensure optimal data quality and continuous availability.
- > Strengthen and connect the operational GHG emissions measurement network (ground measurements, satellite measurements and models). Play an active role in strengthening national and international networks, with a view to joint measurements and data exchange.
- > Contribute to the strategic autonomy of the Netherlands and Europe with regard to vital data, digital infrastructures, technology and cybersecurity.

Knowledge, models and data

KNMI ensures that the Netherlands has access to the best data and models to support warnings and advice, also through a strong Dutch position in international collaborations.

Via open data platforms, we make observations, model and research results easily available and usable for all kinds of users.

From our weather, climate and seismology data and models, we increasingly focus on impact and management measures for safety and livability of the Netherlands, in close cooperation with our strong networks.



We do this by:

- › Maintain and develop our knowledge base for current and future questions, based on scientific quality and independence, with openness and critical reflection.
- › Use models and data for analyses of both natural phenomena and their consequences and risk management (especially also through our Early Warning Centre).
- › Making our data and model results openly and unambiguously available and usable for citizens, organisations and companies, who can use them to create added value in myriad ways.
- › Not studying weather and climate separately, but where possible bringing together data, models and analyses of the past, present and future, with special attention for uncertainties.
- › Investigating new risks that could arise from the combination of several individual risks (such as an increasing chance of drought and extreme rainfall), but also from the consequences of the energy transition or even possible interventions in the climate (solar radiation modification).
- › Actively investing in the application of Artificial Intelligence and Machine Learning (AI/ML) for knowledge development, products and services. In doing so, we continuously and consciously choose the best combination of AI/ML, physical models and human interpretation.
- › Taking an active role in setting up international data platforms for efficient storage and computing capacity, analysis and distribution.
- › Develop models and use them operationally in international collaborations, aiming for a European weather and climate model and joint infrastructure.



Services and products

As the 24/7 Early Warning Centre, KNMI advises and warns society about weather, climate and seismological risks with a single tone of voice, thus contributing to the safety and liveability in the Netherlands.

To this end, the KNMI develops state-of-the-art products and services that meet societal demands and needs and are trusted by people and organisations.

Services and products pay special attention to changing risks and new opportunities, in close cooperation with partners in society.

We do this by:

- > Actively involving society and partner organisations in our work and working together to develop knowledge and awareness of the (local) impact of risks with a view to safety and liveability of the Netherlands.
- > Continuously connecting with users in the network of safety partners, ensuring that our position in the network is clearly defined.
- > Effectively and proactively advise on complex risks (including multiple threats, combined and sequential risks, including tipping points), causes and uncertainties.
- > Contribute to understanding the societal consequences of extreme weather and climate change in financial and legal contexts.
- > Continuously evaluate and improve our services and products.
- > Communicate our data and insights to the wider general public, also to counter disinformation, with an extra focus on young people.
- > Provide a single point of contact for all questions from society.
- > To fulfil an educational function towards professionals and the general public to share knowledge about weather, climate and seismology and raise awareness of related risks.

Positioning



KNMI is the independent, authoritative national knowledge institute for observations and scientific knowledge in the field of weather, climate and seismology for the Netherlands (including the Caribbean).

KNMI contributes to the effective use of its data by citizens, organisations and companies, which create added value in many ways.

KNMI continues to be known for the reliable provision of information for government tasks, as part of the network of partners and directly to society. In this way, the institute actively contributes to the safety and liveability in the Netherlands.

We contribute to national policy and applications, using national and international observations, research and policy.

KNMI's role is clearly enshrined in legislation, including the role of the Supervisory Board, and is laid down in the relationship statute with the Ministry of Infrastructure and Water Management, including the care for government-wide anchoring of responsibilities.

We do this by:

- > Continuously communicate with society in close contact with our target groups, with a special focus on young people.
- > Ensuring a single tone of voice in disasters and danger by further developing an effective national Early Warning Centre for risks related to weather, climate and seismology, towards policymakers and within the network of safety partners, with clear powers and responsibilities for the KNMI.
- > Creating opportunities for citizens, businesses and researchers who use KNMI data. Serving as a bridge for effective national and international cooperation in our field of science and its application.
- > Strengthening cooperation with other knowledge institutes, universities and colleges, including through shared appointments, joint talent development and efforts to create a strong knowledge landscape.
- > Contribute with our expertise to international organisations such as WMO, ECMWF and EUMETSAT, as national delegates, in decision-making positions, and through staff exchange.
- > Proactively shape European cooperation, with fellow institutes and in the EU context.
- > Share our knowledge and expertise with other countries to contribute to the shared ambitions in international treaties (including through the United Nations Early Warning for All initiative).

Organisation in development



KNMI is a great place to work, an agile organisation where diverse talent collaborates effectively on top science, innovative applications and effective advice, in close connection with society for now and in the future.

Employees are proud, feel connected and responsible, actively contributing to the safety and liveability of the Netherlands.

Employees are facilitated by effective management with clear goals and a good infrastructure.

We do this by:

- > To develop a strong and diverse team in an inviting and inspiring working environment where talent takes pride and pleasure in working for longer or shorter periods of time.
- > Ensuring that our staff can operate as environment-sensitive advisers in the Early Warning Centre and are broadly deployable in the network of partner organisations.
- > To ensure an agile organisation, with decisive unified management, based on jointly defined goals that are achievable for everyone.
- > Strengthen the synergy between parts of the organisation, for instance regarding the weather-climate continuum and our observational ambitions.
- > Investing extra in the synergy between operational services, R&D and ICT: mission-driven, innovative and continuously learning from experiences (such as current extreme weather events).
- > Ensure continuity of our knowledge base and internal chain responsibility.
- > Provide an attractive and socially safe workplace for a diverse population of employees of different generations, with prospects for current and new talent.
- > Develop an inspiring and sustainable building that facilitates different forms of work in an attractive working atmosphere and with an inviting appearance.