

ENVS Strategy 2023 – 2026

The ENVS mission is ...

...to carry out environmental natural and social science research, and deliver advisory services and educational activities, towards fulfilment of the 17 UN sustainable development goals (SDGs), and a national and international, sustainable green transition.

The ENVS vision is ...

...to support the continuous development of Danish society in an environmentally, economically and socially sustainable direction.

We conduct *research* of the highest international standard based on national and international networks, in cooperation with research institutions, authorities, industries and NGOs. We aim for an interdisciplinary approach, creating synergies and results with our range of natural and environmental social science disciplines.

Our *advisory service* is research-based, quality assured, and relevant to Danish as well as international stakeholders.

Our *communication* with users and stakeholders must be open and easy to understand, and our knowledge must be presented in a way that conveys its relevance, including to the public.

Our *teaching* must be relevant to the needs of society and aimed across all levels, i.e. bachelor, master and PhD, as well as continuing education courses.

Strategic goals at the Department of Environmental Science 2023-2026

Our main goal is to secure the best possible foundation for the academic activities and priorities that are elaborated in the section strategies. We therefore wish to:

1. Maintain and expand the extent of *research and advisory projects* that contribute to the fulfillment of the UN sustainable development goals and supports the green transition in an interdisciplinary cooperation with national and international stakeholders;
2. Develop *educational offers* at all academic levels as well as continuing education;
3. Target the work on enhancing *talent development* for the younger scientists of the department at all career levels up towards senior level;
4. Increase focus on *digitalisation* in work processes and method development as well as visibility and utilisation of environmental data for collaborators and society in general;
5. Actively support a more equal *gender distribution* at ENVS through recruitment, talent development, competency development and promotions;
6. Secure a healthy *work environment*.

Ad 1 Support sustainable development through research and advisory services

We will:

- Increase the research project portfolio to maintain a growth strategy for the number of post docs and PhD students, contributing to **the high level of the department's green research**.
- Strengthen our international profile through more applications for **international research and advisory projects**, and take more leadership roles in these.
- Maintain and develop established **positions of strength** through:
 - Emission inventories and projections of airborne emissions and greenhouse gases.
 - Air quality models and integrated models for health effects and the social cost of air pollution;
 - Increase the understanding of the climate and climate effects, as well as further development of climate models, with a focus on the Arctic;
 - Understanding activity, diversity, and resilience of environmental microbiomes, including their part in biochemical processes in soil, water, and air;
 - Further development of methods and models to evaluate conflicts and synergies between policy areas and regulations, e.g., climate, nutrients, and biodiversity;
 - Further development of state of the art environmental chemistry methods for determination of man-made chemical substances fate and effects in environmental tests and circular processes;
 - Further development of hydro economic models in collaboration with the Department of Ecoscience.
- Further increase the success rate of **research projects** that can contribute to:
 - Improved regulation of greenhouse gases, including technology development and behavioural change;
 - Understanding of the connections between health effects, ecosystem condition and services, air quality, and climate change;
 - Risk assessment of biological pesticides and other technologies to reduce the carbon footprint from agriculture;
 - The circular use of resources, e.g. recirculation of nutrients from wastewater through nature based solutions etc.;
 - Risk assessment of new green technologies, including biogas and recirculation;
 - Development of holistic methods and tools for the evaluation of toxicity;
 - Development of cutting edge non-target analyses;
 - Development of technological and nature based solutions for the reduction of greenhouse gas emissions.
- Maintain and further development of research based **advisory services** that supports a sustainable development:
 - Continue to secure and maintain competences regarding the need for knowledge of the ministries of Environment, Climate, Transport, and Food, Agriculture and Fisheries, as well as ensuring the continuous fulfilment of the framework contracts;
 - Increasing the sale of advisory services to private companies and public authorities, among others, about their own carbon footprint;
 - Increase the advisory services to municipalities, regions and private stakeholders, e.g. through larger visibility, including participation in various knowledge forums, meetings, workshops etc.
 - Increase our focus on international advisory tasks within in the EU.

Ad 2 Education

We aim to contribute to the education of researchers, administrators and consultants of the future within the field of environment and climate, by:

- Developing, hosting and contributing to continuing education courses at a high scientific level within the fields of environment and climate, targeted at public environmental administrators and private consultants;
- Developing and hosting courses and course modules within the fields of environment and climate, as part of the Bachelor and Master's degree programmes, in collaboration with other departments at Aarhus University as well as other Danish and international universities.

Ad 3 Talent development

To ensure that the next generation of talents within relevant research fields have good opportunities to establish their careers, we want to:

- Secure generational change through the systematic transfer of knowledge from senior employees to younger scientists;
- Systematically include PhD students and young researchers when writing applications.
- Include PhD students and young researchers in advisory tasks;
- Support PhD students and young researchers' opportunities to gain teaching experience by actively including them in the development and execution of courses and education plans.

Ad 4 Digitalisation and data

Through increased focus on digitalisation in everything, we do, we want to enhance work processes and utilisation of environmental data. We will:

- Make environmental data available to the public and to the political decision-makers to improve the data's visibility and increase its utilisation for the benefit of society;
- Support the FAIR (findability, accessibility, interoperability and reusability) data policy of the Ministry of Higher Education and Science, committing to more open data, open-source models, and open access publishing;
- Develop competences within and investigate uses of big data, machine learning, remote sensing, bioinformatics, and artificial intelligence;
- Ensure access to High Performance Computing to support demanding calculations, e.g. climate modelling;
- Ensure sufficient server and storage infrastructure for calculations and data;
- Strengthen and support a digital flow from sampling processes to databases;
- Support all relevant employees in digital access to the IT resources and measuring devices of the department, to facilitate working from home or from elsewhere.

Ad 6 Equality and diversity

We set up an Equality and Diversity Committee in 2022 to further strengthen our efforts in the area and ensure continuous focus on and work with equality in relation to gender, ethnicity and other forms of diversity. In autumn 2022, the committee carried out a survey to uncover equality issues in the department, and we had equality and unconscious bias on the program for our department seminar. We will continue the effort through:

- Preparation of an action plan for equality and diversity;
- Implementation of activities and measures according to the action plan.

Ad 6 Work Environment

ENVS works purposefully to achieve a good and healthy work environment in which all employees feel included and with good opportunities to use and display their skills fully within their field of

work, and in dynamic interaction with colleagues. We work actively for an appreciative, flexible and supportive work culture in order to reduce the incidence of work-related stress. We will continue the effort through:

- Continued to prioritize the work in and cooperation between our working environment committee, liaison committee, psychological APV action plan committee, equality and diversity committee and management team;
- Carry out a development process for the management team, which includes handling personnel management issues.