

Highlights of interactions between IIASA and Norway



Member Organization

The Research Council of Norway (RCN)



Selected partners

Over 40 Norwegian organizations have collaborated with IIASA, including:

- CICERO Center for International Climate Research
- Institute of Marine Research (IMR)
- Norwegian Agency for Development Cooperation (Norad)
- Norwegian Geotechnical Institute (NGI)
- Norwegian Institute for Air Research (NILU)
- Norwegian Institute for Bioeconomy Research (NIBIO)
- Norwegian Institute for Nature Research (NINA)
- Norwegian Institute for Water Research (NIVA)
- Norwegian Institute of Public Health (NIPH)
- Norwegian Meteorological Institute (METNO)
- Norwegian University of Life Sciences (NMBU)
- Norwegian University of Science and Technology (NTNU)
- Institute for Rural and Regional Research (RURALIS)
- The Arctic University of Norway (UiT)
- University of Bergen (UiB)
- University of Oslo



Areas of research collaboration

- Strategies to address air pollution and greenhouse gas emissions to mitigate climate change.
- Impact of climate change and infrastructure projects on Arctic populations.
- Sustainable land use, agriculture, forestry, and biodiversity conservation.
- Arctic systems, climate impacts, and socio-environmental resilience.
- Circular economy and resource efficiency transitions.
- Migration, demography, and population dynamics.
- Water-energy-food nexus and environmental systems analysis.
- Climate finance, risk assessment, macroeconomic impacts of climate change.
- Digital transformations with a specific focus on artificial intelligence.
- Enhancement of Norwegian expertise in applied systems analysis and capacity building for the new generation of talented researchers in Norway.



Capacity building

Three doctoral students from Norway or studying in Norwegian institutions have participated in the IIASA Young Scientists Summer Program in 2021-2025.



Publication output

IIASA has co-authored over 230 publications with institutions in Norway, which collectively gathered over 14,000 citations.



Scientific exchange

Over 50 participants from Norway joined IIASA events. Over 15 researchers and professionals from Norway visited IIASA. IIASA scientists visited Norway over 70 times.

IIASA Engagement with Norway

IIASA Info Sheet 2026

The electronic version of this document is available at
<https://iiasa.ac.at/country/norway>

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IIASA Info Sheets provide succinct summaries of IIASA activities. They do not necessarily reflect the views of IIASA staff, visitors, or National Member Organizations.

This Info Sheet summarizes recent interactions between IIASA and Norway. It includes highlights with links to further information but is not meant to be a comprehensive report on all interactions. Feedback and updates are encouraged and should be sent to the External Relations Department.



1. Introduction

The International Institute for Applied Systems Analysis (IIASA) was established in 1972 as an international, independent, non-governmental, multidisciplinary research institute located in Laxenburg near Vienna, Austria. As of February 2026, IIASA has 18 national members and one regional member, representing 36 countries across Africa, the Americas, Asia, and Europe. The Research Council of Norway (RCN) has been the National Member Organization (NMO) representing Norwegian membership of IIASA since 1996, when Norway became a formal member of IIASA.

Research collaborations between IIASA and Norway date back to the beginning of the century and continue to bring new insights into the challenges the country and the wider region face, as well as into the potential solutions. Beyond the already existing collaborations, there is also significant potential to grow the relationship between IIASA, the Norwegian scholarly community, and governing bodies through joint research projects, science diplomacy, scientific exchange, and collaborative capacity building activities.

2. IIASA's Unique Value Proposition for Norway

Over the years, Norway has established itself as a global leader in research, technology, and innovation, as well as a key player in the international arena with strong commitment to the principles of multilateralism. Acting as an international hub for sustainability research, Norway has made major contributions to the global sustainability agenda through leadership in climate and forest protection finance, sustainable ocean governance, and clean energy. In support of those efforts, IIASA provides Norway with a strategic, low-cost, high-leverage platform that supports science-based policymaking on complex global, regional, and national challenges; strengthens national analytical capacity; and amplifies influence in global science and policy processes. Continued membership is therefore best understood not only as an institutional affiliation, but as a strategic investment that amplifies Norway's scientific and policy leadership.

IIASA actively collaborates with Norway, co-developing evidence-based solutions to inform policy in priority areas aligned with the Government's goals, outlined in **Norway's Climate Action Plan for 2021–2030**, as well as **Norway's Long-term Plan for Research and Higher Education 2023–2032**. Leveraging its expertise in science diplomacy, as well as interdisciplinary systems analysis, IIASA works with Norwegian researchers and policymakers to foster sustainable development, reduce environmental footprints, enhance the resilience of natural and socioeconomic systems, facilitate the digital transformation, strengthen partnerships, align human and physical capital, ensure justice and economic efficiency, as well as gender equality.

IIASA offers a valuable portfolio of critical resources and connections to support these efforts:

- ▶ IIASA's applied systems analysis directly supports evidence-based decision-making across different scales of governance with a focus on integrated assessment of energy, climate, air quality, land, water, health, and economic outcomes, as well as quantification of co-benefits, trade-offs, and distributional impacts that are essential for inclusive and sustainable development.
- ▶ IIASA acts as a neutral, apolitical platform under international law that facilitates scientific collaboration across geopolitical divides. It serves as a mechanism that shapes global research agendas on climate, AI governance, health, and sustainable finance.
- ▶ IIASA offers proven decision-support tools such as **GAINS**, **MESSAGEix**, **GLOBIOM**, and the **FABLE Calculator**, which are actively used by Norwegian researchers, as well as experts from all over the world.

- ▶ IIASA acts as a channel to international forums, such as the G20, and multilateral development initiatives, where credible science reinforces diplomatic influence.
- ▶ IIASA is a leading contributor to several UN initiatives (UNEP, UNDP, regional economic commissions, high-level forums) and scientific panels.
- ▶ IIASA uses the most advanced methodologies in systems analysis with a special recent focus on AI, for example by integrating AI in agent-based models (ABMs), to better understand the drivers and impacts of the ongoing global polycrisis and offer data-driven solutions.
- ▶ IIASA opens doors for its partners to tap into additional global funding opportunities and resources.
- ▶ IIASA research is focused on addressing real-world problems in partnership with decision-makers, community members, and practitioners from the countries involved to ensure that results contribute to policy.
- ▶ IIASA actively facilitates knowledge transfer and capacity building to strengthen the national scientific capacity of its Member States, as well as national and sub-national policy-making.
- ▶ IIASA offers a neutral space for international scientific collaboration. Under the protection of Austrian law, scholars from nations currently involved in conflicts work together peacefully, collaboratively, and constructively at IIASA.

The Institute plays a leading role in setting the research agenda within the international scientific community. It connects national scientific communities to a dynamic global network of researchers, policymakers, and practitioners through capacity building, in-person meetings, workshops, joint research initiatives, tool development, collaborative projects, and virtual webinars.

In the last decade, IIASA helped to establish several centers of excellence for systems analysis in different parts of the world, partnering with local researchers to advance the discipline. Those include the North Africa Applied Systems Analysis Centre (NAASAC) in Egypt, the South African Systems Analysis Centre (SASAC) in South Africa, the Archimedes Center in Israel, and the Asian Demographic Research Institute (ADRI) in China. These centers help IIASA create a community of professionals that shares experiences nationally and is well connected, both regionally and internationally, to enable impactful policymaking at all levels. Through this global network, IIASA is well positioned to support Norway in strengthening collaborations with a diverse range of international stakeholders, facilitating knowledge exchange and developing joint solutions to complex sustainability challenges.

IIASA also provides a variety of capacity development opportunities for future leaders in science, politics, business, and culture through its **Young Scientists Summer Program (YSSP)**, a variety of **Summer Schools**, and its **Postdoctoral Fellowships**. IIASA's training and capacity development programs focus on long-term capability enhancement through training the trainers, advanced modeling courses, and multi-year scientific exchanges. They offer Norwegian researchers the opportunity to independently apply, adapt, and extend IIASA's open modeling frameworks. Their collaborations produce policy-relevant research focused on their home countries and help them to become proficient in the scientific and diplomatic skills needed to operate at the highest levels of international science and policy. This model emphasizes brain circulation, not brain drain, enhancing institutional capacity across Norway's research and policy ecosystem. IIASA also contributes to diverse capacity development activities (e.g., workshops, seminars) in Norway in areas of mutual strategic interest.

For Norway, the partnership with IIASA is a strategic multiplier, integrating national priorities with global science, enhancing policy impact, and reinforcing Norway's leadership in shaping solutions to the world's most complex challenges. IIASA proposes to transition the Norway–IIASA relationship from individual participation toward co-designed, mission-driven collaboration that:

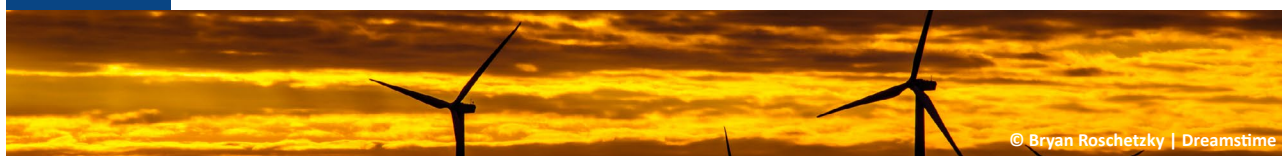
- ▶ Aligns IIASA research with national priority missions on climate, clean energy, air quality, sustainable agriculture, resilience, and digital transformation.
- ▶ Positions Norwegian institutions as co-leads of IIASA global initiatives on systems analysis and sustainability transitions, enhancing Norway's visibility and influence in international science.
- ▶ Supports coordination across research domains, ministries, and sectors.
- ▶ Provides timely policy-relevant insights for sustainable development.
- ▶ Facilitates knowledge exchange and provides an avenue for young Norwegian researchers to learn about systems analysis and further develop their skills.

This approach complements Norway's efforts in convergence research, integrated planning, and mission-oriented innovation.

3. Highlights of IIASA Research Projects and Collaborations with Norway

IIASA researchers work directly with a wide range of diverse stakeholders in Norway. These collaborations are typically formalized through joint research projects, below are a few selected examples.

CircEular



IIASA is coordinating the Developing Circular Pathways for EU Low-Carbon Transition (CircEular) project, a collaboration of 12 international partners, including the Norwegian University of Science and Technology (NTNU).

As part of this project, researchers develop new modeling approaches for analyzing circularity from a systems perspective in order to broaden the understanding of dynamics and levers for societal transformation toward a net-zero emission circular economy. The goal of the project is to develop a stronger understanding of the potential of circular economy strategies for reducing greenhouse gas emissions and achieving the EU's net zero emissions target by 2050. The project is aimed at addressing circularity and related impacts on emissions from a systems perspective, taking into account different levers for change, such as dematerialization and the transition to a service-based economy to limit material stock growth, extending the lifetimes of products via repair, maintenance, and reuse, and reducing waste while increasing recycling.

ESM2025



Working with Norwegian project partners, IIASA researchers are co-developing a novel generation of Earth System Models that will provide relevant climate simulations for the design of comprehensive climate change mitigation and adaptation strategies in line with the Paris Agreement. This next generation of Earth System Models will include an improved representation of the full Earth-system response to anthropogenic emissions, with a particular focus on human land use change. As part of this project, IIASA collaborates with the CICERO Center for International Climate Research, the Norwegian Meteorological Institute (METNO) and the University of Bergen, as well as over 18 other international partners.

Project activities are divided into 4 core themes, ranging from scientific activities to knowledge exchange and outreach. The first three core themes are dedicated to research activities (from component development, process parameterization, couplings, to interactions with the Integrated Assessment Modeling community); the 4th is devoted to the dissemination and exchange of knowledge with stakeholders and the general public. Interactions between the 4 core themes are facilitated by dedicated cross-cutting actions and decision-making boards that link the different activities of the project.

FABLE

The Food, Agriculture, Biodiversity, Land, and Energy (FABLE) Consortium is a global network of researchers who develop national pathways that are consistent with global sustainability objectives, including the Sustainable Development Goals (SDGs) and the Paris Climate Agreement targets. Through its focus on systems-based approaches and integrated assessments, FABLE brings together knowledge institutions from around the world to advance the analytical capacity for strategic land use planning, seeking to improve the understanding of which strategic decisions can benefit the overall transformation of food and land use systems towards sustainability. The consortium brings together over 100 national institutes and 24 country teams.

FABLE country teams are at the heart of FABLE's mission. By engaging multiple country partners, FABLE also aims to improve insights into interactions between regional and country scale pathways with global scale concerns. Country teams develop national bottom-up pathways for sustainable food and land use systems that describe the changes needed to achieve mid-century sustainability objectives. They also engage with national governments to promote ambitious sustainable policies.

The **FABLE Norway Country Team** is led by the CICERO Center for International Climate Research in Oslo. The team's main areas of interest focus on the sustainability debate in Norway, balancing conflicting issues in Norwegian food production and diets, exploration of alternatives to existing non-sustainable production methods, and debate-shifting.

HYway

The Climate Impacts of a Hydrogen Economy (HYway) project is investigating the effects of hydrogen emissions on climate and the environment. As part of the project, IIASA actively collaborates with the CICERO Center for International Climate Research, the Norwegian Meteorological Institute (METNO), and several other international partners.

The aims of the project are to enhance understanding of hydrogen sources and sinks, the quantification of emissions, as well as to evaluate climate impacts, and facilitate industry collaboration. Through a series of interconnected work packages and coordinated efforts, HYway aims to provide comprehensive insights into the hydrogen economy's environmental implications and foster effective communication between scientific and industrial stakeholders. The findings will provide policymakers with critical information for the transition to a low carbon economy.

LAMASUS

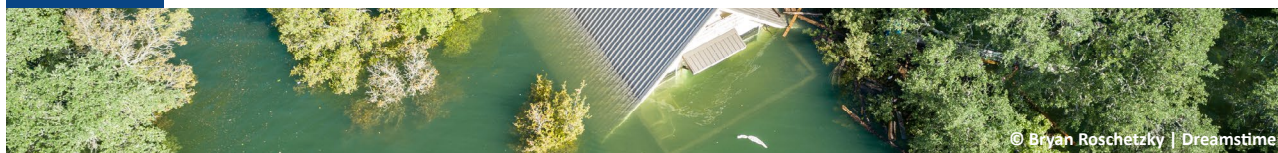


The Land Management for Sustainability (LAMASUS) project is focused on developing tools for an innovative governance model to support the development of policies in the framework of the European Green Deal. As part of this project, IIASA collaborates with Norway's Institute for Rural and Regional Research (RURALIS) and over 15 other international partners.

The project will create a modeling toolbox that can help anticipate the potential economic and environmental impacts of different agricultural and forestry policies on land use and land management. This toolbox can be used by policymakers to evaluate the mid-to-long-term benefits of agricultural and forestry policies across the EU, country, and regional levels. High-resolution data on land use, land use management, and policy information will be made comparable across the EU. Once online, data will be regularly updated using associated databases for European land use, land management, agricultural- and forest-related policies, combined by state-of-the-art remote-sensing and European statistical datasets.

An integral part of the project is the focus on building a multi-level stakeholder dialogue including the European Commission, national, and local policymakers, land users, and other stakeholders. This stakeholder engagement approach will help identify data needs and develop policy-relevant scenarios that will benefit the EU and its citizens and aims to ensure that policies and modeling tools are accepted by those affected by them.

MEDiate



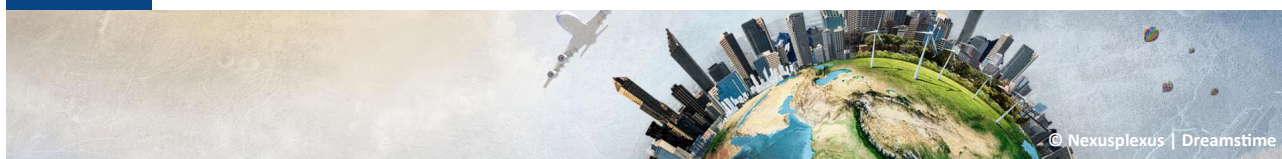
The Multi-hazard and Risk Informed System for Enhanced Local and Regional Disaster Risk Management (MEDiate) project was aimed at developing a decision support system (DSS) for disaster risk management by considering multiple interacting natural hazards and cascading impacts using a novel resilient-informed, service-oriented and people-centered approach that accounts for forecasted modification in hazard and exposure. As part of the project, IIASA collaborated with NORSAR and the Oslo Kommune, as well as over 15 other international partners. MEDiate had partners in **four testbeds** located in France, the UK, Iceland, and Norway.

The project was a resounding success, advancing disaster risk reduction research while supporting local and regional authorities through knowledge transfer and capacity building. The consortium produced 26 journal papers, over 28 conference contributions, and engaged in 15+ stakeholder events, including a strong presence at the Europe and Central Asia Regional Platform for Disaster Risk Reduction (EFDRR). MEDiate's results reached a broad audience of researchers, practitioners, and policymakers and were featured in the 2025 **UNDRR Global Assessment Report**.

NAVIGATE

The Next Generation of Advanced Integrated Assessment Modeling to Support Climate Policy Making (NAVIGATE) project was focused on tackling existing weaknesses and lack of capabilities of the previous generation of Integrated Assessment Models, as well as providing new insights into how long-term climate goals can translate into short-term policy action to implement the goals of the Paris Agreement. As part of this project, IIASA collaborated with the Norwegian University of Science and Technology (NTNU) and 16 other international partners.

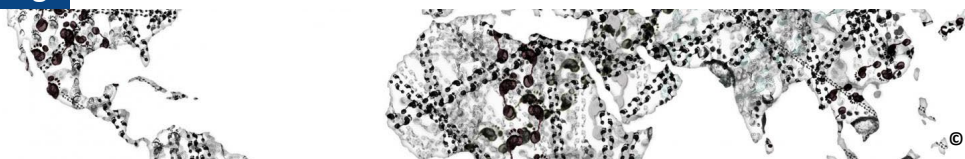
The project helped to improve the capability of Integrated Assessment Models (IAMs) to inform the design and evaluation of climate policies by targeting major advancements in two areas: describing transformative change in the economy, in technology, and in consumer goods and services, and describing distributional impacts of climate change and climate policy. IIASA led the work on energy demand and the representation of energy demand modeling for the buildings and transport sectors in the MESSAGEix-GLOBIOM framework. IIASA also contributed to the improvement of modeling frameworks for energy-water-land nexus research and the tools to explore synergies and trade-offs between mitigation and the Sustainable Development Goals.

RESCUE

The Response of the Earth System to Overshoot, Climate Neutrality and Negative Emissions (RESCUE) project investigates the potential response of the Earth system to implementing carbon dioxide removal (CDR) technologies and designs new climate projection scenarios with representation of CDR portfolios. RESCUE brings together 17 organizations from 10 European countries and one African country, with knowledge and expertise in climate science, climate policy, and science communication. As part of this project, IIASA works with the Norwegian University of Science and Technology (NTNU) and Norce Norwegian Research Centre (AS NORCE), among other partners.

IIASA scientists contribute to this project by co-developing the deep mitigation scenarios and broadening the understanding of the regional differences across multiple dimensions including CDR deployment, carbon storage, geophysical feedbacks, and localization of climate impacts. These new scenarios will explicitly consider future patterns of land use, including agricultural productivity, in the context of sustainably achieving the global climate goal in order to provide harmonized and consistent data to medium and large-scale Earth system models.

QuantMig

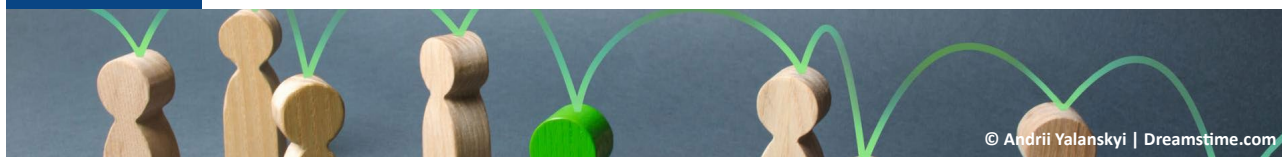


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The primary aim of the Quantifying Migration Scenarios for Better Policy (QuantMig) project was to produce comprehensive, multi-perspective, and robust quantitative migration scenarios to support various areas of European migration policy, based on cutting-edge developments in conceptualizing, explaining, estimating, and forecasting migration. This work was conducted in partnership with Peace Research Institute Oslo (PRIO) and five other institutions around the world.

The project made important contributions to improve the understanding of qualitative and conceptual foundations of migration flows into, out of, and within Europe and was selected as a **Success Story** by the European Commission's Research and Innovation Services. The final project meeting gathered high-level officials from different government agencies across Europe. Based on their recommendations and inputs, the QuantMig consortium produced a [paper on Migration Policy and Practice](#), summarizing key policy recommendations, which was published by the International Organization for Migration.

WorldTrans



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The Transparent Assessments for Real People (WorldTrans) project will help to develop better Integrated Assessment Models (IAMs) that show the interaction between climate, economy, and society. WorldTrans is coordinated by the Norwegian Meteorological Institute (METNO).

WorldTrans will address systemic, structural weaknesses and limitations of current IAMs. By using simpler models that focus on feedbacks, cross-sector connections, and linkages, the project aims to overcome transparency issues, incorporate human behavior and actor heterogeneity more explicitly, explore a wider range of uncertainties, assess the implications of feedback loops, and engage citizens and stakeholders in inspiring environments of co-production and learning. IIASA leads the work on incorporating societal transformation into integrated assessment modeling, aiming to improve the representation of behavioral factors in IAMs and create feasible dynamic scenarios of food and energy demand based on an in-depth analysis of the adoption of low-carbon behaviors as a demand-side mitigation option.

4. Selected Examples of IIASA Models, Tools, and Data

IIASA develops a wide range of advanced models that integrate scientific knowledge across disciplines to address complex global challenges. These models are designed to capture the interconnected dynamics between human, environmental, and technological systems, providing robust tools for exploring alternative futures and informing evidence-based policy decisions.

Several IIASA models cover key areas of strategic priority for the government of Norway. These tools help to inform long-term low-emission strategies, climate adaptation planning, clean air programs, and science-based Sustainable Development Goals (SDG) implementation for governments around the world. In addition, IIASA offers focused workshops covering its tools. Below are a few selected examples.

FABLE Calculator



The FABLE Calculator is an open-source tool designed to help governments, researchers, and organizations explore sustainable food and land use pathways. The tool provides insights by modeling 88 agricultural products across crops and livestock; land and water use for food production from 2000 to 2050; and trade, losses, waste, and environmental constraints. Used by research teams and governments worldwide, the FABLE Calculator helps develop long-term integrated pathways, supporting decision making and prioritization, as well as facilitating cross-sectoral dialogues to build a common vision for sustainable food and land use systems.

The Calculator is extensively used by the **Norway Country Team** of the **FABLE Consortium**.

GAINS



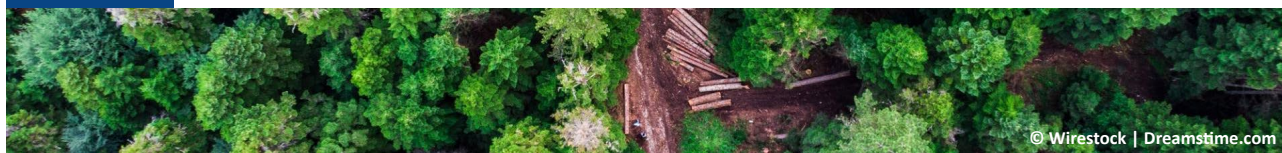
The Greenhouse Gas and Air Pollution Interactions and Synergies (GAINS) model assesses emission and pollution reduction strategies that combat air pollution and climate change simultaneously. GAINS estimates historic emissions of 10 key air pollutants and 6 greenhouse gases for each country based on data from international energy and industrial statistics, emission inventories, and data supplied by countries themselves. It assesses emissions on a medium-term time horizon, with projections being specified in five-year intervals through the year 2050. Scientists in many nations around the globe use GAINS as a tool to assess emission reduction potential in their region. The model is continuously refined to improve representation of key sources and new mitigation opportunities, as well as address new emerging challenges.

IIASA worked on multiple projects associated with the air quality policy initiatives of the European Commission. For example, IIASA led the consortium that worked within the DG-ENV Air Quality Framework and included the Norwegian Meteorological Institute (METNO). IIASA led the assessment, analyzing prospects for reducing air pollution in the EU by 2030 and beyond, which supported the third Clean Air

Outlook published by the European Commission. The GAINS model was the key tool in all three Clean Air Outlook reports, all of which can be found [here](#).

The Norwegian Meteorological Institute (METNO) and IIASA also supported the Impact Assessment of the revision of the Ambient Air Quality Directive. Using the GAINS model, IIASA developed air pollution scenarios which created the basis for the [proposal](#).

Geo-Wiki



The Geo-Wiki Project is a global network of volunteers who participate in Earth observation driven citizen science through the Geo-Wiki tool. The Geo-Wiki portal offers all citizen scientists the opportunity to participate in environmental monitoring of the Earth's surface by evaluating satellite and aerial images in detail. By using these innovative techniques, Geo-Wiki has been used to successfully integrate citizen-derived data sources with expert and authoritative data. Data can be input via desktop or mobile devices, with campaigns and games used to incentivize input. These innovative techniques have been used to successfully integrate citizen-derived data sources with expert and authoritative data to address pressing policy-related questions.

Since its inception, Geo-Wiki has grown rapidly, with currently over 22,000 registered users having contributed more than 18 million image classifications from around the world, including Norway. Furthermore, the Geo-Wiki toolbox has expanded to include numerous applications which help to address a variety of global challenges (e.g., land use change, food security, pollution, and more).

GLOBIOM



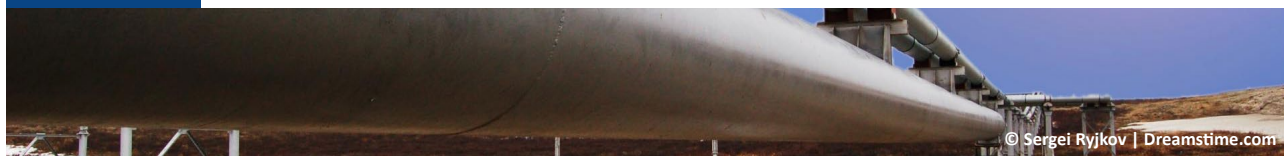
The IIASA Global Biosphere Management Model (GLOBIOM) is used to analyze the competition for land use between agriculture, forestry, and bioenergy, which are the main land-based production sectors. The model can provide scientists and policymakers with the means to assess, on a global basis, the rational production of food, forest fiber, and bioenergy, all of which contribute to human welfare. The partial-equilibrium model represents various land use-based activities, including agriculture, forestry, and bioenergy sectors.

The model is built following a bottom-up setting based on detailed grid-cell information, providing biophysical and technical cost information. This detailed structure allows a rich set of environmental parameters to be taken into account, and its spatial equilibrium modeling approach represents bilateral trade, based on cost competitiveness.

The model was initially developed for impact assessment of climate change mitigation policies in land-based sectors, including biofuels, and nowadays is also increasingly being implemented for agricultural and timber markets foresight, and economic impact analysis of climate change and adaptation, and a wide range of sustainable development goals.

Proposals for revising climate-, energy-, and transport-related legislation in the **Fit for 55** package of the European Union, draw heavily on IIASA scientific analyses to map pathways to climate neutrality by 2050. The IIASA Greenhouse Gas and Air Pollution Interactions and Synergies (GAINS) and Global Biosphere Management (GLOBIOM) models have been a key part of the science underpinning the package, aiding impact assessments and analyzing policy options.

MESSAGEix



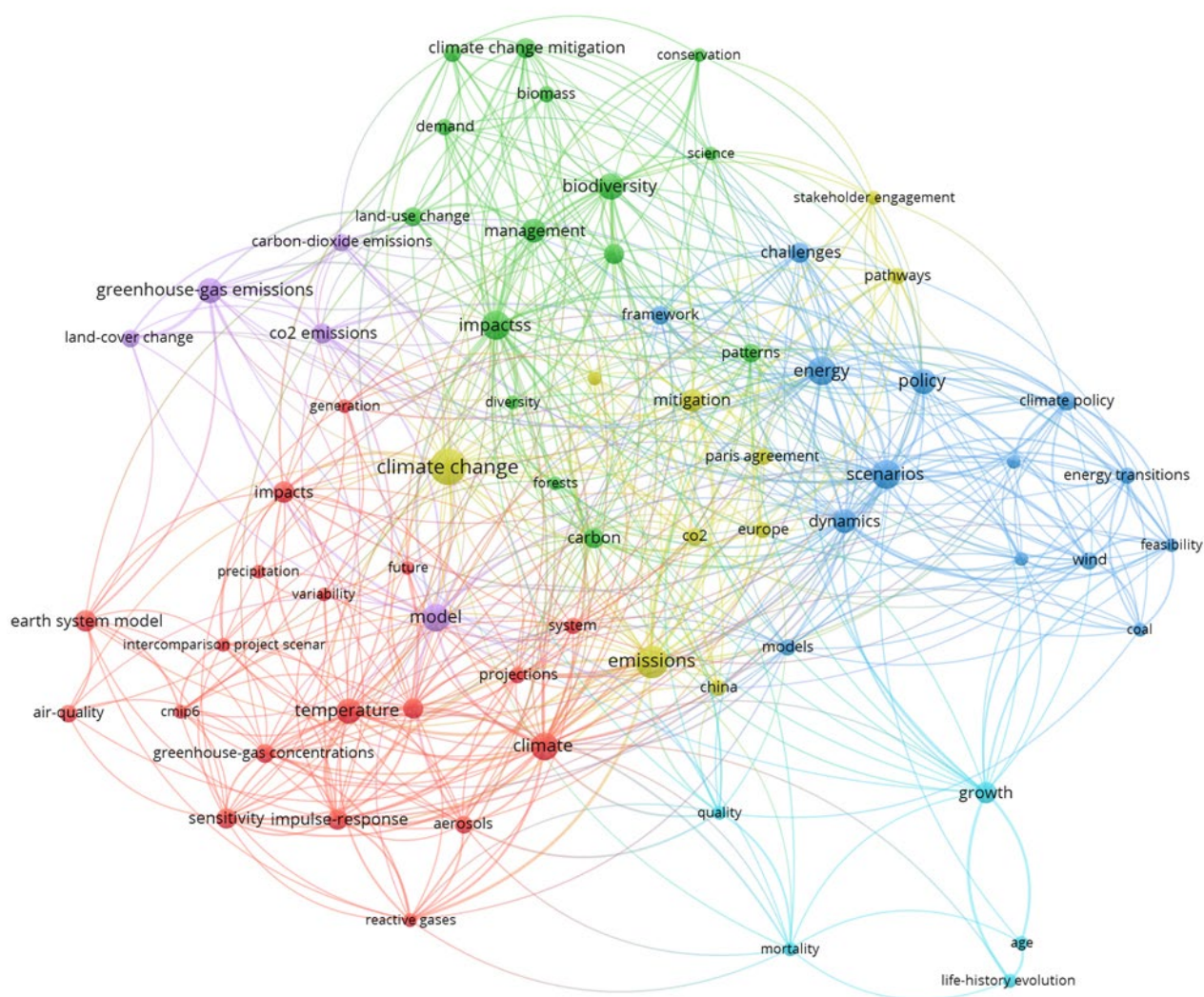
The IIASA Model for Energy Supply Strategy Alternatives and their General Environmental Impact (MESSAGE) has been a central tool in energy-environment-economy systems analysis in the global scientific- and policy arena. It provides a flexible framework for the comprehensive assessment of major energy challenges and has been applied extensively for the development of energy scenarios and the identification of socioeconomic and technological response strategies to these challenges. It played a major role in the Intergovernmental Panel on Climate Change (IPCC) Assessment Reports; it provided marker scenarios of the Representative Concentration Pathways and the Shared Socioeconomic Pathways; and underpinned the analysis of the Global Energy Assessment. It is currently known as MESSAGEix.

MESSAGEix covers all greenhouse gas-emitting sectors, including energy, industrial processes, as well as agriculture and forestry (through its linkage to GLOBIOM). The model is designed to formulate and evaluate alternative energy supply strategies consonant with the user-defined constraints such as limits on new investment, fuel availability and trade, environmental regulations and policies, as well as diffusion rates of new technologies. Environmental aspects can be analyzed by accounting, and if necessary, limiting the amounts of pollutants emitted by various technologies at various steps in energy supplies. This helps to evaluate the impact of environmental regulations on energy system development. Its principal results comprise, among others, estimates of technology-specific multi-sector response strategies for specific climate stabilization targets.

5. Key Data on IIASA Engagement with Norwegian Policy

IIASA is not just a research partner but a trusted policy resource for the Norwegian government, directly supporting the delivery of the country's strategic priorities across different sectors and scales. Between 2021 and 2025, IIASA researchers coauthored over 2,400 scientific articles in the fields of environmental, social, Earth and planetary, agricultural, and energy sciences, which gathered over 70,000 citations. Out of these publications, over 230 were coauthored in collaboration with Norwegian institutions. IIASA publications were cited over 25 times in local and national Norwegian government documents.

Figure 1. Key topics of IIASA publications produced in collaboration with Norwegian organizations in 2021-2025 (Source: Web of Science)



Main policy subject areas addressed by the Norwegian Government citing IIASA researchers include climate change, natural environment, Earth sciences, greenhouse gas emissions, economy, biodiversity, applied and interdisciplinary physics, energy, agriculture, and air pollution, among others.

Figure 2. Key policy areas in which the Government of Norway cites IIASA research
(Source: Overton)

Climate Change

12
citations



Natural Environment

11
citations



Earth Sciences

9
citations



Greenhouse gases

9
citations



Economy

7
citations



Biodiversity

6
citations



Top three government sources citing IIASA research in those years are:

- ▶ Norwegian Environment Agency (8 citations or 30%)
- ▶ Norwegian Institute of Public Health (3 citations or 11%)
- ▶ Norwegian Scientific Committee for Food and Environment (3 citations or 11%)

Funders of IIASA research cited in policy documents

The main funders of the research cited in the Norwegian policy documents were: The Research Council of Norway (RCN), The United States National Science Foundation (NSF); and the European Commission (EC).

6. How the Government of Norway Benefits from IIASA Research

We present a few selected case studies illustrating how Norway benefits from policy-relevant research conducted at IIASA. The case studies showcase how the Institute's expertise in modeling and systems analysis helps the government of Norway address the country's interconnected priorities.

Building collaborations and facilitating dialogue to support the green transition

IIASA is a key partner in the Energy Transition Initiative, which provides world leading research on energy transition strategies to industry and government and is led by the Norwegian University of Science and Technology (NTNU).

As part of this work, IIASA contributes its expertise and extensive global network to the organization of the annual Energy Transition Conference. The conference brings together participants from policy, industry, and academia, fostering dialogue across sectors and disciplines. Since 2017, IIASA researchers have served on the conference's international advisory board and regularly contribute to the program through presentations and discussions that link local, national, and regional energy transition challenges with broader global developments in energy systems and climate policy.

This longstanding partnership has led to numerous highly impactful collaborative activities. Those include the Horizon 2020 and Europe-funded projects **CirceUlar** and **NAVIGATE**, as well as IIASA's contributions in several Norwegian research and development centers, such as **FME NTRANS**, **FME Battery**, and **FME MarTrans**.

Fostering transformation of the maritime sector toward a low-carbon future

Maritime shipping is an energy-intensive sector, accounting for a significant share of global final energy use and greenhouse gas emissions, while at the same time serving as the backbone of international trade and globally integrated supply chains. The transition of the maritime sector toward a low-carbon future presents both a challenge and an opportunity for Norwegian industry, including shipping companies, shipbuilders, maritime technology suppliers, and ports. However, the maritime sector's transition toward decarbonization cannot occur in isolation and needs to be integrated into the broader transformations in energy, economic, and societal systems, which have been lacking so far. Achieving this transition requires that developments in maritime transport are closely linked with broader transformations in energy, economic, and societal systems.

To support this integration, a longstanding collaboration between the Norwegian University of Science and Technology (NTNU) and IIASA has focused on combining detailed sectoral and systems-level modeling approaches. In particular, the integration of the MariTeam ship emission model developed at NTNU with the IIASA MESSAGEix-GLOBIOM integrated assessment framework has been the focus of a **recent study**.

The analysis is further being expanded to the Shared Socio-economic Pathways (SSPs), feeding into the Coupled Model Intercomparison Project (CMIP7) to underpin climate change research with detailed insights on decarbonization strategies for the maritime shipping sector. The collaboration between NTNU and IIASA continues under **FME MarTrans**, the Norwegian Research and Development Center for Maritime Energy Transition, which involves 65 partners, mostly from Norwegian research institutions and industry. The collaboration has principally facilitated the interlinkage of the internationally leading maritime engineering research in Norway with the transition assessment expertise at IIASA. The ongoing activity is expected to continue to yield highly policy-relevant outcomes in 2025-2032, over the period of **FME MarTrans**.

Producing scenarios underpinning the Network for Greening the Financial System

The Central Banks and Supervisors Network for Greening the Financial System (NGFS) is a group of over 140 Central Banks and Supervisors willing, on a voluntary basis, to exchange experiences, share best practices, contribute to the development of environment and climate risk management in the financial sector, and to mobilize mainstream finance to support the transition toward a sustainable economy.

As an NGFS member, represented by Norges Bank, Norway is actively involved in NGFS activities, helping to develop climate-related scenarios and analytical tools that assess climate transition risks, physical climate risks, and macroeconomic implications for the financial system. These NGFS scenarios and frameworks are used by central banks and supervisors globally to understand how climate change affects financial stability. Norway benefits from this work by having access to these globally consistent scenario datasets and stress-testing tools that inform domestic risk analyses.

A consortium of climate and economic experts from IIASA and several other organizations have been providing annual, quantitative global mitigation scenarios to the Network, detailing sectoral transitions and assessing the potential for transition and physical risks. The scenario set, hosted in the **IIASA NGFS Scenario Explorer**, is essential for future climate risk assessments and is widely used in research, financial services, climate risk consulting, and business, helping to inform measures and rules, developed by central banks to foster a more sustainable, dynamic, and modern economy, both at the national and global levels. IIASA researchers provide mitigation scenarios using the **Model for Energy Supply Strategy Alternatives and their General Environmental Impact (MESSAGEix)** to inform transition risks, and also now lead the work package on physical risks.

7. Capacity Building Opportunities at IIASA

Developing the next generation of researchers and decision-makers is central to IIASA's mission, and highly relevant to Norway's ambition to strengthen skills, innovation, and global influence in science. Through its flagship training programs, IIASA provides Norwegian researchers with a unique platform to apply systems thinking to the context of their home country and translate their research into real-world impact.

IIASA's training and capacity development programs focus on long-term capability enhancement through training the trainers, advanced modeling courses, and multi-year scientific exchanges. Norwegian researchers gain the knowledge and tools to independently apply, adapt, and extend IIASA's open modeling frameworks, helping to further develop domestic expertise.

Participation not only equips scientists with advanced methodological expertise and experience using IIASA's world-class models but also provides access to a truly international network of peers, policymakers, and practitioners. These opportunities act as a bridge between research and practice: participants return with new skills, perspectives, and professional connections that enrich their home institutions, strengthening the national talent pool.

IIASA Young Scientists Summer Program (YSSP)

For over 50 years, IIASA hosts up to 50 doctoral students from around the world as part of its Young Scientist Summer Program (YSSP) — a three-month course designed for advanced PhD students working on a topic that is compatible with ongoing research at IIASA and who wish to explore the policy implications

of their work. Participants work under the direct mentorship of experienced IIASA scientists in a unique interdisciplinary and international research environment. YSSP fellows produce a paper serving as the first step toward a publishable journal article and have the opportunity to build contacts for future collaboration within the institute's worldwide network.

Many of the former YSSP participants return to IIASA as staff members, others hold esteemed positions in their home countries and research institutions all over the world.

YSSP'25

Avijit Pandit (Norwegian University of Science and Technology) carried out research with a focus on "Scenarios of dietary transition: Exploring linkages between changing demography, consumption patterns, and biogeochemical nutrient cycles in food systems" under the supervision of the IIASA Biodiversity and Natural Resources Program.

YSSP'24

Anouk Brisebois (Oslo Metropolitan University) carried out research on "The gendered dimensions of climate resilience in urban destination areas with a focus on a case study of a coastal city in Bangladesh" under the supervision of the IIASA Population and Just Societies Program.

YSSP'21

Iulia Marginean (University of Oslo) carried out research on "Demography and heat stress: The role of population dynamics in climate risk projections" under the supervision of the IIASA Population and Just Societies Program.

Postdoctoral Fellowships

IIASA also offers a range of bilateral postdoc opportunities for early career researchers. These include fully funded research positions of up to two years to study topics related to the IIASA research agenda. This opportunity should be reemphasized for Norway. Moreover, IIASA now actively supports and helps applicants in their applications for a Marie Skłodowska Curie Action postdoctoral fellowship with IIASA as their hosting institution.

Other Activities

IIASA Integrated Assessment and Climate Change Research Group Leader, Volker Krey, holds an Adjunct Professor position at the Norwegian University of Science and Technology (NTNU) and as part of this position, teaches a post graduate course on Integrated Assessment Modeling. This course has been running since 2019 and has been taught to approximately 20 students in Norway. In addition to these teaching commitments, Krey has co-supervised three PhD students and one postdoctoral researcher at NTNU.

IIASA Principal Research Scholar Edgar Hertwich is a professor at the Norwegian University of Science and Technology (NTNU). In 2025, he led a **science advice activity** of the Norwegian Academy of Sciences with a focus on resource efficient settlements. The event brought together diverse stakeholders from the Norwegian government, including the Ministry of Local Government and Regional Development and Bergen Kommune, as well as several Norwegian universities and research organizations.

Selected Leading Personalities from Norway Associated with IIASA

Anne Sophie Daloz, Senior Researcher, CICERO Center for International Climate Research. She works with IIASA as part of the part of the Food, Agriculture, Biodiversity, Land, and Energy (FABLE) consortium.

Marta Bivand Erdal, Research Professor at Peace Research Institute Oslo (PRIO). She actively collaborated with IIASA as part of the QuantMig project.

Jan Sigurd Fuglestad, Research Director, CICERO Center for International Climate and Environmental Research. He is a long-term collaborator, who worked with IIASA's experts on the mitigation of air pollution and greenhouse gases.

Nils Petter Gelditsch, Professor Emeritus, Peace Research Institute Oslo (PRIO). He served on IIASA's Science Advisory Committee.

Thomas Hansteen, Special Advisor on International Relations, The Research Council of Norway. He is a former IIASA Council Member.

Bjørn Hvinden, Head of Research, Norwegian Social Research, Oslo Metropolitan University (OsloMet). He actively collaborates with IIASA's demographers.

Hans Olav Ibrekk, Policy Director, Energy and Climate Change, Norwegian Ministry of Foreign Affairs, and Co-Facilitator of SDG 7 Technical Advisory Group. He is a prominent collaborator of IIASA.

Merle Jacob, former Director, Centre for Technology, Innovation and Culture at the University of Oslo. Currently, Professor in Research Policy at Lund University and the UNESCO Chair in Research Management and Innovation Systems. She was a guest research scholar at IIASA.

Björn Klöve, Professor, University of Oulu. He worked closely with IIASA as part of the WatNEX project.

Klaus Mittenzwei, Research Professor, Norwegian Center for Rural Research (RURALIS). He worked closely with IIASA as part of the LAMASUS project.

Daniel Beat Müller, Professor, Norwegian University of Science and Technology (NTNU). He worked closely with IIASA as part of the BALANCE project.

Jozef Pacyna, Director at The Department of Center for Ecological Economics at the Norwegian Institute for Air Research (NILU). He works with IIASA researchers to better understand uncertainty in greenhouse-gas-emission changes over time.

Glen Peters, Senior Researcher, CICERO Center for International Climate Research. He is a prominent collaborator of IIASA.

Bjørn Hallvard Samset, Senior Researcher, CICERO Center for International Climate Research. He is a prominent collaborator of IIASA.

Maria Sand, Senior Researcher, CICERO Center for International Climate Research. She worked closely with IIASA as part of the HYway project.

Michael Schultz, Professor, Norwegian Meteorological Institute (METNO). He worked closely with IIASA as part of the HYway project.

Anders Hammer Strømman, Professor, Norwegian University of Science and Technology (NTNU). He worked closely with IIASA as part of the SHAPE project.

Bob van Oort, Senior Researcher, CICERO Center for International Climate Research. He works with IIASA as part of the part of the Food, Agriculture, Biodiversity, Land, and Energy (FABLE) consortium.

Barbara Zimmermann, Professor, University of Inland Norway. She actively collaborated with IIASA as part of the TaigaClimate project.

8. Outlook for the Future of Partnerships between IIASA and Norway

This Info Sheet summarizes recent research collaborations between IIASA and Norway. Significant potential remains to further intensify the IIASA-Norway relationship through developing a range of new joint activities including:

- ▶ **Developing IIASA applied systems analysis models for the Norwegian context:** There is a possibility to develop new bespoke versions of IIASA global models to further enable researchers and policymakers to explore complex global problems and their impact on Norway in a holistic and integrated way.
- ▶ **Conducting international assessments in areas of mutual strategic interest:** Norway was a significant contributor to [IIASA Global Energy Assessment](#) which brought together over 500 specialists to transform the way society thinks about, uses, and delivers energy. The new IIASA Strategy will empower its members to collectively initiate new large-scale interdisciplinary projects of high relevance to the regions where its members are located.
- ▶ **Forging new partnerships between IIASA and Norwegian institutions to win grants from international research funders:** IIASA high-quality research and international research network makes it highly competitive in its applications for international research funds. About half of IIASA funding comes from additional funds through contracts, grants, and donations. In line with the [Strategy for Norway's participation in Horizon Europe and the European Research Area](#), IIASA and Norway actively collaborate as part of Horizon Europe projects, such as [LAMASUS](#) or [CircEular](#). There is significant potential to scale up these efforts and secure grants from other international research funders to conduct research in areas of mutual interest, such as artificial intelligence, climate change, environmental protection and conservation, pollution, and health.
- ▶ **Fostering multilateral collaborations:** IIASA's new initiative, the [Science Diplomacy Center](#), is specifically designed to help IIASA member countries enhance international cooperation on global policy challenges by bridging the gap between researchers, policymakers, and stakeholders through evidence-based decision-making. As IIASA expands its focus on critical global challenges, such as resilient and equitable health systems, climate change, AI governance, and multilateralism, Norway's involvement would further enhance its role in shaping international research and policy discussions.
- ▶ **Academic training opportunities for young Norwegian scientists:** Further collaborations can help enhance participation by young Norwegian doctoral and postdoctoral students in IIASA capacity development programs. By combining advanced analytical training with access to IIASA's global networks and real-world policy processes, these opportunities prepare young Norwegian researchers to become leaders in addressing complex sustainability challenges at both the national and international level. There is also a significant potential to scale up training opportunities organized by IIASA within Norway and the broader region.

Annex 1.

Selected IIASA projects with Norwegian funders and partners (arranged by end date)

TITLE	FUNDER	PARTNERS IN NORWAY	DATES
HYway: Climate impacts of a hydrogen economy – the pathway to knowledge	■ European Commission	■ CICERO Centre for International Climate Research; ■ Norwegian Meteorological Institute (METNO)	01-SEP-2024 to 31-AUG-2028
iDesignRES: Integrated Design of the Components of the Energy System to Plan the Uptake of Renewable Energy Sources	■ European Commission	■ Norwegian University of Science and Technology (NTNU); ■ SINTEF Energy Research	01-OCT-2023 to 30-SEP-2027
MULTIFUTURES: A multi-methods approach towards developing novel policy options towards developing multi-dimensional transition futures	■ European Commission	■ Norwegian University of Science and Technology (NTNU)	01-JAN-2024 to 30-JUN-2027
EYE-CLIMA: Observation-based approach for verifying emissions of climate forcers	■ European Commission	■ CICERO Centre for International Climate Research; ■ Norwegian Institute For Air Research (NILU)	01-JAN-2023 to 31-DEC-2026
LEAP-RE: Long-term joint EU-AU research and innovation partnership on renewable energy	■ European Commission	■ NORCE Norwegian Research Centre AS	01-JAN-2021 to 30-SEP-2026
TaigaClimate: Forests and wildlife under pressure – Systems analysis for sustainable solutions	■ The Research Council of Norway	■ Inland Norway University of Applied Sciences; ■ Norwegian University of Life Sciences (NMBU)	01-OCT-2021 to 30-SEP-2026
The HUT: The Human-Tech Nexus – Building a safe haven to cope with climate extremes	■ European Commission	■ The Norwegian Geotechnical Institute (NGI)	01-OCT-2022 to 30-SEP-2026
CircEular: Developing circular pathways for a EU low-carbon transition	■ European Commission	■ Norwegian University of Science and Technology (NTNU)	01-SEP-2022 to 31-AUG-2026
LAMASUS: Land use and management modelling for sustainable governance	■ European Commission	■ Norwegian Center for Rural Research (RURALIS)	01-SEP-2022 to 31-AUG-2026
RESCUE: Response of the earth system to overshoot, climate neutrality and negative emissions	■ European Commission	■ NORCE Norwegian Research Centre AS; ■ Norwegian University of Science and Technology (NTNU)	01-SEP-2022 to 31-AUG-2026
OpenMod4Africa: Open modelling toolbox for development of long-term pathways for the energy system in Africa	■ European Commission	■ SINTEF Energy Research	01-JUL-2023 to 30-JUN-2026

TITLE	FUNDER	PARTNERS IN NORWAY	DATES
PREMIUM_EU: Policy recommendations to maximise the beneficial Impact of unexplored mobilities in and beyond the European union	■ European Commission	■ Oslo Metropolitan University (OSLOMET)	01-APR-2023 to 31-MAR-2026
BALANCE: Balancing human and natural resource use in a circular bioeconomy	■ The Research Council of Norway	■ Norwegian University of Science and Technology (NTNU); ■ University of Agder	01-DEC-2021 to 31-MAR-2026
RAINFOREST: Co-produced transformative knowledge to accelerate change for biodiversity	■ European Commission	■ Norwegian University of Science and Technology (NTNU)	01-DEC-2022 to 28-FEB-2026
SPES: Sustainability performances, evidence and scenarios	■ European Commission	■ Oslo Metropolitan University (OSLOMET)	01-FEB-2023 to 31-JAN-2026
WIMBY: Wind in my backyard: Using holistic modelling tools to advance social awareness and engagement on large wind power installations in the EU	■ European Commission	■ University of Oslo (UIO)	01-JAN-2023 to 31-DEC-2025
MYRIAD-EU: Multi-hazard and systemic framework for enhancing risk-Informed management and decision-making in the EU	■ European Commission	■ CICERO Centre for International Climate Research	01-SEP-2021 to 31-DEC-2025
ESM2025: Earth system models 2025	■ European Commission	■ CICERO Centre for International Climate Research; ■ Norwegian Meteorological Institute (METNO); ■ University of Bergen (UIB)	01-JUN-2021 to 30-NOV-2025
MEDiate: Multi-hazard and risk informed system for enhanced local and regional disaster risk management	■ European Commission	■ Oslo Kommune; ■ NORSAR	01-OCT-2022 to 30-SEP-2025
WATNEX: A water-energy-food nexus assessment of climate change impacts on biomass and hydropower resources	■ The Research Council of Norway	■ Norwegian Water Resources and Energy Directorate (NVE) ■ Norwegian Institute Of Bioeconomy Research (NIBIO)	01-AUG-2021 to 31-JUL-2025
ETC BE 2024: European topic centre on biodiversity and ecosystems 2024	■ European Environment Agency	■ Norwegian Institute for Water Research (NIVA)	01-JAN-2024 to 31-DEC-2024
EMERGE: Evaluation, control and mitigation of the environmental impacts of shipping	■ European Commission	■ Norwegian Meteorological Institute (METNO)	01-FEB-2020 to 31-JAN-2024
MIND STEP: Modelling individual decisions to support the European policies related to agriculture	■ European Commission	■ Norwegian Institute of Bioeconomy Research (NIBIO); ■ Norwegian Center for Rural Research (RURALIS)	01-SEP-2019 to 31-DEC-2023
EuropaBON: Development of a European Biodiversity Observation Network to integrate existing data streams and effectively monitor the status of Europe's ecosystems	■ European Commission	■ Norwegian Institute for Water Research (NIVA); ■ Norwegian Institute for Nature Research (NINA)	01-DEC-2020 to 30-NOV-2023

TITLE	FUNDER	PARTNERS IN NORWAY	DATES
NUNATARYUK: The effect of climate change on Arctic permafrost and its socio-economic impact, with a focus on coastal areas	■ European Commission	■ Norwegian University of Science and Technology (NTNU); ■ University of Oslo (UIO); ■ GRID-Arendal	01-NOV-2017 to 31-OCT-2023
FORCEs: Constrained aerosol forcing for improved climate projections	■ European Commission	■ Norwegian Meteorological Institute (METNO); ■ University of Oslo (UIO)	01-OCT-2019 to 30-SEP-2023
COMFORT: Our common future ocean – quantifying coupled cycles of carbon, oxygen, and nutrients for determining and achieving safe operating spaces with respect to tipping points	■ European Commission	■ Institute of Marine Research (IMR); ■ NORCE Norwegian Research Centre AS; ■ Norwegian Polar Institute; ■ Nansen Environmental and Remote Sensing Center (NERSC); ■ University of Bergen (UIB)	01-SEP-2019 to 31-AUG-2023
NAVIGATE: Next generation of advanced integrated assessment modeling to support climate policymaking	■ European Commission	■ Norwegian University of Science and Technology (NTNU)	01-SEP-2019 to 31-AUG-2023
RECEIPT: Remote climate effects and their impact on European sustainability, policy and trade	■ European Commission	■ CICERO Centre for International Climate Research	01-SEP-2019 to 31-AUG-2023
CONSTRAIN: Constraining uncertainty of multi decadal climate projections	■ European Commission	■ CICERO Centre for International Climate Research	01-JUL-2019 to 30-JUN-2023
OpenENTRANCE: Open energy transition analyses for a low-carbon economy	■ European Commission	■ Norwegian University of Science and Technology (NTNU); ■ SINTEF Energy Research	01-MAY-2019 to 30-JUN-2023
PHUSICOS: According to Nature	■ European Commission	■ Norwegian Geotechnical Institute (NGI); ■ Oppland County Council	01-MAY-2018 to 30-APR-2023
E-SHAPE: EuroGEOSS showcases: Applications powered by Europe	■ European Commission	■ University of Bergen (UIB)	01-MAY-2019 to 30-APR-2023
SHAPE: Sustainable development pathways achieving human well-being while safeguarding the climate and planet earth	■ Austrian Research Promotion Agency (FFG)	■ Norwegian University of Science and Technology (NTNU)	01-SEP-2019 to 28-FEB-2023
QuantMig: Quantifying migration scenarios for better policy	■ European Commission	■ Peace Research Institute Oslo (PRIO); ■ University of Oslo (UIO)	01-FEB-2020 to 31-JAN-2023
BioEssHealth: Scenarios for biodiversity and ecosystem services acknowledging health	■ Austrian Science Fund (FWF)	■ Norwegian University Of Life Sciences (NMBU)	01-APR-2019 to 31-MAR-2022
MultiForest: Management for resilience of multifunctionality in European forests in the era of bioeconomy	■ Federal Ministry for Sustainability and Tourism of Austria	■ Norwegian Institute Of Bioeconomy Research (NIBIO)	01-APR-2019 to 31-MAR-2022

TITLE	FUNDER	PARTNERS IN NORWAY	DATES
VERIFY: Towards a robust and comprehensive greenhouse gas verification system	■ European Commission	■ CICERO Centre for International Climate Research; ■ Norwegian Institute of Bioeconomy Research (NIBIO); ■ Norwegian Institute For Air Research (NILU); ■ University of Bergen (UIB)	01-FEB-2018 to 31-JAN-2022
Arctic BC: EC-Black Carbon in the Arctic	■ Arctic Monitoring and Assessment Programme (AMAP)	■ Arctic Monitoring And Assessment Programme (AMAP); ■ Carbon Limits; ■ Norwegian Institute For Air Research (NILU)	15-JAN-2018 to 30-JUN-2021
CRESCENDO: Coordinated research in earth systems and climate: Experiments, knowledge, dissemination and outreach	■ European Commission	■ NORCE Norwegian Research Centre AS; ■ University of Bergen (UIB)	01-NOV-2015 to 31-JAN-2021



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