



Centre for Climate
and Energy Transformation

Strategy 2020-2022

*Actionable knowledge
for sustainable transformation of society
to prevent climate change*

About CET

Climate change is one of the greatest societal challenges of our time. While we have acquired substantial knowledge about physical climate changes and to some extent their impacts on society, new knowledge is needed on how to achieve deep, rapid and sustainable transformation of society.

Climate and energy transition is one of three priority areas at the University of Bergen (UiB). The Centre for Climate and Energy Transformation (CET) was established in 2016 by the Faculty of Social Sciences as a hub for interdisciplinary research with a basis in the social sciences in this area. CET brings together researchers from three partner institutions - the University of Bergen, NORCE Norwegian Research Centre AS and NHH Norwegian School of Economics.



Challenges

Rapid reductions in greenhouse gas emissions

Substantive research has demonstrated that human activities have already caused global warming of 1°C above pre-industrial levels, and that temperatures continue to increase, with severe consequences for people and ecosystems¹. Taking urgent action to combat climate change and its impacts is highlighted as one of the United Nations' Sustainable Development Goals (SDG13). There are clear links between mitigating climate change and most other SDGs, such as ensuring access to clean energy (7), ending poverty and reducing inequalities (1,10), ensuring responsible consumption and production (12), maintaining ecosystems and biodiversity (14,15), making cities and communities sustainable (11), ensuring good health (3), and promoting inclusive societies with access to justice and good governance (16).

The Paris Agreement aims at strengthening the global response to the threat of climate change by keeping a global temperature rise this century well below 2 degrees Celsius above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5 degrees Celsius. To meet the 1.5 degree target, global CO₂ emissions will have to decline steeply and reach net zero around 2050.

Sustainable transformation of society

The Intergovernmental Panel on Climate Change Research (IPCC) describes different scenarios or pathways for rapid transition to limit global warming to 1.5 degrees Celsius, that include various degrees of energy consumption, economic growth, and need for carbon dioxide removal¹. All scenarios will require substantial social, business, policy and technological innovations, and far-reaching transitions in energy, land, urban and infrastructure, including transport and buildings, and industrial systems.

Such drastic changes will entail a transformation of society, which IPCC defines as altering the fundamental attributes of a system, including value systems, regulatory, legislative, or bureaucratic regimes, financial institutions, and technological or biological systems².

¹ IPCC special report: Global warming of 1.5 degrees (2018), <https://www.ipcc.ch/sr15/>

² IPCC special report: Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation (2012), <https://www.ipcc.ch/report/managing-the-risks-of-extreme-events-and-disasters-to-advance-climate-change-adaptation/>

*Altering society fundamentally –
value systems, regulations, law,
governance, financial institutions,
technology and biological systems*

Goals

The overarching goal of CET is to produce actionable knowledge that can inform policy and practice about how to achieve deep, rapid and sustainable transformation of society to mitigate climate change.

To achieve this, CET will initiate and conduct problem-oriented social science research in collaboration with researchers from other disciplines, and with the involvement of public and private sector user partners when appropriate. CET will bring together scientists from a variety of social science and other disciplines, and strengthen itself as a broad and visible interdisciplinary knowledge hub regionally, nationally and internationally.

Vision:

Society sustainably transformed to mitigate climate change

Actionable knowledge produced

about how to achieve deep, rapid and sustainable transformation of society to mitigate climate change

- **High quality** international publications
- **User relevance** of research questions
- **Communication** of research findings

Problem-oriented research conducted

involving social sciences, inter- and transdisciplinary research

- **Research projects** conducted
- **Research capacity** strengthened
- **Partnerships** strengthened

Interdisciplinary knowledge hub strengthened

with regional, national and internationally visibility

- **Network of researchers** engaged
- **Meeting places** organized
- **Interdisciplinary education** supported

*Producing actionable knowledge
for sustainable transformation of society
to prevent climate change*

Goal 1:

Actionable knowledge

CET will produce and communicate knowledge of high quality about how to achieve deep, rapid and sustainable transformation of society to mitigate climate change.

High quality international publications

Producing knowledge of high quality is essential, as it should inform other research, policy and practice. This includes scientific publications from novel primary research as well as knowledge syntheses and summaries of existing research. CET aims at publishing research findings in highly ranked scientific journals. We will foster a culture for high quality research and scientific writing among academic staff at the centre, affiliates and through our research partnerships.

User relevance of research questions

CET will produce knowledge that is relevant to key societal transformation within priority areas. Interaction with stakeholders throughout the research process can make our questions more relevant and our analyses more insightful, and facilitate that research-based knowledge will inform decision-making. We will seek to co-produce knowledge with decision-makers and other stakeholders whenever this is appropriate.

Communication of research findings

CET will communicate research findings to, and engage with, public and private decision makers, societal organizations and society at large. Knowledge will be communicated in appropriate formats and in a way that makes it relevant to stakeholders.

We will take advantage of the broad expertise of CET researchers from various disciplines in producing knowledge summaries, policy briefs and reports, and in providing research-based inputs to white papers and hearings. Our researchers will be encouraged and trained to engage in public debate and facilitate discussions with central stakeholders. We will present research findings at scientific conferences and meetings, and also organize own conferences. We will use social media actively as part of our communication activity.

*Creating knowledge
relevant to societal challenges,
often by involving stakeholders
throughout the research process*

Goal 2:

Problem-oriented research

CET will initiate and conduct problem-oriented social science research in collaboration with researchers from other disciplines, and with the involvement of public and private user partners when appropriate.

Research projects

CET will take a leading role at UiB, and in the nexus including NORCE, NHH and the Bjerknes Centre for Climate Research (BCCR), in coordinating, initiating and conducting social science-based and interdisciplinary research projects on climate and energy transformation. We will identify relevant funding opportunities, and work proactively to establish a base of externally funded grants, in particular through the Research Council of Norway (RCN) and the European Union (EU) programs. CET core funding will predominantly be used to support activities that can catalyze external funding.

Research capacity

CET will contribute to strengthen research capacity in identified competence areas where needed. We will secure a critical mass of senior researchers from a variety of scientific backgrounds working at or being affiliated with CET. We will actively recruit strong international researchers at mid-career or senior levels, and will develop models of collaboration with other departments and institutions. We will stimulate the establishment of permanent positions, prof. II – positions, and engage senior staff at other UiB units in research collaboration and supervision of PhD students. When hiring scientific staff, we aim for open, international calls, and competition based on merits. CET will during the strategy period position itself to lead a larger centre proposal.

Partnerships

CET will strengthen partnerships with leading national and international researchers and research institutions. Initially, this will be through partnerships on research proposals, and through inviting top international researchers as visiting researchers or lecturers. CET may also engage in more formalized partnerships with key institutions.

CET will also strengthen partnerships with public and private sector actors and non-governmental organizations. CET has already established good working relations and project collaborations with several local and regional municipalities and private sector actors. We will maintain these relations, and work actively to engage with new stakeholders, in particular with relevant national level governance agencies.

*Bringing together scientists across disciplines –
geography, political science, law,
psychology, natural sciences, economics,
anthropology, system dynamics, linguistics
– in problem-oriented research*

Goal 3:

Interdisciplinary knowledge hub

CET will strengthen itself as a social science-based interdisciplinary knowledge hub with regional, national and international visibility.

Network of researchers

We will maintain and grow the network of CET affiliated researchers at our primary partner institutions (UiB, NORCE and NHH), in particular in areas where competence is needed. The network will be actively engaged in idea exchange, project development and communication. The established CET Accelerator seed funding mechanism will be continued, and supplemented with more strategic catalytic funding for project development.

Meeting place

CET will be an active meeting place at the University of Bergen, and create physical and virtual arenas for researchers, students, and users of research. This includes hosting regular seminars and scientific conferences, as well as workshops and other meetings for knowledge exchange, discussions, idea generation and project development.

Interdisciplinary education

CET will recruit PhD fellows mainly as part of externally funded projects, and will contribute to supervision in collaboration with other departments. We will provide a supporting and stimulating research and learning environment for PhD and master students. We may collaborate with other departments and units on interdisciplinary teaching programs, and will encourage PhD students and postdocs to develop individual courses in cooperation with their host departments. We will support the UiB Collaboratory, which brings together students, researchers, and practitioners in innovative, interdisciplinary and problem-oriented forms of education, research and outreach activities.



Competence areas

CET has competence within six main areas through its affiliated researchers:

Urban governance and politics

The Spaces of climate and energy laboratory (SpaceLab) group originating from the UiB Department of Geography has significant experience in urban governance and politics in Norway and Europe, including studies of climate-related planning, mobility and inter-urban networks. The group uses qualitative approaches and case studies, as well as co-production of knowledge.



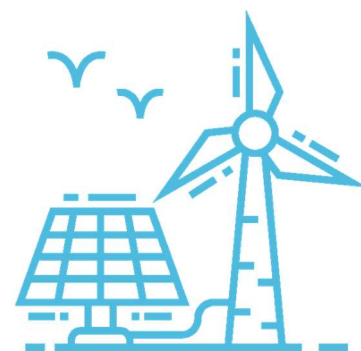
Public perceptions and policy preferences

A group of CET researchers from various faculties - social sciences, humanities and psychology - are using survey experiments, panel analysis and quantitative and qualitative text analysis to study public perceptions related to climate change. They utilize data from the UiB Digital Social Science Core Facility (DIGSSCORE) and other national and international surveys to understand barriers to and opportunities for transformation.



Energy transitions

A few CET researchers are studying the mechanisms of how new energy sectors emerge and how old energy sectors are phased-out. They study what are the energy system, socio-technical and political economic preconditions and connections within these transitions, primarily at national and global levels, using integrated and systems modelling approaches. UiB also possesses competence in natural science energy research, relating to various forms of renewable energies, including the Bergen Offshore Wind Centre (BOW).





Law, governance and economics

Several CET affiliates with a background in law and political science have a research interest in examining legal, organizational and political aspects of transformation. A potential partner for extended collaborations is the Centre on Law and Social Transformation, which has competence on how law shapes society, including climate litigation. There is potential to extend collaborations in particular with researchers and centres at NHH.

Systems analysis

There is potential to strengthen the expertise at CET on systems analysis, in particular through linking up more strongly with the Systems Dynamics group at UiB. This is an important asset in understanding the complexities and interactions of policies and society, that can be applied to a number of thematic areas.



Climate systems, impacts and adaptation

NORCE and the Bjerkes Centre for Climate Research have extensive natural science expertise on climate systems and impacts. Some of these researchers, also affiliated with CET, have worked on climate forecasting, local climate impacts and how to adapt to them. CET is also a partner in the Norwegian Research Centre on Sustainable Climate Change Adaptation (NorAdapt).

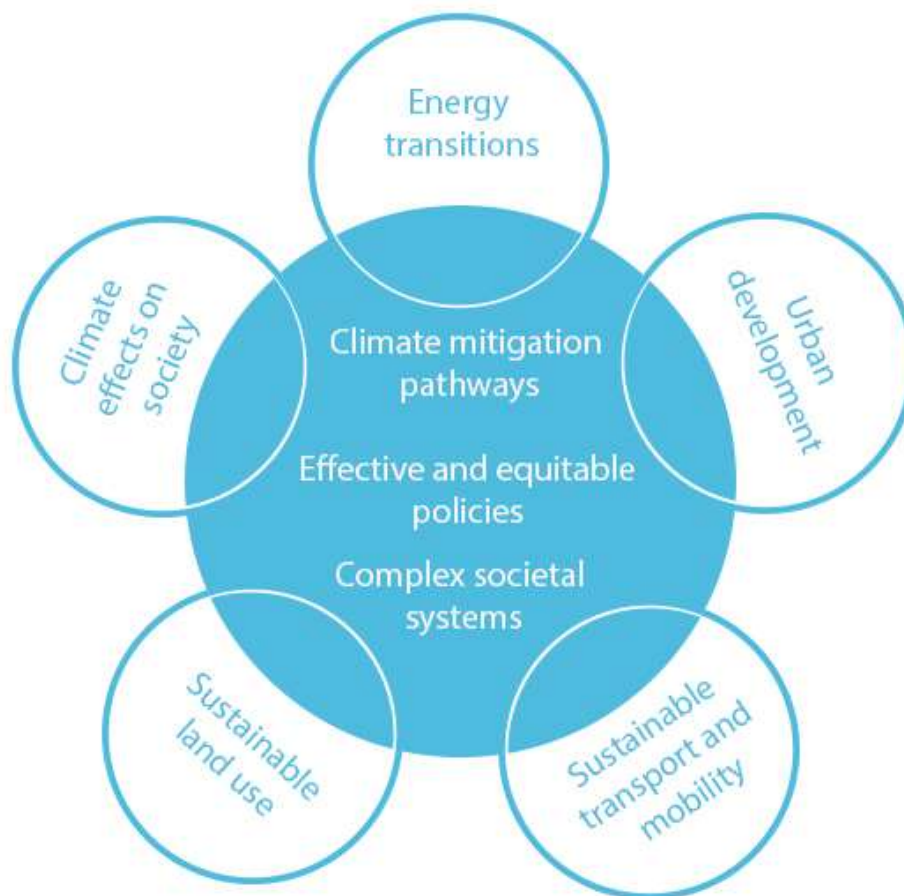
Priority areas

CET will strengthen and expand its research activities in three core and five applied priority areas.

These are areas where new knowledge can have potential large impact on achieving deep, rapid and sustainable transformation of society, and where CET can have an instrumental role in generating such knowledge.

First, CET will strengthen its competence and conduct innovative and interdisciplinary research in three core priority areas (figure, inner circle).

Second, CET will engage in several applied priority areas where such social science-based competence and knowledge is needed and where CET either has strong competence, or where there is potential to collaborate with other leading initiatives and researchers at our partner institutions (figure, outer circles).



Core priority areas

Climate mitigation pathways

We will build upon natural science research on climate gas emission projections, and generate knowledge on social and political mitigation pathways that can bring emissions down rapidly without compromising other development goals, in particular maintaining biodiversity and ecosystems. Such research will address choices we make as individuals and institutions.

Effective and equitable policies

We will conduct research that advances critical assessment of today's policies and governance mechanisms. Social scientists have observed that these suffer from multiple goal conflicts and incoherence, as well as trade-offs and unintended consequences that are poorly understood. To meet climate targets, there is a need for policies that builds upon climate science, and are coherent and inclusive. We will conduct research that contributes to understanding societal issues, including public perceptions, governance structures, law and complexity. We will also study innovative ways of *doing* politics and policy-making.

Complex societal systems

We will conduct research to better understand complex societal systems, including institutions, technologies and individual actors. These create path dependencies, barriers and drivers that shape our opportunities to transform society. We will also address questions related to climate risks, and how to address practices and behaviours.

Applied priority areas

Energy transitions

Transitioning to renewable energy is critical to meeting the climate challenge. We will continue strengthening our research on the phase-out of fossil energy sources, and the transition to renewables, both at national and global levels. We will explore opportunities for more collaborative research on legal, policy and social dimensions of introduction of renewable energy sources, in particular linked to the Bergen Offshore Wind Centre. We will also explore possibilities for collaborating on interdisciplinary education on energy transitions.

Urban development

The way cities are developed and planned has a significant impact on GHG emissions. This includes emissions from buildings and other infrastructure, transport, consumption and more. We will support the SpaceLab group in ensuring continuation of its work on transformative politics and local governance of relevance to climate and energy transformation.

Sustainable transport and mobility

The transport sector is a significant source of GHG emissions, and one where it has been difficult to achieve emission reductions. CET's research competence on urban governance, perceptions and energy systems can address how to achieve rapid change towards more sustainable forms of mobility and transport. We will also continue exploring future research collaborations with economists and logistics experts at NHH, as well as public and private sector stakeholders.

Climate effects on society

Climate change is already affecting people and societies, and will increasingly do so with rising temperatures. CET will engage in collaborations with the Bjerknes Centre and NORCE where social sciences can contribute to understanding processes of human induced climate change and mitigation pathways. We will also engage in research collaborations through Noradapt in particular on the linkages between climate mitigation and adaptation. Finally, we will engage with scientists who have relevant expertise on various societal challenges that increasingly will be linked to climate change, such as food insecurity, migration, and health impacts.

Sustainable land use

Competing interests from renewable energy production, urbanization, infrastructure development, food production and more may create conflicts and trade-offs over land use – both ecological and social. CET will engage researchers from across several social science disciplines in collaborations with natural scientists on how these conflicts can be avoided and resolved.

Cross-cutting priorities

Gender balance and perspectives

We will strive for maintaining gender balance at all levels, including the CET leadership group, steering committee, Scientific Advisory Committee, recruitment positions and involvement of researchers in project proposals. We will emphasise gender equality by actively recruiting female applicants, and countering gender bias in the framing of the calls.

At open meetings and conferences, we will strive for equal representation for invited speakers and participants, notably at expert roundtables, where experience shows gender balance is often neglected.

Gender perspectives are also relevant to the substance of the planned research. Through practical research and cross-sectorial mentoring our PhDs and postdocs will gain competence that enables them to pursue careers in a wide array of sectors and professions.

The gender balance of CET researchers will be reviewed by the CET steering committee, that can propose other measures to counter imbalances.

Sustainable research practices

CET will strive to lead by example when it comes to doing research with as little environmental and climatic footprint as possible. We have developed the CET Low-Carbon Travel Policy to reduce GHG emissions from CET activities, that will be reviewed and revised annually by the Steering Committee, and followed up by action plans for implementation.

Organization and management

In order to achieve its goals, the centre will have a robust, effective and inclusive organisation (described below). Strategic management involves developing and monitoring progress towards the strategy, annual work plans, multi-year budgets and annual reports.

Owner: The Centre is organized under the Faculty of Social Sciences at the University of Bergen. The Centre is part of one of the three priority areas at the University, "Climate and energy transition", which is led by the Faculty of Mathematics and Natural Sciences, and where the overall responsibility sits with the group of Deans.

Steering committee: The steering committee consists of representatives from key stakeholders of the centre, and is led by the Dean of the Faculty of Social Sciences. The steering committee has an overall responsibility for the development and goal achievements of the centre. This includes approval of strategies, budgets and plans, approval of economy and progress reports, give input to job advertisements, and ensure anchoring of the centre within the University's priority area of climate and energy transition.

Director: The Director is responsible for the daily operation of the centre. The Director seeks advice from the Scientific advisory committee, and reports to the Steering committee.

Research coordinator: The research coordinator is responsible for the organisational and academic aspects of the centre's daily operation, delegated by the centre director. The research coordinator reports to the director and to the administrative leader at the Departments of Geography and Social Anthropology.

Leadership group: The Director of the centre appoints a leadership group to assist with the operation of the centre.

Scientific advisory committee: The scientific advisory committee consists of 3-5 internationally recognized experts, and can be supplemented with 1-2 highly relevant stakeholders. The scientific advisory committee shall give advice in development of the centre, give advice about strategic plans and contribute to achievement of goals, and contribute to making the centre visible nationally and internationally.

Administrative support: The central administration at Departments of Geography and Social Anthropology is responsible for administrative support to the centre.

Monitoring and evaluation


The strategy is approved by the CET Steering Committee. Progress towards the strategy is monitored by the Steering committee in their biannual meetings. The strategy will be revised in 2022.





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and Energy Transformation

University of Bergen
Lauritz Meltzers House,
Fosswinkels gate 6, 6th floor

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