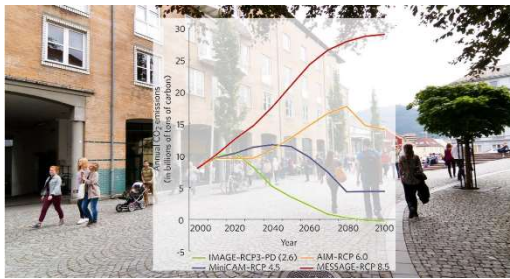




Centre for Climate
and Energy Transformation

Annual report 2018



We are pleased to share with you the CET Annual Report 2018. For the first time since the launch of CET in October 2017, we have put together a comprehensive results report for the centre. The purpose is to give an overview of activities and achievements in 2018, but also to point to some challenges that we will address onwards. We have also included some key activities from the time of the launch in 2017.

For the first time we have also collated information about publications and projects from all CET affiliated researchers, which is presented in this report. We thank all CET affiliated researchers and partners for inspiring collaboration and contributions to CET in 2018, and are looking forward to take this work forward in 2019.

Highlights from 2018

At the **United Nation High-level Political Forum** in New York Jakob Grandin and Siddharth Sareen discussed partnerships in education and energy transition, as part of summit discussion to revise the Sustainable Development Goals.

Jessica Jewell led a team of authors that published an **article in Nature**. The article discusses the role of fossil fuel subsidies in emission scenarios.

Many CET-affiliated researchers contributed to the publication of the book *Grønn omstilling: norske veivalg* (**Green transformation: Norwegian pathways**), co-edited by CET director Håvard Haarstad

We launched our **CET Travel Policy**, an innovative set of guidelines to reduce the CO₂-emissions from academic research. These have helped stimulate debate on sustainable travel in Norwegian universities and beyond.

The UiB Collaboratory organised the first **Bergen International Student Conference**, a conference for and by students, with the theme of Climate and Society: Transformations in the 21st century.

We established and held the first meeting of the **CET Steering Committee**, composed of leaders from University of Bergen, NORCE and the Norwegian School of Economics.

Summary

In 2018, there was a large increase in activities at the centre, while at the same time the organizational structure of the centre was more firmly established.

The CET steering committee met for the first time in February. The committee consists of representatives at leadership levels from the University of Bergen (UiB), the Bjerknes Centre for Climate Research (BCCR), NORCE and the Norwegian School of Economics (NHH).

The network of CET affiliated researchers was formalized, and has already grown to include more than 50 researchers at UiB, NORCE and NHH. Many of them are active participants at CET seminars, and have also applied for CET Accelerator Grants – a new funding mechanism to stimulate new research and other strategic activities of relevance to the centre.

The group of academic staff at the centre has been expanded and strengthened. Three PhD students and one postdoctoral fellow were recruited. A new Professor II-position was established in the field of climate impacts and adaptation to strengthen our links with the Bjerknes Centre for Climate Change Research and NORCE Climate. The administrative and communication work was strengthened through the recruitment of a research assistant.

The centre is now a vibrant and increasingly multidisciplinary centre. There are frequent seminar activities, and our regular CET lunches, organized every 1-2 weeks, are attracting a good number of attendants from other departments and faculties. Also, the centre has had visiting scientists for shorter and more long-term stays.

In 2018, substantial time was invested in developing a larger proposal for a research centre for social-science related energy research that was submitted to the Research Council of Norway. We proposed the FME-centre *Coastal Area Sustainable Transport (COAST)*, with 5 key research partners and 19 public and private user partners. Unfortunately the application was not funded. Nevertheless, the experience from developing the proposal will be useful in developing the centre further.

The CET centre has also hosted students and student activities. The Collaboratory, an initiative for student-led and innovative teaching, has stepped up its' activity levels, and recruited 4 coordinators to plan and manage the annual Bergen International Student Conference 2019 and a new bachelors' course in sustainable innovation. Also, a total of 5 master students from various departments have working space at CET.

CET has an ambition to conduct its research in a climate and environmentally friendly way. A CET low-carbon travel policy was developed, and formally endorsed by the Steering Committee in December. It helped spur debate among CET affiliated researchers, in university newspapers and beyond on academic travel and air travel.

One challenge identified was the lack of sufficient senior researcher capacity at the centre. Work was initiated to try to establish permanent senior researcher positions in collaboration with relevant departments.

Work plan and key activities

The CET centre's work in 2018 was organized under 3 main results areas plus one administrative result area, as shown in the following work plan. Activities and progress are described according to these. The work plan and categories will be subject to future revisions.

Table: CET work plan for 2018

Goal	Activity area	Activity
0. Strategic & administrative goals	0.1 Robust organization of CET established	0.1.1 CET leadership group established and meets regularly 0.1.2 CET steering committee meets 2x/year 0.1.3 CET reference group meets 4x/year 0.1.4 CET Scientific Advisory Committee meets 1x/year 0.1.5 Research assistant employed
	0.2 Strategic planning and management	0.2.1 CET strategy developed 0.2.2 Multi-year budget 2017-2022 developed 0.2.3 Annual report developed (narrative + economy)
1. Research of high international quality	1.1 Build excellent research groups in core areas	1.1.1 BFS process 2017 1.1.2 BFS process 2018
	1.2 Conduct/lead interdisciplinary research	1.2.1 Sustainable transport - FME proposal 2018 1.2.2 KKV proposal 2018
	1.3 Facilitate interdisciplinary and problem-oriented research	1.3.1 Recruitment positions 2017 1.3.2 Seed funding ("CET accelerator") 2017/18 announced 1.3.3 Network of affiliates established and activated 1.3.4 Part-time position with NORCE Climate established 1.3.5 Inviting top international researchers as visiting researchers, associates, or lecturers
	1.4 Maintaining a long-term strategy for external funding	1.4.1 Research Council of Norway (RCN) calls identified and proposals developed 1.4.2 H2020 calls identified and proposals developed 1.4.3. Provide input to future RCN and EU calls
2. Interdisciplinary knowledge hub	2.1 CET as a physical meeting place	2.1.1 CET lunch seminars 2.1.2 The Collaboratory further developed
	2.2 Sustainable research	2.2.1 Travel policy developed 2.2.2 Actively use of video meetings
	2.3 Facilitate interdisciplinary teaching	2.3.1 Develop programmes in collaboration with SV-fac. and Strategic Committee (SU)
	2.4 National visibility of the centre	2.4.1 Web site set up, content and use 2.4.2 Actively engage CET affiliated researchers in public debates and communication 2.4.3 CET organized conferences / seminars / workshops 2.4.4 CET as communication channel for affiliated researchers
3. Actionable knowledge	3.1 Publications	3.1.1 Peer reviewed publications from CET affiliated researchers 3.1.2 Policy briefs from CET affiliated researchers
	3.2 Conferences/meetings with policy makers	3.2.1 Conferences organized 3.2.2 Conferences attended
	3.3 Knowledge-informed policies and practice	3.3.1 Input to white papers, hearings etc.
	3.4 Engagement in public debate	3.4.1 Number of debates participated in

0. Strategy and administration

Activity area	Activity	Status
0.1 Robust organization of CET established	0.1.1 CET leadership group established and meets regularly	On track
	0.1.2 CET steering committee meets 2x/year	On track
	0.1.3 CET reference group meets 4x/year	Changes to plans
	0.1.4 CET Scientific Advisory Committee meets 1x/year	Not started
	0.1.5 Research assistant employed	Completed
0.2 Strategic planning and management	0.2.1 CET strategy developed	Delayed
	0.2.2 Multi-year budget 2017-2022 developed	Completed
	0.2.3 Annual report developed (narrative + economy)	On track

0.1 Robust organization of CET established

0.1.1 CET leadership group established and meets regularly

The CET leadership group, consisting of Håvard Haarstad, Eystein Jansen, Endre Tvinnereim, Tarje Wanvik and Kårstein Måseide, met regularly during the winter/spring, with meetings approximately every 2 weeks. Over summer, the meetings were discontinued, mainly due to intensive work with two larger research proposals to the Research Council of Norway (FME and KKV, see below) where Haarstad, Tvinnereim and Måseide were strongly involved. Wanvik is in the period August 2018 – August 2019 on a one year leave of absence from UiB (SpaceLab/CET).

From November 2018, leadership group meetings were resumed with the following people: Håvard Haarstad (CET director), Kårstein Måseide (research coordinator), Endre Tvinnereim (senior researcher part time), Jessica Jewell (senior researcher part time) and Erik Kolstad (prof. II).

0.1.2 CET steering committee meets 2x/year

The first meeting in the CET steering committee was organized 16.02.2018, were all members and deputy members were invited. The planned meeting in June was postponed, given delays in developing the CET strategy, and instead, the CET steering committee members were invited to the CET affiliate seminar “Deep and rapid transformation” in May.

Onwards, steering committee meetings will be held twice a year, in December (with emphasis on budget and plans), and June (with emphasis on results). The December meeting was organized according to plan.

0.1.3 CET reference group meets 4x/year

The previously established CET reference group met once in 2018 (February). However, as the CET steering committee was established (0.1.2) and the CET affiliate network was more clearly defined and activated (1.3.3), the CET management increasingly focused on activities through the affiliate network (seminars etc.) where members of the reference group were also invited. In December, the Steering Committee formally approved that the Reference group onwards is no longer assembled as a separate group, but are included and involved in activities for the CET affiliate network.

0.1.4 CET Scientific Advisory Committee meets 1x/year

The composition of a scientific advisory committee been delayed. CET would benefit from having an internationally composed scientific advisory committee, and establishing a committee should be

prioritized in 2019. Work load and travels of a committee should be minimized by linking their involvement to existing conferences / meetings, and/or conduct virtual meetings.

0.1.5 Research assistant employed

CET publicly announced a 50% research assistant position in January, with emphasis on administrative and communication tasks. Out of 46 applicants, 4 were interviewed, and one was found qualified and was offered the position. However, the candidate declined because of another job offer. Subsequently, Johan Elfving who had previously worked as coordinator for the Collaboratory's Bergen International Student Conference (BISC) was recruited in a 100% position for an interim period (01.05.2018 – 31.08.2018). A 100% position was announced publicly in May. Out of 34 applicants, 5 were interviewed, and 3 were found qualified. Judith Dalsgård was offered the position, and employed for the period 03.09.2018 – 02.07.2020.

0.2 Strategic planning and management

0.2.1 CET strategy developed

A strategy has been under development since autumn 2017, and the CET steering committee had an overarching discussion on strategy in February. The plans of finalizing a strategy document by summer 2018 were postponed, as CET wanted to engage the affiliate network in discussions on strategic priorities. A strategy seminar in May among all affiliated researchers gave valuable input to important themes, and a draft strategy was discussed among the researchers working at CET in December. The CET steering committee agreed in December that a strategy document should be developed and presented at their June 2019 meeting.

0.2.2 Multi-year budget 2017-2022 developed

A multi-year budget for the period 2017 – 2022 was presented to and approved by the CET steering committee in February 2018. A revised budget, including accounts for 2018, was presented to and approved by the CET steering committee in December 2018. Revised budgets including accounts for the past year will be presented to the CET steering committee for approval in December every year.

0.2.3 Annual report developed

This is the first annual report to be developed for CET. The report will be finalized in April/May 2019, including final financial statements and activity data, and presented for approval to the CET steering committee in June 2019. CET will consider if a more popularized version of the report, highlighting research findings, should also be developed.

1. Research of high international quality

Activity area	Activity	Status
1.1 Build excellent research groups in core areas	1.1.1 BFS process 2017	Partly fulfilled
	1.1.2 BFS process 2018	Partly fulfilled
1.2 Conduct/lead interdisciplinary research	1.2.1 Sustainable transport - FME proposal 2018	Partly fulfilled
	1.2.2 KKV proposal 2018	Not funded
1.3 Facilitate interdisciplinary and problem-oriented research	1.3.1 Recruitment positions 2017	Completed
	1.3.2 Seed funding ("CET accelerator") 2017/18 announced	Completed
	1.3.3 Network of affiliates established and activated	On track
	1.3.4 Part-time position with NORCE Climate established	Completed
	1.3.5 Inviting top international researchers as visiting researchers, associates, or lecturers	Partly fulfilled
1.4 Maintaining a long-term strategy for external funding	1.4.1 Research Council of Norway (RCN) calls identified and proposals developed	Partly fulfilled
	1.4.2 H2020 calls identified and proposals developed	Partly fulfilled
	1.4.3. Provide input to future RCN and EU calls	Partly fulfilled

1.1 Build excellent research groups in core areas

1.1.1 BFS process 2017

In June 2017, CET submitted a larger proposal to Bergen Research Foundation (Bergen Forskningsstiftelse, BFS, now Trond Mohn Foundation). The proposal was not granted funding. Detailed feedback was received from the expert review panel, which was deemed useful in further developing the centre, including developing the CET strategy. See also 1.1.2.

1.1.2 BFS process 2018

Bergen Research Foundation (Bergen Forskningsstiftelse, BFS, now Trond Mohn Foundation) invited UiB to submit a new proposal in 2018. This work was coordinated through the Strategic committee ("Strategisk utvalg") for UiB's priority area "Climate and Energy Transition". A draft proposal, Enabling zero emission society - EZES, was developed by an interdisciplinary working group, submitted to BFS in the autumn and also presented to BFS in a meeting. CET did not participate in the meeting. BFS decided not to invite a full proposal based upon the project outline. The main reason for rejecting the proposal was that the initiative presented in the meeting was too far from the initial starting point of strengthening the UiB's investments in CET.

1.2 Conduct/lead interdisciplinary research

1.2.1 Sustainable transport - FME proposal 2018

CET led the work with developing a proposal to the Research Council of Norway's (RCN) call for Research Centres in Environmental Friendly Energy (Forskningssentre for Miljøvennlig Energi, FME). The proposal, titled Centre for Coastal Areas Sustainable Transport (COAST), was submitted 10. October. The proposal includes 7 research partners and 19 user partners from public and private sector. Allocations were announced in May 2019, where COAST unfortunately was not granted funding. The two FME centres that were funded, will operate for an 8 year period. CET will build upon the work and partnerships of the FME proposal in future proposals on sustainable mobility and transport.

1.2.2 KKV proposal 2018

CET submitted a project outline for the Research Council of Norway's (RCN) call for Knowledge platforms for climate policy instruments (KKV). After a matchmaking event at the RCN, and based upon feedback on the outline, CET decided to join the Norwegian University of Science and Technology's (NTNU) proposal as a partner. The proposal, *Knowledge Platform for Climate Action (CLIMACT)*, was submitted to the RCN on 10. October. Håvard Haarstad took part in an interview with the assessment panel in Oslo. In December we were informed that the proposal was not granted funding.

1.3 Facilitate interdisciplinary and problem-driven research

1.3.1 Recruitment positions 2017

Four recruitment positions (3 PhDs and 1 postdoc) were announced with application deadline 7. November 2017. A total of 92 applications were received for the PhD positions and 13 for the postdoc position. Five of applicants were found qualified for the PhD positions and one applicant was found qualified for the postdoc position. By September 2018, the following people had started working at CET:

Postdoctoral fellow:

- Gregory Ferguson Cradler (Department of Geography).

PhD fellows:

- Thea Gregersen (Faculty of Psychology, supervisor Gisela Böhm and Endre Tvinnereim);
- Jesse Schrage (Department of Geography, supervisors Knut Hidle and Håvard Haarstad);
- Brooke Wilkerson (Department of Geography, supervisor Birgit Kopainsky).

1.3.2 Seed funding ("CET Accelerator") 2017/18 announced

Partly inspired by talks with the Bjerknes Centre for Climate Change Research (BCCR), CET developed a funding mechanism, "[CET Accelerator](#)", where CET affiliated researchers can apply for (1) seed funds to develop larger research applications for national or international calls for proposals, or (2) strategic projects within research, publication, teaching or communication. Calls for proposals are announced 2x per year. In the first call (application deadline 28. January), 5 proposals were received, and 3 proposals were funded, while in the second call with application deadline 1. November 2018, 7 proposals were received and 2 were granted funding (table).

Table 1.1: CET accelerator applications granted funding in 2018

Title	Applicant	Activity
The Architecture of Climate Change Mitigation (CLIM-ARCH)	Michaël Tatham, Prof., UiB, Dept. of Comparative Politics	Seed money (research assistant) to prepare for submitting an application to ERC Consolidator Grant.
Researchers in dialogue: Learning actionable knowledge	Stina E. Oseland and Kristin Kjærås, PhD candidates, UiB, Dept. of Geography	Create a platform for productive dialogue between researchers and practitioners by convening novel gatherings of people, topics and dialogue forms. The dialogues will be recorded and constitute a podcast series for CET.
Zero-emission transportation and intelligent traffic management	Endre Tvinnereim, Senior researcher, Norce Rokkansenteret	Employ research assistant to analyse data, collate results and draft text for articles.
Workshop on co-production of climate adaptation and mitigation	Erik Kolstad, Prof., NORCE, BCCR, CET	Workshop to plan summer school. Travels and accomodation for 4 international scientists, pluss servings at CET 3 hr seminar.
Transformative Climate Governance	Siri Gloppen, Prof., Dept. of Comparative Politics/LawTransform	Prepare interdisciplinary research proposal to RCN, including travels and salary for coordinator and prepare submission of 2 articles for Catalina Valleho.

1.3.3 Network of affiliated researchers established and activated

Guidelines outlining rights and obligations for CET affiliated researchers were developed and announced in December 2017. By December 2018, a total of 53 researchers at UiB, NORCE and NHH had signed up as CET affiliates.

Table 1.2: Distribution of CET affiliated researchers by position, institution and gender

Position	NHH		NORCE		UiB		Total	
	Female	Male	Female	Male	Female	Male	Female	Male
Professor		1			7	9	7	10
Associate Professor					2	3	2	3
Research Professor (Forsker I)				2	1		1	2
Senior Researcher				2	1		1	2
Researcher				2	1	2	1	4
Postdoc fellow					1	4	1	4
PhD fellow					10	3	10	3
Research Assistant					1		1	
Senior Adviser						1		1
Total		1		6	24	22	24	29

Table 1.3: Distribution of CET affiliated researchers by unit and gender

Institution	Department	Male	Female	Total
NHH	Dept. for Business and Management Science	1		1
NORCE	Climate Society	3		3
UiB	CET	1	2	3
	Department of Social Anthropology		1	1
	Dept. of Administration and Organization Theory	2	1	3
	Dept. of Biological Sciences		1	1
	Dept. of Biological Sciences		1	1
	Dept. of Comparative Politics	1	2	3
	Dept. of Earth Science	3		3
	Dept. of Economics	1		1
	Dept. of Foreign Languages		1	1
	Dept. of Geography	7	8	15
	Dept. of Geography / CET	3		3
	Dept. of Informatics	1		1
	Dept. of Information Science and Media Studies		1	1
	Dept. of Physics and Technology		1	1
	Dept. of Psychosocial Science/CET		1	1
	Dept. of Social Anthropology	1		1
Faculty of Law	1	4	5	
Geophysical Institute	1		1	
Total		29	24	53

The majority of the affiliates are at UiB and within the social sciences, but we have recently attracted some more affiliates also from the natural sciences. There is still not many economists among the affiliates, and there seems to be an untapped potential in engaging more with researchers at NHH.

The researchers participate in CET seminars (2.1.1), and are entitled to apply for CET accelerator funding (1.3.2).

In 2018, we initiated a series of half-day seminars for CET affiliated researchers called “Deep and rapid transformation”, where the intention is to organize seminars approximately twice a year. The first seminar in May (“Deep and rapid transformation – the way forward”) focused on the depth and speed of transformation needed, and included group discussions on how researchers can contribute. The second seminar in November (“1.5°C – implications for research”) had plenary talks on the recent IPCC 1.5 degree report and other global initiatives, as well as the CET low-carbon travel policy. It was followed by a panel discussion between the leader of the Norwegian Parliament’s standing committee on energy and environment and UiB researchers on “Quotas on air travels – is it realistic and what is needed to implement radical climate measures?”

CET will continue to work actively to engage affiliated researchers in developing research ideas and proposals, and communication of research. In this round, we mapped existing projects for all affiliated researchers based upon their own reporting (Annex 4 and 5). A total of 14 projects totaling NOK 32.7 million were reported as being funded or owned by CET (Annex 4), while another 27 projects totaling NOK 347,7 million, although not being funded by CET, were reported as being relevant for CET (Annex 5). Please note that there was some incomplete reporting in these figures, and we have not carefully reviewed the role of CET nor the relevance in these data.

1.3.4 Part-time position with NORCE Climate established

To strengthen the collaboration with NORCE Climate and BCCR within climate impacts and adaptation, Erik Kolstad was engaged as Prof. II at CET for the period March 2018 – February 2021. Kolstad will work on project development, interdisciplinary research, supervision and knowledge exchange within climate transformation, adaptation and modelling at local scales.

1.3.5 Inviting top international researchers as visiting researchers, associates or lecturers

CET had a longer term visit by Prof. Steven Wolf (Cornell University), and shorter visits by various scholars linked to presentations/seminars. The potential for having visiting researchers and for longer periods of time should be explored and used more systematically, in particular to bring in more senior expertise to strengthen priority areas for the centre.

1.4 Maintaining a long-term strategy for external funding

1.4.1 Research Council of Norway (RCN) calls identified and proposals developed

Some efforts were made to work systematically to identify calls for proposals at RCN. In January, CET organized a seminar for researchers to identify potential calls and research ideas. The outcome of this exercise is not certain. However, one new partnership between NORCE Climate (Erik Kolstad) and Christian Michelsen Institute (CMI) resulted in a proposal, *Co-producing Gender-responsive Climate Services for Enhanced Food and Nutrition Security and Health in Ethiopia and Tanzania (COGENT)*, that was granted funding under the Norway – global partner (NORGLOBAL-2) programme.

The UiB is working on improving systems to register proposals in the preparation phase, which will be useful also for CET in getting a better overview of proposals before submissions. Structuring this work will continue in 2019 and will be even more important, given that RCN will have one main deadline for researcher proposals (10. April 2019) with restrictions on how many proposals that can be submitted. The CET accelerator mechanisms is already being used by some CET affiliated researchers to prepare for this call.

1.4.2 Horizon 2020 calls identified and proposals developed

Some efforts were made in working systematically to identify calls for proposals under H2020 societal challenges 3 (Secure, clean and efficient energy), 4 (Smart, green and integrated transport) and 5 (Climate action, environment, resource efficiency and raw materials). These calls were also presented under CET seminar mentioned under 1.4.1. We are not aware that this resulted in any applications to Horizon 2020.

The UiB research administration has worked to engage more researchers in H2020 proposals and networks, and has a coordinating role in the Vision 2020 Climate helix network. CET has not fully exploited these possibilities. Some CET affiliated researchers have applied for CET accelerator funding to develop ERC grant. CET should identify upcoming H2020 calls in priority areas of CET.

1.4.3 Provide input to future Research Council of Norway and EU calls for proposals

CET has contributed with inputs to the process leading up to the RCN call for proposals for knowledge platforms for climate policy instruments (see 1.2.2). However, in 2018, CET has not been active in providing input to future calls.

2. Interdisciplinary knowledge hub

Activity area	Activity	Status
2.1 CET as a physical meeting place	2.1.1 CET lunch seminars	On track
	2.1.2 The Collaboratory further developed	On track
2.2 Sustainable research	2.2.1 Travel policy developed	Completed
	2.2.2 Actively use of video meetings	On track
2.3 Facilitate interdisciplinary teaching	2.3.1 Develop programmes in collaboration with SV-fac. and Strategic Committee (SU)	Changes to plans
2.4 National visibility of the centre	2.4.1 Web site set up, content and use	Partly fulfilled
	2.4.2 Actively engage CET affiliated researchers in public debates and communication	Partly fulfilled
	2.4.3 CET organized conferences / seminars / workshops	Partly fulfilled
	2.4.4 CET as communication channel for affiliated researchers	Partly fulfilled

2.1 CET as a physical meeting place

2.1.1 CET lunch seminars

A main meeting arena for CET affiliates is the regular CET lunch seminars organized every 1-2 weeks with invited presentations by internal or external experts. The seminars normally attract 15-25 participants.

A list of all CET seminars can be found in Annex 1.

2.1.2 The Collaboratory further developed

The UiB Collaboratory is a student-driven initiative for partnership between researchers and students with the aim to mobilize innovation in research and higher education. CET has supported the Collaboratory economically, with office space and some administrative support. In April, the Collaboratory organized the first Bergen International Student Conference (BISC). Two conference coordinators were recruited, and the organization involved a number of volunteer groups. The evaluation showed that the conference was perceived as very successful, and is onwards planned as an annual conference. The Collaboratory has also taken the initiative to a student-driven bachelors degree interdisciplinary course in sustainable innovation to be run in the spring of 2019.

2.2 Sustainable research

2.2.1 Travel policy developed

The CET Low-carbon travel policy has been developed and shared among the CET affiliated researchers. The idea of developing a CET travel policy was partly inspired by looking to the Tyndall Travel Strategy, and was endorsed by the CET leadership group in November 2017. A working group was established, consisting of Kårstein Måseide (research coordinator), Stina Ellevseth Oseland (PhD student), Jakob Grandin (PhD student) and Jesse Schrage (PhD student). The strategy was developed with inputs from other CET researchers, and was formally endorsed by the CET steering committee in December.

The aim of the CET low-carbon travel policy is to reduce climate gas emissions from CET activities, and inspire similar efforts outside CET. The strategy focuses on raising **A**wareness of emission targets and own emissions, providing climate-friendly **A**lternatives to organize, conduct and merit research,

Accountability through measurements, setting targets and being transparent, and create **A visible culture** that stimulates and supports low emission actions. Three tools were developed: i) CET code of conduct, ii) CET carbon tracker (a CO2 calculator for own travels and meetings organized) and iii) a checklist for low-carbon meetings.

A pilot study using the CET carbon tracker was run among CET affiliates in the Autumn. A total of 10 affiliates ended up submitting their data. The plan was to present the CET low-carbon travel policy to the UiB leadership in January 2019.

2.2.2 Actively use video meetings

CET has increasingly used video meetings, e.g during multiple work meetings to develop the FME proposal. CET purchased portable video equipment that has been used in the seminar/meeting rooms. Work to upgrade meeting rooms with more permanent and professional video conference equipment will be continued in 2019.

2.3 Facilitate interdisciplinary teaching

2.3.1 Develop programmes in collaboration with SV-faculty and Strategic Committee (SU)

Despite an initiative by the Strategic Committee (“Strategisk utvalg”) for the UiB priority area Climate and Energy Transition to map teaching courses in climate and energy transition, no new teaching activities have materialized yet. Initial talks with the Faculty of Social Sciences about developing an interdisciplinary bachelor degree programme did not materialize.

In October/November, the Collaboratory were successful in securing support and funding to start an interdisciplinary course in sustainable innovation.

Discussions in the CET steering committee in December concluded that CET should restrain from engaging in education that is resource demanding and the responsibility of the university departments.

2.4 National visibility of the centre

2.4.1 Web site set-up, content and use

Some work has been done to restructure the CET web site to better present key research areas and CET affiliated researchers, but the work is still not completed. Otherwise, the web site is actively used to present news and announce seminars at the centre. Moving the web site to other platforms was considered, but there are clear benefits and also formal requirements of continuing using the UiB web sites.

2.4.2 Actively use CET affiliated researchers in public debates and communication

Some CET affiliated researchers have engaging in public debates and opinion media articles, in particular locally in Bergen. However, there is still a huge potential in working more systematically with the CET affiliate network to engage in ongoing discussions. More concrete measures will be developed as part of a communication plan.

2.4.3 CET organized conferences / seminars / workshops

CET affiliated researchers participated in the official Norwegian side event at the United Nations High-Level Political Forum. CET also had several sessions at the UiB Sustainable Development Goals (SDG) conference in February 2018. CET did not organize any larger conferences of national visibility in 2018. The organization work for the next international Beyond Oil conference, to be organized in Bergen in October 2019, was initiated.

2.4.4 CET as communication channel for affiliated researchers

CET has strengthened its capacity in communication through recruiting a research assistant with expertise from journalism/communication. We were active in using Twitter and Facebook, in combination with podcasts (Klimasnakk) and newsarticles, to communicate events and activities.

We are developing a communication plan that will also include how to more actively engage CET affiliated researchers (2.4.2). A draft communication plan was discussed at the CET retreat in December 2018, and will be completed in 2019.

3. Actionable knowledge

Activity area	Activity	Status
3.1 Publications	3.1.1 Peer reviewed publications from CET affiliated researchers	On track
	3.1.2 Policy briefs from CET affiliated researchers	On track
3.2 Conferences/meetings with policy makers	3.2.1 Conferences organized	Partly fulfilled
	3.2.2 Conferences attended	Partly fulfilled
3.3 Knowledge-informed policies and practice	3.3.1 Input to white papers, hearings etc.	Partly fulfilled
3.4 Engagement in public debate	3.4.1 Number of debates participated in	Partly fulfilled

The following is based on annual reports submitted by each affiliate on an online reporting form. Out of 58 affiliates, 48 responded (2 by email only). Of the remaining 10, 2 were “not applicable” (administrative staff at CET), 5 did not receive the reporting request (2 because they were on leave and 3 inadvertently), and 3 did not submit the form despite having received several reminders.

The categories used in the affiliate reporting form were somewhat different from the terminology of the work plan. For the future, a revision should be conducted of what are the most relevant indicators to report on, and what additional records that should be kept by the CET administration.

3.1 Publications

3.1.1 Peer reviewed publications from CET affiliated researchers

Although CET is at an early stage, there is a range of scientific work published where CET is explicitly acknowledged. The CET affiliated researchers reported 8 journal articles and 6 books/book chapters funded by CET (Annex 2, A2.1). This includes articles in Nature, Energy Research and Social Science and Applied Energy, which are strong journals in the competence area of CET.

Of other publications of relevance to, but not funded by, CET, a total of 28 journal articles and 4 books/book chapters were reported (Annex 3, A3.1). There were 21 affiliates who reported publications in this category.

Overall, there were 25 affiliates who reported scientific publications, and 23 who did not. One should note that several of the affiliates are at an early stage of their career development, and more publications might be expected at a later stage.

3.1.2 Knowledge summaries & policy briefs from CET affiliated researchers

The categories used in the reporting form, “Policy briefs and reports” (Annex 2, A2.2 and Annex 3, A3.2) and “Media publications” (Annex 2, A2.3 and Annex 3, A3.3) were somewhat different from the terminology of the work plan.

Knowledge summaries were not specifically asked for, but there were no reports in this category.

A total of 6 CET – funded policy briefs and reports were reported (1 report, 3 policy briefs and 2 book reviews), while 2 other policy briefs/reports were reported.

3.2 Conferences/meetings with policy makers

3.2.1. Conferences organized

We do not have a comprehensive record of such meetings from affiliates, as it was not made part of the annual reporting template. One event to mention is the panel debate organized with attendance of Ketil Kjenseth, leader of the Norwegian Parliament's standing committee on energy and environment in October.

3.2.2. Conferences attended

We do not have a comprehensive record of such meetings from affiliates, as it was not made part of the annual reporting template.

3.3 Knowledge-informed policies and practice

3.3.1 Input to white papers, hearings etc.

We do not have a comprehensive record of such meetings from affiliates, as it was not made part of the annual reporting template. Rather, we collected information about media publications. A total of 9 media publications were reported where CET was acknowledged, and an additional 20 media publications of relevance to CET. The media publications were linked to a few researchers only, and in some cases to the same subject.

3.4 Engagement in public debate

3.4.1 Number of debates participated in

We do not have a comprehensive record of such meetings from affiliates, as it was not made part of the annual reporting template.

Financial overview

Our activities are partly funded by external projects, partly by an annual state allocation, and to a smaller extent through resources from the University of Bergen.

The CET centre receives an annual allocation of NOK 6 million through the Norwegian Ministry of Education and Research, and in addition additional annual running costs of NOK 100 000 (in 2017 NOK 200 000), from the UiB Faculty of Social Sciences. The funding started on short notice in 2017, so we will underspend the first years of the centre, while we have a long-term plan to balance spending and income alongside our organization and strategic build-up.

Figure 1 shows the CET approved long-term budget, with incomes, expenses and unspent funding transferred to subsequent years. Expenses increased from NOK 1.2 mill. in 2017 to 3.1 mill. in 2018, but is still well below the annual income of NOK 6.1 mill. This lower expenditure is natural at such an early stage, given that the centre was launched as late as end of October 2017. The ongoing and planned activities will result in catching up over time, reaching a balance before 2022. Hence, recognizing that often some delays will occur, there is still financial room for making even more ambitious plans.

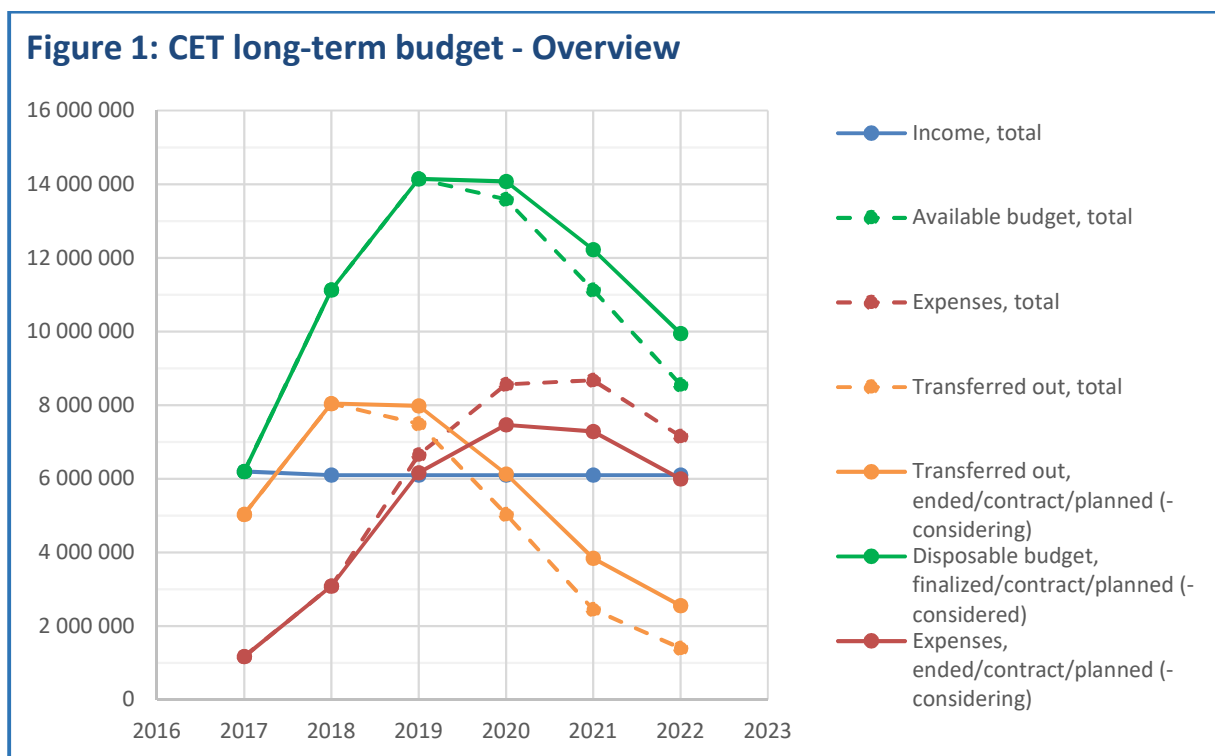


Figure 1: Long-term (6 years) budget showing total incomes (blue), expenses (red) and funding transferred to subsequent years (orange) lines. Solid lines represent more definite plans for spending (including activities that already have ended, contractual obligations and quite concrete plans that are likely to materialize), while dotted lines in addition includes more uncertain activities that are being considered.

The distribution of expenses between ended activities, ongoing contracts, planned activities and more uncertain plans under consideration are presented in Figure 2.

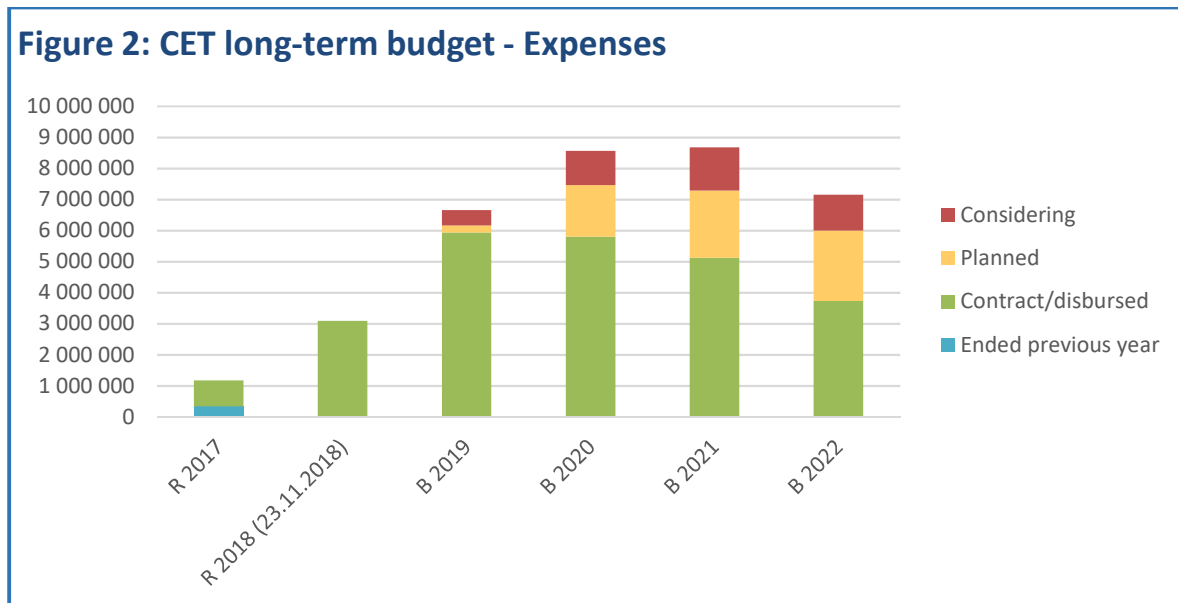


Figure 2: CET expenses based upon their stage. A small proportion of the funding has been disbursed to activities that has ended (blue). The bulk part of the funding has or will be disbursed to ongoing activities/contracts (green). Some planned activities are likely to materialize (yellow), while more uncertain activities are indicated in red.

Figure 3 shows expenses by cost category. The largest amounts are associated with the recruitment positions (currently 3 PhDs and 1 postdoc.). The second largest category is salary for senior researchers in part-time positions. The third largest category is strategic positioning funding, including CET Accelerator funds.

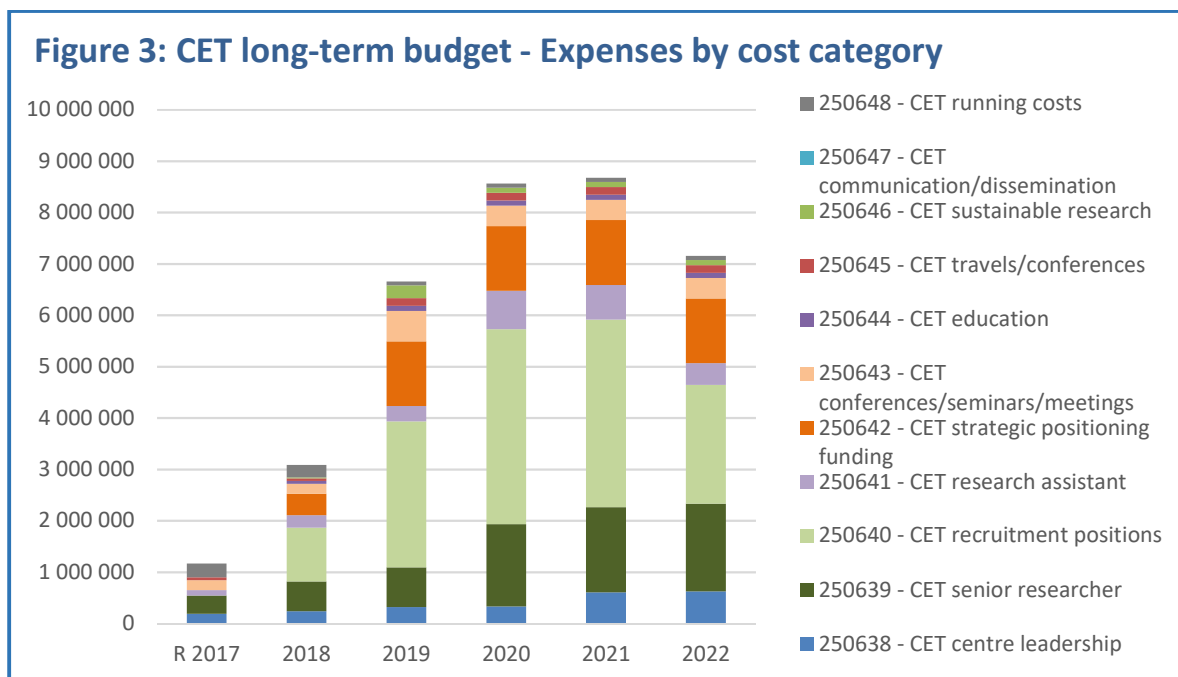


Figure 3: CET expenses by cost category.

Annexes

Annex 1: CET seminars

Date	Name	Institution	Title	Type	Co-organizer
10.01	Lidia Puka-Kjøde	The Polish Institute of International Affairs	Enable.EU - understanding consumers' energy choices in Europe.	CET lunch	
16.01	Kårstein Måseide / Corina Guder	UiB - CET & Research Admin. Department	CET workshop on project ideas and funding opportunities	Workshop	
17.01	Erling Moxness	UiB - Department of Geography	System dynamics as a tool for interdisciplinary research on climate and energy transformation.	CET lunch	
30.01	Don Kalb	UiB - Dept. of Social Anthropology	Can analyses of capitalism help enable climate and energy transformation?	CET lunch	
05.02	Petra Buergelt	School of Psychological and Clinical Sciences, Charles Darwin University, Australia	Transforming how people relate to and interact with the environment: A philosophical paradigm shift	CET lunch	
07.02	Timothy Moss	Humboldt University	Re-appraising sociotechnical continuity and change: Berlin's infrastructure history as a conceptual challenge	CET lunch	
04.04	Vivian Price	University of Liverpool / California State University	How is the Labour Movement Addressing Climate Change?		
05.04	Collaboratory	UiB - Collaboratory	BISC - Bergen International Student Conference (5-6. April 2018)	Conference	
10.04	Siddharth Sareen et al.	UiB - CET & Dept. of Geography	Energy, Measurement and Society	Energy Lab	
18.04	Steven Wolf	Cornell University	Accountability in socioecological systems: US environmental policy and sustainable transitions?	CET lunch	
16.05	Erik Kolstad	NORCE Climate / Bjerknes Centre for Climate Change Research	Nedskalerte klimamodeller, hordaklim, klimatilpasning	CET lunch	
23.05	CET affiliates workshop	UiB - CET	Deep and rapid transformation - How to get there? Del av strategiprosess	CET affiliate workshop	

Date	Name	Institution	Title	Type	Co-organizer
30.05	Michaël Tatham	UiB - SamPol	The Architecture of Climate Change Mitigation (CLIM-ARCH)	CET lunch	
25.06	Joint seminar	UiB - CET		CET seminar	Bjerknes Centre for Climate Change Research
22.08	Catalina Vallejo	Los Andes University, Bogotá	Suing the State for climate change (and holding it to account?)	CET lunch	
23.08				Møte om storfylket	Western Norway Research Institute
05.09	Scott Bremer	UiB - Centre for the study of sciences and humanities	Co-production of Seasonal Representations for Adaptive Institutions: Can we change the ideas of seasons underpinning Bergen's key institutions?	CET lunch	
11.09	Midori Aoyagi	Center for Social & Environmental Systems Research, National Institute for Environmental Studies, Japan	Climate change risk perception in Asia: survey results from Thailand, Vietnam, Myanmar and Japan.	CET lunch	Energy lab + DIGSSCOR E
19.09	Massimiliano Mollona	Goldsmiths, Univeristy of London	Other Futures. Anthropology, Energy and Life After Capitalism.	CET lunch	Dept. of Anthropol ogy
03.10	Karen Moberg	Western Norway Research Institute	What consumption changes are necessary for achieving the 1.5C goal? Results from a climate game with 309 households in medium sized cities in four European countries.	CET lunch	
11.10	Suyash Jolly	Lund University	The Geography of Nordic Sustainability transitions: Green growth initiatives in Värmland, Skåne, and Nordjylland	CET Lunch	
17.10	Arild Eriksen	FragmentOslo	Citizen involvement in city making – perspectives on sustainable urbanization	CET lunch	
24.10	Susanna Barrineau &	Uppsala University	Learning for an uncertain future: higher education in climate and energy transformations	CET lunch	The Collaborat ory
07.11	Svein Gunnar Sjøtun	Western Norway University of Applied Sciences	A ferry making waves: A demonstration project 'doing' institutional work in a greening maritime industry	CET lunch	
13.11	Leigh Hancher	University of Tilburg	Recent legal developments and new energy infrastructure	CET lunch	Juridisk fakultet

Date	Name	Institution	Title	Type	Co-organizer
21.11		UiB - CET	Deep and rapid transformations – 1.5C implications for research.	CET affiliate seminar	
28.11	Tale Halsør	Hordaland County Council	klimabudsjett/utslippsframskrivinger.	CET Lunch	
04.12	Joana Cristina Pedroso	University of Gothenburg	State aid applied to environmental taxes - An analysis of the environmental protection and sustainable development objectives integration within the internal market.	CET Lunch	Juridisk Fakultet
06.12	Aase Jeanette Kvanneid	NORCE Kristiansand	Reflections on the effect of climate change communication on civil society	CET Lunch	
12.12	Helge Drange	UiB - Dept. of Earth Sciences	Norway's strongly increased fossil fuel use 1990-2017 (also when disregarding petroleum industry) versus the governments claims of greenhouse gas emissions.	CET lunch	

Annex 2: CET publications

The following publications are authored or co-authored by CET affiliates, and CET is acknowledged since the project was partly owned or co-funded by CET. (From guidelines for CET affiliation: “For projects partly owned or co-funded by CET, CET should be included as affiliation in addition to formal employer in scientific publications.”)

A2.1 Scientific, peer-reviewed publications (journal articles, books and book chapters)

Journal articles

Cherp, A., Vinichenko, V., Jewell, J., Brutschin, E., & Sovacool, B. (2018). Integrating techno-economic, socio-technical and political perspectives on national energy transitions: A meta-theoretical framework. *Energy Research and Social Science*, 37. <https://doi.org/10.1016/j.erss.2017.09.015>

Grandin, J., Haarstad, H., Kjærås, K., Bouzarovski, S. (2018). The Politics of Rapid Urban Transformation. *Current Opinion on Environmental Sustainability*, 31, 16-22.

Haarstad, H., Sareen, S., Wanvik, T.I., Grandin, J., Kjærås, K., Oseland, S.E., Kvamsås, H., Lillevold, K. and Wathne, M. (2018). Transformative social science? Modes of engagement in climate and energy solutions. *Energy Research & Social Science* 42: 193-197.
<https://www.sciencedirect.com/science/article/pii/S2214629618303037>

Jewell, J., McCollum, D., Emmerling, J., Bertram, C., Gernaat, D. E. H. J., Krey, V., ... Riahi, K. (2018). Limited emission reductions from fuel subsidy removal except in energy-exporting regions. *Nature*, 554(7691), 229–233. <https://doi.org/10.1038/nature25467>

Sareen, S., Baillie, D. and Kleinwächter, J. (2018) Transitions to future energy systems: Learning from a community testfield. *Sustainability*. <https://doi.org/10.3390/su10124513>

Sareen, S. and Haarstad, H. (2018). Bridging socio-technical and justice aspects of sustainable energy transitions. *Applied Energy* 228: 624-632.
<https://www.sciencedirect.com/science/article/pii/S0306261918309747>

Sareen, S. and Kale, S. (2018). Solar ‘power’: Socio-political dynamics of infrastructural development in two Western Indian states. *Energy Research and Social Science* 41: 270-278.
<https://doi.org/10.1016/j.erss.2018.03.023>

Books & book chapters

Brutschin, E. and Jewell, J. (2018). International political economy of nuclear energy. In *International Political Economy of Energy and Natural Resources*, edited by A. Goldthau, M. F. Keatin, and C. Kuzemko, 322-341. Edward Elgar.

Froestad, J., Nøkleberg, M., Shearing, C og Trollip, T. (2018). South-Africa's Mineral-Energy Complex: Flows, Regulation, Governance and Policing, in Y. Omorogbe and A. O. Ordor (Eds.) *Ending Africa's Energy Deficit and the Law, Achieving Sustainable Energy for all in Africa*, Oxford: Oxford University Press

Haarstad, H and Rusten, G. (eds) (2018). *Grønn omstilling: norske veivalg* [Green transformation: Norwegian Pathways] Oslo: Universitetsforlaget.

Haarstad, H and Wathne, M. (2018). Smart cities as strategic actors: Insights from EU Lighthouse projects in Stavanger, Stockholm and Nottingham. In: Karvonen., A, Cugurullo F., and Caprotti, F. (eds). *Inside Smart Cities: Place, Politics and Urban Innovation*, London: Routledge.

Oseland, S., og Haarstad, H. (2018). Norske byers rolle i grønn omstilling: hva gjør vi med målkonfliktene? I: *Grønn omstilling: norske veivalg*, redigert av Haarstad, H. og Rusten, G. Oslo: Universitetsforlaget, p. 63-78.

Sareen, S. 'Electricity distribution in Rajasthan: Unbundling the recurrent failures of a politicised sector'. In (eds. Dubash N., S. Kale & R. Bhavirkar, *Mapping Power: The political economy of electricity in India's states*, Oxford University Press., 2018

<https://global.oup.com/academic/product/mapping-power-9780199487820>

Sareen, S. 'Gujarat's success in efficient electricity distribution: A call for proactive governance to further gains'. In (eds. Dubash N., S. Kale & R. Bhavirkar) *Mapping Power: The political economy of electricity in India's states*, Oxford University Press., 2018,

<https://global.oup.com/academic/product/mapping-power-9780199487820>

A2.2 Policy briefs and reports

Reports

Falk, J., Gaffney, O., Bhowmik, A., Borgström-Hansson, C., Pountney, C., Lundén, D., Pihl, E., Malmodin, J., Lenhart, J., Jónás, K., Bergmark, P., Sareen, S., Widforss, S., Henningsson, S., Plitt, S., Shalit, T. (2018) *Exponential Climate Action Roadmap. Future Earth Sweden*.

<http://exponentialroadmap.futureearth.org>

Policy briefs

Sareen, S. (2018). Co-author. European Energy Poverty COST Action Policy Brief 1.

<http://www.engager-energy.net/wp-content/uploads/2019/01/Engager-Brief-1.pdf>

Sareen, S. (2018). Co-author. Accelerating SDG7 Achievement: Policy Briefs in Support of the First SDG7 Review at the UN High-Level Political Forum 2018. Policy Brief 8: Interlinkages among energy, poverty and inequalities.

https://sustainabledevelopment.un.org/content/documents/18041SDG7_Policy_Brief.pdf

Sareen, S. (2018). Co-author. Accelerating SDG7 Achievement: Policy Briefs in Support of the First SDG7 Review at the UN High-Level Political Forum 2018. Policy Brief 24: Energy sector transformation: Decentralized renewable energy for universal energy access.

https://sustainabledevelopment.un.org/content/documents/18041SDG7_Policy_Brief.pdf

A2.3 Media publications

Sareen, S. (2018, October 3). *Centre for Policy Research Mapping Power Op-Ed Series*. 'Mapping Power: Electricity Distribution in Gujarat: A Sustainable Energy Future Roadmap?'

www.cprindia.org/news/7272

Grandin, J. (2018, June 4). De misforståtte byene. *Energi og Klima: Norsk klimastiftelses nettmagasin*.

<https://energiogklima.no/to-grader/de-misforstatte-byene/>

Haarstad, H., Grandin, J. (2018, May 30). Bærekraftsmålene som endringskraft for universitetene.

Khrono.no. <https://khrono.no/havard-haarstad-uib-baerekraft/baerekraftsmalene-som-endringskraft-for-universitetene/225287>

Neby, S. (2018, October 24) "Vi må lære å leve med flom". Kronikk, *Bergens Tidende*

<https://www.bt.no/btmeneringer/debatt/i/J18rmP/vi-ma-lre-a-leve-med-flom>

Sareen, S. (2018, June 9). *Pecha Kucha Bergen: The future of solar power as poetry*.

<https://www.uib.no/en/cet/118372/future-solar-power-poetry>

Sareen, S. (2018, September 28). *Fossil Free Europe*. Rising for climate on Norway's remote western shores. <https://gofossilfree.org/europe/rising-on-western-norways-remote-shores/>

Sareen, S., Haarstad, H. (2018). *Special issue call via the Chinese Academy of Sciences*.

<http://www.keaipublishing.com/en/journals/global-transitions/events/special-issue-on-sustainable-energy-transitions/>

Sareen, S. (2018, October 18). Recording of public performance at '*Fest for Fesken*', Cafe Opera. 'The case for hope amidst climate change catastrophe'. <https://soundcloud.com/sidsareen/the-case-for-hope-amidst-climate-change-catastrophe>

<https://soundcloud.com/sidsareen/the-case-for-hope-amidst-climate-change-catastrophe>

Sareen, S. (2018) Energy, measurement and society' seminar recording.

<http://video.dig.uib.no/engage/ui/watch.html?id=929cfb48-f427-4d0d-8bb3-e00f75a9d7e0>

Annex 3: Other publications

The following publications are authored or co-authored by CET affiliates and are of relevance to CET, but where CET did not contribute to the project / publications.

A3.1 Scientific, peer-reviewed publications (journal articles, books and book chapters)

Journal articles

Andersen, G., & Tellmann, S. M. (2018). Ekspertene i kunnskapssamfunnet. *Norsk sosiologisk tidsskrift*, 2(05), 357-362. doi:10.18261/issn.2535-2512-2018-05-01

Amundsen, E.S. (2018). "Simultaneous use of black, green, and white certificate systems". *Energy Journal*; Vol. 39(4)p. 103-125

Bennich T., Belyazid S., Kopainsky B., Diemer A. (2018). Understanding the transition to a bio-based economy: Exploring dynamics linked to the agricultural sector in Sweden. *Sustainability*. 10(5): 1504. DOI 10.3390/su10051504.

Bennich, T., Belyazid S., Kopainsky B., Diemer A. (2018). The bio-based economy: Dynamics governing transition pathways in the Swedish forestry sector. *Sustainability* 10(4): 976. DOI 10.3390/su10040976.

Bremer, S., Stiller-Reeve, M., Blanchard, A., Mamnun, N., Naznin, Z., & Kaiser, M. (2018). Co-producing "Post-normal" Climate Knowledge with Communities in Northeast Bangladesh. *Weather, Climate, and Society*, 10(2), 259-268.

Dankel D.J. (2018). "Doing CRISPR": The novel case of Atlantic salmon, science and industry. *Politics and the life sciences*, 37(2), 220-235.

Duarte, K. and Eide E. (2018). Når vitenskapen skal "ut". *Norsk Medietidsskrift*, 03 (25), https://www.idunn.no/nmt/2018/03/naar_vitenskapen_skal_ut

Ferguson-Cradler, G., (2018). Fisheries' collapse and the making of a global event, 1950s-1970s, *Journal of Global History*, 13, 399-424.

Ferguson-Cradler, G. (2018). Review of Fish, Coast and Communities: A History of Norway, edited by Nils Kolle, translated by Elisa Kalle in *Scandinavian Economic History Review* 66/3: 323-325.

Fløttum, Kjersti. Quelles conceptions du « changement climatique » en France et en Norvège? *SHS Web of Conferences* 2018

Grandin, J., Haarstad, H., Kjærås, K. and Bouzarovski, S. (2018) The politics of rapid urban transformation. *Current Opinion in Environmental Sustainability* 31: 16-22.

Hart, J.K., Clayton, A.I., Martinez, K. and Robson, B.A., (2018). Erosional and depositional subglacial streamlining processes at Skálafellsjökull, Iceland: an analogue for a new bedform continuum model. *GFF*, 140(2), pp.153-169.

- Herrera Anchustegui, I., Hunter, T.S.. 'Oil as Currency: Venezuela's Petro, a New 'Oil Pattern'?' *Oil, Gas & Energy Law (OGEL)* Pages 1-20.
- Holm, V.R.A., Zheng, B.Y., Denby, P.M., Holst, B., Halas, N.J., and Greve, M.M.
Work function-driven hot electron extraction in a bimetallic plasmonic MIM device. *ACS Photonics* 5 (4), 1202-1207 (concerns the development of a solar cell based on metal nanoparticles).
- Jensen, M.F., Nisancioglu, K.H., Spall, M.A. (2018). Large changes in sea ice triggered by small changes in Atlantic water temperature. *Journal of Climate* 2018 ;Volum 31.(12) s. 4847-4863.
- Jacob, D., Kotova, L., Teichmann, C., Sobolowski, S. P., Vautard, R., Donnelly, C., ... H, M. T. (2018). Climate Impacts in Europe Under +1.5°C Global Warming. *Earth's Future*.
<https://doi.org/10.1002/2017EF000710>
- Kasanga, M., Andersen, P., Kpienbaareh, D., Mason-Renton, S., Atuoye, K., Sano, Y., Antabe, R., Luginaah, I. (2018). Traditional agriculture in transition: examining the impacts of agricultural modernization on smallholder farming in Ghana under the Green Revolution. *International Journal of Sustainable Development and World Ecology; Volume 26(1)* s. 11-24
- Knudsen, S. (2018). Is Corporate Social Responsibility Oiling the Neoliberal Carbon Economy? *Ethnos* 83(3): 502-520.
- Læg Reid, O. M., and Povitkina, M. (2018). Do Political Institutions Moderate the GDP-CO2 Relationship? *Ecological economics*, 145, 441-450.
- Müftüoğlu, I.B., Knudsen, S., Dale, R.F., Eiken, O., Rajak, D., Lange, S. (2018). Rethinking access: Key methodological challenges in studying energy companies. *Energy Research & Social Science* 45 (November): 250-257.
- Nyberg, B., Gawthorpe, R., L. & Helland-Hansen, W. (2018). The distribution of rivers to terrestrial sinks: Implications for sediment routing systems. *Geomorphology*, Vo. 316, p. 1-23.
- Plach, A., Nisancioglu, K.H., Le clec'h, S., Born, A., Langebroek, P., Guo, C.; Imhof, M., Stocker, T.F. (2018). Eemian Greenland SMB strongly sensitive to model choice. *Climate of the Past; Volume 14.(10)* s. 1463-1485
- Robson, B.A., Nuth, C., Nielsen, P.R., Girod, L., Hendrickx, M. and Dahl, S.O., (2018). Spatial Variability in Patterns of Glacier Change across the Manaslu Range, Central Himalaya. *Frontiers in Earth Science*, 6, p.12.
- Sayre R. et al., (2018). A new 30 meter resolution global shoreline vector and associated global islands database for the development of standardized ecological coastal units, *Journal of Operational Oceanography*, DOI: 10.1080/1755876X.2018.1529714
- Steiger, N., Nisancioglu, K.H., Åkesson, H., de Fleurian, B., Nick, F.M. (2018) Simulated retreat of Jakobshavn Isbræ since the Little Ice Age controlled by geometry. *The Cryosphere; Volum 12.(7)* s. 2249-2266
- Stiller-Reeve, M., & Naznin, Z. (2018). A climate for art: Enhancing scientist–citizen collaboration in Bangladesh. *Bulletin of the American Meteorological Society*, 99(3), 491-497.
- Åkesson, H., Morlighem, M., Nisancioglu, K.H., Svendsen, J.I., Mangerud, J. (2018) Atmosphere-driven ice sheet mass loss paced by topography: Insights from modelling the south-western Scandinavian

Ice Sheet. *Quaternary Science Reviews*; Volum 195. s. 32-47

Books and book chapters

Andersen, G. (2019). Forskning for politikk: Om uavhengighet i direktoratsektoren. I I. Bay-Larsen, K. Hiis Hauge & H. Ingjerd (Red.), *Interessekonflikter i forskning* (s. 153–175). Oslo: Cappelen Damm Akademisk. <https://doi.org/10.23865/noasp.63.ch7>

Grandin, J. (2018). Translokala utvecklingsstigar: relationell politik i Oslos Bilfritt byliv. 3, sider 47-69. In: Andersson, Ida (ed). 2018. *Globala flöden och lokala praktiker - policymobilitet i tid och rum*. 273 sider. ISBN: 978-91-982150-4-5.

Haarstad H and Wathne MW. (2018). Smart cities as strategic actors: insights from EU Lighthouse projects in Stavanger, Stockholm, and Nottingham. In: Karvonen A, Cugurullo F and Caprotti F (eds) *Inside Smart Cities: Place, Politics and Urban Innovation*. Routledge.

Herrera Anchustegui, I., Midtun, L.m Strømsnes, K., Service Concessions. (2018). Directive 2014/23 on the award of concession contracts. A comparative study of its transposition into Norwegian law. In Lazo-Vitoria, Ximena (ed), *Service Concessions. Directive 2014/23 on the award of concession contracts. A comparative study of its transposition into national law* (Thomson-Aranzadi, 2018). 30 pages.

A3.2 Policy briefs and reports

Fløttum, K. (2018) Språkets rolle i klimadebatten - foredrag. I: *Årbok 2017*. Novus Forlag 2018 ISBN 978-82-7099-914-9. s. 357-368, Det Norske Vitenskabs-Akademi

Grandin, J. Presentation at United Nations High-level Political Forum on Sustainable Development in New York: Leveraging innovative partnerships with higher education institutions towards sustainable and resilient societies" SDGs Learning, Training and Practice (9 -13 July, 2018)

Kvamsås, H., Stiller-Reeve, M. (2018). *Klimathon 2018 Rapport. Utfordringer og moglege løsninger for lokal klimatilpassing i Noreg. NORCE report*. Retrieved from: <https://sites.google.com/view/r3-climate/news/klimathon-2018-rapport>

A3.3 Media publications

Dankel, D. (2018, September 10). Vi støtter Greta, *Bergens Tidende* <https://www.bt.no/btmener/debatt/i/oRbMzV/vi-sttter-greta>

Fløttum, K. (2018, August 17). Endring, kaos eller krig? Om språkbruk i klimadebatten på norsk og på fransk. *Podcast, Institutt for fremmedspråk, UiB*.

Tvinnereim, E. (2018, January 21) «Plastkvalen» fekk ein av fire til å plukke plast. *NRK*, https://www.nrk.no/hordaland/_plastkvalen_-fekk-ein-av-fire-til-a-plukke-plast-1.13875715

Tvinnereim, E. (2018, January 22) NRK Troms TV olje Medborgerpanelet Oljedebatt på Arctic Frontiers i kveld bilde, ikke lyd <https://tv.nrk.no/serie/distriktsnyheter-nordnytt/DKTR97012218/22-01-2018#t=1m9s3:00> og utover

- Tvinnereim, E. (2018, January 23) Nordlys nett Lofoten, oljeindustri Medborgerpanelet nett Annika Rødeseike. ET ikke nevnt ved navn.
- Tvinnereim, E. (2018, January 31). *BBC* plastinnsamling Medborgerpanelet press release translated
- Tvinnereim, E. (2018, January 23). *New York Times* interview miljø generelt flere surveys 45 minutes
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Annex 4: CET projects

The following projects are fully or partly owned or funded by CET.

Name - Last	Name - First	Institution	Department / Unit	Title - full name	Title - short name	Funder(s)	Start year	End year	Total budget (NOK)
Gloppen	Siri	University of Bergen	Comparative Politics	Transformative Climate Governance - CET accelerator grant	CET-Acc-18-07	CET	2019	2020	200 000
Grandin	Jakob	University of Bergen	Geography	Bergen International Student Conference 2018	BISC	Faculty of Social Sciences, CET	2017	2018	250 000
				UiB Collaboratory	UiB Collaboratory	Faculty of Social Sciences, CET	2017		
Kjærås	Kristin	University of Bergen	Geography	CET Accelerator - Researchers in dialogue: Learning actionable knowledge (CET-Acc-18-03)	Researchers in dialogue	CET	2018	2018	100 000
Haarstad	Håvard	University of Bergen	Geography	European Cities as Actor in Climate and Energy Transformation	European Cities	Bergen Research Foundation	2016	2020	20 000 000
				Energy Transitions across scale	ENTRANS	Akademia agreement	2014	2018	5 000 000
				Professor II funding for Stefan Bouzarovski	Prof II Bouzarovski	Akademia agreement	2015	2018	900 000
Kolstad	Erik	NORCE	Climate	Co-producing Gender-responsive Climate Services for Enhanced Food and Nutrition Security and Health in Ethiopia and Tanzania	COGENT	Research Council of Norway	2019	2022	5 972 000
Nyberg	Bjørn	University of Bergen	Earth Science	Predicting flooding and changing shorelines for the next 100 years of sea-level rise and changing land-use	Land-Water Change	CET Accelerator Funding	2019	2019	150 000

Name - Last	Name - First	Institution	Department / Unit	Title - full name	Title - short name	Funder(s)	Start year	End year	Total budget (NOK)
Tatham	Michaël	University of Bergen	Comparative Politics	The Architecture of Climate Change Politics (CLIM-ARCH)	CLIM-ARCH	CET	2018	2018	129 411
Twinereim	Endre	NORCE	Society	CONNECT		NFR			
				Contractions		NFR			
				Hidden Costs		NFR			
				Pathways to Energy Transition		Akademiaavtalen			
Grand total									32 701 411

Annex 5: Other projects

The following projects are of relevance to CET, but not fully or partly owned or funded by CET.

Name - Last	Name - First	Institution	Department / Unit	Title - full name	Title - short name	Funder(s)	Start year	End year	Total budget (NOK)
Amundsen	Eirik S.	University of Bergen	Economics	Energiomstilling		Akademiaavtalen (UiB-Statoil)	2015	2018	400 000
Andersen	Gisle	NORCE	Society	Changing Nature. A lexical and argumentative analysis of public debates on nature (1998-2017)	Changing Nature	Research Council of Norway - SAMKUL Programme	2018	2021	9 000 000
Dankel	Dorothy	University of Bergen	Biological Sciences	An interdisciplinary investigation into scenarios of national and international conflicts of ecosystem services in the Svalbard zone under a changing climate in the Arctic	REGIMES	NFR POLARPROG	2016	2019	5 600 000
Fløttum	Kjersti	University of Bergen	Foreign Languages	Pathways to Energy Transition		Akademiaavtalen	2016	2019	4 600 000
Gloppen	Siri	University of Bergen	Comparative Politics	Bergen Exchanges on Law & Social Transformation - 2019 focus includes climate change law and legal mobilization	BeEx2019	UiB, CMI, Fritt Ord, Universitetsfondet, multiple external research grants	2014		500 000
Herrera Anchustegui	Ignacio	University of Bergen	Faculty of Law	Regulating energy markets, a perspective from EU/EEA Competition and Public Procurement Law		Akademiaavtalen	2017	2019	2 500 000
Hessevik	Agnete	University of Bergen	Administration and	PhD project working title: Governance of the Green		Agnete Hessevik	2017	2021	

Name - Last	Name - First	Institution	Department / Unit	Title - full name	Title - short name	Funder(s)	Start year	End year	Total budget (NOK)
			Organization Theory	Transition in the Norwegian Maritime Sector					
Holst	Bodil	University of Bergen	Physics and Technology	Coating for Wind Turbine Blades	Diamond Coating	Strategic Postdoc from Mat Nat Faculty	2019	2022	
Jewell	Jessica	University of Bergen	Geography and CET	Contractions	Contractions	Research Council Norway	2017	2021	8 612 000
Knudsen	Ståle	University of Bergen	Social Anthropology	Norwegian energy companies abroad - Expanding the anthropological understanding of corporate social responsibility	Energethics	Research Council of Norway	2015	2019	9 000 000
Kolstad	Erik	NORCE	Climate	RELEVANT, RELIABLE AND ROBUST LOCAL-SCALE CLIMATE PROJECTIONS FOR NORWAY	R3	Research Council of Norway	2016	2019	12 160 000
Læg Reid	Ole Martin	NORCE	Society	Pathways to Energy Transition		Academia Agreement	2016	2020	4 600 000
				a PLATform for Open and Nationally accessible climate policy knowledge	PLATON	Norwegian Research Council	2019	2022	72 511 000
				Analyzing past and future energy industry contractions: Towards a better understanding of the flip-side of energy transitions	Contractions	Norwegian Research Council	2017	2021	8 612 000
					DEMOVATE	Research Council of Norway	2019	2023	8 200 000
Måren	Inger	University of Bergen	Biological Sciences	From traditional management to modern production: holistic management on the west coast of Norway	TradMod (MILJØFORSK)	Research Council of Norway	2018	2022	9 800 000

Name - Last	Name - First	Institution	Department / Unit	Title - full name	Title - short name	Funder(s)	Start year	End year	Total budget (NOK)
Neby	Simon	NORCE	Society	Frå eit til to klimatilpassingsfylke		Hordaland Fylkeskommune, Sogn og Fjordane fylkeskommune	2018	2019	650 000
				HordaFlom: Bedre beslutningsgrunnlag for risikostyring i flomsone i Hordaland	HordaFlom	RFF Vest	2017	2020	6 284 000
				Coordination, capacity and legitimacy: organizing for climate change, immigration and the police	COCAL	NFR	2016	2019	10 000 000
Nisancioglu	Kerim	University of Bergen	Earth Science/Bjerknes Centre	Arctic Sea Ice and Greenland Ice Sheet Sensitivity	ice2ice	ERC FP7	2014	2019	120 000 000
Overå	Ragnhild	University of Bergen	Geography	Small Fish and Food Security: towards innovative integration of fish in African food systems to improve nutrition	SmallFishFood	EU Horizon 2020 programme LEAP-Agri (NFR funds Norway)	2018	2022	10 000 000
Rotevatn	Atle	University of Bergen	Earth Science	An Integrated Geological and Mathematical Framework for the Characterization, Modelling and Simulation of Fractured Geothermal Reservoirs	ANIGMA	NFR ENERGIX and Equinor (through Akademiaavtalen)	2015	2019	10 000 000
Sareen	Siddharth	University of Bergen	Geography / CET / Centre for the Study of the Sciences and the Humanities	PARTicipatory platform for sustainable ENergy management	PARENT	JPI Urban Europe / Research Council of Norway (my role 2018-2019, part of larger project hence total budget not specified here,	2016	2019	0

Name - Last	Name - First	Institution	Department / Unit	Title - full name	Title - short name	Funder(s)	Start year	End year	Total budget (NOK)
						country PI Kjetil Rommetveit)			
Schütz	Sigrid Eskeland	University of Bergen	Law	Causes and Consequences of the Legal Architecture of Climate Politics	LEG-ARCH	University of Bergen	2019	2023	3 800 000
Schütz/ Haarstad	Sigrid Eskeland	University of Bergen	Law	Legal governance in land use planning. Balance between national and municipal power and between private initiative and public control	GOVLAND	RCN-DEMOS	2016	2021	8 900 000
Sobolowski	Stefan	NORCE	Climate	Hidden Costs	Hidden Costs	NDR	2018	2020	10 000 000
Stiller-Reeve	Mathew	NORCE	Climate	Relevant, Reliable and Robust local-scale climate projections for Norway	R3	RCN	2016	2019	12 000 000
Grand total									347 729 000