



Centre for Climate
and Energy Transformation

Annual report 2019

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



Summary

We are pleased to share with you the CET Annual report 2019.

The centre keeps growing its activities. In 2019 there were a good number of publications, including some in very high-impact journals. Several project proposals where CET was a partner were secured funding from the EU Horizon 2020 programme and the Research Council of Norway. This will lead to recruitments of several PhD and postdoctoral fellows in 2020. The centre has also maintained a high activity level in terms of seminars and outreach activities. We organized and co-organised 49 events in 2019, among them the Beyond Oil conference.

We also strengthened the senior research capacity at the centre through the recruitment of Corbett Grainger and Kevin Anderson in prof. II positions, and initiated the recruitment of a joint Associate professor position with the Department of Administration and Organization Theory. Our work on sustainable research practices has led to new partnerships and inspired others. In December, the CET strategy 2020-2022 was finalized, which outlines research priority areas for the coming years.

The Annual report 2019 has been structured around some core themes: **People** – demonstrating how we have strengthened research capacity at the centre, **Research** – showing how we have engaged in new projects and project development, **Knowledge** – presenting our publications for the past year, and **Outreach** – highlighting how we have engaged in communication, organizing meeting places, and education. We also describe our work on strategic management and cross-cutting priorities. The Work plan 2019 that has guided this work can be found in Annex 9.

We thank all CET affiliated researchers and partners for inspiring collaboration and contributions to CET in 2019.

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.

Highlights

People

58

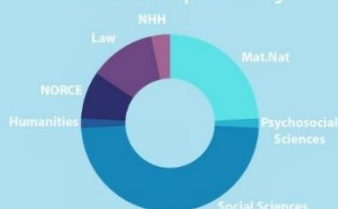
Affiliated
researchers

Gender balance



43% Female 57% male

Interdisciplinarity



2

New
Professor II

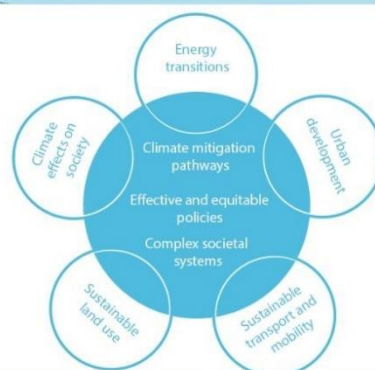
Research

5

New project
partnerships

CityFreight
DemoClim
VARCITIES
CINTRAN
TR2AIL

**Strategy
2020-2022**



Outreach

28

CET Lunch
Seminars

Beyond Oil 2019

130

Participants

45

Papers
Presented

25

Passengers on
Conference Train

488

Downloads of
CET podcast

Knowledge



43

Scientific
publications



2

Papers in
Nature



39

Engagements
in media

Co-production

Strong stakeholder engagement

Actionable knowledge

Informing policy and practice

People

Senior researcher capacity

We have worked actively to strengthen the senior researcher capacity at the centre, in order to ensure a group of senior scientists covering a broad competence base who can engage in larger projects, project proposals development and supervision.

- A permanent position as Associate professor was announced in collaboration with the Department of Administration and Organization Theory, where CET will contribute with bridge funding for the first four years. There were 34 applicants for the 15. September deadline, and employment is expected to commence in 2020.
- Dr. Corbett Grainger, economist from University of Wisconsin, was employed as Professor II at CET for a period of three years, with funding from the Akademia agreement.
- Dr. Jessica Jewell will be re-engaged as Professor II at CET for another three-year period (2020 - 2022).
- Prof. Kevin Andersen will be engaged as Professor II at CET for the period 2020 - 2022.

Recruitment positions

There have been some changes with respect to postdoc positions, which at the end of the year counted 3 (Sareen, Wanvik and Vinichenko), who are all funded by external project grants.

- Dr. Tarje Wanvik, funded from the Trond Mohn Foundation-financed project European cities, returned to the centre in September from his leave as political advisor with the Bergen municipality.
- Dr. Gregory Ferguson Cradler, funded by CET, left the centre in December before his postdoctoral fellowship had ended, to take up a permanent position at the Inland Norway University of Applied Sciences.
- A postdoctoral position linked to the themes of climate mitigation policy, carbon budgets, priority setting and equity was announced, but unfortunately did not attract sufficiently strong applications to proceed with the recruitment process.

There were no changes to the number of PhD fellows working at the centre, which counts 3 funded by CET, and 5 with funding from other sources.

One new research assistant was engaged:

- Eleanor Johnson was recruited as part of the *European cities* project, funded by the Trond Mohn Foundation, and has a contract until the end of the project period (2020)

As several externally funded project grants were secured towards end of the year, several new postdocs and PhDs will be recruited in 2020 to work at CET.



Professor Kevin Anderson

“The keys to catalysing change reside in understanding behaviours, practices and routines, the role of institutional inertia and the locked-in mindset of hierarchies so evident in politics, journalism and academia. It is from within this more qualitative realm of the humanities and social sciences where the frameworks for change will emerge. This is exactly the terrain where CET is well equipped – the social sciences, humanities, engineering and science working collaboratively and not in competition. It is in this twenty first century partnership that I hope to play a small part.”



Associate Professor Corbett Grainger

“I am excited to be joining CET as a faculty affiliate. In order to address Climate Change and the Energy Transformation, we need a multidisciplinary approach. I'm looking forward to new collaborations and fostering dialogue to help solve the most pressing problems facing society.”

Researcher network

At the end of the year, there were 58 researchers affiliated with CET (see Annex 5 for details). The majority of the affiliates are at the University of Bergen (UiB) and within the social sciences, but we have recently attracted some more affiliates also from the natural sciences.

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. In November, a half-day seminar was organized for affiliated researchers on climate communication to society and decision makers. A complete overview list of all CET seminars can be found in Annex 6.

CET affiliates have also been engaged in development of a significant number of research proposals (see more under “Research” later).

The bi-monthly affiliate newsletter *etCETera* was launched in February 2019. The newsletter contains announcements for the affiliate network, including events and funding opportunities, as well as news from the centre. The purpose of a regular newsletter is to build a sense of community within the affiliated researchers and build awareness around opportunities at the centre.

Research

New projects

CET was partner in several successful project proposals to the EU Horizon 2020 programme and the Research Council of Norway in 2019:

- *CityFreight - Freight logistics in sustainable cities* (The Research Council of Norway, EnergiX programme), led by Stein W. Wallace (NHH – Norwegian School of Economics)
- *DemoClim - Cities confronted by protests: Democratic governance for efficient and socially just climate transformation* (The Research Council of Norway, DEMOS programme), led by Hege Hofstad (OsloMet – Oslo Metropolitan University)
- *VARCITIES - Visionary nature based actions for health, wellbeing & resilience in cities* (EU-Horizon 2020), led by Dionysia Kolokotsa (Telecommunication Systems Institute)
- *CINTRAN - Carbon Intensive Regions in Transition - Unravelling the Challenges of Structural Change* (EU-Horizon 2020), led by Lukas Hermwille (Wuppertal Institut für Klima, Umwelt, Energie gGmbH)
- *TR2AIL - Tracking, reflecting and reducing air travel: A pathway to more sustainable travel behavior* (Vinnova - Sveriges Innovationsmyndighet), led by Marie Jürisso, Stockholm Environment Institute

In addition, several CET affiliated researchers have been granted a total of 16 externally funded research projects from a variety of funders, including Academia agreement (2), EU ERC (3), EU Horizon 2020 (1), EU Erasmus + (1), the Research Council of Norway (4), UiB (2), and several other sources (3).

A complete list of projects can be found in Annexes 3 and 4.



Professor Stein W. Wallace on Cityfreight:

“Most existing literature on freight logistics focuses on mega-cities. Our interest is smaller often medieval, topologically complicated cities. We ask, for such cities, what are viable ways to regulate freight deliveries to achieve a sustainable city? We use classical logistics tools, but with the purpose of advising authorities as to the effects of regulations, and not as a way to help companies handle regulations.”

Partnerships

UiB through CET became a formal partner in Noradapt – Norwegian Research Centre on Sustainable Climate Change Adaptation. CET is represented in the Noradapt leadership group and the supervisory board (“representantskap”). Also, Kjersti Fløttum and colleagues has established a new researcher group, Environmental Humanities (HUMKLIM), with relation to CET.

Project proposals

CET has been invited into, or become partners in, several larger proposals, including the following two initiatives that were submitted to the Research Council of Norway SFI (centres for research-based innovation) scheme:

- **RESPONSE** - Research on energy-related safety and security – Pre-competitive cooperation for protecting industry, society and the environment, led by Trygve Skjold, Department of Physics and Technology
- **SEREND!CITY**, led by Annemie Wyckmans, NTNU – Norwegian University of Science and Technology

Two CET researchers, Jessica Jewell and Siddharth Sareen, applied for *ERC starting grant* i 2019.

CET will continue the ongoing work of keeping a good overview of relevant calls and proposals under development, and work systematically to prioritize which proposals to engage with according to the CET strategy.

Seed funding

CET had two calls under the CET accelerator seed funding mechanism, in February and November. Two projects were funded after the February call (out of 7 proposals), while none of the three proposals were funded after the November call.

- *Predicting flooding and changing shorelines for the next 100 years of sea-level rise and changing land-use*, Led by William Helland-Hansen, Department of Earth Science. The project led to a Horizon2020 proposal being submitted in February 2020.
- *Climate Risk and Sustainable Performance*, led by Esmeralda Colombo, Faculty of Law. The project will lead to a project proposal being submitted to the Research Council of Norway in May 2020.



Professor William Helland-Hansen, Dept. of Earth Sciences

“Seed money from the CET Accelerator funding has been instrumental in initiating the new project CC21 (Coastal Change 21st century). Because of this funding we could arrange a kick-off workshop in Bergen where all key partners could meet. The workshop was crucial to create good working conditions as we moved into the proposal writing stage.”



Esmeralda Colombo, Faculty of Law

“The Accelerator Seed Funding allowed me to achieve what, at first glance, had seemed impossible for a junior female researcher: start an international network and organize a conference on Climate Risk and Sustainable Performance, and take the momentum forward for a research project application to the Research Council of Norway. I am incredibly thankful for this opportunity!”

Knowledge

Scientific publications

The following is based on annual reports submitted by each affiliate on an online reporting form. Out of 58 affiliates, 43 responded.

- The CET affiliated researchers reported 14 journal articles and 1 book funded by CET (Annex 1, Table A1.1). Of these, there are a few in some high-impact journals, including Nature and Nature Climate Change (see also box on next page). The CET-supported publications are naturally stemming for a few researchers closely linked to the centre.
- Of other publications of relevance to, but not funded by, CET, a total of 23 journal articles and 5 books/book chapters were reported (Annex 2, Table A2.1). There were 16 affiliates who reported publications in this category.
- To strengthen scientific writing and exchange of ideas, we have continued the “works-in-progress” seminar series at the centre where a small group of researchers can present and discuss their publications as they are being developed.
- We are working towards having a more systematic way of gathering newly released publications from the affiliate network. The idea is that we can publish research findings or develop news articles of research findings, but also to have a better overview of the scientific production throughout the year. Trials with using online platforms such as Microsoft Teams as a way of identifying new publications are underway.
- To make knowledge relevant to decision makers, we maintain a close contact with decision makers on various projects.

Policy briefs and reports

Overall, there were 2 reports that were supported by CET, and 6 policy briefs or reports that were not supported by CET.

Media publications

We saw a rise in media publications where CET was acknowledged, from 9 in 2018 to 20 in 2019. An additional 19 media publications were reported as relevant to CET. The media publications were linked to a handful of researchers and this year there was a wider variety of themes covered than previously.

Publications highlights

Jessica Jewell and Vadim Vinichenko in *Nature Climate Change*

Prospects for powering past coal

“Here we estimate that the premature retirement of power plants pledged by PPCA members would cut emissions by 1.6 GtCO₂, which is 150 times less than globally committed emissions from existing coal power plants. We also investigated the prospect of major coal consumers joining the PPCA by systematically comparing members to non-members. PPCA members extract and use less coal and have older power plants, but this alone does not fully explain their pledges to phase out coal power”

PhD fellow Stina Oseland in *Journal of Environmental Policy and Planning*

Breaking silos: can cities break down institutional barriers in climate planning?

“...the nature of climate change as a wicked problem is not compatible with the specialised and sectorised nature of policy-making institutions...Mainstreaming of the planning process can be observed in Trondheim, whilst in Bergen, the process has been highly politically driven. Three factors appear to be important to overcome institutional barriers at the local level: broad processes, political will and institutional entrepreneurs.”

Postdoc Siddharth Sareen's book *Enabling sustainable energy transitions: Practices of legitimation and accountable governance (Palgrave Pivot)*

“The real-world challenge of climate change requires sustainable energy transitions. This presents a crisis of accountability legitimated through situated practices in a wide range of cases... By synthesising these cases, chapters identify various dimensions wherein practices of legitimation construct specific accountability relations”

SKREVET AV



Thea Gregersen



Endre Tvinnereim

ENERGI KLIMA

[Energi og Klima](#)

NYHET

Tema »

Folk mener

In the «Folk mener» series CET PhD Fellow Thea Gregersen and CET affiliate Endre Tvinnereim use data from the Norwegian Citizen Panel and explore public opinions about several issues. In 2019 these include worry about climate change, oil and gas exploration in Lofoten and Vesterålen, electrification of car fleets from 2025 and opinions about land and offshore wind power.

Outreach

Seminars and conferences

CET hosted and participated in several conferences, seminars and workshops throughout 2019.

The Beyond Oil conference is a biannual international research conference organized by CET. The third edition *Beyond Oil: Deep and Rapid Transformations* was held at Literature House Bergen on October 16th – 17th. 130 participants joined the conference and 45 papers were presented. Keynote speakers included Prof. Keri Facer, Jessica Jewell, Eirik Wærness, Prof. Michael Bradshaw, and Prof. Lorraine Whitmarsh.

The CET travel policy was a central part of organizing the 2019 Beyond Oil conference. We aimed to reduce emissions from previous conferences. Two of the emission cutting measures we used were the *Beyond Oil Conference train* and the *satellite keynote session*. CET hired a train carriage from Vy and offered free travel to those travelling from Oslo – Bergen. We hosted an extra day of the conference on the train and the feedback was overwhelmingly positive. The stunt also received attention in the local media and set a record on the faculty Facebook page. Our keynote session on day two of the conference was done as a dual satellite session with the CAST centre in Cardiff.



CET is partner in two regional transdisciplinary networks; *Bærekraftig frokost (sustainable breakfasts)* and *Klimaomstilling* conference program committee. The *Bærekraftig frokost* network members are Husbanken, City of Bergen, Vestland Municipality, Vestland County Governor, BAS and HVL. CET hosted its first breakfast meeting in March on Carbon Budgets – *Hvor mye CO2 har Bergen råd til?*. The 2019 Klimaomstilling conference was held in February and featured presentations from CET affiliated researchers as well as policymakers in the Vestland region.

Engagement in public debate

CET participated for the first time at Arendalsuka, and we used this opportunity to communicate our work with the CET low-carbon travel policy. We hosted a panel debate “Klimaomstilt og virksom - Hvordan kutte jobbrelaterte flyreiser?” in the DN tent with panellists from the public and private sectors. We also launched a beta version of the carbon calculator “CET Carbon Planner” on the UiB stand as well as a quiz about flight travel emissions.

Many of our affiliated researchers are present in the public debate. Many are invited as panelists or moderators and several are active with opinion pieces in predominately Norwegian media (see Annexes 1 and 2).

In Autumn we focused on how CET researchers can be further engaged in the public debate. The CET Affiliate seminar in November had the title “How can CET researches form society” with sessions on how to reach policymakers and how to use social media platforms to communicate research findings. At the annual autumn retreat at Bjørnafjorden Hotell for researchers with a workspace at CET we had a session with “SpeakLab”. The researchers could further develop their skills in verbal and non-verbal communication.

Communication

The CET website has undergone a restructure to reflect the strategy. This new structure shows our priority areas, as well as, highlighting the areas our affiliated researchers work in.

CET was used as a case example in the *MEVI304 Strategic Communication* master’s course. A group of 4 students created a social media communications plan for the centre. The students identified several areas where we can strengthen our presence in digital communication. This will be integrated into the communications plan that is being developed to complement the CET strategy 2020 – 2022.

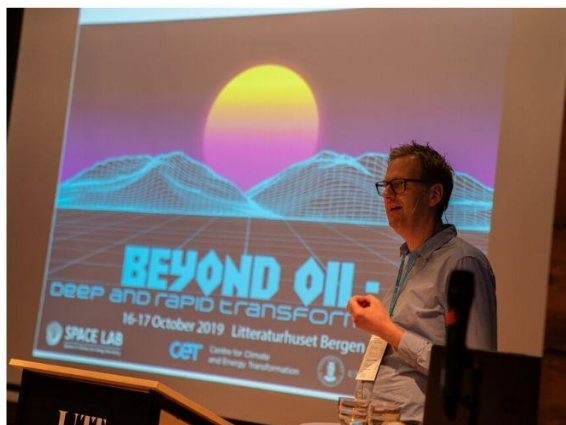
CET Klimasnakk/ Climate Chats podcast was launched in January 2019 with a live recording of our panel debate on flight quotas. Six episodes were released during the spring on the themes: flight quotas, individual action for climate change, sustainable education and understanding energy transitions.

Education

CET continues its support to the UiB Collaboratory, a student-driven initiative for partnership between researchers and students to mobilize innovation in research and higher education. In April, the Collaboratory organized the second Bergen International Student Conference (BISC) attracting 118 students from 15 countries. Spring 2019 saw the first student-driven bachelor’s degree interdisciplinary course CET201: Sustainable Innovations. The course was popular with over 80 students applying for 30 spaces. 26 students completed the course.

The Arqus European University Alliance was established with UiB as a key partner. As part of the work package “Engaged European Citizens”, UiB will lead a challenge-based learning programme as well as a student forum. These activities will build upon the experiences of BISC and CET201.

The first interdisciplinary autumn school in “Co-production of climate adaptation research” was organized with financial support from CET by Erik Kolstad and Scott Bremer in Mjølfjell 20. – 25. October. Also, 6 master students from different disciplines had their work place at CET last year.



International and interdisciplinary conference Beyond Oil: Deep and rapid transformations. October 16 - 17.



CET conference train. An extra conference enjoyed by 25 researchers travelled from Oslo - Bergen to the Beyond Oil conference



Arendalsuka 2019. Klimaomstilt og virksom - hvordan kutte jobbrelaterte flyreiser? Panel debate and CET carbon tracker launch.



Master students at CET 2018/2019 and 2019/2020.



Seminar at Bjørnafjorden Hotell and CET affiliate seminar.



The Collaboratory – Bergen International Student Conference and the CET201: Sustainable Innovation course.

Strategic management

Strategy

The CET strategy 2020 – 2022 was completed and approved by the Steering Committee in December 2020. The overarching goal of CET outlined in the strategy 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. The strategy outlines three sub-goals – i) actionable knowledge, ii) problem-oriented research and iii) interdisciplinary knowledge hub, under which activities will be structured. The strategy further identifies three core priority areas and five applied priority areas where research activities will be strengthened and expanded (see box on next page).

Steering committee

The steering committee met according to plan in June to discuss results achieved, and in December to discuss budget and plans. The committee provides valuable strategic guidance to the work of the centre, not least in developing the strategy. In their December meeting, they also provided input to the suggested composition of the Scientific Advisory Committee.

Leadership group

CET leadership group meetings were held regularly in the spring with but were paused in the autumn, partly since it was a very hectic time with project development, but also since the meeting format was not optimal. Regular meetings with a stronger focus on scientific discussions and project development will resume in 2020, when the group will have a broader composition including the two new Prof. II positions.

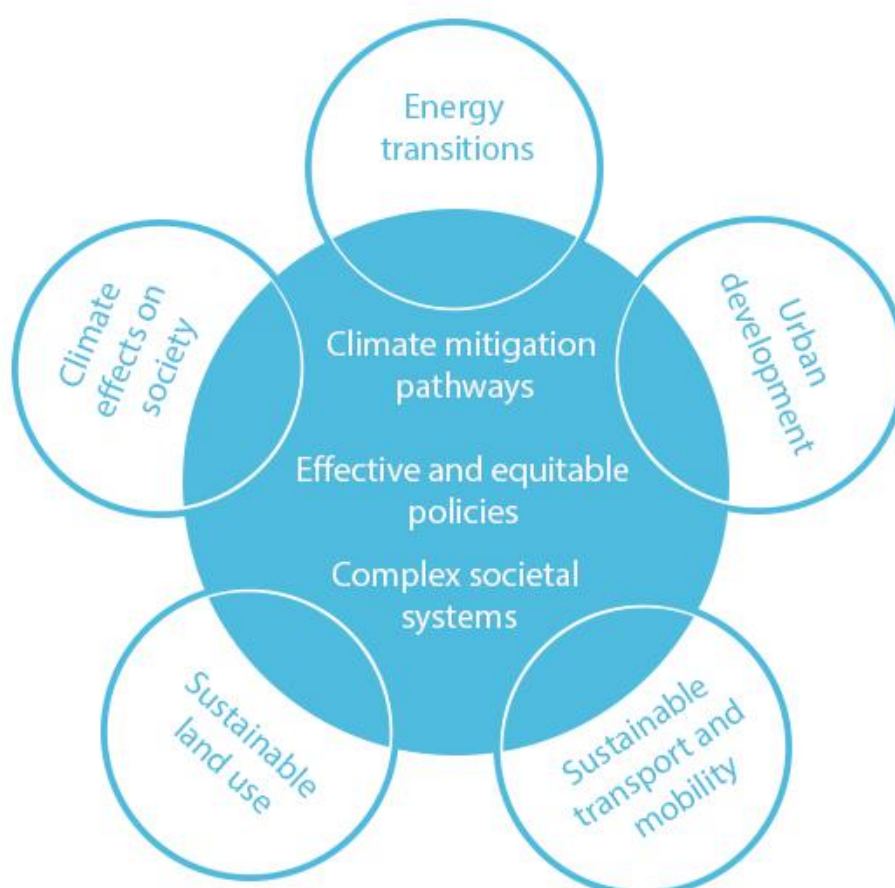
CET strategy 2020-2022

Goals

Produce actionable knowledge that can inform policy and practice about how to achieve deep, rapid and sustainable transformation of society to mitigate climate change:

- Actionable knowledge
- Problem-oriented research
- Inter-disciplinary knowledge hub

Priority areas



Cross-cutting priorities

Sustainable research practices

There has been substantial attention around the CET low-carbon travel policy in 2019. The year 2019 started with lots of media attention around academic air travels at Norwegian universities. CET was invited to several meetings with the UiB leadership to present the CET low-carbon travel policy and provide input to UiB's work. Some key activities in 2019:

- Several meetings with UiB leadership regarding UiB's central work on travel policy, and participation in panel debate at Kvarteret regarding launch of UiB travel policy
- Presentation of the policy to other institutions and UiB units: "Bærekraftskonferansen" at HVL – Western Norway University of Applied Sciences in Sogndal in April; BCEPS – Bergen Centre for Ethics and Priority Setting; UiB - Social Anthropology; CMI - Christian Michelsen Institute
- Panel debate on low carbon travels Developed beta-version of the CO2-calculator "CET Carbon Planner"
- Participation in the project *TR2AIL - Tracking, reflecting and reducing air travel: A pathway to more sustainable travel behavior* (funded by Vinnova - Sveriges Innovationsmyndighet), in partnership with the Stockholm Environment Institute, the Tyndall Centre for Climate Change Research and Energinet.
- Action plan developed and discussed internally at CET.
- Conference train and virtual hub during Beyond Oil-conference in October.

The internal working group will be renewed, and there are plans for extending collaborations with other units. Also plans for virtual seminar series with the Tyndall Centre, Cardiff, Uppsala.

CET low-carbon travel policy

The aim of the CET low-carbon travel policy is to reduce climate gas emissions from CET activities, and inspire similar efforts outside CET. This will be achieved by mobilizing:

- **Awareness** of climate gas emission targets and own emissions among researchers;
 - **Alternatives** for climate-friendly ways of organizing, conducting and meriting research;
 - **Accountability** through measurements, setting targets, and being transparent;
 - **A visible culture** that stimulates and supports low emission actions created.
-

This year, affiliates were asked questions about their attitudes and actions regarding low-carbon travels as part of their annual reporting (please see Annex 7 for details). All 39 respondents reported to have made major (28) or minor (21) efforts to reduce climate gas emissions from their research practice in the past year. A total of 23 had set personal targets to reduce emissions, while only 7 were tracking emissions. Many had considered various alternatives to travels (21-30) and planned, prioritized and combined meetings (19-27). When organizing conferences or meetings, several had considered the location of the meeting (11) and encouraged online speakers (15). Many had worked with their peers to promote a low-carbon culture or resisted their own fear of missing out from

attending everything (14-26). Overall, 32 reported that CET or the CET low-carbon travel policy had influenced their efforts to reduce climate gas emissions substantially (11) or to some degree (21). Only 6 reported that it did not have any such influence.

Gender balance and perspectives

Gender balance and perspectives has been defined a cross-cutting priority in the strategy, and will be reported upon regularly.

Overall, there is a good gender balance among affiliates (25 female vs. 33 male: Annex 5, table A5.1). In all senior position categories there is a majority of men, while there are more female than male PhD fellows.

At seminars and conferences, the gender balance has usually been good. At the Beyond Oil 2019 conference, a majority of key presenters were women, and there was good gender balance in the parallel sessions.

Women are still underrepresented in the CET leadership group, while in the CET steering committee there is a 50/50 balance between men and women both among the members and the deputies.

This year, affiliates were asked questions about to what extent they had considered various aspects of gender balance in their work (Annex Y). Almost all respondents reported that they considered gender balance when recruiting people and when organizing conferences and meetings. Almost all respondents also reported that they supported career development for women and gender balance on project proposals. We received several good suggestions for how the work on gender equality can be strengthened, that will be included in our future work.

Financial overview

The CET centre receives an annual allocation of NOK 6 million through the Norwegian Ministry of Education and Research, and in addition annual running costs of NOK 100 000, from the UiB Faculty of Social Sciences. This reporting refers to this core funding. In addition comes external project funding, as outlined in Annexes 3 and 4.

The table shows the longterm budget approved 7. December 2018 (light blue) and final accounts per 31. December 2019 (orange).

Main categories	2017	2018	2019	2020	2021	2022	Total 2017-2022	% of budget 2017-2022	R 2019 (31.12.2019)
Governmental allocation	6 000 000	6 000 000	6 000 000	6 000 000	6 000 000	6 000 000	36 000 000		6 000 000
SV-faculty, running costs	200 000	100 000	100 000	100 000	100 000	100 000	100 000		100 000
Income, total	6 200 000	6 100 000	6 100 000	6 100 000	6 100 000	6 100 000	36 700 000		6 100 000
Transferred in, total		5 029 656	8 044 511	7 491 141	4 795 540	2 220 085			8 537 196
250638 - CET centre leadership	187 698	236 105	320 620	564 567	606 249	627 461	2 542 700	6,9	294 159
250639 - CET senior researcher	356 043	583 684	772 348	1 605 253	1 655 483	1 707 421	6 680 232	18,2	308 435
250640 - CET recruitment positions	0	1 042 679	2 840 032	3 791 506	3 651 529	2 310 063	13 635 809	37,2	2 929 875
250641 - CET research assistant	109 249	243 017	300 369	407 816	318 661	54 703	1 433 815	3,9	615 672
250642 - CET strategic positioning funding	0	421 661	1 260 000	1 260 000	1 260 000	1 260 000	5 461 661	14,9	528 581
250643 - CET conferences/seminars/meetings	191 899	190 000	590 000	395 000	395 000	395 000	2 156 899	5,9	387 228
250644 - CET education	0	58 000	100 000	100 000	100 000	100 000	458 000	1,2	100 389
250645 - CET travels/conferences	55 563	50 000	150 000	150 000	150 000	150 000	705 563	1,9	28 489
250646 - CET sustainable research	0	20 000	250 000	100 000	100 000	100 000	570 000	1,6	194 073
250647 - CET communication/dissemination	0	0	0	341 460	358 533	369 289	1 069 282	2,9	36 112
250648 - CET running costs	269 892	240 000	70 000	80 000	80 000	80 000	819 892	2,2	245 271
Expenses, total	1 170 344	3 085 145	6 653 370	8 795 602	8 675 455	7 153 937	35 533 853	96,8	5 668 284
Transferred out, total	5 029 656	8 044 511	7 491 141	4 795 540	2 220 085	1 166 147			

The expenditures in 2019 of NOK 5.7 mill. were lower than the approved budget (NOK 6.7 mill.) and the annual income (NOK 6.1 mill.). The under-expenditure is due to delayed or changed activities as explained per cost category below. Unused funds are transferred to subsequent years. The activity level is expected to increase significantly in 2020, including more funding of senior researchers.

- **Centre leadership:** Main expenditures in 2019 were salary costs for centre leader (25%) that were somewhat higher than budgeted. Still, in total there was a small under-expenditure (kNOK 26) due to delayed nomination of Scientific Advisory Committee. The budget post will increase from 2020 and onwards when Prof. Haarstad's position at CET will increase from 25% to 50% when the Trond Mohn Foundation-financed project European cities ends.
- **Senior researcher:** Main expenditures were salaries for two prof. II-positions (Erik Kolstad and Endre Tvinnereim). The under-expenditure (kNOK 464) is due to two prof. II positions that were budgeted for but will start in later years, and the termination of Endre Tvinnereim's prof. II-position when he started in a permanent position at UiB (Adm. Org.) in April. This cost category will increase substantially over the next years. First, Jessica Jewell, previously funded by the Akademia agreement, will be re-engaged in a 3 year prof. II-position funded by CET. Second, in late 2019 there were concrete plans of engaging Kevin Anderson in a prof. II position. Finally, starting in autumn 2020, CET will provide 4 years of salary funding for an Associate Professor currently being recruited to the Adm. Org. department.
- **Recruitment positions:** This post covers salary, running costs and administrative costs for three PhD fellowships and one postdoc. There is an expected over-expenditure (kNOK 90) mainly due to administrative costs that were not budgeted for, and some increased salary rates. The over-expenditure would have been even higher, had it not been for delay in the transfer in some salary costs to another department, that will have to be deducted from next year's budget. We plan to announce two recruitment positions in 2020: a PhD position on

energy transitions to strengthen the group of Jessica Jewell, and a new postdoc position within a core priority area of the centre. At the same time, the postdoc position of Gregory Ferguson Cradler was terminated in December 2019 as he chose to take up a permanent position at the Inland Norway University of Applied Sciences.

- **Research assistant/administrative support:** The expenditures in 2019 were salary for a research assistant. The over-expenditure (kNOK 315) is mainly due to an error in the budget regarding this position. The centre has a constant need for administrative and communication support, and a permanent senior consultant will be recruited in 2020.
- **Strategic positioning funding:** This post covers funding of two seed funding (CET Accelerator) grants in 2019. The expected under-expenditure (kNOK 731) is partly due to less funds being granted under this mechanism than expected. Two projects received funding in February, while the autumn call was delayed until November, and resulted in no allocations. To stimulate the development of research projects, we may consider additional funding mechanisms, such as co-funding of research proposals. Funding of more visiting researchers should also be considered.
- **Conferences/seminars/meetings:** The post covers co-funding of the Beyond Oil 2019 conference as well as seminars at CET: Weekly CET lunch seminars, half day seminar at Literaturhuset for CET researchers in November, and 2 day gathering for CET researchers at Bjørnefjorden hotel in Os. The expected under-expenditure (kNOK 203) is due to over-budgeting for the BeyondOil 2019 conference.
- **Education:** CET has contributed to co-funding of the Collaboratory (kNOK 100) which is according to budget. The Collaboratory also receives funding from UiB centrally and from the SV faculty. Main expenses are salaries for 4 bachelor students who are recruited as coordinators for the Bergen International Student Conference (BISC) and the interdisciplinary course CET201 – Sustainable innovation.
- **Travels:** Expenditures to travel and conference participation are substantially lower (kNOK 122) than budgeted. A small part of this is due to delays in submission of travel reimbursement claims. Still, this budget post has been too large given the few number of people it is serving and also fewer travels due to increased use of video meetings at CET. The expenses may still increase somewhat in the coming years due to travels for more prof. II's.
- **Sustainable research:** There is an under-expenditure (kNOK 56). Costs have mainly covered the salary costs for a research assistant who worked a few months to develop the improved CET Carbon Planner web-application, and the purchasing of audio-visual equipment for video meetings in two meeting rooms. Some costs on other budget posts could alternatively have been covered by this post, such as the conference train for the BeyondOil 2019 conference.
- **Communication/dissemination:** No specific costs were budgeted for in 2019, but the expenditures (kNOK 36) were related to upgrading of meeting rooms, rental of studio and some costs relating to the participation at Arendalsuka. Note that CET spends substantial amounts on communication covered under other budget posts: Judith Dalsgård (research assistant) spends most of her time on communication and dissemination, and communication is both the purpose and theme of many of our seminars.
- **Running costs:** Costs in 2019 were substantially larger (kNOK 175) than budgeted for, and include renovation and upgrading of our large meeting room, purchasing of computers and other miscellaneous running costs, resulting in an over-expenditure (kNOK 175).

Annex 1: 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.”)

A1.1 Scientific, peer-reviewed publications (journal articles, books and book chapters)

Journal articles

Bouzarovski, S. and Haarstad, H. (2019). Rescaling low-carbon transformations: towards a relational ontology. *Transactions of the Institute of British Geographers*, 44(2), pp. 256-269.

Haarstad, H. and Wathne, M. W. (2019). Are smart city projects catalyzing urban energy sustainability? *Energy Policy*, 129, pp. 918-925.

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Jewell, J., Vinichenko, V., Nacke, L. & Cherp, A. (2019) Prospects for powering past coal. *Nature Climate Change*, 9, 592-597.

Jewell, J., Vetier, M., & Garcia-Cabrera, D. (2019). The international technological nuclear cooperation landscape: A new dataset and network analysis. *Energy Policy*, 128 (May), 838–852.

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Nielsen, K., Sareen, S. & Oskarsson, P. (2019). The Politics of Caste in India's New Land Wars. *Journal of Contemporary Asia*. <https://doi.org/10.1080/00472336.2020.1728780>

Oseland, S. E. (2019) Breaking silos: can cities break down institutional barriers in climate planning?. *Journal of Environmental Policy & Planning*, 21(4), 345-357. *Meteorological Society*, 100(8), 1419-1428.

Sareen, S., Thomson, H., Herrero, S.T., Gouveia, J., Lippert, I., Lis, A. (2019). European energy poverty metrics: Scales, prospects and limits. *Global Transitions* 2: 26-36. <https://doi.org/10.1016/j.glt.2020.01.003>

Sareen, S., Grandin, J. (2019). European green capitals: Branding, spatial dislocation or catalysts for change? *Geografiska Annaler B: Human Geography*. In press: <https://doi.org/10.1080/04353684.2019.1667258>

Sareen, S., and Rommetveit, K. (2019). Smart gridlock? Challenging hegemonic framings of mitigation solutions and scalability. *Environmental Research Letters* 14: 075004. <https://doi.org/10.1088/1748-9326/ab21e6>

Sareen, S., Saltelli, A. & Rommetveit, K. (2019). Ethics of Quantification: Illumination, Obfuscation and Performative Legitimation. *Palgrave Communications*, 6(20).

<https://www.nature.com/articles/s41599-020-0396-5>

Sareen, S., & Haarstad, H. (2019). Legitimacy and Accountability in the Governance of Sustainable Energy Transitions. *Global Transitions*. <https://www.sciencedirect.com/journal/global-transitions/special-issue/10T0G3D08R2>

Books & book chapters

Siddharth S. (ed). Enabling sustainable energy transitions: Practices of legitimation and accountable governance. Palgrave Macmillan. <https://www.palgrave.com/gp/book/9783030268909>

A1.2 Policy briefs and reports

Reports

Kvamsås, H., Stiller-Reeve, M. A. (2019) Klimathon2018 Rapport - Utfordringer og moglege løsninger for lokal klimatilpassing i Noreg. Bergen: NORCE/UniResearch 2018 27 s.

Sareen S., Thomson, H. (eds.). (2019). Moving beyond the state of the art in energy poverty measurement. ENGAGER European energy poverty network working group 2 report.

<http://www.engager-energy.net/wp-content/uploads/2019/12/WG2-report-November-2019-1.pdf>

A1.3 Media publications

Duarte, K. (2019, October 4). Slik er de norske klimaskeptikerne. *Bergens Tidende*.

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Duarte, K. (2019, Desember 6). Hvorfor er Norge det tredje mest klimaskeptiske landet i verden? *NRK*

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Duarte, K. (2019, Desember 2). Oljeindustrien og velstanden får skylda for klimaskepsis: - Mange går inn i en dyp fornektelse. *Nettavisen*.

<https://www.nettavisen.no/okonomi/oljeindustrien-og-velstanden-far-skylda-for-klimaskepsis---mange-gar-inn-i-en-dyp-fornektelse/3423886471.html>

Duarte, K. (2019, October 7) Norge er blant landene med flest klimaskeptikere. *På Høyden*

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Duarte, K. (2019, February 24) Jakten på bedre klimajournalistikk. *Bergens Tidende*

<https://www.bt.no/btmeninger/debatt/i/Kv5A7E/jakten-paa-bedre-klimajournalistikk>

Grandin, Elfving, Ødegaard, Aarø and Beitnes (2019, February 17). Å gi studenter reell innflytelse over utdanningen sin har en egenverdi. *Khrono*. <https://khrono.no/baerekraftkonferansen-studentaktiv-laering-tverrfaglighet/a-gi-studenter-reell-innflytelse-over-utdanningen-sin-har-en-egenverdi/262040>

Grandin, J. (2019, August 12). Klimatet och framtiden som inte kan börja. *Røyst*.

<https://www.royst.no/post/klimatet-og-framtiden-som-inte-kan-borja>

Grandin, J. (2019, November 29). Klimaskam og integritet. *Morgenbladet*.

<https://morgenbladet.no/ideer/2019/11/klimaskam-og-integritet>

- Gregersen, T., Tvinnereim, E. (2019, May 6). Bekymring for klimaendringer. *Energi og Klima : Norsk klimastiftelses nettmagasin* 2019
<https://energiogklima.no/nyhet/bekymring-for-klimaendringer/>
- Gregersen, T., Tvinnereim, E. (2019, May 13). Bilparken – bare nullutslippsbiler fra 2025?. *Energi og Klima : Norsk klimastiftelses nettmagasin* 2019. <https://energiogklima.no/nyhet/bilparken-bare-nullutslippsbiler-fra-2025/>
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<https://energiogklima.no/nyhet/vindkraft-pa-land-og-til-havs-nordmenns-holdninger/>
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- Haarstad, H. (2019, May 2). Bergen er tjent med en stram arealplan. *Bergens Tidende*.
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<https://www.bt.no/btmeninger/debatt/i/4qVPbV/klimafarer-rammer-alltid-lokalt>
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Annex 2: 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.

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

Journal articles

Bertazzi, L., Maggioni, F., Cagnolari, M., and Wallace S.W. (2019), Stochastic Optimization Models for a Bike-Sharing Problem with Transshipment. *European Journal of Operational Research* 276(1) 272-283.

Bremer, S., Wardekker, A., Dessai, S., Sobolowski, S., Slaattelid, R., & van der Sluijs, J. (2019). Toward a multi-faceted conception of co-production of climate services. *Climate Services*.

<https://doi.org/10.1016/j.cliser.2019.01.003>

Böhm, G., Pfister, H-R., Salway, A., Fløttum, K. (2019) Remembering and Communicating Climate Change Narratives – The Influence of World Views on Selective Recollection. *Frontiers in Psychology*; Volume 10.

Cyndecka, M. A. (2019) The 2019 'Fitness Check' of State Aid Modernisation Reform of 2012—An Opportunity to Redefine and Reintroduce Sustainability into the EU/EEA State Aid Rules? The Example of the Transport Sector. *Sustainability* 2019 ;Volum 11.(22)

Colombo. E., Giadrossi, A. (2019) Comparative International Litigation and Climate Change: A Case Study on Access to Justice in Adaptation Matters. *University of Pittsburgh Law Review*, Volume 81, Issue 3

Dahl, T., Fløttum, K. (2019) Climate change as a corporate strategy issue: A discourse analysis of three climate reports from the energy sector. *Corporate Communications. An International Journal* 2019 ;Volum 24.(3) s. 499-514.

Fløttum, Kjersti. (2019) A cross-disciplinary perspective on climate change discourse. I: New Challenges for Research on Language for Special Purposes. *Frank & Timme* ISBN 978-3-7329-0420-4. s. 21-37.

Fløttum, K., Gjerstad, Ø., Gjesdal, A. M. (2019) Avenir et climat : représentations de l'avenir dans des blogs francophones portant sur le changement climatique. *Mots: Les langages du politique* ;Volum 119.

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- Kysela, E., Tvinnereim, E., Ivarsflaten, E. (2019). Attitudes to public spending on environmental risk reduction: the role of temporal and spatial distance. *Environmental Sociology*; Volum 5.(4) s. 362-373
- Meuwissen, M. P. M., Feindt, P. H., Spiegel, A., Termeer, C. J. A. M., Mathijs, E., Mey, Y. d., ... Kopainsky B. Reidsma, P. (2019). A framework to assess the resilience of farming systems. *Agricultural Systems* 176: 102656. DOI: <https://doi.org/10.1016/j.agsy.2019.102656>
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- Måren I.E. (2019). Food systems for sustainable terrestrial ecosystems (SDG 15). *Food Ethics* 2(2), 155-159. doi: 10.1007/s41055-018-00032-2
- Schütz, S.E.; Slater, A. M. (2019) From strategic marine planning to project licenses - Between predictability and adaptability in management of aquaculture and off shore wind farms. *Marine Policy*, s. 1-11.
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- Siekiera, J. (2019). South Pacific regionalism as a driver of environmental policy – legal approach. *Право, Политика, Администрация*.
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Books and book chapters

- Siekiera, J. (2019) Political responsibility for climate change in the Pacific – the Samoan example, in: O. Syheva, Гуманитарные знания в современном мире: правовые, экономические, исторические, лингвистические, философские аспекты, Тульский филиал Российской правовой академии Министерства юстиции Российской Федерации, Tula
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- Herrera Anchstegui, Ignacio (2019). “Competencia en mercados con recursos esenciales compartidos: telecomunicaciones y energía” *Transmission Networks in Electricity Competition: Third-Party Access*

and Unbundling – a Transatlantic Perspective (Acceso a las Redes de Transmisión de Electricidad y Separación Efectiva: Una Perspectiva Transatlántica). Thomson-Aranzadi (ed) 37 pages.

Schütz, S.E.; Askeland, B.; Cyndecka, M.A.; Holmøyvik, E.; Konow, B.; Nordtveit, E. (2019). Klimaretslege utfordringer for rettsvitenskapen, in Giertsen, J.; Husabø, E.J.; Iversen, Ø.L.; Konow, B.; Rett i vest, Fagbokforlaget 2019, ISBN: 978-82-450-2794-5, p. 177-196.

Tiller, R & Dankel, D.J. (2019). Climate Change and Contested Marine Areas in the Arctic. Harris, P. (ed). *Climate Change and Ocean Governance: Politics and Policy for Threatened Seas*. Cambridge Univ. Press. 184p. <https://doi.org/10.1017/9781108502238>

A2.2 Policy briefs and reports

Andersen, G., Dale, B., Kristoffersen, B. (2019). Kunnskapsbaserte beslutningsverktøy? Syntese av samfunnsvitenskapelig forskning på marine forvaltningsplaner (2005–2019). Norce Rapport 30-2019. <http://hdl.handle.net/11250/2633620>

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Nicholson C.F., Stephens E., Jones A.D., Kopainsky B., Parsons D., Garrett J. 2019. Setting Priorities to Address the Research Gaps Between Agricultural Systems Analysis and Food Security Outcomes in Low- and Middle-Income Countries. CGIAR Working Paper No. 255. Consultative Group on International Agricultural Research.

Paulsen, M.L. and Robson, B.A., 2020. Glaciers and Land-to-Ocean Flux of Carbon.

Thompson W., Curcio B., Aguiar Rodriguez A., Bonhilla-Duarte S., Kopainsky B. Krütli P., Six J. 2019. DR-UK Banana Producer Resilience Assessment. Understanding preparation, impacts and recovery responses to hurricane-induced flooding for smallholder banana producers. ETH Zurich, Switzerland.

Thompson W., Aguiar Rodriguez A., Bonhilla-Duarte S., Krütli P., Kopainsky B. 2019. DR-UK Banana Value Chain Climate Resilience Workshop. Forming a transdisciplinary platform to generate stakeholder designed strategies to enhance climate resilience. ETH Zurich, Switzerland.

A2.3 Media publications

Amundsen, E.S. and L. Bergman (2019): "Trading arrangements in a renewable electricity system: The case of the Nordics" Presentation IAEE-conference, Ljubljana, August 25 -29, 2019.

Atanasova, D., Fløttum, K. (2019, May 30). Climate change or climate crisis? To really engage people, the media should talk about solutions. *The Conversation*. <https://theconversation.com/climate-change-or-climate-crisis-to-really-engage-people-the-media-should-talk-about-solutions-118004>

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Fløttum, K., Martincic, J. (2019, April 17) Vi må snakke om været. *Klassekampen*. <https://klassekampen.no/utgave/2019-04-17/vi-ma-snakke-om-vaeret>

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- Nisancioglu, Kerim Hestnes. From Evidence to Action: Moving Knowledge to Policy & Practice. Global Partnerships for Climate Action; 2019-09-20 - 2019-09-20
- Nisancioglu, Kerim Hestnes. Togradersmålet vs åttegradersrealiteten på Svalbard. Arendalsuka; 2019-08-13 - 2019-08-13
- Nisancioglu, Kerim Hestnes. Fra værvarslingsmodeller til klimaforskernes krystallkule. Utvikling av klimamodeller og klimapolitikk; 2019-01-31 - 2019-01-31
- Nisancioglu, Kerim Hestnes. Havet stiger - flere nasjoner er i ferd med å forsvinne. TV2.no [Internett] 2019-10-26
- Nisancioglu, K. H (2019, September 13). Unge forskere strømmer til "klimalaboratoriet" Svalbard. Men engasjementet gjenspeiles ikke blant beslutningstakerne. *High North News*
<https://www.highnorthnews.com/nb/unge-forskere-strommer-til-klimalaboratoriet-svalbard-men-engasjementet-gjenspeiles-ikke-blant>
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Annex 3: CET projects

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

Funder / Project title	Project owner	CET partner(s)	Total budget (NOK)
Akademiaavtalen, Statoil/UiB			1 050 000
Prof. II - Applied Economics in Climate and Energy Transformation	UiB - CET	C. Grainger	1 050 000
EU - H2020			131 148 740
CINTRAN - Carbon Intensive Regions in Transition - Unravelling the Challenges of Structural Change	Wuppertal Institut für Klima, Umwelt, Energie gGmbH	J. Jewell/E. Tvinnereim	29 994 050
VARCITIES - Visionary nature based actions for health, wellbeing & resilience in cities	Telecommunication Systems Institute	H. Haarstad (UiB - Geography, MN, MOF, Law, KMD)	101 154 690
RCN - Research Council of Norway			31 777 000
CityFreight - Freight Logistics in Smart Cities	NHH	S. Wallace, H. Haarstad, E. Tvinnereim, S. Eskeland Schütz, K. Måseide	18 558 000
DemoClim - Cities confronted by protests: Democratic governance for efficient and socially just climate transformation	OSLOMET - NIBR	H. Haarstad	13 219 000
UiB - University of Bergen, CET			270 300
Predicting flooding and changing shorelines for the next 100 years of sea-level rise and changing land-use	UiB - Earth Science	William Helland-Hansen	150 000
Climate Risk and Sustainable Performance	UiB - Law	Esmeralda Colombo	120 300
Vinnova - Sveriges Innovationsmyndighet			651 682
TR2AIL - Tracking, reflecting and reducing air travel: A pathway to more sustainable travel behaviour	SEI - Stockholm Environment Institute	K. Måseide, J. Dalsgård	651 682
Grand Total			164 897 722

Annex 4: Other projects

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

Funder / Project title	Project owner	CET partner(s)	Total budget (NOK)
Akademiaavtalen, Statoil/UiB			10 000 000
DeWindSea - Designing a Refined Legal Framework for Offshore Wind in the North Sea Basin	UiB - Law	Sigrid Eskeland Schütz	5 000 000
SANE-Clim - The Structure Acceptance Nexus in Climate Politics	UiB - Comparative politics	Michael Tatham	5 000 000
EU - Erasmus+			0
InternACTIONal - Erasmus+ Strategic Partnership	UiB	Jakob Grandin	0*
EU - ERC			95 000 000
Arqus European University Alliance - Arqus European University Alliance, AL7 Engaged European Citizens	UiB	Jakob Grandin	0*
Calendars - Co-production of Seasonal Representations for Adaptive Institutions	UiB - SVT	Scott Bremer, Stefan Bouzarovski	15 000 000
CONFER - Co-production of climate services in East Africa	NORCE - Climate	Erik Kolstad	80 000 000
EU - H2020			72 000 000
OceanNETs - Ocean-based Negative Emission Technologies - analyzing the feasibility, risks, and cobenefits of ocean-based negative emission technologies for stabilizing the climate	Helmholtz Zentrum für Ozeanforschung Kiel	Gisle Andersen	72 000 000
Professor Arvid Frihagens offentligrettslige minnefond			29 000
Adapting Law to Climate Change - Adapting Public Law to a Changing Climate: Four Perspectives and Publications	UiB - Law	Esmeralda Colombo	29 000

Funder / Project title	Project owner	CET partner(s)	Total budget (NOK)
RCN - Research Council of Norway			123 460 000
#LoVeSeSDG - Localizing the SDGs for Lofoten, Vesterålen and Senja	UiB - BIO	Dorothy Dankel	96 000 000
CLIMLIFE - Living with climate change: motivation and action for lifestyle change	UiB - Foreign languages	Kjersti Fløttum	7 330 000
DEMOVATE - Democratic innovation in practice	Bergen Municipality	Ole Martin Lægreid	8 200 000
THERAPY - The Electoral Ramifications of Environmental Policy	NORCE - Social sciences	Ole Martin Lægreid	11 930 000
Rogaland Fylkekommune			850 000
Klimakonsekvenser Rogaland - Utgreiing av konsekvensar av klimaendringar på natur og samfunn i Rogaland - utfordringar, mogelegheiter og prioriteringar	Western Norway research institute	Simon Neby	850 000
Sogn og Fjordane og Hordaland fylkeskommuner			500 000
2til1 - Frå to til eitt klimatilpassingsfylke: Kartlegging av erfaringar frå regionalt plan- og klimatilpassingsarbeid i nye Vestland	Western Norway research institute	Simon Neby	500 000
UiB - University of Bergen			7 100 000
CeSAM - CeSAM - Center for Sustainable Area Management	UiB - BIO	Inger Måren	7 100 000
GOV-WIND - Governing Offshore Wind: Legal Challenges, Market Opportunities and Policy Perspectives	UiB - Law	Ignacio Herrera Anchustegua	0*
Grand Total			308 939 000

*Budget information missing.

Annex 5: Affiliates

Table A5.1: Distribution of CET affiliated researchers by position, institution and gender

Position	NHH		NORCE		UiB		Total	
	Female	Male	Female	Male	Female	Male	Female	Male
Professor		2			8	12	8	14
Associate Professor					2	4	2	4
Research Professor (Forsker I)				2	1		1	2
Senior Researcher				2	1		1	2
Researcher				1	1	3	1	4
Postdoc fellow					2	3	2	3
PhD fellow					10	4	10	4
Total		2		5	25	26	25	33

Table A5.2: Distribution of CET affiliated researchers by institution, unit and gender

Institution	Department	Female	Male	Total
NHH	Dept. of Business and Management Science		2	2
NORCE	Climate		2	2
	Social sciences		3	3
UiB	Department of Social Anthropology	1		1
	Dept. of Administration and Organization Theory	1	2	3
	Dept. of Biological Sciences	3		3
	Dept. of Comparative Politics	2	1	3
	Dept. of Earth Science		8	8
	Dept. of Economics		1	1
	Dept. of Foreign Languages	1		1
	Dept. of Geography	8	10	18
	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	1		1
	Dept. of Social Anthropology		1	1
	Faculty of Law	6	1	7
	Geophysical Institute		1	1
Total		25	33	58

Annex 6: Events

Table A6.1: Overview of events organized by CET.

Date	Name	Institution	Title	Type	Co-organizer
09.01	Anna Birgitte Milford	Nibio	Drivers of meat consumption	CET Lunch	
16.01	Linda Nøstbakken	NHH	Climate risks and the Norwegian Economy	CET Lunch	
23.01	CET Affiliates	CET	Mobilizing for research council proposals	CET Lunch	
23.01	Håvard Haarstad, Julie Andersland, Håkon Pettersen, Marte Mjøs Persen, Øystein Bønes, Tor A. Woldseth, Marthe Hammer, Marte Leirvåg, Ove Sverre Bjørdal, Sofie Marhaug,	Bergen city council politicians	Hva vil vi med klimapolitikken i Bergen?	Debate	Klimafestivalen 112.
30.01	Tore Furevik	BCCR	COP Katowice: The meeting, the results and the way forward	CET lunch	
06.02	Gregory Ferguson-Cradler, Siddharth Sareen, Kåratein Måseide, Agnete Hessevick, Endre Tvinnereim, Jakob Grandin, Thea Gregersen.	UiB/ CET / DiGSSCORE /The Collaboratory	Workshop 1: Accountable Climate Action for Energy Transition. Workshop 2: Rethinking student involvement in higher education. Workshop 3: Public perceptions of climate change	Workshop	SDG Bergen
13.02	Håvard Haarstad, Siddharth Sareen	Energy Lab, UiB	Smart Cities half day Workshop	Workshop	Energy Lab

Date	Name	Institution	Title	Type	Co-organizer
20.02	Tarje Wanvik, Kristin Kjærås	UiB/ CET & Department of Geography	Contested energy spaces	CET Lunch/ Book launch	
27.02	Finn Gunnar Nielsen	Dept. of Earth science	Bergen Offshore Wind Centre	CET Lunch	
06.03	Infomedia researchers	Dept. Of Information and Media Sciences	Joint lunch seminar	Workshop	InfoMedia
13.03	Stella Emery Santana	McKinney Law	Is Brazil heading towards River Basin and Integrated Coastal Zone Management?	CET lunch	Faculty of Law (Sigrid Schütz)
20.03	Mathew Stiller-Reeve, Jesse Schrage et al	Hordaland FK & UiB/CET	Klimathon	Workshop	Hordaland fylkeskommune Sogn og Fjordane fylkeskommune NORCE
26.03	Maria Wolrath Söderberg	Södertörn University	Klimaretorikk	CET Lunch	Infomedia
27.03	Jesse Schrage, Tale Halsør, Are Børjesson,	Bærekraftig Frokost nettverk	Hvor mye Co2 har Bergen råd til?	Breakfast meeting	Bergen Kommune, Husbanken, Hordaland Fylkeskommune, Fylkesmannen, BAS, HVL
28.03	Ragnhild Ødegaard & Synnøve Betnes	UiB / CET	BISC - Bergen International Student Conference: Towards sustainable futures,	Conference	The Collaboratory
03.04	Kårstein Måseide	UiB/ CET	Carbon Tracker Pilot results	CET Lunch	
10.04	Andrew Jordan	Tyndall Centre/	Governing climate change: Policentricity in action?	CET Lunch	Michael Tatham / CHAD

Date	Name	Institution	Title	Type	Co-organizer
		University of East Anglia			
24.04	Klimaomstilling2019	County Govener Vestland	Klimaomstilling 2019	Conference	Fylkesmannen Vestland, HFK, Sogn & Fjordane FK, Statens Veivesen, NVE, Klimapartenere, Vestlandsforskning, HVL
30.04	Håvard Haarstad, Ole Frithjof Norheim, Kårstein Måseide	Global Health priorities	Joint lunch seminar with global health priorities	CET lunch	BCEPS - Bergen Centre for Ethics and Priority Setting
13.05	Pathways conference	UiB, Norce.	Perspectives from the social sciences and humanities on pathways to energy transition	Conference	Pathways to Energy Transition
15.05	Dorothy Dankel et al.	Dept. Biological sciences	LoVeSeSDG Kick off	Project Launch	Dept. Biological sciences
15.-16.05	Siddharth et al.	UiB/ CET & Dept. of Geography	Accountability and legitimacy in energy transitions governance.	Workshop	
22.05	Kårstein Måseide / Håvard Haarstad	UiB/ CET	The Way forward for CET: Strategy 2019-2022	CET lunch	
29.05	Åshild Aarø	UiB/CET	Reworking education: reflections from the first student-led course - CET201: Sustainable Innovation	CET lunch	Collaboratory
05.06	Vadim Vinichenko	UiB/CET	Riding the S-curve: the global uptake of wind and solar power	CET lunch	

Date	Name	Institution	Title	Type	Co-organizer
12.06	Sören Becker	University of Bonn	Smart Fragmentation in a Growing City: Digitisation and Urban Development visions in Berlin	CET lunch	
14.08	Arendalsuka stand	UiB / CET	CET Carbon Tracker	Stand	UiB
15.08	Arendalsuka debatt		Klimaomstilt og virkson - hvordan kutte jobbrelaterte flyreiser?	Debate	DN/ Arendalsuka
20.08	Moderator: Håvard Haarstad. Panel: Trym Aarføy, Henning Warloe, Tarje Wanvik & Marthe Hammer		Bompenger: Politikk, sirkus og motstand	Debate	Vigsmstad & Bjerke
28.08	Kristin Linnerud	HVL / CICERO	The Imperatives of Sustainable Development: Needs, Justice, Limits	CET lunch	
04.09	Maurice Skelton	ETH Zürich	Discussing environmental knowledge face-to-face: How experts' (non)participation in transdisciplinary workshops is shaped by (un)comfortable knowledge.	CET lunch	Scott Bremer
06.09	Håvard Haarstad, Anne Lise Fimreite, Bjørn Enge Bertelsen	UiB	Klimadebatt	Debate	TV2 & Klimanøytralt UiB
18.09	Ross Pifer	Penn State University	Recent Developments in US Energy Law and Policy; Shale Gas Revolution, Renewables and Climate Change	CET lunch	Energy Lab

Date	Name	Institution	Title	Type	Co-organizer
25.09	Inger Måren	Dept. Biological sciences	The latest IPCC report: What does it say and what does it mean	CET lunch	
26.09	Håvard Haarstad, Elisabeth Bergskaug, Gottfried Heinzerling, Gudrun Heute- Bluhm	Nordic Edge Expo	The Democratic challenge to sustainable mobility.	Conference	Nordic Edge
09.10	Aklilu Tilahun Tadesse	Dept. Geography/ System Dynamics	Using C-ROADS world climate simulator: From carbon sources to long-term climate impacts.	CET Lunch	
16.- 17.10	Keri Facer, Jessica Jewell, Lorraine Whitmarsh, Eirik Wærness & Michael Bradshaw	UiB / CET	Beyond Oil: Deep and rapid Transformations	Conference	
18.10	Kevin Anderson	University of Manchester/ Uppsala University	Climate change and equity: What is a fair share of the carbon pie	Open Lecture	
29.10	Jan Thomas Odegard & Pablo Dourojeanni	Utviklingsfond et	Food production in the time of the climate crisis	CET Lunch	
30.10	Ida Andersson	Örebro University	Sustainable housing 2.0? The role of policy networks and eco innovation in the wood based housing sector in Sweden	CET Lunch	Geography

Date	Name	Institution	Title	Type	Co-organizer
01.11	Kårstein Måseide, Kjersti Fløttum, Dorothy Dankel, Helge Drange, Ståle Knudsen	UiB	Klimanøytralt UiB	Debate	UiB Communications department
06.11	Eva Ritcher	Charles University. Prague	Public responses to climate change mitigation policies	CET Lunch	DIGGSCORE (Endre Tveinnereim)
12.11	Sigrid Schutz	Faculty of Law	DeSeaWind	CET Lunch	Energy Lab
13.-14.11	CET	UiB/CET	CET Intern seminar - Bjørnafjorden	CET Retreat	
20.11	Thea Gregersen	UiB/ CET	Predicting worry about Climate Change	CET Lunch	
22.11	Nathalia Golis, Tarje Wanvik, Andreas Opsvik, Katherine Duarte		How can CET researchers shape society?	CET Affiliate seminar	
26.11	Ranjan Datta	University of Regina	Climate Change and Community-based Resiliency: Meanings and Means	CET Lunch	Centre on Law and Social Transformation
27.11	Hanna Brauer	Berlin Technical University	Contradictory value(s) of coal mining in Colombia: Re-discussing values in economics and international interconnectedness of energy injustices.	CET lunch	Jessica Jewell
04.12	Gregory Ferguson - Cradler	UiB/ CET	Ownership and Property in the Energy Transformation	CET Lunch	

Annex 7: CET low-carbon travel policy

Table A7.1: Responses from affiliates to their efforts to reduce climate gas emissions from their research practice

<i>Have you made efforts to reduce climate gas emissions from your research practice during the reporting year?</i>	<i>Yes, major efforts</i>	<i>Yes, minor efforts</i>	<i>No</i>
	18	21	
<i>Monitor and reduce</i>	I have set personal targets to reduce emissions from my professional activities	I have kept track of carbon emission from my professional activities	
	23	7	
<i>Consider alternatives</i>	I have used video conference and/or streaming to reduce travels	I have encouraged meeting organizers to provide video/streaming of meetings	When I had to travel, I used transportation options with the lowest possible emissions
	30	24	21
<i>Plan, prioritize and combine</i>	I have considered what meetings to attend based on least amount of carbon emissions	I have planned my travels well in advance and prioritized between travels or combined several activities in the same location when possible	I have justified my travels considering the priority, location and purpose of the event. and the alternative options available
	19	27	25
<i>Reduce the footprint of events</i>	When organizing activities (conferences/meetings), I have chosen location by giving high priority to a low carbon footprint from travels by the participants	When organizing activities ((conferences/meetings), I have encouraged incorporated and/or technically supported online speakers and webcasts to reduce unnecessary travel	
	11	15	
<i>Support a low-carbon research culture</i>	I have worked with my peers, organization/ department and/or funders to value alternative metrics of success and encouraged the promotion of low-carbon research	I have resisted my own Fear of Missing Out (FoMo) from not attending everything	I have worked towards sensitizing others to the need of the research community to walk the talk on climate change
	14	26	19
<i>Has CET or the CET low-carbon travel policy had any influence on your efforts to reduce climate gas emissions last year?</i>	<i>Yes, substantial</i>	<i>Yes, to some degree</i>	<i>No</i>
	11	21	6

Annex 8: Gender balance

Table A8.1: Number of affiliates who have considered various aspects of gender balance in their work.

	Considered	Not considered	Not applicable	Did not answer
<i>Gender balance when recruiting people.</i>	23	1	14	5
<i>Gender balanced participation when organizing conferences and meetings.</i>	28	3	7	5
<i>Supported career development for women.</i>	24	1	11	7
<i>Gender balance on project proposals.</i>	27	1	11	4


Annex 9: Work plan 2019

Goal	Activity area	Activity
1. Actionable knowledge to inform policy and practice	1.1 High international quality publications	1.1.1 Peer reviewed publications from CET affiliated researchers 1.1.2 Stimulate competitive publication culture through "work in progress" seminars
	1.2 User involvement and co-production of knowledge	1.2.1 Maintaining contact with stakeholders and decision-makers 1.2.2 Research projects with user involvement
	1.3 Communication	1.3.1 Popularized articles and media publications of research findings 1.3.2 Knowledge summaries, policy briefs and reports 1.3.3 Research-based input to white papers, hearings etc. 1.3.4 Engage in and facilitate public debates 1.3.5 Active use of social media 1.3.6 Presentation and promotion of the centre to decision makers
2. Research of high international quality	2.1 Build excellent research capacity in core areas	2.1.1 Permanent position (Ass. Prof.) with Dept. of Adm. Org. Theory established 2.1.2 Recruitment position (postdoc) 2019 2.1.3 Prof. II position in economics (Akademikaavtalen, NHH) 2.1.4 FME COAST application 2018 2.1.5 BFS application 2019/2020
	2.2 Strengthen research partnerships	2.2.1 Formalized partnership with leading research institutions 2.2.2 Partnership on research proposals 2.2.3 CET visiting professorship (1-2 years duration) 2.2.4 Strengthen research collaborations at/between UIB, NORCE, NHH and BCCR in priority areas
	2.3 Facilitate and conduct interdisciplinary research	2.3.1 Network of affiliates expanded and activated 2.3.2 Seed funding ("CET accelerator") 2019 announced 2.3.3 Shorter term visiting researchers, associates or lecturers 2.3.4 Research Council of Norway (RCN) calls identified and proposals developed 2.3.5 H2020 calls identified and proposals developed 2.3.6 Provide input to future RCN and EU calls
3. Interdisciplinary knowledge hub	3.1 CET as a physical and virtual meeting place	3.1.1 CET lunch seminars 3.1.2 Information exchange among affiliates (newsletter, email, web sites) 3.1.3 Conferences / seminars / workshops (co-)organized by CET 3.1.4 Deep and rapid transformation seminar for affiliates 2x per year 3.1.5 CET annual retreat 3.1.6 Beyond Oil Conference 2019
	3.2 Network of experts	3.2.1 Web site set up, content and use 3.2.2 Actively engage CET affiliated researchers in research and research communication (incl. summarizing knowledge, expert opinions, public debates, policy processes) 3.2.3 CET as communication channel for (affiliated) researchers
	3.3 Education	3.3.1 Stimulating environment for education and training at PhD and Masters levels 3.3.2 Develop courses in collaboration with other departments and units 3.3.3 The Collaboratory further developed 3.3.4 Summer school 2019: Co-production of climate adaptation and mitigation research (Kolstad)
	3.4 Sustainable research	3.3.5 Bergen Summer Research School 2020 led by CET/Håvard Haastad 3.4.1 CET Low-carbon travel Action plan developed and implemented 3.4.2 Active use of video meetings
4. Organization and strategic management	4.1 Robust organization of CET established	4.1.1 CET leadership group established and meets regularly 4.1.2 CET steering committee meets 2x/year 4.1.3 CET Scientific Advisory Committee meets 1x/year 4.1.4 Continued/permanent solution for administrative support 4.1.5 Need for external reference group with stakeholders explored
	4.2 Strategic planning and management	4.2.1 CET strategy developed 4.2.2 Multi-year budget 2017-2022 developed 4.2.3 Annual work plan developed and updated 4.2.4 Annual report developed (narrative + economy) and shared publicly



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