

**Acronym:** SEQUAL

**Project title:**

Social-ecological relations and gender equality: Dynamics and processes for transformational change across scales.

**3. Abstract:**

The SEQUAL research project addresses the call topic 3.1 Gender Dimension In Climate Behavior and Decision-Making. Focusing on the sector of natural resource management we investigate gender differences in participation and leadership in climate related processes - everyday practices, decision-making and adaptation strategies - at all levels in society. We extend the frontiers of research in this field to a focus on why gender differences occur, how they are produced and reproduced and their social location (where). We conduct top-down discourse analysis of policy on climate change and gender equality in natural resource management across three countries, Norway, Sweden and Spain. We ground truth our policy analysis through qualitative case studies across national borders in reindeer herding in the Arctic, community farming in the Pyrenees and dry forest communities in Burkina Faso. We then focus on interactions between levels through comparative analysis across case studies and policy. The overall vision of the SEQUAL research project is understanding connections and flows of power to dig deep into processes of climate change and gender relations, and address these issues as social, ecological and political processes across borders and across scales. Our research is framed conceptually as investigations of discourse (politics and power), and processes (the dynamics and effects of flows of power) between and across scales, operating in social-ecological systems.

**4. Coordinator:** Dr. Michelle Dyer

## Section 5. Scientific description of the project

### PART A: Description of the Collaborative Research Project

#### Social-ecological relations, climate change and gender equality: Dynamics and processes for transformational change (SEQUAL)

The SEQUAL research project addresses the call topic *3.1 Gender Dimension in Climate Behavior and Decision-Making*. Focusing on the sector of natural resource management, we investigate gender differences in participation and leadership in climate related processes - everyday practices, decision-making and adaptation strategies - at all levels in society. We extend the frontiers of research in this field to a focus on **why** gender differences occur, **how** they are produced and reproduced and their social location (**where**). We examine conditions for change for institutional and interactional levels to work together to produce gender equitable outcomes in natural resource management and climate action.

We argue that natural resource management is a sector particularly suited to exploring the intersections and interdependencies of climate change and gender in an innovative way. Here conflicts related to climate policy are fully cross-cutting in terms of: adaptation strategies and effective mitigation measures; for livelihoods and well-being; and for ecosystem health and biodiversity. Vulnerable groups are highly dependent on natural resources, and compared to men, women are often the most affected by environmental change.<sup>1</sup> Nevertheless, gender has been widely neglected in natural resource management and climate action. In this context, the overall vision of the SEQUAL research project is understanding connections and flows of power to dig deep into processes of climate change and gender relations, and address these issues as social, ecological and political processes across borders and across scales. Our research is framed conceptually as investigations of discourse (politics and power) and processes (the dynamics and effects of flows of power between and across scales) operating in social-ecological systems.

#### Research objectives

1. Contribute to better understanding of how the persistent social problems of climate change and gender inequality are framed and addressed on different policy levels, and identify the factors that promote or hinder real social and ecological change.
2. Further our understanding of gender power relations under changing environmental conditions on the local level across nation states.
3. Contribute to better understanding of the gaps and linkages between national and international gender and climate policies on the one hand, and local everyday gendered practices on the other hand. Based on an integrative top-down and bottom-up analysis, we aim to formulate a conceptual framework that can capture changes to gendered power dynamics - that operate across national borders and between and across international, national and interpersonal scales - in a changing climate.

#### Research Context: Gender equality and climate change as policy and practice

UN Women's 2018 report into gender equality in the 2030 Agenda,<sup>2</sup> found that less than 20% of the 54 gender-specific indicators across the SDGs can be monitored reliably at the global level. More than a third of the indicators suffer not only from insufficient country level data but also from a lack of capacity to generate data due to conceptual and methodological gaps. The report therefore calls for thinking that moves beyond compartmentalizing social and environmental goals to a social-ecological approach – an understanding of humans as part of complex adaptive social-ecological systems and applying this framework to the cross cutting issues of gender equality and climate change.

We identify and address two related research gaps for these issues in the sector of natural resource management. First, a lack of systematic investigation between gender equality (SDG 5) and climate action (SDG 13) in natural resource management.<sup>3</sup> Both climate adaptation and mitigation policies have obvious consequences for natural resource uses around the world. Compared to other sectors, the lack of gender equality in decision-making regarding natural resource use and protection has largely been neglected by policy makers, practitioners and scholars<sup>4</sup>. Furthermore, there is also evidence of a systematic bias when comparing natural and social science niches on these issues<sup>5</sup>. In work with an ecological bias, social power

dynamics are not comprehensively considered and thus lack the nuance necessary for analysis of social differentiation. As a result, the addition of gender equality measures often appears disconnected from other relations, both social and environmental.<sup>6</sup> By contrast, research that focuses on social power dynamics has been criticized for not paying attention to ecological relationships and outcomes.<sup>7</sup>

Additionally, in the process of incorporation throughout different sectors, gender inequality has been compartmentalized into economic, social, health and political arenas. While this may be necessary for the production of quantitative data on gender differences, it masks the diversity and dynamics of gender relations. We are left with static, binary, oppositional gender categories and aggregates that hide inequalities along other axes of social differentiation. The roles of culture and agency are obscured as is the intersectional and dynamic nature of social relations and their interaction with changing environments. We contribute to the growing body of scholarship from a variety of disciplines attempting to understand gender equality and climate change adaptation across scales and premising the social and ecological as inseparable and co-constituted.<sup>6,8</sup>

The second gap we address is a disconnect between mainstreaming goals of both gender equality and climate action and actual outcomes at policy level and in translating policy into action.<sup>9</sup> Many studies have documented the failure and constraining conditions of integrated policy strategies.<sup>10</sup> Scholars have analyzed the development of gender mainstreaming as a policy strategy, since it first featured in international policy in 1995 as a part of the Beijing Platform of Action,<sup>11</sup> and a general finding is that gender mainstreaming as a policy strategy has limited success.<sup>12</sup> At the same time, environmental and climate policy integration has become a popular political strategy in international organizations as well as nation states. Scholars have investigated the existence and effectiveness of such integrative policies for environment and climate in international and national policy and across sectors.<sup>13</sup> As in the case of gender mainstreaming, many studies have documented the failure and constraining conditions of integrated policy strategies.<sup>14</sup> We address this gap through cross scale comparison of top down policies and bottom up practices related to climate change and gender equality, described in more detail below.

### Research design

The research is divided into 5 work packages (WP) divided into tasks (T). Each work package is described in more detail below. Figure 1 shows the relationship between the WP/T and the work plan shows timing and task allocation. The project is designed to gain in depth inquiry into the gaps identified above at the intersections of gender mainstreaming and climate change as; component parts, at different levels and then as flows of interaction and social-ecological processes across and between parts and levels. We take a mixed methods approach, using qualitative, reflexive and participatory research methods throughout our project not only to answer our research questions but also to critically investigate and evaluate our own research practice.

#### **Work package 1: Project and data management, ethical oversight**

WP 1 consists of coordination of the overall project, coordination of research activities, data management and ethical issues supervision. The project coordinator will take overall responsibility for coordinating these tasks and each country PI will further coordinate in country. Integration and collaboration between teams will be managed by the project coordinator but also between various team members in different parts of the research project. Continuous engagement between teams and with stakeholders at every phase of the process is a central component of our reflexive research practice. All consortium members share an ethical imperative and take responsibility for this engagement.

#### **Work package 2: Policy analysis - top-down investigation**

In WP 2 we conduct a discourse analysis of how the sustainable development goals 5 and 13, are implemented in national policies in general, and natural resource management in particular in Sweden, Norway and Spain. The national teams will conduct the policy analysis of their own countries, focusing on how the national political system and culture shape policy development and strategies.

**Methodology:** We conduct a discursive analysis of relevant policies in each country using Carol Bacchi's "What is the problem represented to be?" framework. We focus on the conceptions of "problem representations" in gender equality policy, climate policy and natural resource management, along with underlying assumptions to the particular policies. The aim is to make explicit power relations and to what extent these are part of policy framing and how implementation happens. We look for the dominant as well as the alternative or marginalized problem representations in policy documents. Further, we will look at the gaps and silences in the analyzed texts, the re-problematizations, the space for challenge and the signs of resistance.<sup>15</sup> In Task 1 we map how and to what extent the sustainable development goals 5 and 13 are mainstreamed into national policies on an overall level. In Task 2 we investigate how and to what extent SDG 5 and 13 are implemented into the sectoral policies of natural resource management. Where relevant, other local and national policies are also examined. Nvivo qualitative software will be used for thematic analysis across and within policies.

### **Work package 3: Place-based case studies – *bottom up empirical investigation***

WP 3 is a bottom-up empirical investigation, using place-based case studies in Norway/Sweden, Spain and Burkina Faso. We seek to understand connections across and between scales by ground truthing our policy analysis through ethnographic case studies. Ground truthing is a term from geological/earth sciences to describe validation of remotely generated data by physically checking "on the ground". The three case-studies are not only heavily affected by climate change but are also more vulnerable relative to other contexts within these countries. Thus, we investigate gender from an intersectional perspective to consider other axes of discrimination hindering adaptation to climate change, changing gender relations and the effective participation of women in decision making. The case studies concern areas of natural resource management: 1) reindeer herding in the border region between Sweden and Norway, 2) mountain extensive and community livestock management in the Pyrenees in Spain and 3) forest management in Burkina Faso. The choice of these cases represents a comparative design along three geographical dimensions: 1) North in the North (Northern regions in two Nordic country), 2) European North/South (Nordic countries and Spain) and 3) Global South/North (European countries and Burkina Faso). We expect that cross-border, sub-national social-ecological situations and perspectives are critical focal points for understanding the linked dynamics of gender and climate change. We investigate the power-relations that structure the people and their relations to their rapidly changing environments and connection to how they will respond to or influence policy. In Task 1 we investigate gender relations and climate change in natural resource management processes on the ground. In Task 2 we map key policy documents and processes affecting the respective local communities.

The investigation will be guided by the following research questions:

1. How do environmental and social change and adaptation processes challenge or consolidate gender norms and gendered practices?
2. How are men and women affected by and engaging in decision-making processes and conflicts with regard to the use of land and in the context of climate change?
3. How are women and men engaging in local and national political processes and decision-making?

**Methodology:** We adopt a cross-disciplinary mixed methods approach in order to capture complexities and multiple voices. An initial desktop review is applied to understand local institutions and the history of changes in the local social-ecological systems. Then, through in-depth interviews, participant observation and narrative approaches like oral histories, we investigate the informal social and cultural institutions as well as the gender of participation in families, local organizations, networks and the decision-making dynamics within them. From feminist political ecology the visual and performative arts may be adopted in focus group discussions to capture new languages and expressions for representing global environmental change. In this way, we complement the more traditional qualitative methods with innovative methods that intersect different disciplines and are key in feminist approaches. These methods are able to challenge dominant ways of knowing and knowledge construction. The triangulation of the results of these different methods allow us

to capture a range of voices and perspectives. The Norwegian team is responsible for conducting the case study on the Swedish/Norwegian border, and the policy analysis in Norway; the Spanish team conduct the policy analysis and case study in Spain; and the Swedish team conduct the case study in Burkina Faso and policy analysis of Sweden. At least one team member from across countries will participate in some aspects of the fieldwork conducted by another country. This is to promote consistency, pooling of expertise of methods and areas of specific contextual inquiry, as well as bring in line comparative perspectives outside national borders during the actual fieldwork phase.

#### **Case study 1: Reindeer husbandry in a Nordic border region**

In this case we will study reindeer herding districts in Nordland county in Norway and in Norrbotten county in Sweden. This case transcends national borders as Sápmi, the Sami nation, stretches across four countries, including the northern parts of Sweden and Norway. The Norwegian-Swedish border region share ecosystems and species, and Sami reindeer herders move their herds across the border. Climate change in the Arctic occurs at a faster rate than in any other region in the world<sup>16</sup> and reindeer husbandry in sub-Arctic regions is highly affected.<sup>17</sup> While the adaptive capacity of Sami reindeer herding communities and gender relations in Sami communities have been subject to some scholarly attention, only a few existing studies have examined the gendered dimensions of the adaptive capacity of Sami communities in the face of ongoing environmental and societal change.<sup>18</sup>

**Case study 2: Women shepherds, Pyrenees Mountains, Spain.** This case study is located in the Pyrenees mountains, in the cross-border region between Spain and France. This region provides a case for examining the social-ecological system of communal management of land pastures and forests focused on the particular role of women within the system. This mountain region is a remote and marginalized environment, disproportionately vulnerable to climate change.<sup>19</sup> Land tenure regimes are complex and communal land has different types of governance regimes in different counties of the Pyrenees. Traditional and novel institutional arrangements, such as communal land access and use, innovative multiple scale networks and cooperative systems influence changes in power, gendered management of environment and decision spaces. Yet, the role of women in decision-making processes in the management of communal land has not yet been investigated.

**Case study 3: Forest conservation communities, dry forests, Burkina Faso.** Burkina Faso provides a case for assessing how global climate change and sustainability discourses are translated to national and local levels, in particular, how Swedish feminist foreign policy is translated in development aid to the Global South. We focus on the forest sector in Burkina Faso, which is subject to programs by the FAO and World Bank for forest based mitigation and adaptation and poverty reduction, based on assessments that the drivers of deforestation are primarily local. Since 2005, the Swedish International Development Agency has been financing the National Democratic Institute (NDI), a global non-governmental organization that has created a platform for women to reach decision-making positions, and supporting relevant government ministries.<sup>20</sup> While these efforts are critical in setting the political agenda, they often do not translate into local forestry arenas that are often male dominated spaces in which forest management, land use and benefit sharing decisions are made.<sup>21</sup> Whose equity matters, who has agency – and what are the implications for those affected by climate change, and by climate change projects? In this case study, we investigate the different dimensions of gender equity and benefit sharing in forest-based climate mitigation and adaptation decision-making through an intersectionality lens.

#### **Work package 4: Integrative analysis**

The methodology in WP 3 and 4 conceptualizes groups or locations as defined by the following criteria: 1. ecosystems (Arctic, mountain and forest); 2. cultural and livelihood practices (Sami reindeer herding, mountain extensive and community livestock management and forest community management); 3. political groupings across national borders (e.g. northern or southern European and global south and north). Work package 4 will be a comparative and integrative analysis based on the findings of the national studies and defined across borders by the criteria above. We bring consortium members and partners together for an integrative workshop where the teams will present the analyses described above. Joint analysis will be guided by the following research question:

- 1) What are the similarities and differences across borders and places with regard to how gender equality and climate action concerns and policies are implemented in natural resource management?

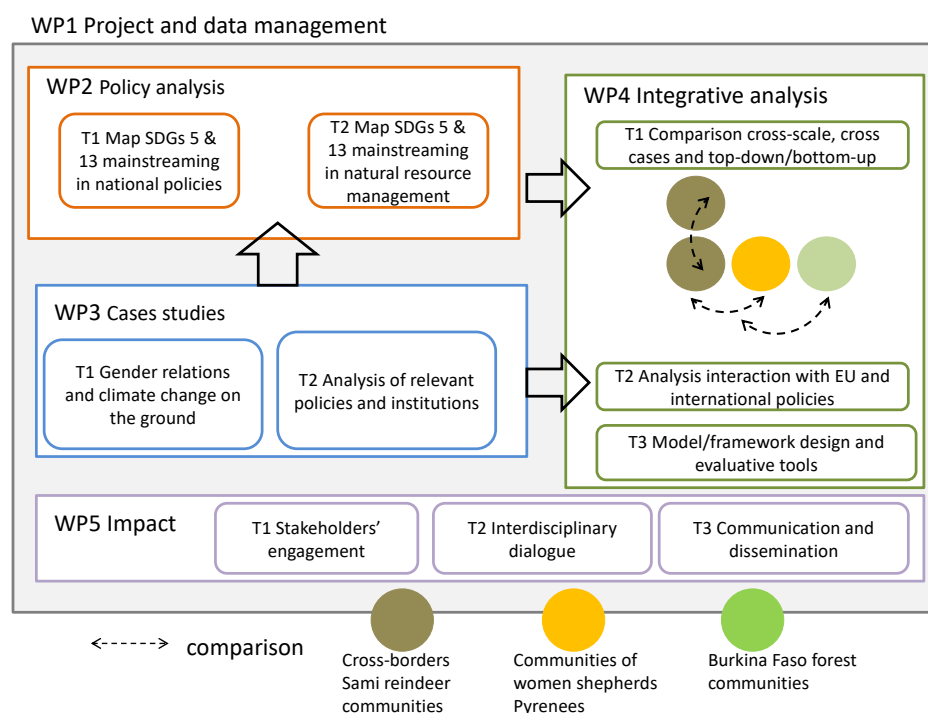
**Methodology:**

This integrative analysis will be carried out collaboratively by team members across the consortium from different disciplines. We expect innovative analytical tools and perspectives to emerge from the collaboration to inform this phase. Additionally, we use Nvivo qualitative software to analyze thematically and by social and /or ecological attributes across case studies and policy analysis. We use inductive analysis allowing themes, attributes and intersections to emerge from the data. In Task 1 we compare between the countries (north/north, European North/South, Global North/South), between cases and top down/bottom up. In Task 2 we compare the national studies to previous research on how the cross-cutting mandates of gender equality and climate action are implemented in international organizations, most importantly the UN and the EU, and in other countries. In this way, we aim to contribute to the international scholarship on a) mainstreaming of gender equality policy, b) mainstreaming of climate policies and c) the benefits and barriers to successful implementation of cross-cutting policy mandates. In Task 3 we will develop a novel framework for the policy and scientific community extrapolating suggestions for policy planning and future research and for the implementation at EU and international level of new evaluative tools that can capture changes in gendered power dynamics as processes in climate change and development interventions and policies.

**Work package 5: Impact, Communication, Engagement, Dissemination**

WP 5 involves participatory engagement with stakeholders, harvesting results and evaluating changes due to the research project. We perform an iterative engagement of stakeholders along the process at different scales (Task 1): policy tier from local to national and international scale; local stakeholders, managers/practitioners. This process includes a co-design with stakeholders, co-doing - especially in focus groups, workshops and in general qualitative research. In Task 2 we establish a platform for interdisciplinary engagement through an Advisory Board to guarantee that multiple voices from different disciplinary teams are involved and may help to think out of the box of dominant epistemologies. In Task 3 we communicate results including artistic works, webpage, use of social and digital media, and dissemination activities, including policy briefs and scientific publications/conferences.

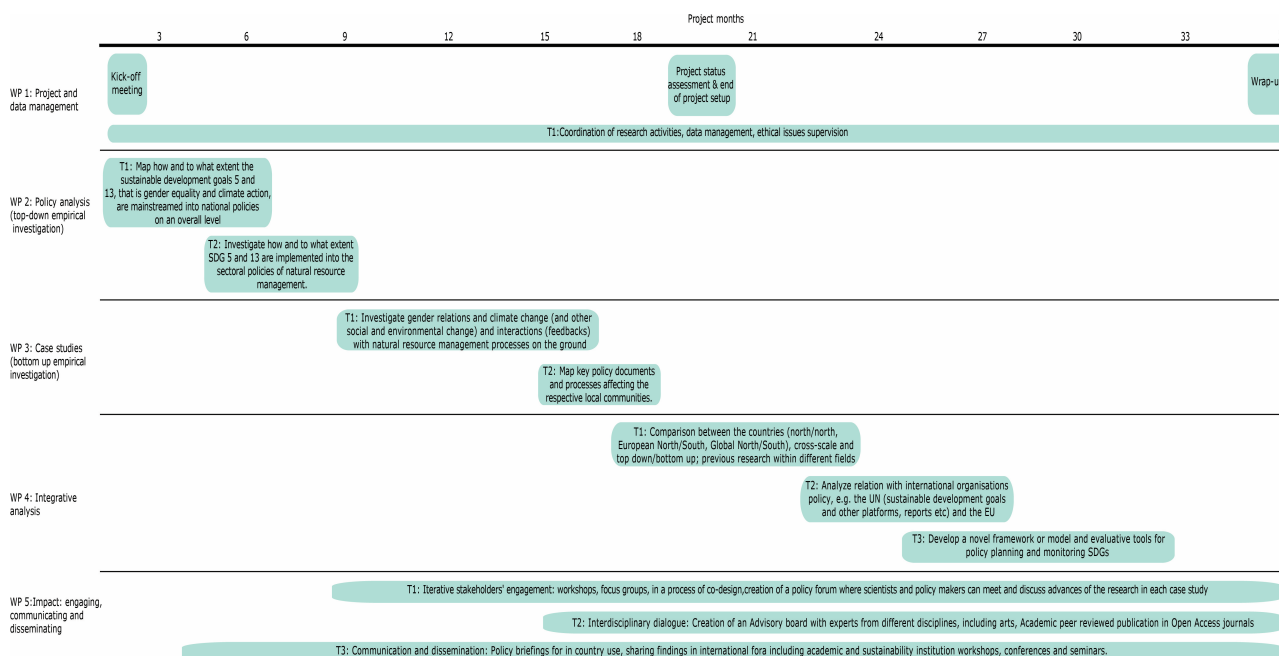
Figure 1: Work packages and tasks





## Work plan

Our project will have a 36-month duration. The work is divided between country teams, with each country taking responsibility for in-country policy assessments and case studies. We closely coordinate our activities to facilitate timely delivery for the comparative aspects of the project. Country teams are allocated different tasks, as the content will be collaboratively produced. The Swedish team will take the lead on coordinating collaboration on the comparative aspects.



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## Part B – Knowledge exchange and potential impact

### Expected Project Impact

#### *Relevance of research outcomes*

The overarching aim of SEQUAL will be to establish a better understanding of the interactions and linkages between gender equality and climate action, and the process and mechanisms maintaining and changing gender inequalities in natural resource management. The aim is to establish a research basis that will have impact on the progress of gender equality as well as climate mitigation and adaptation. We anticipate that this research will have significant impact within and outside academia.

**In academia:** The project will push the frontiers of gender equality, sustainable development and climate change research, as related to SDGs 5 and 13. We use insights from the wider literature on gender equality, climate change and natural resource management to understand and analyze the logics and mechanisms behind social-ecological processes on different levels. Our research design combines policy analysis and ethnographic methods and thus allows us to pinpoint the specific mechanisms behind gender inequalities. As such, one key contribution of SEQUAL will be to be able to distinguish both what is specific to the field of resource management and what is general, i.e. what are the general challenges to mainstreaming gender equality policy and climate action, and achieving gender equality and climate mitigation and adaptation in practice. Our research thus speaks to the international literature on gender mainstreaming, climate policy integration and natural resource management policy and local practices.

Our academic contributions will include:

- a. Conceptual framework and discourse: The new conceptual framework is intended to work towards transcending binary tendencies in current conceptualizations of gender in development and climate change. We also expect to influence the academic discourse of gender and climate research; working towards a paradigm shift that reconciles academic tensions between predominantly social versus ecological.
- b. Dynamics of gendered power relations: To push the frontiers of knowledge on gender and climate change from the descriptive and the local, to analytical examination of socio-political mechanisms and institutions that sustain and reproduce gendered power relations and inequalities between and across scales.
- c. Social differentiation and cross scale dynamics: By incorporating social differentiation within the social-ecological framework, we can better capture the multiplicity of possible linkages and feedback loops relative to the cross-scale dynamics and drivers of climate change. Such integrated perspectives provide better understanding of gendered outcomes and social equity opportunities and may open new pathways for transformational change that move beyond “business as usual”.

**In Policy:** Identifying the general and the specific is also important in terms of impacting policy development. Having a thorough understanding of how gender inequalities and climate changes are affecting natural resource management and local communities is key to sound policy making. Through engagement with policymakers, we will be able to disseminate our research and contribute to changing practices. Our findings at different stages of the research process will be shared in a series of stakeholder engagements with the policy institutions and communities at case study sites. The research findings and practice as the research progresses will be strengthened through this feedback and shaped to inform gender sensible development design.

**Internationally across academia and policy and development practice:** Our project is designed to provide international comparisons which will contribute to a better understanding of the cross cutting issues of gender inequality and climate change across nation states. International collaboration and research mobility is an integral part of our project and will ensure that SEQUAL will have impact on research and policy beyond the specific countries studied in the project. The project will reinforce existing research collaborations and create new ones in academia as well as on the local level. We aim to lay the ground for important cross-national comparisons and sharing of best practices, also after the grant period.



## Dissemination

SEQUAL aims to develop, disseminate and institutionalize research-based knowledge and research practices about the mechanisms producing, maintaining and changing gender inequalities within natural resource management and climate change, and in particular increase knowledge and awareness about the strategies, measures and possibilities for change. Outreach activities with key stakeholders representing the quadruple helix; universities and research organizations, companies and industry, policy-makers and public actors at regional, national and European level, and citizen, will take place.

The unique contribution of SEQUAL will be to:

1. To broaden and clarify the knowledge about barriers of and possibilities to gender equality and climate action on the local, national and international level.
2. To identify barriers that may impede or improve gender equality, climate action and sustainable development.
3. To collaboratively develop with stakeholders from local contexts to national and international policy makers ways in which identified barriers may be overcome.

Dissemination of results will take place in 3 tiers:

**Tier 1: Local level:** Through participatory research methodology and feedback of findings through workshops and seminars with case study participants and stakeholders. Research methods in WP3 at case study level are designed for collaboration and participation including reciprocal knowledge sharing.

**Tier 2: National level:** In country by each country with relevant bodies, government and non-government through the production of policy briefings and through participatory workshops and seminars. One workshop will be held in each country with relevant in-country stakeholders as part of the WP2 policy analysis research. A second workshop will be held in each country with relevant in-country stakeholders at the completion of WP 4 to share and develop findings in country strategies with stakeholders.

**Tier 3: International:** Findings will be shared internationally within academia through publication in Open Access journals. SEQUAL findings will also be shared at international conferences as a product of the consortia as whole, one in year 1 of the project and one in year 3. The SEQUAL project will have an online presence in the form of a website and on social media platforms which will engage with the research consortium's wide network amongst sustainable development and conservation practitioners. And the interested general public. In line with previous activities of several consortium members, practitioner-academic dialogues and workshops will be conducted both at international conferences and other fora as possible.

The research knowledge of SEQUAL will be communicated through:

- (a) the presentation of research results in a series of articles in peer-reviewed, international journals;
- (b) popular dissemination of research results in a policy brief series
- (c) a series of workshops and seminars including researchers and users;
- (d) other channels for dissemination of findings to users and to the public through popular writings.

## Measures to maximize knowledge transfer

SEQUAL will, through its communication of research practice, results and activities, stimulate knowledge sharing and knowledge exchange, as well as encourage and facilitate a knowledge-based dialogue between researchers, stakeholders, media and the wider public. Throughout the project and including in the dissemination phase the SEQUAL project promotes gender equality as being everybody's business and seeks to engage with the widest possible audience in academia and in organizations and government stakeholders dealing with climate change issues. SEQUAL will involve main stakeholders at all stages of the research process. Throughout the research period we will arrange workshops, seminars and discussion forums with a core group of relevant stakeholders, including local communities of the case studies and policy makers and research communities. In WP 2 we engage with relevant government departments and others as part of knowledge generation and will feedback to these and other interested stakeholders after analysis. In WP 4 we engage in knowledge generation as a collaborative research project with case study participants and

other stakeholders. Workshops and discussion groups are part of fieldwork and feedback with these groups will take place through result sharing workshops at the end of the project. In WP 5 we will create transdisciplinary Advisory board with experts. Additionally we envisage some of our planned conference and seminar presentations as practitioner-academic dialogues. All these forums are intended as participatory platforms for knowledge co-creation.

A unique web-site will be the foundation for our communication and exchange of knowledge. The SEQUAL website will present updated information about research results, activities, publications, - as well as research results and opinions expressed in media. The website updates will be made known through social media channels like Facebook and Twitter.

Although electronic dissemination through websites and social media is growing in importance, establishing physical meeting places will be prioritized by SEQUAL. It is of great importance that researchers and stakeholders meet to discuss what policies can and should be introduced to solve the social problems of climate change and gender inequality.

## Part C – Quality and efficiency of the implementation

### Management structure and procedures

The general purpose of the project management is strategic control of each work package, implying coordination of the different project activities and implementation of quality control mechanisms with appropriate project standards. Overall project management activities include:

- Co-ordination of the technical and research activities of the project at consortium level.
- Overall legal, contractual, ethical, financial and administrative management at consortium level only. Each country partner is solely responsible for financial in country requirements and own administrative management.
- Preparing, updating and managing the consortium relationship, communication and research protocol between partners.
- Co-ordination of workshops and seminars throughout the project duration at the whole of consortium level. PIs in country will coordinate their own in country workshops in collaboration with members from other team countries. Overall management will be provided by the project coordinator on timing for the project phases and with regards to results sharing.
- Co-ordinated management of whole of project data
- Managing the dissemination of the project activities and results.

One face to face meeting of all consortium members is planned in each year of the proposed project. The exact location of meetings will be planned to minimize carbon footprint and to share travel and meeting costs given the larger budget allocation for the Swedish and Norwegian teams compared to Spain. During each phase of the project regular whole of consortium meetings will be held on online platforms (e.g. Skype, Zoom etc).

### Structure of the consortium as a whole

Across the consortium we bring together researchers from different academic backgrounds, with extensive experience working on gender, environmental justice and policy, who approach these complex issues from different angles. Areas of expertise are not divided by country teams but are spread across the consortium.

#### *Relevant experience and expertise of individuals*

Our consortium overall has extensive experience and high levels of expertise in many aspects of gender equality research, including policy dimensions and qualitative feminist research methodologies, as well as solid grounding in climate change and sustainability research from an ecological perspective. The team places a priority on having a balance of early career and senior researchers to bring in fresh perspectives while also supporting emerging researchers and expanding the pool of experience in this field. Experience and expertise listed here of individuals does not encompass the full range of expertise of the team but is provided as concrete examples. Each team, including the Associate partner, contain senior members with extensive experience in gender policy issues and social power analysis. This includes: M. Teigen who is head of [CORE – Centre for Research on Gender Equality](#) and NORDICORE – Centre for Research on Gender Equality in Research and Innovation; M. Brockhaus is Professor of International Forestry at the Helsinki University; M. Rivera-Ferre is the Chair in Agroecology and Food Systems (SoPCI), and S. Ezquerro is the UNESCO Chair of Women, Culture and Development at SoPCI. Team members have extensive expertise in the case study areas and sectors: Associate Partner M. Brockhaus and G. Wong in forestry in Burkina Faso; C. Risvoll in Sámi reindeer husbandry communities in the Arctic; and F. Ravera and M. Rivera-Ferre with farming communities in the Pyrenees. Our team members have extensive experience with gender equality and natural resource management research including ethnographic and feminist methodologies: M. Dyer, G. Wong, M. Brockhaus, M. Rivera-Ferre, I. Iniestia-Arendia, F. Ravera, C. Risvoll, A. Lundberg and H. Eggbo. We have deep academic grounding in social-ecological systems research including A. Jimenez-Aceituno, A. Downing, O. Selomane, I. Iniestia-Arendia and F. Ravera. Senior members of our consortium including B.V. Vangelsten, M. Rivera-Ferre, S. Ezquerro, F. Ravera, M. Brockhaus, M. Teigen and G. Wong have extensive experience in research and administration of public research programs, participating and managing national and international research projects.

## Allocation and justification of the resources to be committed

### 1. Personnel costs

**SU:** 30% salary costs over 3 years to Project coordinator and Swedish PI M. Dyer. 20% salary costs over 3 years each allocated to senior researchers G. Wong and A. Downing to lead and co-lead of Workpackage responsibilities in Sweden. 10% salary costs over 3 years each allocated to O. Selomane and A. Jimenez-Aceituno who will contribute across WP 2-5. All investigators will be involved in project development and contribute to manuscript preparation. Sweden has higher personnel allocation relative to other consortium members due to the time heavy responsibilities of project coordination. Associate Partner Professor Maria Brockhaus is self-financing and will contribute in-kind.

**NRI:** Salaries are actual person costs, including social costs, for the Nordland Research Institute team. 24% of the salary costs are allocated to the PI, A. Lundberg, for the three years of the project, the two senior researchers H. Eggebø and C. Risvoll will each allocate 20% of their time to the project over three years, while senior researcher B.V Vangelsten will allocate 16% of his time to the project over three years.

**UVic:** The personnel cost is dedicated to paying 2 part-time postdoctoral researchers, total cost 83.6K EUR. One person will perform field work and one workshops and empowerment activities focused on action through transdisciplinary research with the women participating within the Spanish case-study.

### 2. Workshops and travel

**SU:** The Budget includes ±21K EUR for workshop and travel. The workshops (one per year) will be held in either of the three participating countries – selected to minimize costs and carbon footprint. The Swedish budget (and Norwegian) will be used to cover workshop travel for the Spanish team, to allow for inclusive collaboration, given the lower available budget in Spain. Travel costs will also cover two trips to and from the research site, for co-production and the feedback summary meetings. Travel costs here also include travel for the Swedish team to participate with the Spanish and Norwegian teams during the fieldwork phase of WP3. ±16K EUR are allocated to the work in Burkina Faso (WP3), including the paid assistance of an MSc student, to cover costs of renting a workshop venue, translation costs, and remuneration to local assistants. For added impact, inspiration and collaboration, the participants will present their work at conferences in the first and last year of the project, totaling ±5.8K EUR.

**NRI:** 14K EUR are allocated to the field work in the border region of Norway and Sweden (WP3). This includes two trips to and from the case study communities, for the introduction to the co-production and the feedback summary meetings. 3K EUR will cover participation from the Norwegian team to the Spanish and Swedish teams during the fieldwork phase of WP3. 3K EUR will cover field work travel for the Spanish team members, to allow for inclusive collaboration, given the lower available budget in Spain.

**UVic:** 7.2K Euros per year for travelling and accommodation to do the field work (4 months each year) during the first two years are estimated, at a cost of 650 EUR/month of accommodation (total cost 2.6K per year), 3360 EUR for living during and 1240 EUR for fuel. 2K EUR are estimated to perform the field work of the third year to perform the workshops.

### 3. Other Costs

**SU:** The publication costs will cover the open access publication of up to three open access academic publications. Miscellaneous costs will cover online presence and the printing of other forms of reports and publications, including translations, dissemination, as well as ensure the inclusive participation and contribution of all three teams, given different budget availabilities.

**NRI:** 3K EUR will cover renting workshop venues in the case communities, transcribing interviews, translation costs, and remuneration to local assistants during the fieldwork phase. The reindeer herders' travel cost and accommodation, plus compensation for their time involved in workshops will also be covered. 7K EUR are allocated for conference participation in the first and last year of the project. This includes travel, accommodation and conference fees. 2.5K EUR will cover the open access publication of at least one open access academic publication.

**4. Subcontracts.** **NRI:** 17% of the total costs will cover the participation of professor Mari Teigen and head of CORE – Centre for Research on Gender Equality at the Institute for Social Research in the Norwegian team. Her competences are crucial for the policy analysis in Norway (WP2) and the integrative analysis of the mainstreaming of gender equality policies and climate policies (WP4). She was therefore added as sub-contractor in the budget, but if required this may be adjusted should the project receive funding.

## **Part D. Added value of international cooperation**

Gender is a fundamental mechanism of social organization across cultures worldwide. We assert that the stage on which gender relations are enacted is at once both deeply personal and relevant to viability of humanity's future given anthropogenic climate change. Therefore transnational cooperation is essential to the objectives and underlying philosophy of the SEQUAL project. We seek to bring perspectives that investigate and question nationally and/or globally defined goals and their translation to locally understood priorities and gendered social norms in their social and ecological contexts. We operate at a research frontier that presents as a messy nexus of overlapping and sometimes contradicting priorities, at every level from interpersonal to global. We contend that gender relations and climate policy and strategies are inherently political – again across and between scales. This calls for perspectives that have both depth in context and breadth across them.

Thus, our multi country collaboration provides possibilities for innovation and impact on several counts not otherwise possible. First, extended collaboration across research contexts is a vital component of generating cross cutting perspectives with deep knowledge of in country context (from insider and outsider perspectives) and component aspects of research areas (social, ecological, gender). This enables our global perspective with a connection to local context and an understanding of the pathways, value chains and dynamics between them. The in-depth inquiries into how each country implements their gender equality and climate change policies sets the stage for understanding policy disconnects and gaps in national context. Thus, structured policy comparisons of the three countries can reveal what are general, as opposed to context specific problems. This differentiation is crucial for successful implementation of globally conceived policies such as in SDGs 5 and 13.

Second, our cross-scale comparative perspective, from place based case studies, to national policy instruments to EU and UN policy, allows for a rich analysis of synergies and dissonances beyond traditional single country and case study analysis. Our cross border and cross scale approach which focusses on ecosystems and communities of activity seeks to relocate understanding of sites of action and for effective implementation. This strategy can help dislodge contextual bias and opens up new pathways of inquiry, widening the possibilities for change.

Third, our consortium strengthens research cooperation in Europe and Scandinavia bringing together researchers from disparate academic backgrounds, with extensive experience in gender and environmental justice, approaching these complex issues from different angles. We seek to bridge sometimes siloed research areas and development and policy practice across gender equality, climate change and ecological and social research generally. Such efforts are urgently needed to generate innovation that is not nationally, regionally or locally confined.

By considering gendered power relations as a crucial variable we provide a deeper dive to questions of who has what, does what, gets what, and what they do with it in the production of, and adaptation to environmental change. We will identify critical intervention to tackle roots of gender inequality dynamics in changing environments.

## Part E. Gender equality and sex and gender analysis

We recognize and support the importance of gender balance in research teams. However our research consortium is female dominated. The Swedish team has 5 members, 4 women and one man. The Norwegian team has 5 members, 4 women and one man. The Spanish team has 8 members, 6 women and 2 men. All the female members of our research teams have either extensive or some experience in conducting gender analysis and/or gender focused research. The male members of our teams have more expertise in climate and ecological related research with less experience doing gender focused research.

The gender balance in our research consortium reflects the domination by women generally in the field of gender research, particularly at higher levels of experience and expertise. We believe it is counterproductive to recruit any members to the team based solely on their gender. Particularly given the already clear gender imbalances between the social (female) and natural (male) sciences and then again between senior positions in academia across all scientific fields (male dominated). The gender composition of our research consortium then may be seen as a positive discrimination measure.

That being said an underlying premise of our research is that gender equality is everybody's business and in everybody's best interest. Throughout each phase of our research we keep our focus on gender relations rather than gender differences. The fieldwork and dissemination phases of our research are planned to be as participatory as possible to engage with all genders and promote gender equality as a desirable goal regardless of gender. This includes in academia. As such, our transdisciplinary approach aims to develop a conceptual framework in which gender equality and climate change are integrated as cross cutting issues and not only as extra variables, and/or left to women academics.

Gender analysis is the overall lens to the research project. There is gender research content in every aspect of the project. We use mixed methods in the research, including feminist research methodologies, which we employ to reflexively and critically analyze our own research practice and strive for collaboration and co-production of knowledge with all research participants.



## Part F. Statement on ethical issues

The research will involve human participants in research methodologies including behavioral observation, interviews, group discussions and surveys. All participants will be volunteers with every effort made to ensure full knowledge and disclosure of research goals, outputs and use of results prior to participation. Before consent is sought, information is given specifying the aims, methods and implications of the research, the nature of the participation and any benefits, risks or discomfort that might ensue. All potential participants will be given an information sheet in a language in which they are fluent. When such information has been given, free and informed consent is obtained. In the case of variable literacy of participants, information and informed consent will be carried out orally in language in which participants are fluent and with a witness other than the person carrying out the research. Recruitment of eligible participants for research will take place through identifying individuals and groups of relevance to the research topic. No participants shall be excluded on the basis of gender, culture, religion, ethnic origin or social class. All potential participants will be informed that refusal to participate will have no consequences and will not involve any penalty or loss of benefits to which the person is otherwise entitled. All participants will be made fully aware that they may discontinue participation and withdraw any data they have so far provided at any time without penalty or loss of such benefits. Research will not take place with children (under 18 years of age), patients, incompetent/incapacitated persons, immigrants or other sensitive groups (i.e. prisoners).

Ethics standards and rules will apply also to the consortium members' own staff and ensure that appropriate procedures that conform with national legislations are applied. At all times the research team will respect the rights, integrity and privacy of research participants and their fellow researchers. As an ethical imperative, related to meaningful use of participants' time and knowledge, the research will generate meaningful, high-quality data and ensure timely publication, communication and dissemination of results.

Audio recordings of various discussion groups or interviews may be taken for facilitating later analysis. Audios will be kept by the partners in charge of analysis within their private storage systems and will be destroyed after the analysis has been completed. Participants will be informed in advance of the recording and will be asked to sign an informed consent prior to participation in the sessions, which will content the objectives and methodology of the project. The research will only include voluntary participants who have provided, and fully understand, the informed consent.

Identified risks include potential risk to participants of their opinions or responses on topics sensitive or controversial within their context being known. The research project addresses and minimizes this risk by: participation at participants' discretion; information revealed at participants' discretion; confidentiality during data collection and anonymization of any research materials. Participants' identity will not be disclosed in publications or at meetings. No names or other personal data will be maintained or disclosed by the researchers. Participants' confidentiality will be respected at all times as detailed in the informed consent form in order to prevent possible identification of individuals' opinions or ideas in any sharing, through publication or otherwise, of research results.

## Part G. Data management and open access plan

In this project, two main types of data will be collected. The first type of data will be sought from public offices, documents and national statistics offices and international data custodians, and will be used first for the purpose of investigating and comparing problems of climate change and gender inequality in our four countries of interest, and second for the purpose of understanding the dynamics of gender relations under changing environmental conditions. There will be no need to publish or disseminate these data in any way as they will already be available to the public, and we will simply refer to them in reports of scientific publications.

The project will also generate data from the document/policy analyses in an excel spreadsheet and using Nvivo qualitative analysis software. We will use demographic census data, data on gender equality indicators from a variety of open access online sources and data contained in government and non-government organizations relating to climate change and gender equality indicators relevant to the context of the project. These data will be used to highlight gender inequality as differences between women and men, which will be contrasted with a nuanced view of how and why those differences occur. The expected size of the data is no more than 1 gigabyte, and possibly much less. Since most of these data are freely available (except interviews), their utility is well established given their continuous usage by policies and researchers alike. The interview data beyond the project will be to verify the project findings primarily for transparency.

The second type of data will be actively collected from groups and individual in case studies selected for the project. These will generate qualitative data in the form of recorded and written interviews and group discussions. Given the sensitivity of these data, because it will include information about individuals and groups, and the onerous task of sorting through many interview recordings and written answers, we feel it might not be appropriate to publish these data. Parts of the data will be made available through the publication process either as graphics and figures, or as supplementary materials to the publications. If published as supplementary material, journals have systems to easily identify the data – in relation to the scientific output. Since the data will be collected and stored as one cross-section, there will be no need for versions. The identifying information about those interviewed will be removed to maintain anonymity in these published data. Whenever possible, priority will be given to open access journals when it comes to scientific publications related to the Project results. However, because part of the aim of this research is also to inform other disciplines in how to deal with gender in their respective work, we will primarily aim for journals which reach the most relevant audience, which might not always be open access. In these circumstances, we will strive to use avenues such as ‘Green open access’, which also referred to as self-archiving. Green open access is the practice of placing a version of an author’s manuscript into a repository, making it freely accessible for everyone. There will be no restrictions to use of the published data, except that usage should acknowledge the source (i.e. SEQUAL project). There is no need for a data access committee. Accessing the data through journal is completely anonymous.

The costs for making data FAIR in our project are the same costs as publishing open access as they will be part of that publication process, and are included as part of the budget for open access publishing. The project coordinator Michelle Dyer and country PIs Aase Lundberg and Sandra Izquerra take joint responsibility for data management with project coordinator Michelle Dyer taking on overall coordination of data responsibility.

## Section 6. Requested budget overview (totals only)

	Total requested budget (euros)
Partner 1: SU	399 757
Partner 2: NRI	399204
Partner 3: UVic-UCC	100000
Total requested budget of the CRP:	898961

## Section 7. Project partners: descriptions of project partner teams, including associate partners

**SU. PI and Project Coordinator: M.Dyer. Team Members: G.Wong, A.Downing, A. Jimenez Aceituno, O. Selomane. Associate Partner M. Brockhaus.**

We are a creative multidisciplinary research team working at the frontier of social ecological science in sustainable development. Our team has a high-quality mix of expertise in gender specific academic and development work and broader ecological and social-ecological systems thinking. We are all currently researchers at the Stockholm Resilience Centre, Stockholm University, in the SIDA funded project: *Guidance for Resilience in the Anthropocene: Investments for development* (GRAID) (<http://graid.earth/>). Michelle Dyer (PhD) and Grace Wong (PhD) co-lead a flagship in the GRAID program on *Equity, Gender and Poverty*. Michelle Dyer is the Principal Investigator and Project Coordinator. She is an anthropologist and feminist political ecologist with ten years' research and development practice experience with gender equality, social power relations and sustainable development as the central focus of all her work. Grace Wong is a natural resource economist. She has previously worked on conservation and the poverty-environment nexus, focusing in particular on the political economy and governance of forests and natural resources. More recently, she has led projects assessing the equity and benefit sharing dimensions of climate mitigation and social forestry across Southeast Asia, Cameroon and Burkina Faso. Andrea Downing (PhD) has a background in ecology. Her main research theme is to relate global perspectives on resilience thinking and social ecological systems to sustainable development needs at sub-global scales. Amanda Jimenez-Aceituno (PhD) hails from a social-ecological systems background with a particular focus on the integration of education and participation in biodiversity conservation. She has previously participated in climate change campaigns for university students and general citizen awareness. Amanda's current research aims to build understanding of the features of sustainability initiatives that have a high transformative potential, how the SDGs targets interact at this local scale and analyze the contexts that best support these initiatives. Odirilwe Selomane (PhD) has a background in agricultural and environmental economics and has most recently completed work on ecosystem services and human well-being links, focusing on the disaggregation of benefits between households by various social characteristics. His current work focuses on bringing a social-ecological systems perspective into progress monitoring for sustainable development and indicator development. Our Associate Partner is Maria Brockhaus (PhD), Professor of International Forestry at the Helsinki University. She has a long history working across West Africa on issues of gender, equity and related policy processes over natural resources. Our current research project, as a team, is developing innovative methodologies and conceptual frameworks for understanding the cross-scale dynamics and tele-couplings of SDGs within and across countries. Intersectional perspectives and gender as a cross cutting axes of social differentiation are central to our analyses. This project feeds into our proposed Gender-net project.

**NRI. Principal Investigator: Aase K. Lundberg, Team Members: H. Eggebø, C. Rivsoll, B.V. Vangelsten, M. Teigen**

Nordland Research Institute (NRI) is the Norwegian partner institution. Included in the project team is also CORE – Centre for Research on Gender Equality at the Institute for Social Research (ISF). The Norwegian project team's principal investigator is Aase K. Lundberg (PhD). Further, the team consists of Senior researchers H. Eggebø (PhD), C. Risvoll (PhD) B. V. Vangelsten (PhD) at NRI and Centre Director M. Teigen (Research professor/PhD) at the ISF. Lundberg is a Senior researcher at NRI. She has a PhD in Society, Planning and Development from the Norwegian University of Life Sciences (2017). Her research focuses on knowledge, legitimacy and power in natural resource management and in her thesis, she investigated the gender equality of Norwegian nature conservation management. Eggebø has a PhD in sociology from the University of Bergen and worked extensively on immigration and welfare state policies. She was member of the Norwegian Government's Equality Commission and has broad expertise on gender equality. Risvoll has a PhD in sociology from Nord University and her field of expertise is interdisciplinary research on how climate change impact on Arctic communities. Her research has particular emphasis on social-ecological resilience and adaptive capacity in Sámi reindeer husbandry communities. Vangelsten has more than 20 years of experience from research and administration of public research programs, participating and managing national and

international research projects. His field of expertise includes natural risk management and societal vulnerability, climate change and ecological economics. Teigen is head of CORE and Centre for Research on Gender Equality in Research and Innovation. Her current research specializes on analysis of gender equality policy, social elites, gender quotas in corporate boards, gender segregation in the labour market and in research and innovation. She was also a member of the Norwegian Government's Equality Commission. This interdisciplinary project team combines expertise in the fields of gender equality and environmental policy crucial to the project. The team also have competences on a broad range of methods including policy analysis, ethnographic fieldwork and quantitative analysis.

**UVic. Principal Investigator: S. Ezquerra. Team Members: M. Rivera-Ferre, F. Ravera, I. Iniesta-Arandia, F. López-i-Gelats, R. Binimelis, E. Oteros, G. Dean.**

The Research Group on Societies, Policies and Inclusive Communities (SoPCI, Spanish acronym) is a consolidated research group of the UVic awarded by the Catalan Government (SGR 1455). SoPCI develops, from a feminist and intersectional approach, interdisciplinary and transdisciplinary research and evaluation centered on the analysis of social, political and economic processes of inclusion, as well as the resulting policies and practices. Our notion of inclusion is a holistic one: social inclusion, health inclusion, environmental and territorial inclusion, and sustainability. From this conceptual approach, we analyze multiple practices stemming both from institutional top-down initiatives as well as from bottom-up initiatives emerging from social innovation processes. Two chairs conform the SoPCI: the Chair in Agroecology and Food Systems, coordinated by Dr. Marta Rivera-Ferre, and the UNESCO Chair of Women, Culture and Development, coordinated by Dr. Sandra Ezquerra. The group has an interdisciplinary profile with experts in the fields of political sciences, agri-food sociology, anthropology, environmental sciences and food studies. With regards to the specific topics of the call, several researchers have a long-track expertise in feminist economics and social inclusion, gender studies and global environmental change and feminist political ecology. In this sense, examples of publications are the recent work of Dr. Ezquerra on "Public policies, crisis and the elderly: feminization of poverty and aging" (Revista Barcelona Societat 2017); the special issue coordinated by Dr. Ravera and Dr. Iniesta-Arandia published in AMBIO (Vol. 45): "Gender perspectives in resilience, vulnerability and adaptation to global environmental change"; the Intergovernmental Panel of Climate Change (IPCC) cross-chapter on "Gender and Climate Change" of the AR5 global assessment co-authored by Dr. Rivera-Ferre; the recent thoughts about the linkages between feminist economics and commons published by Dr. Ezquerra and Dr. Rivera-Ferre as book chapter (Dialogues between feminist economics and the economy of the commons: the democratization of care) or the work published by Dr. Binimelis and Dr. Rivera-Ferre on the situation of rural women in Spain (Athenea Digital, 2014). Other topics of expertise of the group include research on extensive livestock production, being the main focus of research of Dr. Oteros and Dr. López-i-Gelats, as well as mountain areas and vulnerability assessment (Dr. Ravera, Dr. Oteros and Dr. López-i-Gelats). SoPCI has performed research both in the Global north (i.e. Mediterranean region) and the Global South (i.e. South-East and South Asia, Africa and Latin America regions). The group has a strong participation at international panel of experts, with Dr. Rivera-Ferre being lead author at the IPCC since 2010, Dr. Ravera and Dr. Oteros participating at the Intergovernmental Platform of Biodiversity and Ecosystem Services (IPBES), and Dr. Binimelis as part of the Cartagena protocol.