

02_What the anti-extractivist resistance tells us in terms of the transformation _____	4
03_The Impacts of Economic Growth in Rural Areas_A Multi-Scale Analysis and Local Strategies for Degrowth _____	5
04_Approaching Lanzarote through degrowth lenses _____	6
05_Mountain wine_2024_(EE,GC) _____	7
06_Protected areas and racialized minorities_2024_(EE,GC) _____	8
07_The effectiveness of payments-based forest conservation_(EE,GC) _____	9
08_The politics of ecological restoration in Catalonia_2024_(EE,GC) _____	10
09_HouseholdEnergyMetabolismOfSpain _____	11
11_Master_thesis_ David_Gilbert_3 Propositions _____	12
12_Tarragona EJ conflicts _____	13
13_Analyzing Urban Green Injustices in Barcelona through GIS (EE, GC) _____	14
23_Civic Perceptions and Mobilization for Greater Housing Equality _____	16
24_Changing Environmental & Energy Policies in Spain (EE, UIE) _____	17
25_Understanding the Just Transition through Catalonia's Housing System _____	18
26_Climate impact of a wealth tax _____	19
28_ICTA SAES Master thesis proposal Urban climate shelters systematic review_(EE,GC) _____	20
29_CAP_Developing_degrowth_strategies_julia_grosinger _____	22
30_Energy metabolism of Girona _____	23
31_Societal metabolism of Costa Rica_(EE,UIE) _____	25
32_TFM proposal_icta_2024_heat vulnerability _____	26
36_Rural immigration and sustainability in Europe _____	28

55_Rural Development and Transformative Change in Spain	29
57_Intentional communities and degrowth_The case of_(EE,GC)	31
58_TFM_SAES_Propuesta_Laila_Sergio_(EE)_pendent email	32
59_Is modern irrigation greener_IRRIGO	34
60_Technological Frames and Irrigation Modernization in Spain_- RECOUNT	36
61_Beyond Growth_ Adapting Fiscal Ordinances and Municipal Budgets for Sustainable Urban Futures_(EE, UIE)	38
62_Developing the Green Shops Network of Girona_ An Initiative to Combat Food Waste_(EE, UIE)	40
63_Local Action for Global Impact_ Examining the Potential of M- unicipalities for a post-growth transition_(EE, GC)	42
64_Municipal Educational Resources for a Postgrowth Transform- ation_ Redesigning Environmental Education for a Finite Planet_(EE, GC)	44
65_Quantifying Prosperity for Cities_ A Postgrowth Approach to Urban Sustainability_(EE,GC,UIE)	46
66_Environmental Justice in Scaling Nature-based Solutions_A Literature Review for Fair and Inclusive Urban Greening_(EE,GC)	47
67_Nature-Based Solutions for Reducing Vulnerability to Climate Change Impacts_Approaches for Ex-Ante and Ex-Post Monitor_(EE,GC)	48
68_Uncovering digital relational values embedded in food_(EE, GC)	49
69_Uncovering digital relational values in the context of climate_(EE,GC)	50
70_Mapping the stranded assets of major fossil fuel companies	51
71_Global map of Liquified Natural Gas (LNG) impacts and resist- ances	52

72_Scrutinizing the fossil fuel industry “part of the solution” narrative _____	53
73_Thesis_SUSTAIN_Social vulnerability collective action _____	54
74_Beyond ecotourism_Innovation in supply chains_Business Models assessment and transparency in profits allocation _____	55
75_Environmental Governance and Public Funding in practice ____	56
76_Integrating Sustainable Tourism into Business Models in Medi- terranean Biosphere Reserves _____	57
77_Mainstreaming the gender and youth lens throughout the Me- diterranean BR management strategies _____	58
78_NPAs and socioecological conflicts in Mediterranean Biosphere Reserves _____	60
85_Climate services and multilevel governance_(EE,GC) _____	61
86_Analysing the approach to climate change vulnerability in the Province of Barcelona_(EE,UIE) _____	62

Zehra Taşdemir Yaşın 30.09.2024

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Proposal for MA Thesis: What the anti-extractivist resistance tells us in terms of the transformation of the countryside in regions where extractivist expansion into rural socio-natural frontiers has been a predominant pattern of capitalist development and integration in the Global South with a focus on 21st century

Main focus of analysis: How anti-extractivist struggles in the Global South render the contradictions between capitalist extraction and the rural socio-ecological relations of production and reproduction threatened by the extractive projects based on computational social science methods & techniques

Geographical reach/focus: Latin America, South(east) Asia, Africa

Scope and methods: The expected research entails the following research axes.

- A comparative review and mapping of literature: what is coming to fore in the accounts of the anti-extractive struggles and resistance with claims on land-nature-resource:
- Primary research for a selected number of cases/instances: i) local, national or international news archives; ii) local, national and transnational NGOs/movements' news or reports (such as <https://grassrootsonline.org/>; <https://www.wrm.org.uy/>; <https://viacampesina.org/en/>); iii) social media - Interpretive digital behavioral data formation: based on techniques of computational social science and social analytics

Questions for inquiry:

- How extractive/mining projects transform and destructs local relations of production and reproduction as expressed by the anti-extractive socio-environmental resistance?
- How mining projects subsumes/incorporates or, otherwise, destructs/ dispossess/ displaces local peasants, farmers, fisher people, (agro)pastoral communities, indigenous people and their work as expressed by the anti-extractive socio-environmental resistance?
- What are the conceptions of nature and human-nature interaction among resisting/insurgent rural-indigenous communities and how do they perceive the impact of mining projects on the human-nature connection/interaction?
- How do they defend their nature (land, forest, water, air)? –

What are the languages of resistance with respect to everyday forms of lives, production, reproduction and human-nature interaction? - What are the differential gender roles and influence in the persistence and patterns of resistance?

Student profile: Background in social sciences (and/or engineering with social science interest), computational social science methods

Master Thesis Proposal: The Impacts of Economic Growth in Rural Areas: A Multi-Scale Analysis and Local Strategies for Degrowth.

Yulia Grosinger (julia.grosinger@uab.cat)

This thesis explores the impacts of economic growth and possible degrowth strategies at local level in rural areas in Europe. These areas though highly heterogenous are in general marginalized, yet at global level they are highly privileged in terms of resources and stable governance. In this multi-scalar analysis the student tries to identify, assess and structure the impacts of growth in rural areas in Europe.

First identified growth impacts can be structured along varying scales—local, regional, national and inter/supranational and different dimensions (e.g. social, spatial and organisational). Second, related key sectors (and possible actors) at various scales shall be subsequently identified.

Third, the research will investigate potential visions of what degrowth might look like at the local level. Alongside this, strategies for realizing these visions will be developed. Lastly, the analysis will critically examine the risks of placing too much emphasis on the local while considering the broader context of global inequality.

The research will contribute to the field of rural degrowth. The suggested approach includes conducting desktop research and qualitative interviews with experts in the field or local stakeholders. Additionally, the student may choose to propose a case study. The final structure and specifics of the research will be collaboratively decided with the student at the beginning of the thesis process.

Master Thesis Proposal: Approaching Lanzarote through degrowth lenses

Marula Tsagkari (marouko.tsagkari@uab.cat)

This thesis aims to explore the island of Lanzarote through the theoretical framework of degrowth, using the real existing degrowth model as its analytical lens. The study will investigate how various elements of degrowth have surfaced within the context of Lanzarote, how these elements have evolved to challenge the prevailing growth-oriented paradigms, and how they intersect with the island's unique local identity, culture, and history.

A central focus of this analysis will be on the concept of the 'local'—an idea that is deeply ingrained in the daily life of the Lanzaroteños and in the way the island has developed its economic and cultural models over time. Lanzarote presents a unique case where the tensions between growth-driven regimes (such as tourism and construction) and more sustainable, locally focused practices are starkly visible. This research will examine how these tensions manifest, particularly in opposition to the globalized, profit-driven growth model, and will seek to understand who the key actors are in this emerging post-growth landscape.

Methodologically, this thesis will rely on desk research, analyzing historical documents, policy papers, and other archival materials to trace the evolution of the island's development models. Additionally, interviews with local stakeholders, activists, and policymakers will be conducted to capture contemporary perspectives on the degrowth movement within Lanzarote.

Project title: Mountain wine: threat or opportunity for mountainous rural areas?

Project supervisors: Lucía Argüelles (IN3-UOC), Esteve Corbera (ICTA-UAB, Dept of Geography)

Desirable specialization of the student: Ecological Economics, Global change (with GIS as required key skill)

Project description:

Changes in rainfall and temperature patterns driven by climate change are affecting agricultural production in many regions of the world. In Catalonia, such processes are inducing farmers and agribusinesses to try out new crop varieties, management practices, and in some contexts and for some crops it may also imply to look for new growing areas.

This research project aims to analyze if, how and why spatial shifts are occurring in the viticulture sector, as vine growing is expected to move towards higher altitudes and latitudes. Vine growing and wine production have a greater profitability than other crops, and the actors and dynamics that govern the sector differ from vegetable, cereal, or fruit trees, for example. Hence, the sector's northward shift might bring new agrarian dynamics while displacing other crops or land uses, and change rural economies and cultures. In turn, the new geographies might also bring changes to wine production and the wine sector.

The study would ideally combine geographic spatial analysis and interviews with farmers, agribusinesses and policymakers from the viticulture sector to better understand the current trends, prospects and limitations of vineyards' spatial shifts, and in so doing the project will also imagine the landscapes of the new rural regions that this crop may colonize in the future. The latter will be explored in one or two mountainous valleys of the Catalan Pyrenees where vineyards are experimentally grown.

We are looking for an MSc student with an undergraduate in environmental science, biology/ecology, geography, sociology, or political science willing to undertake qualitative research in Catalonia. Familiarity with interviewing and/or GIS mapping techniques are desirable. Catalan or Spanish speaking is a must.

The student will be supervised by Prof. Esteve Corbera (ICTA-UAB) and Dr. Lucía Argüelles (IN3-UOC) and be involved in the meetings and activities of ICTA-UAB's Laseg research lab (www.laseg.cat), and the Conservation reading group.

Contact: Esteve Corbera (Esteve.Corbera@uab.cat)

Title: Protected areas and racialized minorities in Catalonia

Supervisors: Isabelle Anguelovski, Esteve Corbera

Specialization: Ecological Economics, Global change

Description:

Research on climate and health has identified extreme temperature (heat, cold), intense precipitation and flooding as well as droughts, as areas of great concern globally and specifically for Southern Europe. In this context, efforts have been focused on enhancing the adaptive capacities of vulnerable groups (e.g. elderly, low-income people) and vulnerable areas, but little attention has been given specifically to global south (GS) migrant and racialized minorities, and their intersectional vulnerabilities.

Among others, research shows that those groups are enduring the environmental, social and health impacts of environmental pollution and burdens while having the least access to green space and climate-protective infrastructure. Yet, rural protected areas, located in peri-urban or remote regions, are not only reservoirs of biodiversity but also climate and social refuges that can also enhance people's wellbeing. Yet, as recent scholarship on green space and exclusion has shown, GS migrant and racialized residents, visitors and/or workers might find themselves unattracted by and excluded in those spaces or might find their needs unmet by greenspace plan(ner)s and managers. On the other hand, they might also have valuable knowledge for supporting the climate and other benefits that can be harnessed from those spaces.

This research aims to understand how and why GS migrants and racialized minorities in Catalonia access and benefit from protected areas. Specifically, the research will examine the use made of those spaces by families, the socio-natural relationships and individual and collective identity built with protected areas, as well as the constraints people face in their access to the area and its benefits. The research will be grounded on one or two protected areas from inland Catalonia, to be selected after a set of preliminary interviews with decision-makers. The research will contribute original knowledge at the intersection of protected area management, conservation and climate justice, and processes of migration and racialization.

We are looking for an MSc student with an undergraduate in environmental or conservation science, biology/ecology, geography, sociology, or political science willing to undertake qualitative research in Catalonia. Familiarity with interview and participatory techniques is desirable. Catalan or Spanish speaking is a must. The student will be supervised by Profs. Esteve Corbera and Isabelle Anguelovski, and be involved in the meetings and activities of ICTA-UAB's Laseg research lab (www.laseg.cat), Bcnuej lab (www.bcnuej.org) and the Conservation reading group.

Contact: Esteve Corbera (Esteve.Corbera@uab.cat) and Isabelle Anguelovski (Isabelle.Anguelovski@uab.cat)

Project title: The effectiveness of payment-based forest conservation: a systematic review

Project supervisor: Esteve Corbera (ICTA-UAB, Dept of Geography)

Desirable specialization of the student: Ecological Economics, Global change

Project description:

Over the past twenty years, payment- and market-based projects and programs which reward farmers and communities in tropical and sub-tropical countries for the conservation of forests have proliferated. These include carbon offsetting forest projects, as well as projects and programs aimed at Reducing Emissions from Deforestation and forest Degradation (REDD+) and Paying for the provision or enhancement of Ecosystem Services (PES). As these initiatives have matured, researchers have begun to analyze their effectiveness in avoiding deforestation and the number of studies has been mounting, particularly since the mid 2000s. It is now critical to know the overall contribution of these initiatives to the conservation of forests, and to investigate whether they have been able to modify land-use change trends in their implementation sites.

This project is aimed at providing a state-of-the-art review of all peer-reviewed scientific literature which has employed spatial and matching methods to investigate how much deforestation has been avoided through PES, REDD+ and carbon offset projects. The review will also provide a map of the case study locations, and the methodological approaches used, including their strengths and weaknesses. It will also discuss how much these projects have contributed to modify local and regional land-use trends, identify research gaps and propose how to advance the frontier on the impact assessment of forest conservation.

I am looking for an MSc student with an undergraduate in environmental science, biology/ecology, geography, sociology, or political science willing to undertake rigorous desk-based research and willing to learn the art of review and document content analysis. Familiarity with statistical analysis is desirable. Catalan or Spanish speaking is a must.

The student will be involved in the meetings and activities of ICTA-UAB's Laseg research lab (www.laseg.cat), and the Conservation reading group.

Contact: Esteve Corbera (Esteve.Corbera@uab.cat)

Project title: The politics of ecological restoration in Catalonia

Project supervisors: Forrest Fleischmann (Dept of Geography, University of Minnesota), Esteve Corbera (ICTA-UAB, Dept of Geography)

Desirable specialization of the student: Ecological Economics, Global change

Project description:

We live in the UN decade of ecological restoration. Countries worldwide are mobilizing public resources to redress environmental degradation through ecological restoration programs and projects. However, we know little about who is behind the restoration agenda, how restoration sites are identified, restoration activities funded, and how such activities are designed and perform. Grounded on scholarship about recognition in conservation, the politics of/in ecological restoration, and the politics of scientific knowledge production, this MSc project is aimed at shedding light onto the omissions and pitfalls of ecological restoration, as well as the prospects for success, in Catalonia, Spain.

The MSc student will work with previously collected qualitative data about river custody/restoration projects in Catalonia, funded by the Catalan Water Agency and implemented on the ground by local councils and NGOs. These data consist of information on the projects' goals and achievements to date. The student will be expected to expand such data with additional data collection, and to conduct interviews and site visits to dig deeper in the nature and meaning of such data.

We are looking for an MSc student with an undergraduate in environmental science, biology/ecology, geography, sociology, or political science willing to undertake qualitative research in Catalonia. Familiarity with interviewing and statistical analysis are desirable. Catalan or Spanish speaking is a must.

The student will be supervised by Prof. Esteve Corbera, Prof. Forrest Fleischman (University of Minnesota, former Visiting Prof. at ICTA-UAB), and be involved in the meetings and activities of ICTA-UAB's Laseg research lab (www.laseg.cat), and the Conservation reading group. The project counts with the support of the Catalan Water Agency, which has provided most of the contacts and the information collected to date.

Contact: Esteve Corbera (Esteve.Corbera@uab.cat)

Household energy metabolism of Spain, 2006 – 2023

Supervisor: Jesús Ramos

Specialisation: Ecological Economics

Rationale: The residential or household sector is, along with transport, a diffuse sector in terms of energy consumption, since there are many agents involved. Therefore, it is one of the least studied. However, it is a sector in which energy consumption grows above the average for end-use sectors. This growth is not homogeneous and depends on the level of household income (analysis by quintiles), the size of the household and the type of household.

Objectives: To analyse the evolution of household energy consumption over time and its relative weight in final energy consumption. Disaggregate the evolution of final energy consumption by energy vector, and by income quintiles, size, and type of household. This would allow discussing energy poverty, possible future trends (based on the evolution of the distribution of households over time), as well as discussing the distributive effects of rising energy prices (by vector) among the different households (by size, income level and type).

Methodology: Data from the National Institute of Statistics' Household Budget Survey for the period 2006-2023 will be used. Statistical analysis and regression models will be used.

Expected results: To show how changes in energy consumption, and in the resulting CO₂ emissions, respond to different consumption patterns of different types of households. To also show how the change over time in the distribution of household types explains a large part of the changes in energy consumption at a national level. To analyse phenomena such as energy poverty or how different household conditions (such as educational level, income level, or housing type) affect the consumption patterns shown by households.

Requisites: Interest in quantitative analysis of societal metabolism. Knowledge of statistical packages such as STATA or R.

Target journals: Population and Environment, Energy Policy, Ecological Economics, Energy.

Contact: Jesús Ramos (Jesus.Ramos@uab.cat)

Potential Masters Supervision: Research on social movements and degrowth

I am available to supervise interested students on a master thesis examining the linkages of social movements, environmental change, and degrowth - a key topic in my work with the European Research Council REAL project at ICTA-UAB.

I can supervise work on social movements and degrowth broadly conceived, especially on the topics of political transformation and environmental change. Or, if students are interested in a more guided master thesis, there are three possible directions for projects pertaining to my existing research lines, including:

1. *Social movement degrowth*: There is a need for regional reviews, original desk research, and participatory action research to aid understanding how social movements are creating degrowth economies and communities. Some call these solidarity economies or communes. The thesis writer would carry out a review and/or desk research into movements of smallholder farmers, peasants, urban landless, squatters, etc. that have created communes, squats, agroecology areas, etc. Regions of specific interest to me include California, Amazonia, or Indonesia.

Key skills to develop include academic literature database searches, analysis and synthesis of information, social movement networks, evaluation of local/regional economic trends and counter-trends, participatory action research.

2. *Satellite photography for studying degrowth*: Satellite photography has revolutionized our ability to understand ecological changes like deforestation of the rainforests, wildfires, and ocean-level rise. The thesis writer would use publicly available satellite photography databases to analyze the ways that places and spaces of degrowth economies are changing socially and ecologically, i.e. trends and visualizations of deforestation, forest fire, industrial plantations, agroecology landscapes, etc. Possible focal locations include California, Ecuador, Brazil, and Indonesia.

Key skills to develop include QGIS and ArcGIS spatial analysis software, satellite photography databases and image manipulation, forest cover and wildfire databases and data processing,

3. *Degrowth and workers movements in Sumatra, Indonesia*: Using a unique dataset about social movement organizing and livelihoods in a Sumatran community, the thesis writer would use statistical methods to understand how Indonesian smallholder farmers and peasant activists have created a degrowth economy in a region of Sumatra dominated by industrial agribusiness, mostly oil palm and timber plantations.

Key skills to develop include social science methods of survey analysis, sociology and environmental studies statistics.

Interested students can write to me at: david.gilbert@uab.cat

Sincerely,
David Gilbert, PhD, ICTA-UAB
www.davidgilbert.com
david.gilbert@uab.cat

Suggested Title: *Tarragona as a Sacrifice Zone: Environmental Justice Conflicts in Southern Catalonia through a Political Ecology Lens*

Supervisor: Clara Esteve Jordà (ICTA-UAB) <clara.esteve@uab.cat>

Master's Program Specialisation: Ecological Economics

Abstract: This master thesis will consist of an exploration of environmental justice conflicts in southern Catalonia, in the province of Tarragona. The student can provide an overview of the several key conflicts in this so-called 'sacrifice zone' or focus on a specific case, which may be considered for inclusion in the Environmental Justice Atlas (EJAtlas). Using the lens of political ecology, the research will examine how power relations, economic interests and legal frameworks shape conflicts arising from industrial, tourism and/or energy projects.

Objectives:

- To analyse the socio-environmental impacts of these projects through a political ecology perspective, highlighting how different actors (state, corporations, and local communities) negotiate or contest environmental risks and benefits.
- To investigate the role of law and policy in mediating these conflicts, with a focus on how existing frameworks either reinforce or challenge power imbalances.
- If focusing on a specific case, to produce an EJAtlas entry that critically assesses the political, economic, and legal dimensions of the conflict.

Methodology: The thesis offers two approaches, both grounded in political ecology:

1. Overview Approach: The student will analyse multiple environmental justice conflicts in Tarragona, using the political ecology prism to uncover the power dynamics behind these conflicts. This will involve a comparative analysis of the selected cases, identifying commonalities and divergences in the ways local communities resist or adapt to industrial and energy projects. It will also examine the province of Tarragona as a 'sacrifice zone'.
2. Focused Case Study Approach: Alternatively, the student can focus on the in-depth study of one conflict. Some of the emergent conflicts in Tarragona are: the Hard Rock macro-complex, wind energy massification in rural areas, Very High Voltage lines, petrochemical impacts, the Hydrogen Valley, the Ebro Delta regression, or threats from nuclear power plants. The student will apply a political ecology approach to explore the relationships between economic development, environmental degradation, and community resistance.

In both approaches, the methodology may include:

- **Political Ecology Analysis:** An exploration of how power, governance, and economic interests shape environmental justice struggles, with a particular focus on the role of the state, corporations, and civil society.
- **Case Studies:** In-depth study of one or more conflicts through academical and grey literature research (legal documents, environmental reports, and media coverage), to examine the environmental, social, and political dimensions of the conflict.
- **Stakeholder Engagement (optional):** Qualitative interviews with key actors, including local communities, activists, policymakers, and industry representatives, to understand the competing claims to resources and justice.

Expected Results:

The research will offer critical insights into how the legal and political system can better address environmental justice issues by acknowledging and addressing the underlying power imbalances that drive conflicts over resources and environmental protection. The research will be considered as a case entry for the EJAtlas and/or a journal article.

Analyzing Urban Green Injustices in Barcelona through GIS-Based Analysis of Access to Public Green Space and Green Infrastructure

Supervisors: Amalia Calderón Argelich & Isabelle Anguelovski (ICTA-UAB), Francesc Baró (VUB Brussels). **Specialization:** Ecological Economics or Global Change

Contacts: Amalia.Calderon@uab.cat and Isabelle.Anguelovski@uab.cat

1. Background and Rationale

In recent years, urban planners and policymakers have increasingly focused on the role of green infrastructure in enhancing environmental sustainability and improving public health. Public green spaces, such as parks, gardens, and recreational areas, offer numerous benefits, including mitigating urban heat, reducing air pollution, and promoting physical and mental well-being. However, access to these green spaces is often unevenly distributed, resulting in urban green injustices. Low-income and marginalized communities frequently have limited access to green infrastructure, exacerbating socio-environmental and climate inequalities.

Barcelona, known for its ambitious green infrastructure projects like the “Superblocks” and the “Nature Plan,” offers a valuable context for studying the spatial dimensions of urban green injustice. Despite the city’s progressive urban planning, disparities in access to green spaces may persist, especially in neighborhoods with higher concentrations of vulnerable populations. This research will utilize Geographic Information Systems (GIS) to investigate how access to public green spaces and green infrastructure is distributed across different socio-economic and demographic groups in Barcelona, shedding light on potential inequalities in urban green space availability and examining whether found patterns of injustice in North American and European cities are also present in a more dense and compact city which has a vibrant yet contaminated urban core.

2. Research Objectives

The study aims to:

- Map and quantify the distribution of public green spaces and green infrastructure across different districts of Barcelona, considering also their cooling potential
- Identify socio-economic and demographic characteristics of neighborhoods with limited access to public green spaces.
- Examine the relationship between green space distribution and urban inequality, especially climate inequalities, focusing on vulnerable groups such as low-income residents and racial minorities.

3. Research Questions

- How are public green spaces distributed spatially across the city of Barcelona? And where are those with greatest cooling potential?
- What socio-economic and demographic factors (e.g., income, population density, ethnicity) are associated with neighborhoods that have limited access to green spaces?
- To what extent do residents in disadvantaged neighborhoods experience reduced access to green infrastructure?

4. Methodology: This thesis will use GIS as the primary tool for spatial analysis.

1. Data Collection:

Data on public green spaces will be sourced from municipal records, open-source urban maps, and satellite imagery. Socio-economic and demographic data (e.g., population density, income levels, ethnicity, age distribution) will be obtained from census data and Barcelona’s open data portals. Cooling data will be obtained from other climate resources.

2. Spatial Mapping:

Using GIS software, the student will create a detailed map of Barcelona’s public green spaces and overlay this with cooling potential, socio-economic and demographic data. This will allow for the visualization of green space distribution in relation to key indicators of social vulnerability.

3. Proximity and Access Analysis:

The student will use spatial analysis tools in GIS to calculate proximity to public green spaces from different neighborhoods. This will include measuring the distance to the nearest green space, availability of public transport links to green areas, and the quality (size & amenities) of these spaces.

4. Socio-Spatial Correlation Analysis:

Statistical analysis will be conducted to identify correlations between the distribution of green spaces and socio-economic factors such as income, ethnicity, and housing tenure. This will help reveal

whether vulnerable communities are disproportionately affected by reduced access to urban green infrastructure.

Title: *Civic Perceptions and Mobilization for Greater Housing Equality in Catalonia's Green Transition*

Supervisors: Brian Rosa and Austin Matheney, BCNUEJ-ICTA

Specialization: Ecological Economics

Contact: brian.rosa@uab.cat

Objective

The central objective of this thesis is to explore how civic initiatives perceive and engage with housing inequalities exacerbated or alleviated by green transition initiatives (defined here as nature based solutions, residential retrofit, and residential densification). The research will focus on how neighborhood groups, nonprofits, cooperatives, and community development organizations across different urban and rural contexts in Catalonia evaluate the impact of green policies on housing, and how they mobilize for equitable housing outcomes. This study will focus upon civic responses to housing inequalities in the face of green transition policies driven by EU, Spanish, Catalan, and local authorities.

Key research questions include:

1. How do civic organizations perceive the impact of green transition policies on housing inequality?
2. What role do these groups play in promoting socially just green initiatives?
3. How are these initiatives supported through policy, planning, and financial mechanisms?

Methodology

The research will adopt a qualitative methodology based on semi-structured interviews conducted with key informants in Barcelona, Tarragona, and/or Olot, with a focus on the perceived impacts of green initiatives including nature-based solutions, energy efficiency improvements, and sustainable land use.

- **Data Collection:** Interviews (with a supervisor) will be conducted in Barcelona, Tarragona, and/or Olot, targeting key stakeholders from civic groups, urban planners, and public agencies involved in housing and green transition.
- **Interview Topics:** Interview questions will focus on perceptions of recent green transition policies, the civic organizations' role in housing activism, their use of policy and financial support, and the political opportunities and constraints they face.
- **Analysis:** Interviews will be transcribed and thematically analyzed to identify common trends and unique perspectives. Comparative analysis will help understand urban-rural differences in perceptions of housing inequalities linked to green initiatives in Catalonia.

Expected Results

Key anticipated findings include:

1. **Perceived Impacts:** Different perceptions of green transitions, such as energy retrofitting or sustainable development, either as opportunities for reducing inequalities or as risks that exacerbate housing affordability issues (e.g., green gentrification).
2. **Civic Mobilization:** The ways in which civic organizations mobilize to advocate for inclusive green transitions, with a focus on policy and planning innovations.
3. **Policy Recommendations:** Insights into how supportive frameworks at local, national, and EU levels can be enhanced to empower civic organizations in promoting housing equality in the green transition.

For this project, proficiency in Catalan and Spanish languages would be especially useful.

Title: *Changing Environmental & Energy Policies in Spain and their Implications for Housing Inequalities in Catalonia*

Supervisors: Brian Rosa and Austin Matheney, , BCNUEJ-ICTA

Specialization: Ecological Economics or Urban and Industrial Ecology

Contact: brian.rosa@uab.cat

The primary objective of this thesis is to analyze the national regulatory system of environmental and energy policies (EEPs) in Spain and assess their impact on housing inequalities, with a focus on implications for Catalonia. This study will focus on understanding the strengths, weaknesses, and emergent challenges within Spain's policy framework, particularly in light of the EU Green Deal and ongoing green transition initiatives (predominantly nature based solutions, residential retrofitting for improved energy efficiency, and densification through sustainable land use) implemented by the Generalitat, regional, and local policies. It aims to identify how environmental policies interact with housing markets, examining the economic, social, and institutional factors that shape policy outcomes related to energy efficiency, sustainable land use, and affordable housing.

Key research questions include:

1. How do EU and Spanish environmental and energy policies address housing inequalities, especially in relation to green transition goals, in Catalonia?
2. What economic mechanisms and institutional factors affect the implementation and outcomes of these policies?
3. How have specific EEP policies influenced housing inequality in urban and rural areas of Catalonia?

Methodology

This research will employ a mixed-methods policy analysis approach, integrating both qualitative and quantitative data. The methodology will include:

- **Data Collection:**
 - **Interviews:** Semi-structured interviews ((with a supervisor) with key policy actors, including policymakers, public agency representatives, and NGOs involved in environmental governance.
 - **Case Study Analysis:** Examination of case studies in Barcelona, Tarragona, and Olot, focusing on nature-based solutions, energy retrofitting, and land use policies.
- **Analysis:**
 - Thematic analysis will be conducted on the interview data, and case studies will be analyzed to explore the policy goals, instruments, and strategies implemented at the national and regional levels.

Expected Results

Key anticipated findings include:

:

1. **Regulatory Strengths and Weaknesses:** Identification of the economic mechanisms, institutional arrangements, and regulatory frameworks that promote or hinder equitable housing in the context of green transition policies.
2. **Impact on Housing Inequality:** Insights into the relationship between green transition policies, such as energy retrofitting and densification, and housing inequality, with a particular focus on vulnerable populations.
3. **Policy Recommendations:** Based on the findings, the study will propose policy recommendations to improve housing equality within green transition initiatives.

For this project, proficiency in Catalan and Spanish languages would be especially useful.

Title: *Understanding the Just Transition through Catalonia's Housing System: a Multi-Level Governance Perspective*

Supervisors: Brian Rosa and Austin Matheney, BCNUEJ-ICTA

Specialization: Ecological Economics

Contact: brian.rosa@uab.cat

The goal of this thesis is to explore the evolution of Catalonia's housing system within the framework of multi-level governance, focusing on the role of EU, Spanish, Catalan, and local authorities in addressing housing inequalities. Special attention will be given to how welfare regimes, tenure policies, and the role of public and non-profit actors have been shaped by EU Green Deal initiatives and Next Generation funds. This research will provide a perspective on housing systems and their ability to mitigate or exacerbate inequalities under green transition policies.

Key research questions include:

1. How have macroeconomic and institutional changes influenced the housing system in Catalonia?
2. What roles do different levels of governance play in shaping housing policies, particularly regarding tenure, public land supply, and urban regeneration?
3. How has Spain's housing system responded to EU Green Deal policies in terms of supporting vulnerable groups?

Methodology

This research will use a qualitative approach based on interviews and document review. The methodology includes:

- **Semi-Structured Interviews:** Interviews (with a supervisor) will be conducted with key policy actors at the Spanish, Catalan, and local levels (Barcelona, Tarragona, and Olot), including representatives from public housing agencies, urban planners, and non-profit organizations involved in housing provision. The interviews will focus on policy goals and the challenges of responding to housing inequalities in relation to green initiatives.
- **Process Tracing:** The method of process tracing will be used to follow the changes in housing governance over time. This will help identify path-dependencies, shifts in policy goals, and the roles of different actors across governance levels.

Expected Results

Key anticipated findings include::

1. **Shifts in Governance and Policy:** An analysis of how Catalan housing policy has evolved through the framework of the just transition, and how governments at various scales manage housing inequalities.
2. **Role of the State and Non-Profit Sector:** Insights into the changing roles of state actors and non-profit organizations in providing or protecting affordable housing in the face of the imperative to make housing more energy efficient.
3. **Policy Recommendations:** Recommendations for improving multi-level governance in the housing system, particularly in aligning green transition policies with housing equality goals.

For this project, proficiency in Catalan and Spanish languages would be especially useful.

Assessing the climate impact of a wealth tax

Supervisors: James Morrison and Dr Lewis King

Specialisation: Ecological Economics

In the last 15 years, there has been a sharp increase in concern among policymakers about wealth inequality and climate change. Based on the principle of capacity to pay, there have been increasing calls for a wealth tax to fund the huge investment needed to decarbonise. In principle, this would have the dual benefit of reducing inequality and tackling climate change.

The aim of this thesis will be to comprehensively test the climate impact of a wealth tax. It will estimate the impact of a wealth tax in a high-income country. The student can choose any high-income country with good recent data on the wealth distribution (especially at the highest levels). The thesis will use three complementary methods. First, it will estimate the effect on wealth distribution of a wealth tax at different levels of stringency. Secondly, it will estimate the revenues of such taxes and compare them to existing estimates for required investment for decarbonisation. Thirdly, it will estimate the reduction in inequality-related emissions due to the change in wealth distribution.

Projected work plan

We will conduct the thesis in four stages: three research stages followed by a write-up.

Stage 1: Background research

Tasks: 1. Literature scan of papers linking the wealth tax and environmental aims and of wealth tax plans (the majority of this literature will be provided by supervisors, though the student will need to supplement this through their own searches). 2. Select rates of taxes and thresholds to model based on this scan.

Stage 2: Data analysis

Tasks: 1. Model effect of tax for determined time period (e.g. 10 years). 2. Estimate effect on wealth distribution. 3. Estimate revenue gained and compare to decarbonisation cost estimates. Estimate effect on carbon emissions (applying elasticities from provided literature). 4. Estimate revenue gained and compare to decarbonisation cost estimates.

Stage 3: Policy assessment

Tasks: 1. Assessment of wealth tax on based on estimates climate and social effects. 2. Assessment of whether wealth tax is a effective and appropriate climate policy.

Stage 4: Write-up

Tasks: 1. Write up research into TFM. 2. Edit TPM into paper for submission to peer-reviewed journal.

Person specification

- Interest in intersection of inequality and climate change
- Experience of quantitative analysis
- Experience of data analysis using R (desirable, not essential)

Any interested students with questions about the project can contact James Morrison at james.morrison@uab.cat. We can also share papers relevant to the TPM with students.

Urban climate shelters for just adaptation: a systematic review of the literature

Supervisors: Dr. Amalia Calderón Argelich (ICTA-UAB), Dr. Ana Terra Amorim-Maia (BC3), Dr. Francesc Baró (VUB). **Specialization:** Ecological Economics or Global Change

Contacts: Amalia.Calderon@uab.cat ; ana.amorim@bc3research.org; francesc.baro@vub.be

1. Background and Rationale

Climate change is increasingly contributing to the frequency and intensity of extreme weather events, such as heatwaves, cold spells, and severe storms. Urban areas, with their dense populations and infrastructure, are particularly vulnerable to these hazards. Urban climate shelters—designated spaces that provide protection and relief during extreme weather—are emerging as a critical infrastructure of urban resilience and adaptation strategies. Climate shelters can encompass open spaces of heat refuge, such as parks and other urban green and blue spaces, as well as (public) indoor spaces like libraries or civic centers that provide protection from both heat and cold or other extreme weather events. Combined open and indoor spaces such as school facilities with nature-based grounds are also designated as climate shelters in some cities. The academic research on urban climate shelters spans multiple disciplines, including urban planning, architecture, environmental science, public health, and social equity, but it is still in its infancy. This master thesis aims to explore and review the mounting research in this area by addressing one or more of the following research questions:

2. Research Questions

RQ1: How can urban climate shelters be classified in a typology? What are the main social-ecological-technical system components of urban climate shelters? Where (which cities/countries) and how have they mostly been implemented?

RQ2: How have distribution and accessibility concerns been considered in urban climate shelters?

RQ3: To what extent do urban climate shelters address or exacerbate social and spatial inequalities in climate vulnerability/adaptation?

RQ4: What are the main strengths and limitations of urban climate shelters? What improvements can be made to the design and governance of urban climate shelters to better address the needs of socially vulnerable groups?

3. Methodology:

To identify and analyze the scientific literature relevant to our research questions, a **quantitative systematic review** will be carried out, mostly following the widely used protocols of the PRISMA Statement for systematic reviews. Keywords for the search string will include, among others: “climate shelter”, “cooling centers”, “urban refuge”, “clean air centers”, “cool air centers”, etc. The review can also be preceded or substituted by a scoping study on the topic.

4. Relevant references:

- Amorim-Maia, A.T., Anguelovski, I., Connolly, J., Chu, E., 2023. Seeking refuge? The potential of urban climate shelters to address intersecting vulnerabilities. *Landscape and Urban Planning* 238, 104836. <https://doi.org/10.1016/j.landurbplan.2023.104836>
- Fraser, A. M., Chester, M. V., Eisenman, D., Hondula, D. M., Pincetl, S. S., English, P., & Bondank, E. (2017). Household accessibility to heat refuges: Residential air conditioning, public cooled space, and walkability. *Environment and Planning B: Urban Analytics and City Science*, 44(6), 1036–1055. <https://doi.org/10.1177/0265813516657342>
- Munn, Z., Peters, M. D. J., Stern, C., Tufanaru, C., McArthur, A., & Aromataris, E. (2018). Systematic review or scoping review? Guidance for authors when choosing between a systematic or scoping review approach. *BMC Medical Research Methodology*, 18(1), 1–7. <https://doi.org/10.1186/s12874-018-0611-x>
- Vasconcelos, L., Langemeyer, J., Cole, H.V.S., Baró, F., 2024. Nature-based climate shelters? Exploring urban green spaces as cooling solutions for older adults in a warming city. *Urban Forestry & Urban Greening* 98, 128408. <https://doi.org/10.1016/j.ufug.2024.128408>

Towards Rural Degrowth: Identifying Levers to Render the Common Agricultural Policy (CAP) Future-Friendly

julia.grosinger@uab.cat

This thesis seeks to explore how the European Union's Common Agricultural Policy (CAP) can be restructured to align with degrowth-oriented approaches. The CAP is the EU's primary policy tool for agriculture, rural development, and environmental measures. Its application varies across member states (MS) and regions and consists of two pillars: Pillar 1 provides direct payments to farmers and market support, while Pillar 2 focuses on rural development. This study aims to identify the potential of the CAP to facilitate degrowth transitions in rural areas.

Ideally, the study will:

- Provide an overview of the CAP and its relationship to economic growth, including historical background (discourse analysis).
- Identify key action areas within the 1st and 2nd pillars of the CAP (desktop analysis and possible interviews with experts and practitioners).
- **A.** Assess, based on a case study (at either the national or local level, within either the 1st or 2nd pillar, depending on the student's background and expertise), the extent to which the CAP's growth-oriented framework impacts local practices. **B.** Alternatively, the student may investigate existing CAP-funded agroecological practices and degrowth-friendly initiatives within member states.
- Compile policy-relevant conclusions regarding the integration of degrowth within the CAP, including a discussion on degrowth and its potential impacts at the local scale (e.g., involving scientists, activists, and local stakeholders).

Research Questions:

What is the historical relationship between the CAP and economic growth concepts?

What key areas of the CAP could realistically shift toward a degrowth-oriented approach that prioritizes ecological limits, biodiversity, and social equity?

To what extent does the CAP's growth approach influence local practices?

What policy instruments and funding mechanisms could support a degrowth transition within the CAP framework?

The final outline will be collaboratively decided with the student based on expertise, interests, and background. Ideally, the student should have some knowledge of qualitative research methods and an understanding of EU policies.

Energy metabolism of Girona

Proposal for master thesis for the Master in Interdisciplinary Studies in Environmental, Social and Economic Sustainability – ICTA-UAB

Ecological Economics.

European countries have dependency of imports of fossil fuels due to the lack of local resource. Moreover, some regions even have dependency on electricity production given their characteristics or political reasons. For example, cities are typically dense, centralize specific service functions such as high education and management of international companies and financial flows, and do not include primary sector activities (L. Pérez-Sánchez et al., 2019). While the fossil paradigm offshored impacts to the specific regions where resource was found and extracted, the energy transition and the low density of renewable technology exacerbates these regional inequalities and increases social conflict in regions with high penetration of renewables. This type of regions in Global North countries generate unequal exchange dynamics both at the international (Dorninger et al., 2021; Hickel et al., 2022; L. Pérez-Sánchez et al., 2021) and national level (Gaviria et al., 1978; Naredo, 2017; Piñero et al., 2020).

The objective of this master thesis is to quantify and analyse the societal metabolism of one province that has large energy dependency. Girona has wind energy potential but compared to other regions in Catalunya, it has developed and planned fewer wind parks (L. À. Pérez-Sánchez, 2024). This energy societal metabolism will include analysis of the energy system (production, imports), and the whole economic structure (use of time, land and consumption of energy carriers). This will help understand the functions played by the region, its energy dependency, initial conditions for the energy transition and national and international ecologically unequal exchange.

Skills:

- Excel
- Catalan
- GIS would be an asset

Tasks:

- 1) Collection of data from statistic sources from Catalan statistical offices and literature.
- 2) Quantification and visualization of metabolic characteristics of the region.
- 3) Write a peer-review paper for submission in a peer-review journal.

Please contact Dr. Laura Pérez Sánchez (laura.perez.sanchez[at]uab.cat)

References:

- Dorninger, C., Hornborg, A., Abson, D. J., von Wehrden, H., Schaffartzik, A., Giljum, S., Engler, J. O., Feller, R. L., Hubacek, K., & Wieland, H. (2021). Global patterns of ecologically unequal exchange: Implications for sustainability in the 21st century. *Ecological Economics*, 179(January 2020), 106824. <https://doi.org/10.1016/j.ecolecon.2020.106824>
- Gaviria, M., Naredo, J. M., & Serna, J. (Eds.). (1978). *Extremadura saqueada. Recursos naturales y autonomía regional*. Ruedo Ibérico.
- Hickel, J., Dorninger, C., Wieland, H., & Suwandi, I. (2022). Imperialist appropriation in the world economy: Drain from the global South through unequal exchange, 1990–2015. *Global Environmental Change*, 73, 102467. <https://doi.org/10.1016/j.gloenvcha.2022.102467>
- Naredo, J. (2017). Extremadura Saqueada en perspectiva. *Encrucijadas. Revista Crítica de Ciencias Sociales*, 14(0), tc1401.
- Pérez-Sánchez, L. À. (2024). La transició energètica: impactes, beneficis i perspectives a diferents escales territorials. *Revista de Tecnologia*, 12, 40–55. <https://doi.org/10.2436/20.2004.01.52>
- Pérez-Sánchez, L., Giampietro, M., Velasco-Fernández, R., & Ripa, M. (2019). Characterizing the metabolic pattern of urban systems using MuSIASEM: The case of Barcelona. *Energy Policy*, 124. <https://doi.org/10.1016/j.enpol.2018.09.028>
- Pérez-Sánchez, L., Velasco-Fernández, R., & Giampietro, M. (2021). The international division of labor and embodied working time in trade for the US, the EU and China. *Ecological Economics*, 180. <https://doi.org/10.1016/j.ecolecon.2020.106909>
- Piñero, P., Pérez-Neira, D., Infante-Amate, J., Chas-Amil, M. L., & Doldán-García, X. R. (2020). Unequal raw material exchange between and within countries: Galicia (NW Spain) as a core-periphery economy. *Ecological Economics*, 172(March), 106621. <https://doi.org/10.1016/j.ecolecon.2020.106621>

Societal metabolism of Costa Rica

Proposal for master thesis for the Master in Interdisciplinary Studies in Environmental, Social and Economic Sustainability – ICTA-UAB

Ecological economics – Industrial ecology

Costa Rica is considered one of the countries closer to social and environmental sustainability (Hickel, 2020). This project aims to provide a multidimensional quantitative assessment of the metabolism of this country, accounting for working hours, salaries, and GHG emissions. This will be done with production and consumption-based accounting perspectives through the use of environmentally extended input-output tables. This way, the student will explore the national economy, and the international dependencies generated in a globalization context.

The final aim is to publish a paper in a high-impact journal.

Requirements:

- Quantitative analysis (python)
- Use of environmentally extended input-output tables (desirable)

Please contact Dr. Laura Pérez Sánchez
(laura.perez.sanchez[at]uab.cat)

References:

Hickel, J. (2020). The sustainable development index: Measuring the ecological efficiency of human development in the anthropocene. *Ecological Economics*, 167(March 2019), 106331. <https://doi.org/10.1016/j.ecolecon.2019.05.011>

TFM proposal

Vulnerability of Majority World migrants to the impacts of extreme heat and heatwaves in European cities: a scoping literature review and consultation with stakeholders in a participatory event in Barcelona.

Supervisors: Panagiota Kotsila (BCNUEJ, ICTA-UAB), Ana Terra Amorim-Maia (BC3 Basque Centre for Climate Change), Sergio Ruiz Cayuela (BCNUEJ, ICTA-UAB)

Contact: panagiota.kotsila@uab.cat ; ana.amorim@bc3research.org;
sergio.ruiz.cayuela@uab.cat.

Description:

This thesis is part of the 5-year ERC-Consolidator Grant project “**IMBRACE**: Embracing Immigrant Knowledges for Just Climate Health Adaptation”, and in collaboration with the 5-year ERC-Starting Grant Project “**IMAGINE** Adaptation: Imagine Climate Change Adaptation in Urban Areas”.

Climate change, human health and immigration are arguably the most prominent, enduring, and challenging issues of our times, with important implications for justice. Studies on the nexus of these issues have largely focused on climate change as posing challenges to health and thus acting as a push-factor for migration. However, the understanding of how climate is impacting the health of immigrants in places of migration destination is still poor. Further limiting the understanding of potential climate and health injustices, immigrant communities in Europe are far from homogenous, and are often racialized groups of great ethnic diversity. In IMBRACE, we examine what shapes immigrants’ climate health vulnerability and how their situated knowledges and practices can inform both their own response capacities and urban climate adaptation more broadly, towards more effective and just approaches. We focus on two types of climate impacts, chosen as most relevant for urban areas in Europe and with important implications for health: (a) increased and prolonged heat, and (b) intense rainfall and flooding.

The IMAGINE Adaptation project aims to evaluate adaptation in urban areas, considering its complexity and implications across governance levels. We believe that the current focus on policy progress can be useful as a first step, but is it not indicative of effective adaptation. A broader understanding of vulnerability and resilience is needed to inform effective adaptation: one that goes beyond technocratic approaches and considers equity, justice, and maladaptive issues. In response, we aim to bring overlooked knowledges to the fore, including those of immigrant communities whose lived experiences and adaptive knowledges are often marginalized.

The primary objective of this thesis will be to assist in a **scoping review of the literature** on the drivers and indicators of vulnerability to **heat**, specifically for migrant populations from Majority World countries, residing in European urban areas. The

project follows a feminist political ecology approach to climate vulnerability, meaning it considers both tangible and intangible aspects, socio-environmental factors, political and cultural context, and values knowledge co-production in conversation with communities the health and well-being of which is under question. In detail, tasks here will include assisting in the following:

- Identifying scholarly work and gray literature through targeted keyword search
- Reviewing resulting articles abstracts
- Reading through whole articles and keeping notes
- Synthesizing results in the form of a report.

The secondary objective of this thesis will be to assist in the organization and implementation of a knowledge co-production process, where the results of the desk-based scoping review will be presented and discussed with stakeholders during a two-day 'Arena' event in Barcelona, in June 2025. The event will have around 30 participants across the EU from community-based organizations, activist, and research collectives and think tanks, working on issues of: immigrant inclusion and rights, climate and health justice, critical urban planning, and climate adaptation. Detailed tasks here will include assisting in the following:

- Identification of stakeholders through online search and compilation of contact list
- Conceptualizing the Arena event and creating a protocol for its implementation
- Organizing and facilitating the Arena event.
- Collecting data during the event (visual, observations, note-taking from session, recordings etc.)
- Synthesizing outcomes from the Arena event.

A guiding protocol will be designed for how to conduct a scoping literature review on this topic and will be provided to the student prior to the start of the thesis work. The student will be working in collaboration with the supervisors and other researchers within the IMBRACE project, and the broader team at BCNUEJ.

Having prior studies in the social sciences will be highly appreciated for undertaking this master thesis project, as well as knowledge of Spanish and/or Catalan to assist in the organization of the Arena event. Excellent knowledge of English is a requirement.

Proposals for UAB SAES master's dissertations (deadline 31 October 2024)

Provisional title of the master's thesis project proposal (TFM): Rural immigration and sustainability in Europe: challenges and opportunities at social, economic and environmental level

Name of the supervisor: Ricard Morén-Alegret

Email address: Ricard.Moren@uab.cat ; Office: B9-1068, UAB Department of Geography;

Telephone number: (+34) 935814809

Specialization of the master's program to which the TFM would belong: Ecological Economy

A detailed description (maximum one page) of the objectives, methodology, and expected results of the thesis:

The main objective of the master's thesis project proposal that could be supervised by Dr Ricard Morén should be in line with research activities of the program in human migration studies that is linked to the UAB research group in Ecological Economy (see:

<https://webs.uab.cat/migracions/>). Concretely, a master's thesis project on questions related to international immigration and sustainability challenges or opportunities in a European region is suggested. However, the specific topic, study place, period, etc. could be adapted to the skills or interests of the student. There is room for talking about it and negotiating it.

The research methodology and methods of the thesis project can include bibliographic and documental work, statistical work and/or fieldwork that can incorporate semi-structured interviews with qualitative data analysis.

The expected main result of the master's thesis is a research paper on international immigration and sustainability challenges or opportunities in a European region that later could be submitted to an academic journal.

Some recent open-access publications related to this topic that can be useful as background reading are the following:

* Morén-Alegret, R.; Milazzo, J.; McAreavey, R. & Keaveney, K. (2023) "[Perceptions of sustainability in Ireland's small villages during immigration times: Exploring discernments of social, economic, and environmental challenges in rural Cavan and Leitrim](#)", *Irish Geography journal*, 56(2), 91-122.

* Morén-Alegret, R.; Milazzo, J.; Romagosa, F. & Kallis, G. (2021) "[Cosmovillagers' as Sustainable Rural Development Actors in Mountain Hamlets? International Immigrant Entrepreneurs' Perceptions of Sustainability in the Lleida Pyrenees \(Catalonia, Spain\)](#)", *European Countryside journal*, 13(2), 267-296.

* Morén-Alegret, R. & Mendoza, C. (2021) "[Inmigración internacional y sostenibilidad en pueblos pequeños. Retos y oportunidades económicas, ambientales y sociales en el Alt Empordà \(Cataluña, España\)](#)", *Revista Internacional de Estudios Migratorios*, 11(2), pp. 1-35.

* Romagosa, F., Mendoza, C.; Mojica, L. & Morén-Alegret, R. (2020) "[Inmigración internacional y turismo en espacios rurales. El caso de los "micropueblos" de Cataluña](#)". *Cuadernos de Turismo*, 46, 319-347.

* Mendoza, C.; Morén-Alegret, R. & McAreavey, R. (2020) "[\(Lifestyle\) immigrant entrepreneurs in Spanish small villages: Rethinking international immigration in rural Alt Empordà, Catalonia](#)", *BELGEO. Belgian Journal of Geography*, 1.

Call for master's thesis on Rural Development and Transformative Change in Spain

We are looking for a student to carry out their master's thesis on rural development and transformative change in a Spanish context. The student will work within the *SUSTAIN* project (*Leading Sustainability Transitions in Rural Spain*, financed by the Ministry of Science and Innovation) and the [Rural Collectives Lab](#), hosted at [ICTA-UAB](#).

Research context

Spain is confronted with a sustainability transition paradox. On the one hand, many rural regions are highly vulnerable to interacting socio-demographic and environmental problems. On the other hand, such vulnerability makes of those regions a unique experimentation niche for alternative forms of –or alternatives to– sustainable development. These alternative experiences could potentially reduce the vulnerability of rural regions, empower the elderly, immigrant, and women populations, and show the path for others to follow. In this context, the research project *SUSTAIN* aims to better understand the conditions under which those experiences are more likely to emerge and thrive, as featured by local communities.

Master's thesis proposal

The master's thesis will be embedded within the project *SUSTAIN* and build on the research carried out so far on the transformative potential of rural social innovations across rural Spain. More specifically, the aim of this master's project is to conduct a **comparative case study of the transformative potential of rural development projects across rural Spain**. The projects will be evaluated based on a series of transformative features –previously identified through a [co-creation workshop](#)– and grouped by the characteristics of the counties in which these are developed and those of the [Local Action Groups](#) (i.e., representatives of public and private local interests) that promote them.

Main requirements and skills

- Student enrolled in the Master Programme in *Interdisciplinary Studies in Environmental, Economic and Social Sustainability* (ICTA-UAB).
- Motivation to conduct research on social-ecological transformations in rural territories.
- Eagerness to use qualitative and quantitative data analysis techniques, and (potentially) carry out fieldwork.
- Ability to work as part of a team *and* individually.
- Excellent written and oral communication skills in English *and* Spanish.

Desirable skills

- Knowledge of EU and Spanish rural development policy.
- Knowledge of the literature on sustainability transitions, transformative change research, and/or social innovation.
- Experience in qualitative and/or quantitative research methods.
- Experience in empirical research and fieldwork.

Practical details

- Starting date: December 2024 (or soon thereafter, but no later than January)
- Preferable defence date: June 2025
- Should the selected student conduct fieldwork, the expenses will be covered by the project.

Application

If you are interested in this call, please send an email to paula.ugarte@uab.cat (Paula Ugarte-Lucas, ICTA-UAB) with your CV (max 2 pages) and a cover letter (max 500 words) explaining your motivation to carry out this project and how your profile fits the position's requirements.

Intentional communities and degrowth. The case of

Supervisor: Claudio Cattaneo Claudio.Cattaneo@uab.cat

Specialization: Ecological Economics and Global Change

Objective: Exploration of concrete cases within the broad field of intentional communities (it can be eco-communities, rural villages, urban or rural co-housing projects, and other communities where people come and live together). To a certain extent, the definition of community can be extended to examples where participants do not share a roof/housing project, but are related to caring communities (i.e. co-parenting, self-organized kindergarten/schools, consumers' cooperatives, etc.)

Methodology: Depending on the case(s) chosen, research can be desk-based, or through interviews to a community's participants, or even an ethnographic analysis via participant observation.

The expected results are further insights related to gaps in knowledge related to intentional communities from a degrowth perspective.

Master Dissertation Proposal

University Master's Degree in Interdisciplinary Studies in Environmental, Economic and Social Sustainability

Master Dissertation Title Proposal: Urbanization and environmental conflict in periurban areas: the case of La Miralda 'macroproject' in Alella

Supervisors:

- Sergio Ruiz (ICTA-UAB)
- Laila Vivas (BC3)

Specialization of the Master's Program: ecological economics

Language requirements: the student must speak either Spanish or Catalan

Summary:

This TFM proposal investigates the environmental justice conflict surrounding the planned urbanization of La Miralda, a largely undeveloped area with historical agricultural significance in Alella, El Maresme. This "macroproject" has provoked strong opposition from residents who fear the loss of this ecologically valuable landscape. Beyond the immediate site, La Miralda represents broader resistance against speculative urbanization trends in periurban areas, which play a crucial role in countering urban expansion and preserving social-ecological resilience on the urban-rural interface.

Key concepts:

- Territory
- Periurban areas
- *Macroproject*
- Environmental justice conflict
- Food sovereignty
- Identity

Objectives:

- Contextualize the ecological, agricultural, and cultural significance of periurban areas as critical interfaces between rural and urban zones, impacted by the pressures of urban expansion, biodiversity loss, and climate adaptation.
- Investigate urbanization and gentrification trends in El Maresme, focusing on how projects like La Miralda's transform land use, local economies, and community identity through reterritorialization processes.
- Analyze the La Miralda conflict through a political ecology lens, detailing the actors, timeline, dynamics of power, and territorial claims involved.
- Engage in participatory fieldwork with the local resistance movement *Salvem La Miralda*.
- Develop the analysis of territorial through creative methods: integrate insights into a comprehensive analysis focused on displacement, social-ecological resilience, and grassroots resistance as expressions of territoriality. Some possible methods are critical cartography, ethnographic accounts, interviews, and audiovisual storytelling to communicate the research findings.

Methodology:

The research will employ a mixed-methods approach, combining:

1. Literature Review to frame periurban dynamics, (re)territorialization processes, and environmental justice.
2. Case Study documentation through social media, policy analysis, other sources, and interviews.
3. Participatory Fieldwork with Salvem La Miralda to capture local perspectives.
4. Creative approaches, such as ethnographic mapping and audiovisuals, to document and communicate the socio-ecological significance of La Miralda.

Expected results:

The thesis is expected to provide a comprehensive analysis of the La Miralda conflict, illustrating how the proposed urbanization entails speculative and gentrifying dynamics within the context of ecosocial crises and rapid urban expansion. It will explore the tensions that arise in this area and their implications for territorial values and political decisions. Additionally, the research aims to contribute by presenting creative methodologies for engaging with these conflicts.

More information on La Miralda:

- <https://www.revistaalella.cat/etiqueta/miralda>
- <https://directa.cat/de-terra-agricola-a-parc-empresarial-pressio-urbanistica-a-la-miralda/>
- <https://www.instagram.com/salvemlamiralda/>
- https://www.instagram.com/saulo_miralda/

Call for master's thesis on "*Is modern irrigation greener? Mapping the expansion of irrigation modernization and its ability to cope with droughts in Spain*"

We are looking for a student to carry out their master's thesis on the expansion of technological solutions to cope with climate change in irrigated agriculture in Spain. The student will work within the *IrriGO* project (*Governing irrigation modernizations in the face of global change. Ecosocial transformations and effects on resilience*, financed by the Ministry of Science and Innovation) and the [Rural Collectives Lab](#), hosted at [ICTA-UAB](#).

Research context

Droughts and the increasing competition over freshwater resources are probably the most visible manifestation of the current ecological crisis worldwide. In response, governments and local irrigation associations across the globe have invested billions of euros in technology reform programs to increase irrigation efficiency. Irrigation consumes around 70% of all global freshwater after all. Technological reforms range from the construction of water-storage works to the introduction of pressurized irrigation technologies such as drip and sprinkler irrigation. The investments are supposed to provide private benefits to irrigators and are justified, in part, on the premise that increases in irrigation efficiency "save" water. Spain is one of the countries worldwide where the freshwater crisis is becoming more acute due to its dependence on irrigated agriculture. Modernization programs in Spain have indeed exploded in the last two decades. Today approximately 78.5% of irrigated land in the country uses pressurized irrigation. **Despite the widespread expansion of "modern" irrigation across the country, there is no comprehensive map of such modernization efforts, nor systematic evidence of whether modernized systems cope better with droughts than non-modernized systems.** Such a mapping exercise will not only be key to evaluate the governmental efforts to promote new technologies, but also to facilitate new research on their territorial impacts and contribution to climate change resilience.

Master's thesis proposal

This Master's thesis will assess, characterize and digitally map the expansion of irrigation modernization across the 8 main river basins of Spain and its ability to cope with droughts. This will include developing a preliminary inventory of irrigation systems (of a certain size) based on a collaboration with the Spanish Federation of Irrigation Associations (FENACORE), a remote sensing exercise based on the processing publicly available (i.e., LANDSAT) imagery and a basic characterization of the systems and corresponding irrigation associations based on already survey data that will be collected jointly with other colleagues from the project. The results of the project will be shared with FENACORE and the Spanish Ministry for Ecological Transition and Demographic Challenge (MITECO).

Main requirements and skills

- Student enrolled in the Master Programme in *Interdisciplinary Studies in Environmental, Economic and Social Sustainability* (ICTA-UAB).
- Motivation to conduct research on (irrigation) water management, technological innovations, agriculture and Spain.
- Knowledge of GIS and remote sensing data processing.
- Eagerness to use quantitative data analysis techniques.
- Ability to work as part of a team *and* individually.
- Excellent written and oral communication skills in English *and* Spanish.

Desirable skills

- Familiarity with the context of irrigated agriculture in Spain.
- Familiarity with spatial data analysis
- Experience with database management

Practical details

- Starting date: December 2024 (or soon thereafter, but no later than January)
- Preferable defence date: June 2025
- Should the selected student conduct fieldwork, the expenses will be covered by the project.

Application

If you are interested in this call, please send an email to luismaria.sanjuan@uab.cat (Luisa Maria Sanjuan, ICTA-UAB) with your CV (max 2 pages) and a cover letter (max 500 words) explaining your motivation to carry out this project and how your profile fits the position's requirements.

Call for master's thesis on Technological Frames and Irrigation Modernization in Spain

We are looking for a student to carry out their master's thesis on the implementation of technological solutions to cope with climate change in irrigated agriculture in Spain. The student will work within the *RECOUNT* project (*Unveiling the "efficiency paradox": a multi-methods study of technological fRamEs and mental aCOUNTting across Spanish water user associations*, financed by the Ministry of Science and Innovation) and the [Rural Collectives Lab](#), hosted at [ICTA-UAB](#).

Research context

Droughts and the increasing competition over freshwater resources are probably the most visible manifestation of the current ecological crisis worldwide. In response, governments and local irrigation associations across the globe have invested billions of euros in technology reform programs to increase irrigation efficiency. Irrigation consumes around 70% of all global freshwater after all. Technological reforms range from the construction of water-storage works to the introduction of pressurized irrigation technologies such as drip and sprinkler irrigation. The investments are supposed to provide private benefits to irrigators and are justified, in part, on the premise that increases in irrigation efficiency "save" water. **Yet scientific evidence has shown rather the opposite. Empirical evidence suggests that increases in water productivity do not always lead to water conservation due to the so-called rebound effect or efficiency paradox.** The irrigation rebound effect occurs when changes in water use offset the higher efficiencies gained with the infrastructure improvements and can manifest in various ways. With advancing research on the efficiency paradox, **it is becoming more and more evident that the rebound effect is not only explained by economic incentives and institutions, but also subject to a number of behavioral and cognitive factors, including the way water scarcity and technological solutions are framed.**

Master's thesis proposal

This Master's thesis will investigate the extent to which different narratives (e.g. imaginaries) around technology and its use explain different water use behaviors, individually and collectively. The study will consist of a comparative case study of irrigation association that have gone through different levels of modernization investments. The data will be collected via phone interviews and online focus groups with both representatives of the associations and key-informant farmers. The analysis will aim at identifying frame-to-water use pathways via mixed methods.

Main requirements and skills

- Student enrolled in the Master Programme in *Interdisciplinary Studies in Environmental, Economic and Social Sustainability* (ICTA-UAB).
- Motivation to conduct research on (irrigation) water management, collective action, technological innovations, agriculture and Spain.
- Eagerness to use qualitative and quantitative data analysis techniques, and (potentially) carry out fieldwork.
- Ability to work as part of a team *and* individually.
- Excellent written and oral communication skills in English *and* Spanish.

Desirable skills

- Familiarity with the context of irrigated agriculture.
- Knowledge of the literature on collective action, the commons, and/or local irrigation/water management.
- Experience with qualitative research methods.
- Experience with empirical research and fieldwork.

Practical details

- Starting date: December 2024 (or soon thereafter, but no later than January)
- Preferable defence date: June 2025
- Should the selected student conduct fieldwork, the expenses will be covered by the project.

Application

If you are interested in this call, please send an email to Patrick.hoffmann@uab.cat (Patrick Hoffmann, ICTA-UAB) with your CV (max 2 pages) and a cover letter (max 500 words) explaining your motivation to carry out this project and how your profile fits the position's requirements.

Cities Beyond Growth: Adapting Fiscal Ordinances and Municipal Budgets for Sustainable Urban Futures

Supervisors: Sarah Bretschko (ICTA-UAB) & Borja Nogué Algueró (Uni Gothenburg)

Contact: s.bretschko@gmail.com

Specialization: Ecological Economics & Urban Ecology

Context

Last April, the Girona City Hall signed a pioneering agreement with postgrowth researchers and sustainable urban development consultants to explore the possibilities and challenges of articulating and applying postgrowth policies and frameworks at a local scale. This agreement offers students the unique possibility to explore the workings of a municipal administration in depth, giving them access to a wealth of data sources and informants. Moreover, it provides an excellent opportunity to combine theoretical discussions on postgrowth with the analysis of the real-world case study of a major Catalan city. More information here in [spanish](#) and [catalan](#).

Objectives

- **Examine the Role of Fiscal Policy in Sustainable Urban Development**
Investigate how fiscal ordinances and municipal budgeting practices impact urban sustainability. Assess traditional growth-oriented policies and their limitations in achieving sustainable outcomes.
- **Identify and Analyze Postgrowth Fiscal Strategies**
Explore fiscal policies and budgeting strategies that align with a postgrowth model, prioritizing environmental health, social equity, and resilience over economic expansion.
- **Evaluate Case Studies of Cities Implementing Postgrowth-Oriented Budgeting**
Identify cities that have made adjustments to their fiscal policies or budget priorities to support sustainable development goals. Analyze their successes, challenges, and key takeaways.
- **Develop Recommendations for Municipal Fiscal Reform in Girona**
Propose actionable recommendations for Girona in its aim of transitioning toward fiscal ordinances and budget practices that support sustainable and resilient urban futures.

Methodology

- Literature review
- Grey literature analysis (Girona's fiscal ordinances and budgets)

- Interviews with public officials, technicians, and experts
- Categorization and systematization of ordinances and budgeting components

Expected results

Anticipate identifying specific fiscal policies and budget practices that can help municipalities shift from growth-centric to sustainability-focused models. Expected strategies may include redirecting funds to green infrastructure, enhancing social services, and supporting local, circular economies.

Develop a framework that outlines actionable steps for municipalities aiming to transition to postgrowth fiscal models. This framework could serve as a resource for policymakers looking to implement sustainability-oriented changes in fiscal policies and budgeting. The research should contribute new insights to the fields of sustainable urban planning and postgrowth theory, offering practical guidance and theoretical foundations for cities striving to build sustainable futures beyond traditional economic growth paradigms.

Developing the Green Shops Network of Girona: An Initiative to Combat Food Waste

Supervisors: Marula Tsagkari (ICTA-UAB) & Borja Nogué Alguero (Uni Gothenburg)

Contact: borja.nogue@mailbox.org

Specialization: Ecological Economics & Urban Ecology

Context

Last April, the Girona City Hall signed a pioneering agreement with postgrowth researchers and sustainable urban development consultants to explore the possibilities and challenges of articulating and applying postgrowth policies and frameworks at a local scale. This agreement offers students the unique possibility to explore the workings of a municipal administration in depth, giving them access to a wealth of data sources and informants. Moreover, it provides an excellent opportunity to combine theoretical discussions on postgrowth with the analysis of the real-world case study of a major Catalan city. More information here in [spanish](#) and [catalan](#).

Objectives

- To explore how the Green Shops Network initiative can function as a tool to combat food waste in Girona, addressing the main barriers and enablers for successful implementation.
- To analyze how this initiative aligns with the postgrowth framework and identify challenges and opportunities for applying such policies at a local level.
- To evaluate the potential ecological, economic, and social benefits of establishing a network that targets food waste.
- To develop recommendations for scaling and replicating the initiative in similar urban contexts, drawing insights on how lessons from Girona's experience can be applied to other cities.

Methodology

The research will be conducted through a mixed-methods approach, incorporating both qualitative and quantitative data:

- Document Analysis: Reviewing policy documents, reports, and agreements from Girona's City Hall.
- Case Studies: Examining similar initiatives in other European cities to draw comparative insights.
- Interviews: Conducting semi-structured interviews with policymakers, shop owners, local NGOs, and urban planners.

- Field Observations: Observing current waste management practices in participating shops.
- Data Analysis: Using ecological economic models to estimate potential impacts of the Green Shops Network.

Expected results

The thesis aims to produce actionable insights for Girona's municipal administration on effectively deploying postgrowth strategies through the Green Shops Network. This study expects to highlight best practices, potential pitfalls, and replicable strategies that can contribute to the reduction of food waste and support ecological resilience.

Moreover, this research will contribute to the academic discourse on postgrowth and urban ecology by offering a real-world case study of policy implementation. It will provide practical recommendations for policymakers and urban planners interested in integrating postgrowth principles into municipal governance. The findings could also inspire other mid-sized cities facing similar sustainability challenges and interested in postgrowth approaches to tackling them.

Local Action for Global Impact: Examining the Potential of Municipalities for a post-growth transition

Supervisors: Claudio Cattaneo & Sarah Bretschko (ICTA-UAB)

Contact: Claudio.Cattaneo@uab.cat

Specialization: Ecological Economics & Global Change

Context

Last April, the Girona City Hall signed a pioneering agreement with postgrowth researchers and sustainable urban development consultants to explore the possibilities and challenges of articulating and applying postgrowth policies and frameworks at a local scale. This agreement offers students the unique possibility to explore the workings of a municipal administration in depth, giving them access to a wealth of data sources and informants. Moreover, it provides an excellent opportunity to combine theoretical discussions on postgrowth with the analysis of the real-world case study of a major Catalan city. More information here in [spanish](#) and [catalan](#).

Objectives

- To assess the capacity and role of municipalities, such as Girona, in fostering postgrowth transitions through local policy.
- To identify the main challenges and opportunities municipalities face in implementing postgrowth policies.
- To analyze the ecological, economic, and social outcomes of these policies within a local context.
- To develop recommendations for municipalities seeking to integrate postgrowth principles, drawing insights from Girona's experience for potential replication in other cities.

Methodology

- **Literature Review:** A thorough exploration of current literature on postgrowth theory, ecological economics, and urban sustainability to establish a theoretical foundation.
- **Document Analysis:** Examination of policy documents, municipal reports, and relevant agreements from Girona's City Hall to understand existing strategies.

- **Comparative Case Studies:** Evaluation of postgrowth initiatives implemented in other European cities to draw comparative lessons and identify best practices.
- **Stakeholder Interviews:** Semi-structured interviews with key informants, including policymakers, local NGOs, urban planners, and community members, to capture a range of perspectives and qualitative insights.
- **Field Observations:** On-site visits to observe how postgrowth policies are being enacted and their tangible effects on the community.
- **Data Analysis:** Application of both qualitative and quantitative analysis techniques to assess the impacts and effectiveness of local postgrowth efforts.

Expected results

The thesis aims to produce actionable insights for municipal administrations on effectively transitioning to postgrowth strategies. It will highlight best practices, challenges, and replicable strategies that contribute to ecological resilience, economic sustainability, and social well-being. This research will enrich academic discourse by providing a comprehensive case study of municipal-level postgrowth policy application and offering practical recommendations for policymakers. The insights gained could inspire other mid-sized cities to pursue similar sustainable development paths.

Municipal Educational Resources for a Postgrowth Transformation: Redesigning Environmental Education for a Finite Planet

Supervisors: Marula Tsagkari (ICTA-UAB) & Borja Nogué Algueró (University of Gothenburg)

Contact: borja.nogue@mailbox.org

Specialization: Ecological Economics & Global Change

Context

Last April, the Girona City Hall signed a pioneering agreement with postgrowth researchers and sustainable urban development consultants to explore the possibilities and challenges of articulating and applying postgrowth policies and frameworks at a local scale. This agreement offers students the unique possibility to explore the workings of a municipal administration in depth, giving them access to a wealth of data sources and informants. Moreover, it provides an excellent opportunity to combine theoretical discussions on postgrowth with the analysis of the real-world case study of a major Catalan city. More information here in [spanish](#) and [catalan](#).

Objectives

- To evaluate the current state of environmental education in Girona and identify gaps in addressing postgrowth principles.
- To analyze the challenges and opportunities municipalities face when redesigning educational programs for sustainability.
- To explore the ecological, economic, and social impacts of postgrowth-oriented education.
- To propose a set of recommendations for integrating postgrowth values into municipal educational frameworks that can be adapted in other cities.

Methodology

- Literature Review: Conduct an extensive review of existing literature on postgrowth theory, pedagogical approaches in environmental education, and best practices for integrating sustainability into curricula.
- Curriculum Analysis: Examine current educational materials and curricula used in Girona's municipal schools to assess how they address or overlook postgrowth concepts.

- Educational Case Studies: Analyze successful educational programs in other municipalities that have incorporated postgrowth and sustainability principles, drawing lessons that could be adapted for Girona.
- Interviews with Educators and Experts: Conduct semi-structured interviews with teachers, curriculum developers, educational policymakers, and experts in environmental education to gather perspectives on integrating postgrowth values.
- Workshops and Focus Groups: Facilitate or observe workshops with educators and community stakeholders to identify practical strategies for redesigning education with postgrowth principles.
- Pedagogical Assessment: Evaluate the effectiveness of current and proposed educational practices in promoting ecological literacy and postgrowth awareness through qualitative feedback and observation.

Expected results

This thesis aims to generate practical insights and recommendations for municipal administrations seeking to reform educational strategies in line with postgrowth principles. It will highlight effective practices, potential challenges, and ways to incorporate ecological sustainability into educational resources with a postgrowth lens. The research is expected to contribute to academic discourse on postgrowth and environmental education while offering actionable frameworks that can inspire cities facing similar challenges.

Quantifying Prosperity for Cities: A Postgrowth Approach to Urban Sustainability

Supervisors: Claudio Cattaneo (ICTA-UAB) & Borja Nogué Alguero (Uni Gothenburg)

Contact: Claudio.Cattaneo@uab.cat

Specialization: Ecological Economics, Urban Ecology, Global Change

Context

Last April, the Girona City Hall signed a pioneering agreement with postgrowth researchers and sustainable urban development consultants to explore the possibilities and challenges of articulating and applying postgrowth policies and frameworks at a local scale. This agreement offers students the unique possibility to explore the workings of a municipal administration in depth, giving them access to a wealth of data sources and informants. Moreover, it provides an excellent opportunity to combine theoretical discussions on postgrowth with the analysis of the real-world case study of a major Catalan city. More information here in [spanish](#) and [catalan](#).

Objectives

Develop a postgrowth model to assess Girona's environmental and social performance. The model will be based on a series of quantitative social, economic and environmental indicators. It would ideally track the evolution in time of these indicators and study the relationships between the social, environmental and economic dimensions. As well as their performance with respect to targets (be them official set by the municipality, benchmarked against similar cities or based on scientific knowledge and official reports -i.e. Planetary Boundaries per capita allocation, Agenda 2030 SDG, etc.-

Methodology

- A first desk-based analysis of the indicators already [available online](#)
- Selection of relevant indicators and potential gaps in knowledge
- Possible interviews with civil servants of the Girona municipality to check for missing data / targets

Expected results

- A graphic model that show performance and relationships between the main domains
- Definition of the potential the municipality has to achieve quality of life and ecological sustainability in a post-growth scenario
- Definition of areas of intervention
- Critical analysis of the results, data available

Research topic: *Environmental Justice in Scaling Nature-based Solutions: A Literature Review for Fair and Inclusive Urban Greening*

Research line: Environmental Justice, Nature-based Solutions (NbS), Urban transformation

Research group: Commit2Green/FairNature

CONTACT: Johannes Langemeyer
johannes.langemeyer@uab.cat



Background: urban areas are increasingly adopting nature-based solutions (NbS) to address critical environmental challenges, from climate resilience to biodiversity conservation. However, implementing NbS on a large scale often leads to complex justice issues, as the benefits and burdens of these solutions can be distributed unevenly across social-ecological groups. Environmental justice, encompassing distributive, procedural, and recognition aspects, provides a framework to address these disparities. Yet, as cities scale NbS, knowledge gaps remain on how best to incorporate justice principles into decision-making and governance models. This thesis seeks to bridge this gap by providing a comprehensive literature review on environmental justice in NbS, offering guidance on fair and inclusive approaches to scaling urban greening initiatives. The insights from this review will support the development of principles for equitable and sustainable urban greening strategies, ensuring that NbS contribute to both environmental and social well-being.

Aim: to conduct a comprehensive literature review addressing the principles and practices of environmental justice present when assessing the lifecycle and scaling nature-based solutions in urban NbS.

Main tasks:

- Analyze current literature on distributive, procedural, and recognition justice within NbS frameworks, focusing on urban contexts.
- Identify the primary frameworks and models for applying environmental justice principles within urban NbS.
- Identify participatory approaches that ensure a just distribution of NbS impacts
- Outlining knowledge gaps, research opportunities and governance recommendations for the just implementation and maintenance of NbS.

Supervisors:

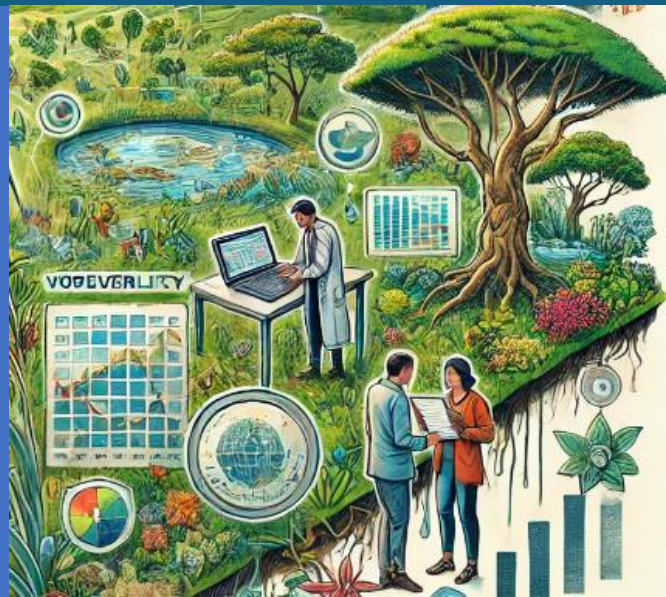
Johannes Langemeyer (ICTA)
David Camacho-Caballero (ICTA)

Research topic: ***Assessing the performance of Nature-Based Solutions for Reducing Vulnerability to Climate Change Impacts. Conceptual and Methodological Approaches for Ex-Ante and Ex-Post Monitoring***

Research line: Nature-based Solutions (NbS), climate change adaptation, vulnerability reduction, environmental justice

Research group: Commit2Green/FairNature

CONTACT: Johannes Langemeyer
johannes.langemeyer@uab.cat



Background: Despite the growing interest in Nature-based Solutions (NbS) for climate change adaptation, a significant gap remains in the literature regarding effective monitoring practices to evaluating their long-term impacts. While robust evidence on NbS outcomes could help mainstream their application in climate adaptation strategies, monitoring these interventions poses substantial challenges. Issues such as the complexity of tracking ecological and social outcomes, spatial scales and multifunctionality, variability in local contexts, and the long timelines needed to observe meaningful changes make it difficult to establish standardized, reliable assessment frameworks. Bridging this gap is crucial for validating NbS effectiveness and informing policy and practice.

Aim: to conduct a comprehensive literature review exploring the challenges and opportunities in assessing NbS outcomes, with a focus on monitoring post-implementation trends in social and ecological vulnerability and including satisfaction assessment, while addressing the principles and practices of environmental justice in scaling NBS designs.

The systematic literature review will update an existing database created by the research group members.

Main tasks:

- Identify primary frameworks and conceptual models used to assess the performance of NbS in the context of climate change adaptation in different scaling approaches
- Expand an existing NBS database by conducting a systematic literature review of methodological approaches for measuring NbS effectiveness, including ground-based techniques, remote sensing, and other assessment methods, along with the indicators used.
- Outline Knowledge Gaps and Research Opportunities and provide governance recommendations to improve NbS impact evaluation and NBS scaling designs.

Supervisors:

Johannes Langemeyer (ICTA)
Anna Marin Puig (ICTA)

Research topic: *Uncovering digital relational values embedded in food*

Research line: environmental value theory, social media data analysis

Research group: BIG 5

CONTACT: Johannes Langemeyer
johannes.langemeyer@uab.cat



Relational values are described as socio-cultural, anthropocentric, yet non-instrumental values rooted in reciprocal and caring social-environmental relations, thus fundamental to just and sustainable transformations. While originally associated with indigenous communities only, several studies recently showed their cultural manifestation in western societies. The research aims **to uncover relational values embedded in food**, in their everyday expression on social media. This work will contribute to the conceptual and methodological framework development within the ERC Project BIG5.

Main aim: to perform an assessment of relational values about food on social media

Main tasks:

- Literature review to define RV coding categories
- Coding social media data
- Statistical analysis to relate RV to social-ecological patterns in the offline reality

Supervisors:

Fulvia Calcagni; Johannes Langemeyer (ICTA)



Research topic: *Uncovering digital relational values in the context of climate change*

Research line: environmental value theory, social media data analysis, climate change

Research group: BIG 5

CONTACT: Johannes Langemeyer
johannes.langemeyer@uab.cat



Relational values are described as socio-cultural, anthropocentric, yet non-instrumental values rooted in reciprocal and caring social-environmental relations, thus fundamental to just and sustainable transformations. While originally associated with indigenous communities only, several studies recently showed their cultural manifestation in western societies. The research **aims to uncover relational values in the context of climate change**, in their everyday expression on social media. This work will contribute to the conceptual and methodological framework development within the ERC Project BIG5.

Main aim: to perform an assessment of relational values about climate change on social media

Main tasks:

- Literature review to define RV coding categories
- Coding social media data
- Statistical analysis to relate RV to social-ecological patterns in the offline reality

Supervisors:

Fulvia Calcagni; Johannes Langemeyer (ICTA)



Mapping the stranded assets of major fossil fuel companies

Supervisor: Marcel Llaveró-Pasquina

Contact: marcel.llaveró@uab.cat; marcelllaveropasquina@gmail.com

Specialization: Ecological Economics

Objectives: The carbon budget to stay below 1.5°C is rapidly evaporating. We only have 4 more years at current emissions levels for a 50% chance to avoid the worst impacts of the climate crisis, disproportionately suffered by marginalised communities. Therefore, a vast proportion of fossil fuel reserves have to remain underground. This significantly changes the economic, financial and power balances in the world, and thus is resisted by the actors controlling fossil assets. If we are to organise a strategy and a managed plan to leave fossil fuels underground it is imperative to know who owns and operates the reserves that cannot be burned. This TFM will map and quantify the owners of the fossil fuel reserves that must remain underground.

Methodology: Large dataset analysis (Prior R or other coding tools skills highly valued), GIS, graphic design

Expected results: A ranking of the top 250 fossil fuel companies by the absolute amount of unburnable oil and gas reserves. A ranking of the top 250 fossil fuel companies by their relative exposure to stranded fossil fuel assets. Both in emissions and monetary terms. The results will contribute to a publication in *Nature Climate Change*.

Global map of Liquefied Natural Gas (LNG) impacts and resistances

Supervisor: Marcel Llaveró-Pasquina

Contact: marcel.llaveró@uab.cat; marcelllaveropasquina@gmail.com

Specialization: Ecological Economics

Objectives: We are witnessing a colossal energy transition, and it is not about renewable energies. In the last 10 years the trade of Liquefied Natural Gas (LNG) has increased by 67%, shifting 7 times more energy than all new renewables installed. This is a transformation of global and historical proportions that has largely substituted and significantly surpassed gas trade by pipeline. LNG completely changes the logic of trade from a regional fixed relationship to a globalised flexible supply chain. It is the epitome of the globalisation of commodity chains. But despite the spurious green credentials conferred to it by the industry, LNG has a carbon footprint across its supply chain larger than some types of coal. In addition, the globalisation of gas trade reinforces the shifting of socioecological costs linked to the energy consumption of industrial societies to the most marginalised geographies in the world. LNG has exacerbated global environmental injustice and is opening new frontiers of gas extraction, especially in Africa and South East Asia. Hence people around the world are protesting, and global environmental justice coalitions are forming. The objective of this TFM is to contribute towards a map of the global impacts of LNG terminals around the world that highlights the global networks of resistance that are struggling against it using the Global Atlas of Environmental Justice.

Methodology: Environmental conflict documentation with the EJAtlas, interviews and participant-observation of global networks of resistance to gas, GIS

Expected results: A global map of LNG terminals, conflicts, impacts, environmental justice organisations and networks. The TFM will contribute towards a research-activism publication to support the global climate justice movement against LNG, and an academic publication in *Energy Research and Social Sciences*.

Scrutinizing the fossil fuel industry “part of the solution” narrative.

How oil and gas companies clinch to their political license by spuriously claiming to solve the climate crisis

Supervisor: Marcel Llaveró-Pasquina

Contact: marcel.llaveró@uab.cat; marcelllaveropasquina@gmail.com

Specialization: Ecological Economics

Objectives: The UNFCCC process is the world’s arena where the phase-out of fossil fuels to mitigate the climate crisis is being negotiated. The multilateral governance space has been historically notorious for including fossil fuel company representatives. But last year saw the culmination of this influence with a fossil fuel executive presiding over the event in Dubai, and this year the event is being held in the authoritarian petrostate of Azerbaijan. The fossil fuel industry political license is unscathed despite loudening calls to kick polluters out of COP. The same situation is found at all scales, from lobbying national governments and legislatures, to science-washing their image partnering with universities. It appears as if this situation responds to a deliberate and coordinated campaign by the fossil fuel industry to position themselves as “Part of the Solution” to the climate crisis and diversified “Integrated Energy Companies”. These exact words are repeated by fossil fuel companies across the world, despite evidence showing that beyond advertising and a few instrumental projects, nothing has changed in their fossil business models. This TFM will investigate whether the “Part of the solution” strategy is a coordinated effort among fossil fuel companies, or a coincidence of individual narratives. It will also trace back the history of the discourse and vocabulary with the objective to challenge the political license of fossil fuel companies and support the demands for their exclusion from decision making fora.

Methodology: Discourse analysis, corporate document research, investigative journalism techniques

Expected results: A comparative and chronological discourse analysis of fossil fuel company documents. An actor map of different fossil fuel companies and their industry associations.

Call for 1 MSc research project

Transformations by and for whom? An intersectional and collective action look at vulnerability and transformation in rural Spain

Requisite: Student of the *Master in Interdisciplinary Studies in Environmental, Economic and Social Sustainability* (ICTA-UAB) or of the Master's degree in *Modelling for Science and Engineering* (UAB-CRM). She/he must be fluent speaking Spanish and English and writing English. She/he must be open to do fieldwork and interested in sustainability transformations.

Research context: Rural Spain is confronted with a sustainability transition paradox. On the one hand, many rural regions across the country are highly vulnerable to socio-demographic and environmental problems, including depopulation, climate change or the globalization of agricultural markets, to the point that their situation has become a concern at the highest political level. On the other hand, such vulnerability can be an opportunity for those regions to experiment with new, alternative forms of sustainable development (as compared to other less vulnerable and more integrated in mainstream development urban regions) that could simultaneously reduce vulnerability and empower marginalized social groups.

Description & Objectives: The Master's thesis will be part of SUSTAIN, a project financed by the Ministry of Science and Education. The project aims at better understanding the influence of rural vulnerability in sustainability transitions and experimenting with new tools for innovative rural development planning and evaluation, paying specific attention to the positionality of women, immigrants, and the elderly. The project has an emphasis on community-based, multi-stakeholder collaborative projects around the promotion of renewable energies, sustainable exploitation of forest resources, commercialization labels, or agro-ecology initiatives in the agricultural sector.

The Master's project will carry a case study of the role of the youth, women and/or immigrants, and their intersections in the promotion and leadership of innovation projects that aim at sustaining local livelihoods. Questions driving the project will include: ¿How similarly or different are the youth, women and immigrants bearing issues of climate change, depopulation and the globalization of agricultural markets, i.e., as compared to older, native males? What would constitute a sustainability transformation in the agricultural sector for them? How would they see themselves in such a transformation? How would such a transformation depend on their ability to act collectively and associate? Which opportunities and barriers do they envision based on their experiences? The study may involve multiple methods, ranging from systematic review methods to case study and survey methods.

Technical details: The analysis can start as soon as possible and not later than February. In case that fieldwork is necessary, expenditures will be covered by SUSTAIN.

If you are interested on writing your MSc thesis on this topic, please contact Sergio Villamayor-Tomas (Sergio.villamayor@uab.cat) and Irene Iniesta (irene.iniesta.a@gmail.com)

Open Call for an MSc student

- **Title of the thesis:**

Beyond ecotourism. Innovation in supply chains, Business Models assessment and transparency in profits' allocation

- **Supervisor(s):**

The thesis will be supervised by Dra. Roser Maneja (Roser.Maneja@uab.cat).

- **Specialization of the master's program** to which the TFM would belong:

Preferably students from the **Ecological Economics** specialization. However, interested students enrolled in the **Global Change** specialisation may also apply, depending on their profile.

- **Description** (objectives, methodology, and expected results of the thesis):

Biosphere Reserves (BR) are examples of blending biological and cultural diversity par excellence. An UNESCO's conservation tool aiming to integrate environmental conservation and local populations. Hence, BR have a great potential to enhance the resilience of landscapes and local populations in the face of Global Change. Moreover, the CTFC undertakes research on socioecological resilience of landscapes and the development of innovative landscape planning and decision-making tools, contributing to accelerate the transformation of Mediterranean BR towards more adaptive, cohesive and resilient landscapes.

The PRIMA-funded project RES-MAB is seeking a master's student to conduct a comprehensive analysis on how to assess Business Models in the ecotourism sector considering the difficulties evaluating business model's profit in Mediterranean Biosphere Reserves. The masters' research will look at the innovation and fairness in supply chains, the transparency in profits' allocation, and it will make a proposal on how to overcome some of these difficulties in practice for the local entrepreneurs and inhabitants of the 7 Mediterranean BR participating in RES-MAB.

Depending on the student's profile and background, the work will be further adapted to her/his interests, and this broad goal will be restricted to affordable research objectives and questions.

Open Call for an MSc student

- **Title of the thesis:**

Environmental Governance and Public Funding in practice. Effective implementation of international projects.

- **Supervisor(s):**

The thesis will be supervised by Dr. Roser Maneja (Roser.Maneja@uab.cat).

- **Specialization of the master's program** to which the TFM would belong:

Preferably students from the **Ecological Economics** or the **Global Change** specialisations.

- **Description** (objectives, methodology, and expected results of the thesis):

Biosphere Reserves (BR) are examples of blending biological and cultural diversity par excellence. An UNESCO's conservation tool aiming to integrate environmental conservation and local populations. Hence, BR have a great potential to enhance the resilience of landscapes and local populations in the face of Global Change. Moreover, the CTFC undertakes research on socioecological resilience of landscapes and the development of innovative landscape planning and decision-making tools, contributing to accelerate the transformation of Mediterranean BR towards more adaptive, cohesive and resilient landscapes.

When it comes to Environmental Governance and Public Funding, lack of financial resources is not always the obstacle. Sometimes the true challenge is the effective implementation of international projects at the local level. Because of this, in the framework of the PRIMA-funded project RES-MAB, we launch a call for a master's research that (1) analyses the keys to achieve effective implementation of international socio-environmental projects at a local scale in protected areas, (2) evaluates the factors related to social reluctance to implement public funded projects and initiatives on the ground, and (3) proposes an action plan to overcome these barriers in the case of the implementation of the WEFE NEXUS Solutions in RES-MAB Biosphere Reserves.

Depending on the student's profile and background, the work will be further adapted to her/his interests, and this broad goal will be restricted to affordable research objectives and questions.

Open Call for an MSc student

- **Title of the thesis:**

Integrating Sustainable Tourism into Business Models for Non-Wood Forest Products in Mediterranean Biosphere Reserves.

- **Supervisor(s):**

The thesis will be co-directed by Dr Roser Maneja and Marta Rovira (PhD student)

- **Specialization of the master's program** to which the TFM would belong:

Student of the master's degree in interdisciplinary studies in Environmental, Economic and Social Sustainability (ICTA-UAB). Specialization in Ecological Economics or Science and Management of Global Change.

- **Description:**

The PRIMA-funded project RES-MAB is seeking a master's student to conduct a systematic literature review on integrating sustainable tourism into business models for non-wood forest products in Mediterranean biosphere reserves as part of a master's thesis. This research will contribute to understanding how sustainable tourism can enhance the economic and environmental value of non-wood forest products, promoting both conservation and local development in these protected areas.

- **Institution:** Forest Sciences and Technology Centre of Catalonia (CTFC) and Autonomous University of Barcelona (UAB)

- **Remarks and requirements:** Written proficiency in English is required.

- **Output:** MSc-thesis & (co-)authorship of a scientific article.

- **Timing:** March to July 2025

- **Contact.** If you are interested on writing your MSc thesis on this topic or ask anything about the project, please contact: roser.maneja@uab.cat and marta.rovira@ctfc.cat

Open Call for an MSc student

- **Title of the thesis:**

Mainstreaming the gender and youth lens throughout the Mediterranean BR integrative management strategies. The case of RES-MAB.

- **Supervisor(s):**

The thesis will be supervised by Dra. Roser Maneja (Roser.Maneja@uab.cat).

- **Specialization of the master's program** to which the TFM would belong:

Preferably students from the **Ecological Economics** specialization. However, interested students enrolled in the **Global Change** specialisation may also apply, depending on their profile.

- **Description** (objectives, methodology, and expected results of the thesis):

In the current context of Mediterranean Biosphere Reserves (BR), the gender dimension (SDG#5) is a key issue and remains a challenge in most territories, despite that most BR's Action Plans integrate UNESCO's guidelines in terms of gender equity. Also, the 7 BR participating in the RES-MAB project, and most of the Mediterranean BR, are rural territories where women, youth and vulnerable groups face specific additional constraints, in terms of entrepreneurship opportunities, capacity-building or involvement in decision-making among others.

The RES-MAB project is a PRIMA Nexus project that aims at *"Promoting WEF Nexus-based adaptation and mitigation solutions and landscape resilience to climate change in the Mediterranean Biosphere Reserves"*. RES-MAB will consider the gender dimension throughout the project, by contributing holistically to the specific gender constraints of BR demo sites, by the different project activities, by disaggregating data by gender and seeking gender balance in the actors' engagement, considering gender and ethical aspects within the policy and livelihood analyses.

The PRIMA-funded project RES-MAB is seeking a master's student to support the project in operationalising a strategy for BR managers and policymakers when developing their equity plans and to promote the mainstreaming of the gender and youth perspectives, integrating them into the action plans and the day-to-day management of Mediterranean Biosphere Reserves.

The masters' research will look at how to mainstream the gender and youth lens throughout the Mediterranean Biosphere Reserves integrative management strategies. Through a qualitative research approach and a comprehensive literature and case study review, the student is expected to suggest a few successful strategies that foster good business practices and policy-making practices that ensure the fair inclusion of women, youth and vulnerable groups in the co-creation of project activities and outputs.

Depending on the student's profile and background, the work will be further adapted to her/his interests, and this broad goal will be restricted to affordable research objectives and questions.

Open Call for an MSc student

- **Title of the thesis:**

NPAs and socioecological conflicts in Mediterranean Biosphere Reserves. A political ecology analysis.

- **Supervisor(s):**

The thesis will be supervised by Dra. Roser Maneja (Roser.Maneja@uab.cat).

- **Specialization of the master's program** to which the TFM would belong:

Preferably students from the **Ecological Economics** specialization. However, interested students enrolled in the **Global Change** specialisation may also apply, depending on their profile.

- **Description** (objectives, methodology, and expected results of the thesis):

Biosphere Reserves (BR) are examples of blending biological and cultural diversity par excellence. An UNESCO's conservation tool aiming to integrate environmental conservation and local populations. Hence, BR have a great potential to enhance the resilience of landscapes and local populations in the face of Global Change. Moreover, the CTFC undertakes research on socioecological resilience of landscapes and the development of innovative landscape planning and decision-making tools, contributing to accelerate the transformation of Mediterranean BR towards more adaptive, cohesive and resilient landscapes.

The PRIMA-funded project RES-MAB is seeking a master's student to conduct a political ecology analysis related to NPAs and socioecological conflicts in Mediterranean Biosphere Reserves. The masters' research will look at the key and more common difficulties in policy deployment due to legal, socio-political and geostrategic contexts that may hinder governance, management and investments in Mediterranean Biosphere Reserves.

The approach involves designing and conducting a qualitative research process to gather expert opinions from various Mediterranean BRs, analysing scientific literature and relevant policies, assessing previous case studies, and capitalizing on existing knowledge of valuable experiences around the Mediterranean region.

Depending on the student's profile and background, the work will be further adapted to her/his interests, and this broad goal will be restricted to affordable research objectives and questions.

Proposals for UAB master students, year 2024-2025

Title of the thesis:

Climate services and multi-level governance

Supervisors: Dragana Bojovic (dragana.bojovic@bsc.es) and Eulàlia Baulenas (eulalia.baulenas@bsc.es)

Specialization of the master's program: Ecological Economics, Science and Global Change Management

Description:

The impacts of climate change transcend political boundaries and governance levels, necessitating a multi-scale approach to address challenges such as the increasing frequency and intensity of heatwaves and droughts. Climate services play a crucial role in supporting decision-making for climate change adaptation. To be effective, these services must account for diverse socio-ecological contexts, geographic variances, climatic conditions, and layers of governance.

Objectives of the thesis and methodology:

This master's thesis will examine the multi-level governance framework in Barcelona, utilising the latest climate change data from the Barcelona Supercomputing Center (BSC) and ongoing climate services projects. By considering outputs from high-resolution climate modelling, this research will investigate how climate information can inform decisions and policies across various geographical, governance, and temporal scales. The specific objectives of this study are to:

1. Analyse the decision-making processes of key stakeholders within Barcelona's multi-level governance structure in relation to a specific climate-related issue, e.g. related to summer heatwaves.
2. Explore how climate services can enhance policy formulation and actions aimed at climate change adaptation within this decision-making framework.

Expected results of the thesis:

The expected results of this master's thesis include a comprehensive mapping of key stakeholders and their decision-making processes regarding climate change adaptation in Barcelona. The research will assess the utilization of climate services from the Barcelona Supercomputing Center, identifying gaps and tailoring recommendations to enhance their effectiveness for diverse stakeholders.

References:

- Juhola, S., & Westerhoff, L. (2011). Challenges of adaptation to climate change across multiple scales: a case study of network governance in two European countries. *Environmental science & policy*, 14(3), 239-247.
- Guido, Z., Rountree, V., Greene, C., Gerlak, A., & Trotman, A. (2016). Connecting climate information producers and users: boundary organization, knowledge networks, and information brokers at Caribbean climate outlook forums. *Weather, Climate, and Society*, 8(3), 285-298.
- Flagg, J. A., & Kirchhoff, C. J. (2018). Context matters: context-related drivers of and barriers to climate information use. *Climate Risk Management*, 20, 1-10.
- Scholten, P., Keskitalo, E. C. H., & Meijerink, S. (2015). Bottom-up initiatives toward climate change adaptation in cases in the Netherlands and the UK: a complexity leadership perspective. *Environment and Planning C: Government and Policy*, 33(5), 1024-1038.

Proposals for UAB master students, year 2024-2025

Title of the thesis:

Analysing the approach to climate change vulnerability in the Province of Barcelona

Supervisors: Dragana Bojovic (dragana.bojovic@bsc.es) and Samuel Pickard (samuel.pickard@bsc.es)

Specialization of the master's program: Urban and Industrial Ecology, Ecological Economics

Description:

Climate change is increasing the intensity, frequency and duration of summer heatwaves around the world, and particularly in the Mediterranean region. Cities and their surrounding regions are hotspots of vulnerability, both because of their high population densities and because the way they are built leads to urban heat island effect, which further intensifies heatwaves. Barcelona is an example of a complex urban area where the increasing impact of heatwaves will uniquely affect its residents.

Objectives of the thesis and methodology:

Effectively adapting to heatwaves includes both short-term disaster preparedness measures that protect people's health and well-being, and long-term strategic decisions that (re)design the city of the future to be more climate resilient. But what interventions are needed, where and when are challenging questions to answer. An important aspect is understanding how to define and map vulnerability to assure that the measures support the most vulnerable population both in short and long term. The objectives of the thesis are to:

1. Conduct a literature review, including research articles, grey literature and public policy to summarise approaches to combatting vulnerability to increasing summer heat in the province of Barcelona
2. Analyse, assess and compare the proposed solutions in light of the latest climate change information (available at the Barcelona Supercomputing Center (BSC) from the ongoing climate services projects)
3. Recommend a framework for equitably building resilience to extreme summer temperature in Barcelona.

Expected results of the thesis:

The expected results of this master's thesis include a literature review and desk research summarizing various strategies for addressing vulnerability to increasing summer heat in the region. Additionally, the thesis aims to recommend a framework for equitably building resilience to extreme summer temperatures, ensuring that measures prioritize the needs of the most vulnerable populations. The findings will contribute valuable insights for policymakers and urban planners.

References:

Amorim-Maia, A. T., Anguelovski, I., Connolly, J., & Chu, E. (2023). Seeking refuge? The potential of urban climate shelters to address intersecting vulnerabilities. *Landscape and Urban Planning*, 238. <https://doi.org/10.1016/j.landurbplan.2023.104836>

Cos, P., R. Marcos-Matamoros, M. Donat, R. Mahmood, and F. J. Doblas-Reyes, 2024: Near-Term Mediterranean Summer Temperature Climate Projections: A Comparison of Constraining Methods. *J. Climate*, 37, 4367–4388, <https://doi.org/10.1175/JCLI-D-23-0494.1>.

Garcia-Sierra, M. [Marta]; Suport tècnic.; E D. [Elena Domene.]; Andreu, M. [Marta]. (2022). Heat in a future: Index of vulnerability to climate change (IVAC)

Tyler, S., & Moench, M. (2012). A framework for urban climate resilience. *Climate and Development*, 4(4), 311–326. <https://doi.org/10.1080/17565529.2012.745389>