Institute of Environmental Science and Technology
ICTA-UAB

# Annual Report



UAB Universitat Autônoma de Barcelona



#### **Edition**

ICTA-UAB Communication staff Research support unit

#### Coordination

Secretary of ICTA-UAB

#### Design

Miriam Arroyo Reina miriamar.com

#### **Photographs**

ICTA-UAB, Unsplash and Freepik

#### Institut de Ciència i Tecnologia Ambientals (ICTA-UAB)

Universitat Autònoma de Barcelona Campus de Bellaterra 08193 Bellaterra (Cerdanyola del Vallès) www.uab.cat/icta







# Table of Contents

- 1 Vision and Mission
- 2 About Us
- 3 ICTA-UAB in Numbers
- 4 Staff
- 5 Research Framework
- 6 Research Groups
- 7 Scientific Advances
- 8 New Projects in 2023
- 9 Publications
- 10 Gender Equity Commitment

- 11 Awards and Recognitions
- 12 Policy and Societal Impact
- 13 Keynote Speakers and Visitors
- 14 Training
- 15 Laboratory Facilities
- 16 Dissemination Activities
- 17 Annexes

Annex I Doctoral Theses

Annex II Publications

Annex III Active Projects

Annex IV Gender Equity and

Responsible Travel Strategy

Annex V Press releases

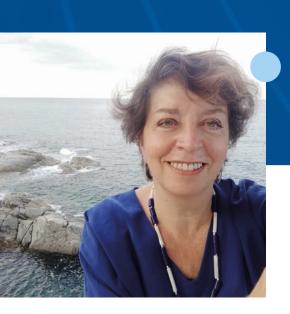


#### **Vision**

To empower society with science to address global socio-environmental challenges.

#### **Mission**

ICTA-UAB is a transdisciplinary science institute that develops vital and strategic knowledge towards strong sustainability. Committed to impactful science, we train researchers and practitioners, and partner with diverse interest groups to strengthen ecosystems health and foster socioenvironmental transformation and innovation.



Isabel Pont Castejón

Director
September 2022 - Present

"I am deeply honored to lead this pioneering research center, which addresses some of the most pressing challenges of our time. Our team, with researchers from both the natural and social sciences, is dedicated to developing solutions that are essential, practical, and fundamentally just. Thank you for getting to know us better and supporting our goals."



The Institute of Environmental Science and Technology (ICTA-UAB) is a research center of the Universitat Autònoma de Barcelona that hosts approximately 200 researchers trained in environmental sciences spanning natural, socio-economic and engineering fields.



The UAB first established the institute in 2003 in the Faculty of Science. Since October 2014, we are hosted in an emblematic LEED GOLD-certified building on the UAB campus that is highly energy-efficient, and which reflects an open and collaborative working environment.

Since 2016, ICTA-UAB has received structural funding from the Spanish national program for scientific excellence known as María de Maeztu (Unidad de Excelencia «María de Maeztu» MDM-2015-0552, and CEX2019-000940-M), which has enabled us to develop more cross-cutting transdisciplinary research and training on global sustainability science and policy.

The institute's decision-making bodies include a Management Team, a Permanent Board and a Council. We also have an Academic Committee for Doctoral Studies in Environmental Science and Technology (as part of the PhD school of ICTA-UAB). There are two official Committees of the council: the Lab Committee (supervised by Dr. André Colonese), and the Alumni Commission (supervised by Prof. Xavier Gabarrell i Durany). There is also a voluntary "Equity, Diversity and Care" Committee.

From September 2022, ICTA-UAB management team is led by Prof. Isabel Pont Castejón as Director,

Dr. Laura Talens Peiró as Secretary, Prof. Adriana Artola Casacuberta as deputy Director of the Doctoral Studies, Dr. Esteve Corbera Elizalde as Deputy Director and Scientific Director, and Maica Nogales Malagón as the Institute General Manager. To ensure the accomplishment of the objectives related to gender and diversity policies as well as a more efficient management of ICTA-UAB's resources, the new management board incorporated two new managers to the team: Prof. Isabelle Anguelovski as Gender, Diversity and Care manager and Dr. André Colonese as Offices and Laboratory manager.





**Director** Isabel Pont Castejón



MdM Scientific Director Esteve Corbera Elizalde





Gender,
Diversity and
Care Manager
Isabelle
Anguelovski



Director of Doctoral Studies Adriana Artola Casacuberta

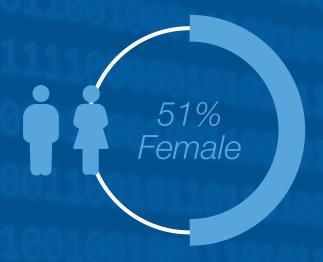


Offices and Laboratory Manager André Colonese





2023 Executive Board



66 Researchers

**49**Doctoral Candidates



Administration and Technical Research Staff



**31**Countries

**8** ERC Grants



**17 M€**Research
Funding



Research Groups



**20**Doctoral Theses
Defended

**352**Publications



#### **Senior Researchers**

Anguelovski, Isabelle

Apostolopoulou, Evangelia

Belmonte Soler, Jordina

Brockington, Daniel

Cole, Helen

Colonese, André Carlo

Corbera Elizalde, Esteve

Gabarrell i Durany, Xavier

Galbraith, Eric

Giampietro, Mario

Hickel, Jason

Honey Rosés, Jordi

Kallis, Giorgos

Lombardo, Umberto

Marquet Sardà, Oriol

Morén Alegret, Ricard

Mortyn, Peter Graham

Pont Castejón, Isabel

Ramos Martín, Jesús

Reyes-García, Victoria

Rovira Val, María Rosa

Scheidel, Arnim

Talens Peiró, Laura

van den Bergh, Jeroen

Villalba Méndez, Gara

Villamayor-Tomás, Sergio

Ziveri, Patrizia

#### **Postdoctoral Researchers**

Arcas Pilz, Verónica

Badía Moragas, Alba

Bene, Daniela del

Bisht, Arpita

Cantoni, Roberto

Conde Puigmal, Marta

D'Alisa, Giacomo

Daunt, Ana Beatriz

Davtian, Nina

Dudgeon, Catherine

Esteve Jordà, Clara

Fernández-Llamazares

Onrubia, Alvaro

Gaitán Cremaschi, Daniel

Gallois, Sandrine Laure

Gamboa Jiménez, Gonzalo

García del Amo, David

García-Lamarca Williams, Melissa

Grelaud, Michael

Grosinger, Julia

King, Lewis

Kotsila, Panagiota

Langemeyer, Johannes

Langer, Gerald

Littley, Eloise

Llavero Pasquina, Marcel

Madrid-López, Cristina

Maestre Andrés, Sara

Marino Taussig De

Bodonia, Agnese

Martin, Nicholas

Mattalia, Giulia

Parada Molina, Felipe

Petit Boix, Anna

Petridis, Panagiotis

Pezo Lanfranco, Luis Nicanor

Prado Bert, Paula de

Renner, Ansel

Requena Mora, Marina

Roca Martí, Montserrat

Rodellas Vila, Valentí

Roy, Brototi

Salekpay, Foroogh

Santos de Lima, Letícia

Slamersak, Aljosa

Toboso Chavero, Susana

Varvarousis, Angelos

Velasco-Fernández, Raúl

Villanueva Ribes, Juan

Walter, Mariana

#### **PHD Candidates**

Alfonso Becares, Diana

Alorda Montiel, Irene

Amorim Maia, Ana Terra

Arosemena Polo, Juan David

Barrero García, Lucas

Birnstiel Falcao Amorim,

Stephanie

Breton-Carbonneau,

Andreanne Chu

Camacho Caballero.

David Alejandro

Castro Vargas, María Soledad

Caviedes Paul, Julian

Chambon, Mouna

Evangelista, Guido

Facchini, Francesco

Fanari, Eleonora

Fossile, Thiago

Gaitan Roca, Albert

Grugni, Elisa

Gu, Bowen

Hanbury Lemos,

Mariana Morena

Heydenreich, Till Jacob

James, Annie

Johnson, Roberta

Khromova, Svetlana

Lucas Forcadell.

Arturo Manuel

Macall, Diego

Matheney, Austin Gage

Molins Cabaní, Sara

Morell Delgado, Gemma

Morrison, James Christopher

Muñoz Sueiro, Lucía

Music, Marta

Nguyen, Anh-Thu

Nogué Alguero, Borja

Nuñez Yebra, Pablo

O'Neill, Ella

Peixoto Macedo, Thais

Penalva Arias, Nuria

Pérez Sánchez, Cristina

Porcher, Vincent

Porcuna Ferrer, Anna

Rodríguez Puig, Julia

Sanclemente Crespo, Mateo

ICTA UAB - Annual Report 2023

Sanz Sebastián, María Teresa

Segura Barrero, Ricard

Sierra Montoya, Miquel

Simón Mas, Gemma

Stringari, Gaia

Stuit, Andrea

Teruel Cabello, Oriol

Tonini, Pietro

Torren Peraire, Daniel

Tran, Dalena Le

Ventura Caballé, Sergi

Vera, Isabela Jayne

Villán Delgado, Ana

Wood Hansen, Oskar

Zsiros, Jozsef

#### **Research Support Technicians**

Alvarez Fernández, Santiago

Anton Quilez, Susana

Bergeler, Sophia Laura

Bukkens, Sandra

Busse, Svea Rieke

Caballeros Finkelstein,

Alejandro

Comes Bordas, Pau (PAS)

Córdoba i Balcells, Valentina

González Atero, Ramiro

Harasta, Nicole Marie

Hoffmann, Patrick

Hörner, Maya

Karafylli, Eleni

Kisyova, Yoana Chavdarova

Kokkorogiannis, Panagiotis

Limacher, Nina

Manfroni, Michele

Mc Donagh, Stphanie Rachael

McGrath Michelle, Krista

Moraleda Cibrián, Núria (PAS)

Muñoz Liesa, Joan

Navarro Gibert, David

Navas Obando, Grettel

Nistor, Brindusa Raluca

Pallacks, Sven

ICTA UAB - Annual Report 2023

Puigdemunt Puig, Rut

Renom Fernández, Silvia

Roset Pérez, Berta

Ruiz Cayuela, Sergio

Sánchez Mateo, Sonia

Sánchez Robles, Laura

Savin, Ivan

Soder Walz, Jesica Maiara

Soleymani-Fard, Ramin

Tofighi Niaki, Adrien

Tomas Pascual, Alexander De

Urbistondo Letamendia,

Borja Mencey

#### **Affiliated Researchers**

Demaria, Federico

Ortega Cerdà, Miquel

Sarto Monteys, Víctor

#### **Administration**

ICTA-UAB General Manager

Maica Nogales Malagón

Scientific Manager

Michela Osnato

Technical Support of Research, International

Projects Office (OPI)
Verónica Colombo

**Communication Staff** 

Ana Cañizares

Isabel Lopera Martínez

Technical Support of Research

(National Projects)

Silvia Martínez Sinibaldi

#### ERC Project Managers, and International Projects Office (OPI)

Vanesa del Pino Pérez Laura Jiménez Fernández Encarna Poncela Fernández Laura Vea Rodríguez Marta Viana Díaz

#### IT and GIS Support

Oriol Baeza Martínez Marta Borrós Vendrell

#### Academic Affairs

Cristina Durán Díez (PhD Program) Eduardo Martínez Martínez (Masters Program)

#### María de Maeztu Financial Officer

Gisela Bellido Ferre Cristina Montero Blázquez

### ICTA-UAB Logistical Support Gloria Gutiérrez García

#### Economic Management Team

Maricarmen Charro Castro
Loli García Lucena
Maite Jiménez Batista
Cristina Martín Montemayor
Angeles Peláez Expósito
Rosa Puga Aranda
Montse Puigdomenech Griño
Laura Sans Sobrino
Gemma Suades Méndez
Núria Vergara Alarcón



## Research Framework

5

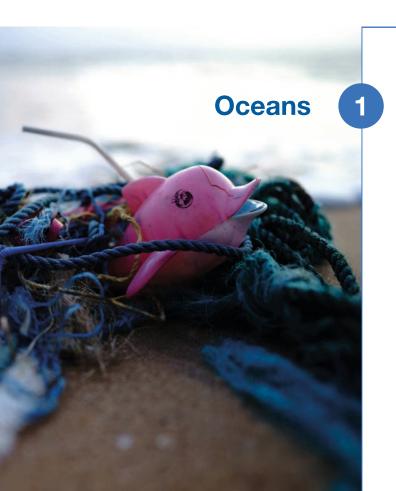
ICTA-UAB's research aims to better understand several socio-environmental challenges that need to be addressed to guarantee human progress in an ecologically sustainable Earth. We engage with a set of global, yet inter-related pressing issues, including climate change, biodiversity loss, resource extraction, ocean acidification and water pollution, environmental mobilization and conflicts, and their social and economic ramifications.



# 5 Inter-related Environmental and Social Challenges

We also engage with important policy and social goals and debates, including for example the United Nations' Sustainable Development Goals (SDGs), the mitigation goals of the Paris Accord on Climate Change, or the Aichi Targets on Biodiversity Conservation. We expect to provide evidence on the best strategies to make progress on these global and regional sustainability goals, as well as to shed light on possible trade-offs across apparently desirable policy objectives.

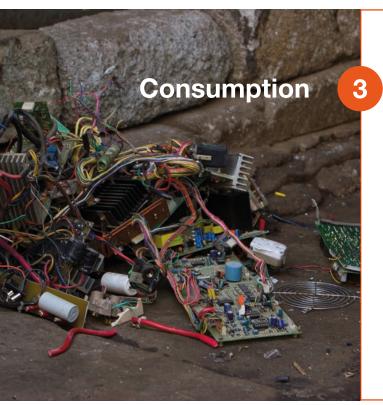
Our research efforts are organized around five inter-related Socio-Environmental Challenges, which structure our María de Maeztu Unit of Excellence strategic program (2020-2024).



This challenge investigates the impacts of global change on oceanic and coastal systems and the potential of distinct policy pathways towards sustainable and equitable interactions with marine environments and their resources. It integrates social and natural science-based analyses which assess oceanic and coastal changes and propose transformative strategies for sustainable human-ocean interactions.



This challenge focuses on the analysis of the combined effects of climate and other drivers of global change on the sustainability of rural landscapes and livelihoods, across many and diverse geographical regions and peoples. It brings together theories and methods across the social sciences to understand how environmental impacts are perceived and managed, and how rural development and environmental conservation policies perform.



This challenge explores how the production and consumption of goods and services relate to the use of raw materials and energy, the resulting environmental impacts during their lifespan, and how they affect to technological transitions and to human wellbeing. Novel product inventories which combine Life Cycle Analysis with Material Flow Analysis, and datasets of electronic goods to facilitate re-use and recycling are being developed.



This challenge aims to advance actions and projects for climate-responsive, equitable, and healthy cities and urban systems. It expects to generate new quantitative and qualitative evidence on the effectiveness of urban environmental actions and projects for meeting climate and sustainability goals; on their effect on the urban atmospheric or metabolism of resources; on their social and wellbeing impacts; and on the governance and planning frameworks that can maximize environmental and social goals in a changing climate.



This challenge aims to analyze and advocate for effective and equitable cross-scale policies, institutions, and social responses to address global environmental change. It aims to develop model- and case-based assessments of climate and other sustainability policy instruments, and to investigate how social mobilization or radical policy shifts (e.g., a-growth, or degrowth) can foster a transition towards a more sustainable planet.



ICTA-UAB's research challenges are addressed by specific research groups (known as SGRs in the Catalan university and research context). These groups share an interest in the study of the causes, mechanisms and impacts of global environmental change, including climate change, the latest interactions with human societies and wellbeing, and the policy and institutional responses necessary for a transition to a sustainable future.





#### **LASEG**

Laboratory for the analysis of social-ecological systems in a globalized world

Research group Generalitat de Catalunya 2021 SGR 00182. Principal investigator Esteve Corbera Elizalde

LASEG aims to better understand social-ecological systems in both rural and urban settings. The group's research explores the social-ecological impacts of global change, with a specific focus on finding solutions to the triple crises of climate change, biodiversity loss and social injustice.



#### **AEROBIOS**

Aerobiology, atmospheric transport, and health

Research group Generalitat de Catalunya 2021 SGR 00519. Principal investigator Jordina Belmonte Soler

AEROBIOTAS focuses its activity on the study of the atmosphere's biological components: pollen and spores of fungi and their allergens and micro-arthropods, and the application of this knowledge to allergology, public health and animal and plant health.



#### **MERS**

Marine and environmental biogeosciences



MERS is addressing various environmental biological and geochemical processes regulating the marine and freshwater realms as well as interacting with climate change. Human-induced global and climate change affects society, natural resources and economy around the world and the awareness of their impact has increased considerably in the last decades.



#### SOSTENIPRA

Sustainability and environmental protection

Research group Generalitat de Catalunya 2021 SGR 00734. Principal investigator Xavier Gabarrell i Durany

SOSTENIPRA aims to develop, adapt, and apply tools to promote sustainability and environmental protection with a systemic, life cycle approach. Their research focuses on resource management for a circular economy, sustainable food systems, and integrated analysis of urban nature-based solutions.



**IMPACTANT** 

Dynamics of natural systems and the anthropic impacts



**ECOLECON** 

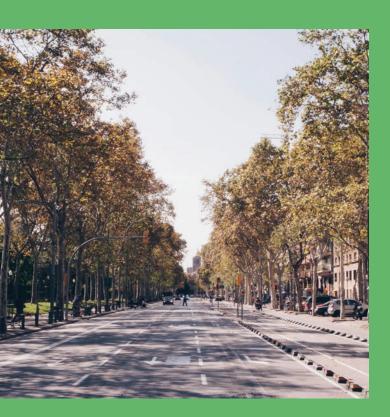
**Ecological Economics** 

Research group Generalitat de Catalunya 2021 SGR 00783. Principal investigator Joan Villanueva Ribes

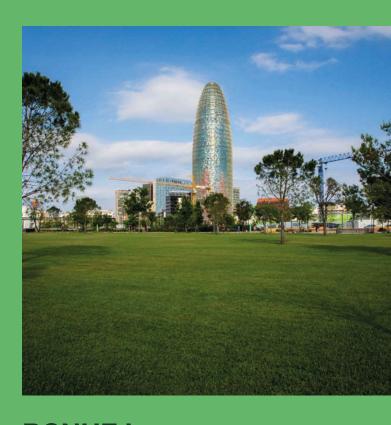
IMPACTANT studies the impact of human activities on the natural environment. The highly interdisciplinary approach combines tools from environmental chemistry, remote sensing, wildlife observation and citizen science, bridging the natural and social sciences to study the Earth System from an integrated perspective.

Research group Generalitat de Catalunya 2021 SGR 01502. Principal investigator Giorgos Kallis

ECOLOGICAL ECONOMICS is the interdisciplinary science of the study of sustainability. Our mission is to develop, apply and disseminate critical knowledge necessary for understanding causes and solutions to environmental problems linking them to economic systems and policies that create or address these problems.







BCNUEJ

Barcelona Laboratory for Urban Environmental Justice and Sustainability

Research group Generalitat de Catalunya 2021 SGR 00577. Principal investigator Oriol Marquet

URBAN MOBILITY aims to adapt mobility studies to rapidly changing urban mobility patterns. Focused on generating innovative global knowledge, educating students for future challenges, and serving as a hub for research, public and private sectors. Key research areas include mobility patterns, urban form, gender inclusion, new methodologies, and policy evaluation. The research is characterized by innovative methodologies and high interdisciplinarity.

Research group Generalitat de Catalunya 2021 SGR 00116. Principal investigator Isabelle Anguelovski

BCNUEJ's research is dedicated to fostering just, inclusive, and sustainable cities. It prioritizes equity in urban planning, focusing on historically marginalized groups. Their work addresses emerging urban inequalities, exploring environmental justice and sustainability through interdisciplinary approaches, including urban planning, policy, sociology, geography, and planning health.



#### **EARLYFOODS**

Evolution and impact of early food production systems



#### **IASTE**

Integrated assessment: sociology, technology, and the environment

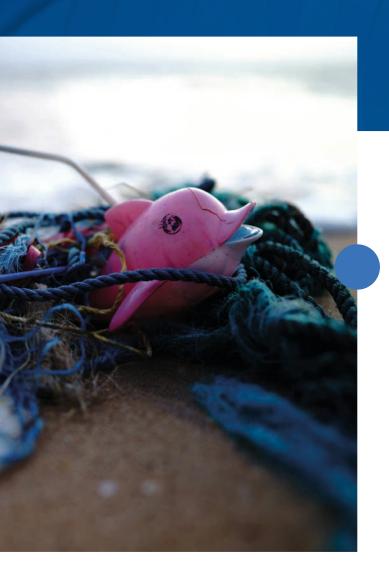
Research group Generalitat de Catalunya 2021 SGR 00527. Principal investigator André Colonese

EARLYFOODS is a collaborative research initiative uniting scientists in environmental-social sciences and prehistoric archaeology at Universitat Autonoma de Barcelona. It seeks to enhance knowledge of early food production systems, exploring their origins, evolution, and environmental impacts in Southern Europe, Anatolia, and South America. EarlyFoods serves as a catalyst for further research in these regions.

Research group Generalitat de Catalunya 2017 SGR 230. Principal investigator Mario Giampietro

The overarching research objective of IASTE is to replace the technocratic approach of evidence-based policy with a more effective approach of coproduction of knowledge claims to inform policy in the face of uncertainty.

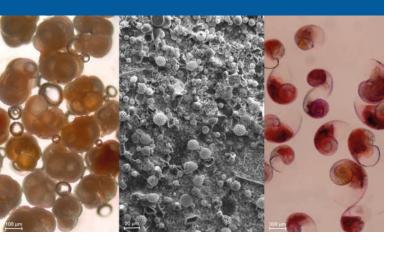
## Oceans



This challenge investigates the impacts of global change on oceanic and coastal systems and the potential of distinct policy pathways towards sustainable and equitable interactions with marine environments and their resources. It integrates social and natural science-based analyses which assess oceanic and coastal changes and propose transformative strategies for sustainable human-ocean interactions.

#### **SA.1**

New finding provides better understanding of oceans' capacity to absorb atmospheric CO<sub>2</sub>



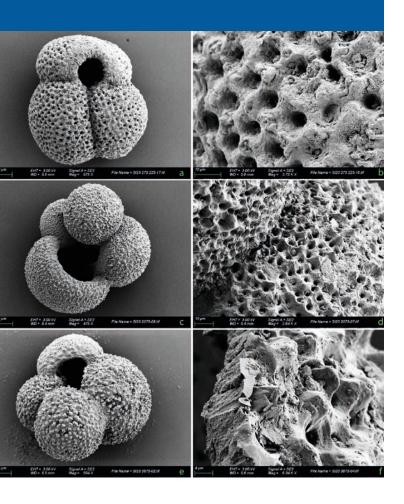
Ziveri, P., Gray, WR., Anglada-Ortiz, G., Manno, C., Grelaud, M., Incarbona, A., Rae, JWB., Subhas, AV., Pallacks, S., White, A., Adkins, JF. & Berelson, W. (2023). Pelagic calcium carbonate production and shallow dissolution in the North Pacific Ocean. Nature Communications, 14:805.

The ocean has removed roughly a third of the carbon dioxide (CO<sub>2</sub>) released by humans since the Industrial Revolution. Understanding the processes that control the exchange of carbon between the ocean and atmosphere is key for projecting the future dynamics of CO<sub>2</sub>. Ocean carbonate cycling is an important component of CO, dynamics and we discovered that the exchange of carbon between the atmosphere and ocean is modulated by the production and shell dissolution of a unique group of photosynthesizing calcifying plankton (coccolithophores). This research highlights that the other two main planktonic calcifying groups, zooplankton (pteropods) and foraminifera, play a secondary role in the context of atmospheric CO<sub>2</sub> modulation. This extensive shallow dissolution explains the apparent discrepancy between previous estimates of CaCO<sub>3</sub> production derived from satellite observations / biogeochemical modelling versus sinking particle estimates from shallow sediment traps. The finding suggests that the processes driving shallow CaCO<sub>2</sub> dissolution are key to understanding the role of planktonic calcifiers in regulating atmospheric CO<sub>2</sub>. This is important as more dissolution will increase the ability of water to hold CO<sub>2</sub>.



#### SA.2

Anthropogenic acidification of surface waters drives decreased biogenic calcification in the Mediterranean Sea



Anthropogenic carbon dioxide (CO<sub>2</sub>) emissions have increased alarmingly in recent decades causing a decrease in ocean pH, a phenomenon known as ocean acidification (OA). OA is believed to be detrimental to marine calcifiers but conclusions are largely based on experimental results and crucial confirmation from the sedimentary record is missing.

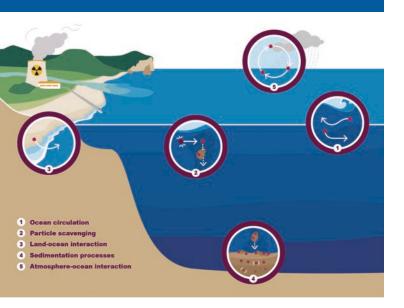
This study analyses foraminiferal records from different Mediterranean sites: the Alboran Sea. off the coast of Barcelona, and the Strait of Sicily, spanning the past two thousand years. Foraminifera are a common type of marine calcifying zooplankton that live in the upper ocean and are very sensitive to climatic and environmental changes. These single-celled organisms build a calcium carbonate shell that has been thinning since the onset of the industrial revolution. This shows that this group of ecologically and biogeochemically important zooplankton has already been affected by OA with potentially negative consequences for marine ecosystem services, including climate regulation.

Pallacks, S., Ziveri, P., Schiebel, R., Vonhof, H., Rae, J., Littley, E., Garcia-Orellana, J., Grelaud, M., Langer, G. & Martrat, B. (2023). Anthropogenic acidification of surface waters drives decreased biogenic calcification in the Mediterranean Sea. Communications Earth & Environment, 4(1).



https://doi.org/10.1038/s43247-023-00947-7

## SA.3 Radionuclides as Ocean Tracers



Source: Rodellas et al., 2023.

Radionuclides are powerful ocean tracers that provide key information on fluxes, pathways, and time scales of marine processes. This book chapter published in "Marine Analytical Chemistry" led by Valentí Rodellas provides a comprehensive overview of the application of radionuclides as tracers of ocean processes. The chapter includes four sections on:

- The main principles of radioactivity and the origin of radionuclides
- The key characteristics that allow using radionuclides as ocean tracers
- Three instructive examples of applications of radionuclides that cover different marine processes (the ocean biological carbon pump, submarine groundwater discharge, and large-scale ocean circulation)
- 4. The different methods used to measure radionuclides in seawater. The chapter is a useful resource for students, teachers, and anyone new to this exciting field of research

Rodellas, V., Roca-Martí, M., Puigcorbé, V., Castrillejo, M. & Casacuberta, N. (2023). Radionuclides as Ocean Tracers. In: Blasco, J., Tovar-Sánchez, A. (eds) Marine Analytical Chemistry. Springer, Cham.



https://doi.org/10.1007/978-3-031-14486-8\_4

Bridging archaeology and marine conservation in the Neotropics



Understanding the scale of marine population decline and diversity loss requires a long-term perspective that incorporates information from a range of sources. The Southern Atlantic Ocean represents a major gap in our understanding of pre-industrial marine species composition. In this study, Fossile et al. performed an extensive literature review of Middle and Late Holocene marine fish remains along the southern coast of Brazil. The work found evidence for both generalist and specialist fishing practices in pre-European times, with large body size and body mass caught regularly over hundreds of years. They assessed species compositions and relative abundances spanning the last 9500 years and found a significant decline in fish diversity in recent times, possibly associated with commercial overfishing. According to ICTA-UAB researcher and PI of the project, Andre Colonese, Brazil preserves archaeological sites that serve as archives of pre-industrial biological diversity, providing valuable insights for informing conservation policies. The results of this work have been published in PlosOne.

© Thiago Fossile

Fossile, T., Herbst, D. F., McGrath, K., Toso, A., Giannini, P. C. F., Milheira, R. G., Gilson, S-P., Ferreira, J., da Rocha Bandeira, D., Haimovici, M., Ceretta, B., Bender, M. G., & Colonese, A. C. (2022). Bridging archaeology and marine conservation in the Neotropics. PlosOne.



https://doi.org/10.1371/journal.pone.0285951

# Land



This challenge focuses on the analysis of the combined effects of climate and other drivers of global change on the sustainability of rural landscapes and livelihoods, across many and diverse geographical regions and peoples. It brings together theories and methods across the social sciences to understand how environmental impacts are perceived and managed, and how policies for rural development and environmental conservation perform.

Comparing State Protected
Areas and Community
Conservation



How do state protected areas compare with community-based measures? This apparently simply question is remarkably hard to answer. A review, with over 50 authors, of evidence (almost) worldwide published in the Annual Review of **Environment and Natural Resources found** that good rigorous data were scarce. They were best available for tropical forests, but rare for other ecosystems (and the answer to the question in tropical forests is not particularly clear cut). More than that however, the research cast doubt on the helpfulness of this sort of question at the global level. Rigorous large-scale comparisons of their very nature entail restricted sets of variables which can leave out much that matters most to people living in or near the places in question. Moreover actually distinguishing between state protected areas, and community managed places, and places where management is meant to have been devolved, but has not, can be hard. There is a tendency in the data showing that community conservation measures are robust, but this is an issue that is best tackled at smaller scales.

A review, with over 50 authors, of evidence (almost) worldwide published in the Annual Review of Environment and Natural Resources found that good rigorous data were scarce.

Combined technical assistance and payments reduce deforestation in Colombia's Amazon

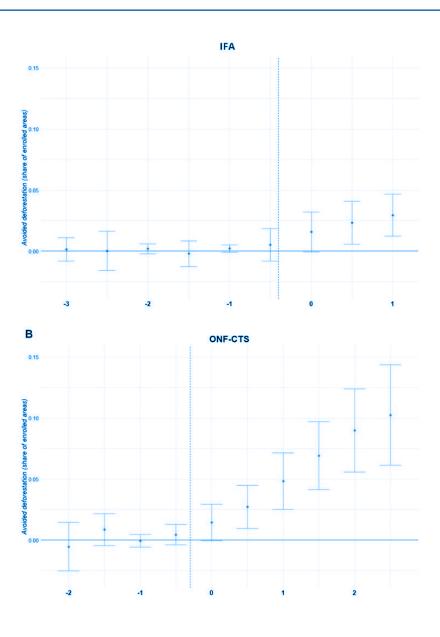


Photo © Esteve Corbera

Forest cover is in this case on average 12.0% higher in enrolled areas than in similar non-enrolled areas.

The Amazon region has lost 20% of its forest cover since the early 1970s but, in Colombia, the country's forests remained relatively well conserved and deforestation rates low until the mid 2010s. Then, when the Peace Accords were signed and the presence of armed groups diminished, deforestation skyrocketed and both government and NGO-driven conservation and sustainable land-use management programs began to be promoted in response. In this study, researchers analyzed for the first time the effectiveness of two forest conservation programs in Colombia's department of Guaviare: the Ministry of the Environment Amazon's Forest Incentive program (IFA), which economically rewards farmers and indigenous communities to keep forests standing, and the NGO ONF-Andina "Caminemos Territorios Sostenibles" program (CTS), which provides technical assistance for the development of farmbased land-use plans. The findings suggest that monetary and in-kind incentives combined can play a key role in halting deforestation in the Amazon's agricultural frontiers and the researchers advocate for more coordinated and upscaled efforts of this kind in the region. This work was submitted for review to PLOS One, and it is an output of the project PES-Emotive (PID2019-109758GB-I00), funded by the Spanish Ministry of Science and Innovation.





The dotted line represents the beginning of the program and t=0 marks the beginning of the contracts analyzed, 2021-2022 for IFA and 2018/2019-2021/2022 for ONF-CTS. The former's impact on avoided deforestation on enrolled parcels is observed one year after implementation and slightly increases over the evaluation period. Forest cover is on average 2.9% higher in

IFA enrolled parcels than in similar, non-enrolled areas. The impact of the ONF-CTS is also noticed straight after implementation and increases over the 3-year analysis period. Forest cover is in this case on average 12.0% higher in enrolled areas than in similar non-enrolled areas.

Article: Charoud et al., 2024, under review.

Family farm succession and agroecology transitions.

A window of opportunity?



The generational renewal in family farms has become a pressing challenge for the sustainability of the family farming model, and agriculture more broadly. In Europe, the share of farm managers under 35 years old has fallen from 14% in 2010 to 6,5% in 2020, while farm managers aged over 55 have increased to almost 60% in 2020. This study analyzed how succession shapes the farm sustainability strategies that young farmers adopt, paying special attention to the role of the family. They draw on in-depth interviews to young farm successors in Castilla y León, Spain, who had adopted a diversity of farm development strategies ranging from farm diversification and agroecology-based production to farm specialization and intensification of industrial agriculture methods.

The study shows that the blueprint, or standard family succession encourages young farmers to continue with – and intensify – the unsustainable farming strategies of their parents, rather than

transforming them. The findings illuminate the risks of taking sustainability for granted in the standard generational renewal of family farms and encourage further research on the synergies and trade-offs involved. Researchers argue that generational renewal policies should integrate sustainability principles and broaden their compass to support not only well stablished successors, but also disruptive succession processes, and provide specific support for agroecological transitions. This work has been submitted for review to the Journal of Rural Studies.

Biocultural criteria to tackle the biodiversity crisis



In this article, researchers explore an approach to connect the biological as well as the cultural conservation status of different components of nature to assess extinction risks.

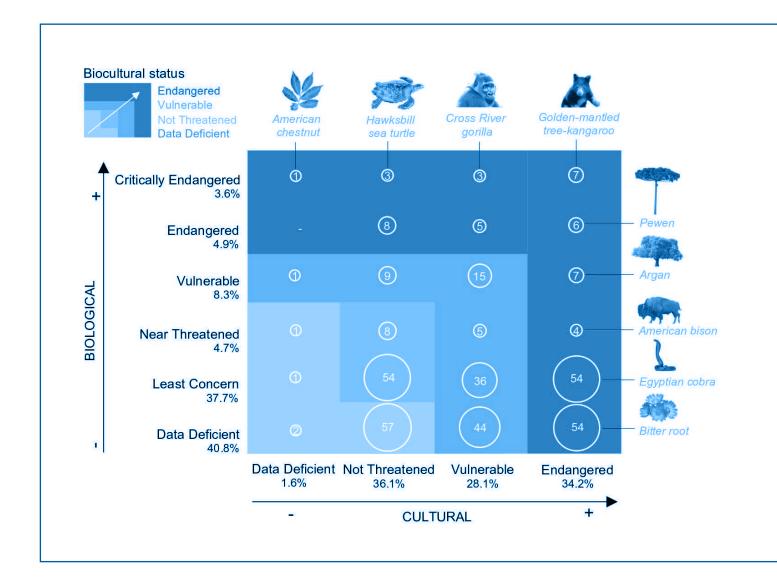
They compiled the most comprehensive list of culturally important species: 385 wild species (mostly plants) that have a recognized role in supporting cultural identity, as they are generally the basis for religious, spiritual and social cohesion, and provide a common sense of place, purpose and belonging. Information on species extinction risks from IUCN and information on language vitality were used to determine the risk of a culture of disappearing (i.e., the more a cultural group's language use declines, the more that culture is threatened and the more vulnerable are cultural uses of species).

They then combined a species' cultural and biological vulnerability to arrive at its biocultural status. This biocultural framework and metric show that high levels of cultural loss, particularly among

Reyes-García, V., Cámara-Leret, R., Halpern, B. S., O'Hara, C., Renard, D., Zafra-Calvo, N., & Díaz, S. (2023). Biocultural vulnerability exposes threats of culturally important species. Proceedings of the National Academy of Sciences of the United States of America, 120(2), e2217303120. Article e2217303120.



https://doi.org/10.1073/pnas.2217303120



Indigenous peoples, swamp the influence of biological status on assessing biocultural status. When a culture dwindles, the species that are important to that culture are also under threat. To be effective, more conservation efforts need to consider the vulnerability of both the species and the people that have historically cared for them.

385 wild species (mostly plants) that have a recognized role in supporting cultural identity, as they are generally the basis for religious, spiritual and social cohesion, and provide a common sense of place, purpose and belonging.

# Consumption



This challenge explores how the production and consumption of goods and services relate to the use of raw materials and energy, the resulting environmental impacts during their lifespan, and how they affect technological transitions and human wellbeing. Novel product inventories which combine Life Cycle Analysis with Material Flow Analysis, and datasets of electronic goods to facilitate re-use and recycling are being developed.

Research on electric vehicle batteries to improve their sustainability



Batteries are becoming key for the decarbonization of the transport sector, especially in electrical vehicles.

They are generally analyzed based on characteristics such as chemistry, energy density, power capacity, cycle life, lifetime among others. To move towards their more sustainable design, it becomes key to investigate other aspects such as their internal design, description of components and their potential reuse and recycling. As part of project H2020 DigiPrime (contract 873111), researchers shed light on some of these relevant aspects.

They provided a more detailed description of the components that are contained and their potential reuse rate (max 80%), investigated the diverse components contained in diverse typologies of batteries (full electric, hybrid, and plug-in) and proposed a novel circularity scoring system to evaluate their potential to reuse, remanufacture and recycling. The methodology was validated in a workshop organized at ICTA-UAB.

Cruz Ugalde J and Talens Peiro, L. (2024). Circularity scoring system: A product specific application to lithium-ion batteries of electric vehicles. Resources, Conservation and Recycling, 205, Article 107546.



https://doi.org/10.1016/j.resconrec.2024.107546

Resource demand and environmental impacts may endanger the implementation of energy transition strategies

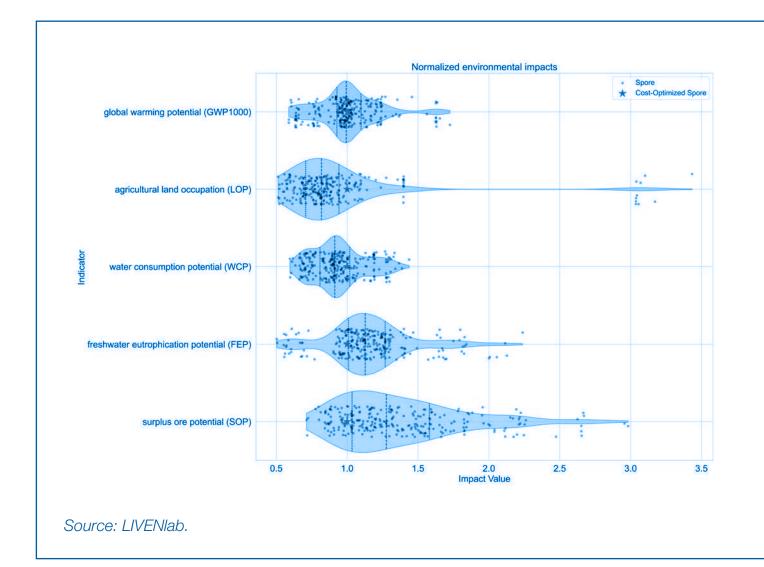


Environmental parameters play a relevant role in determining sustainable energy systems but are often overlooked in energy system optimization models.

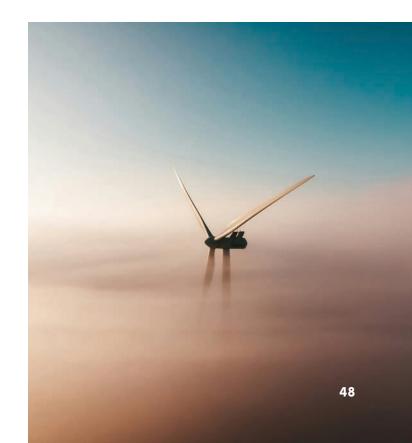
This omission can lead to misleading decision-making processes. Within the LIVEN group at ICTA-UAB, researchers developed ENBIOS, a python-based framework that combines Life Cycle Assessment (LCA) with Multi-Scale Integrated Analysis of Societal and Ecosystem Metabolism (MuSIASEM).

The ENBIOS framework was used to compare the impacts of 260 sub-optimal pathways of energy transition in Portugal, then comparing them with an energy pathway optimized for technical and economic parameters only. Based on this research, traditional energy system models were found to be inadequate when it comes to generating low-impact energy system configurations.

ENBIOS is a python-based framework that combines Life Cycle Assessment (LCA) with Multi-Scale Integrated Analysis of Societal and Ecosystem Metabolism (MuSIASEM).



Traditional energy system models were found to be inadequate when it comes to generating low-impact energy system configurations.



SIRAH reduces water use and costs of irrigation systems in urban agriculture



Sirah is an innovative proof-of-concept of the previous projects Fertilecity I and Fertilecity II developed by Sostenipra research group, Tectum Garden (Sostenipra's start-up company) and UPC.

Following the lessons learned about the resource efficiency use on the greenhouse rooftops at ICTA-UAB building, Sirah aims to replicate the outcomes through an integrated smart urban agriculture station and make it accessible and affordable to people.

The first prototype was tested in Escola La Pau (Sant Sadurni d'Anoia) as an example of an outdoor urban garden. This school is also a partner in the Magnet Alliance. A second prototype made of wood for indoor spaces is tested in the Sala de Revistes, Biblioteca Humanitats UAB (Humanities Library). SIRAH allows us to save water and provide smart fertigation.

The first prototype was tested in Escola La Pau (Sant Sadurni d'Anoia) as an example of an outdoor urban garden. This school is also a partner in the Magnet Alliance.

The evolution of the identity of socio-economic systems from the narrative of biosemiotics



Enso Calligraphy by Kanjuro Shibata XX, CC BY-SA 3.0.

The functioning of human society depends on the formation of sociotechnical imaginaries that are needed to hold together the social fabric when reproducing and updating the social identity. Indeed, in the process of decision-making, existing validated knowledge claims and shared values affect each other in an impredicative way, determining each other's usefulness.

New research has shown that this biosemiotic process becomes problematic in the current situation of polycrisis. Findings indicate that exploring new consumption and production patterns that do not (yet) exist requires two radical changes:

- Prioritizing sociotechnical imaginaries that emphasize taking care of each other and the planet rather than economic growth
- Stopping the use of meaningless complicated scientific models that generate "roadmaps to nowhere".
   Both demand that sustainability science learns how to co-create new desirable futures using participatory quantitative storytelling

https://doi.org/10.1007/s11625-022-01267-z

# Cities



This challenge aims to advance actions and projects for climateresponsive, equitable, and healthy cities and urban systems. It expects to generate new quantitative and qualitative evidence on the effectiveness of urban environmental actions and projects for meeting climate and sustainability goals; on their effect on the urban atmospheric or metabolism of resources; on their social and wellbeing impacts; and on the governance and planning frameworks that can maximize environmental and social goals in a changing climate.

SA.1

Equity concerns in transformative planning: Barcelona's Superblocks under scrutiny

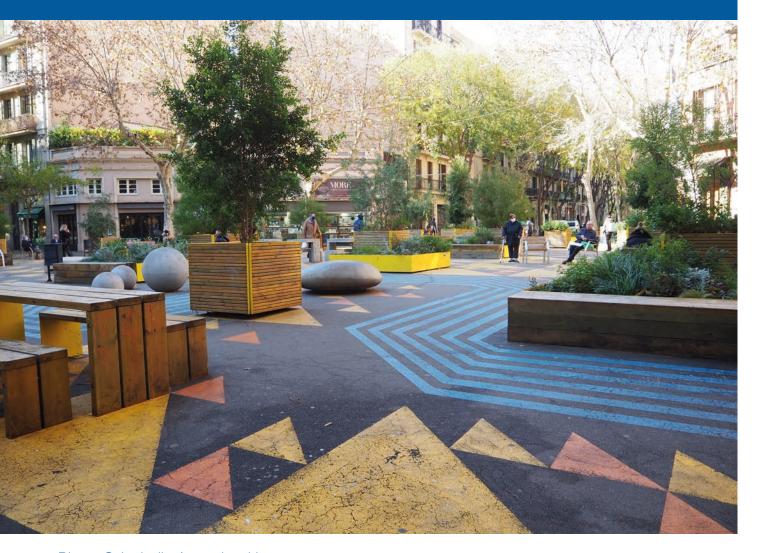


Photo © Isabelle Anguelovski

Transformative planning radically restructures urban land uses, designs, and streetscapes to respond to climate change and improve residents' health and quality of life. In this collaborative paper, three ICTA-UAB researchers examine how transformative planning may overlook critical questions related to equity

relying on the example from Barcelona's must-celebrated transformative plan to implement Superblocks. The study argues that questions about distributional and relational equity, including intersectional equity-driven needs assessment and prioritization; spatialized local benefits or burdens; mobility justice goals; exclusion

Figure by: I. Anguelovski, J. Honey-Rosés, O. Marquet

# Equity questions in transformative planning

Barcelona's Superblocks



Source of Picture: Ajuntament de Barcelona



Do transformational projects shift burdens to other sites & neighborhoods?

Are transformational project helping achieve mobility equity and justice:

Distributional and relational equity



Is transformative planning contributing to a different model of civic participation?

Procedural equity

Is the reconceptualization of the original form & design of transformative projects addressing equity concerns?

Distributional, relational, and procedural equity

and green gentrification, together with procedural equity, must be high on the agenda for transformative planning to achieve urban justice for all. They may also involve key trade-offs between addressing social and environmental vulnerabilities. The results of this analysis have been published in the interdisciplinary journal *Cities and Health*.



Anguelovski, I.., Honey-Rosés, J., & Marquet, O. (2023). Equity concerns in transformative planning: Barcelona's Superblocks under scrutiny. Cities & Health, 7(6), 950-958.



https://doi.org/10.1080/23748834.2023.2207929

"Raval Resilient" - A
participatory photography
project on the vulnerability
of migrant residents
to heatwaves in the
neighborhood of el Raval,
Barcelona



Presentation of photovoice project at Biennal Ciutat i Ciencia 2023

Under the umbrella of the Biennal Ciutat i Ciencia 2023 of the Barcelona City Council and co-curated by ICTA-UAB researcher Helen Cole, this project set out to understand how immigrant residents perceive their neighborhood during extreme climatic events and what strategies they follow to protect and adapt.

This project was a collaboration between researchers from Universidad de Alcalá, Madrid and ICTA-UAB researcher Panagiota Kotsila.

Throughout a series of workshops, neighbors with an immigrant background from countries of the Global South, take and collect photographs and co-create a narrative around the effect of heatwaves in El Raval. Research showed that labor and housing precarity and the limited access to public spaces of heat relief is shaping heat inequities, driven not only by neoliberal urbanism but also systemic racism that migrants experience in formal and informal institutions.

Drawing from feminist political ecology, researchers advanced a notion of vulnerability, not as a mono-dimensional



Project video



Ciutat i Ciencia video



Presentation of the theoretical framework behind the project

or fixed positionality, but an embodiment of intersectional injustice and a place from where radical adaptations emerge. Such adaptations include self-organized spaces and networks of solidarity around issues of social justice. Researchers argued for redefining the means and forms of urban climate adaptation in ways that will address the underlying drivers of vulnerability and the situated knowledges around it.

The project set out to understand how immigrant residents perceive their neighborhood during extreme climatic events and what strategies they follow to protect and adapt.

Participative workshop helps us determine drivers and obstacles of urban agriculture in urban areas

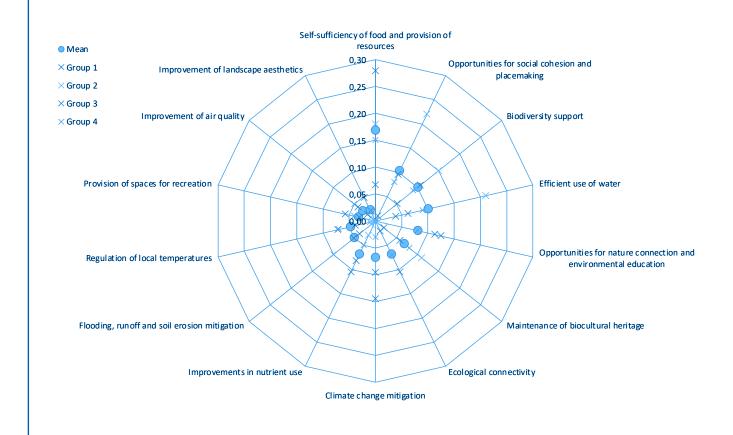


In the Metropolitan Area of Barcelona (AMB), agricultural land has reduced from 20% to 8-9% of the surface despite municipal actions for its promotion. To better understand the limitations and obstacles that urban agriculture has been facing, and the way to move forward to successfully alter the decline of agricultural lands, a co-creation workshop was organized by URBAG on November 25th, 2022, at ICTA's premises. Attended by twenty-five different stakeholders related to the field (public, academic, private), the workshop featured talks by specialists covering the present state and future possibilities of urban agriculture in the city, along with insights into the social and metabolic impacts of this practice.

The session also included two interactive exercises, one aimed at establishing criteria for envisioned future scenarios for urban agriculture in the AMB, and the other focused on identifying pathways to enhance urban agriculture. Results highlight three crucial aspects to be achieved by future urban agriculture: food self-sufficiency, biodiversity support, and social cohesion. Obstacles to urban agriculture fall into four categories: sociopolitical (e.g., globalization, lack of agricultural knowledge), normative

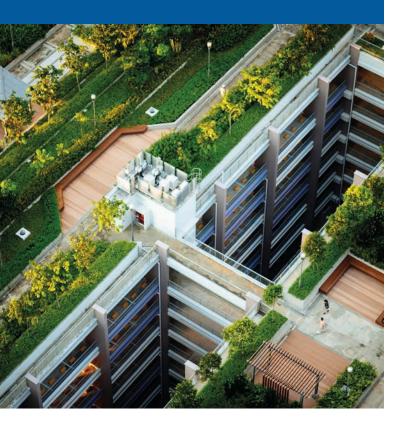
(e.g., outdated legal framework), economic (e.g., uncertainty and competition), and infrastructure/technology (e.g., limited land, outdated tech). Strategies to overcome such obstacles include environmental education, a new legal framework, public aid, resource circularity and rural facility improvements.





A co-creation workshop was organized by URBAG on November 25th, 2022, at ICTA's premises.

An integrative, multicriteria method to assess Nature based solutions in light of urban vulnerabilities



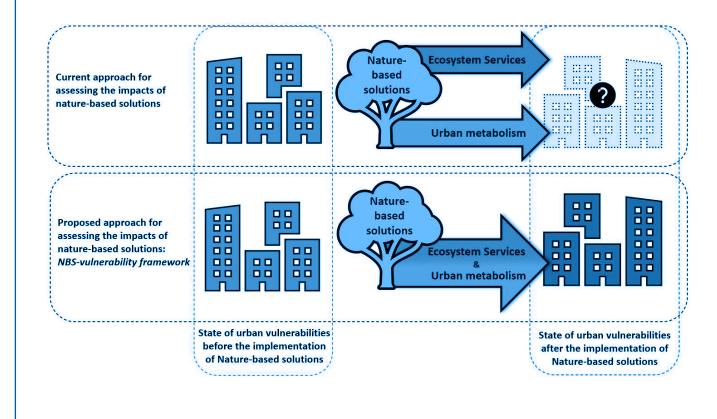
Stakeholder workshop for assessing the relevance of vulnerabilities influenced by green roofs in Oslo

Nature-based solutions (NBS) are increasingly employed to address urban challenges. Typically, NBS planning emphasizes environmental impacts and ecosystem services, often overlooking their role in addressing vulnerabilities (i.e., the susceptibility to harm of both social and ecological systems). Building on this, URBAG has developed a framework that relates ecosystem services and urban metabolism analyses to spatially explicit vulnerabilities. Its successful application to the Metropolitan Area of Barcelona involves assessing the effects of expanding (peri-)urban agriculture in relation to local vulnerabilities. Results reveal diverse spatial outcomes and trade-offs in local vulnerabilities.

Results have been presented during the 11th International Conference on Industrial Ecology (ISIE) (Leiden, 2-5 July 2023). Additionally, a scientific article has been accepted in the journal Sustainable Cities and Society.

The framework is now expanding to assess how NBS influence vulnerabilities beyond urban limits. To achieve this, the concept of planetary boundaries is being incorporated to account for the broader environmental implications of urban NBS on global ecosystems. This updated framework is undergoing testing using the case study of green roofs in

Graphical representation of the current approach for assessing the impacts of nature-based solutions (NBS) in urban environments versus proposed nature-based solutions vulnerability framework



Oslo. Results were shared in an online participatory workshop on January 29th, 2024. The workshop aimed to assess the relevance of the impacts of green roofs in Oslo in vulnerabilities within and beyond

urban boundaries and counted with the presence of ten stakeholders related to the field (public, academic, private).

Camacho-Caballero, D., Langemeyer, J., Segura-Barrero, R., Ventura, S., Mendoza Beltran, A. & Villalba, G. (2024). Assessing nature-based solutions in the face of urban vulnerabilities: a multi-criteria decision approach. Sustainable Cities and Society, 105257.



https://doi.org/10.1016/j.scs.2024.105257

# Policies



This challenge aims to advance actions and projects for climate-responsive, equitable, and healthy cities and urban systems. It expects to generate new quantitative and qualitative evidence on the effectiveness of urban environmental actions and projects for meeting climate and sustainability goals; on their effect on the urban atmospheric or metabolism of resources; on their social and wellbeing impacts; and on the governance and planning frameworks that can maximize environmental and social goals in a changing climate.

Shades of green growth skepticism among climate policy researchers



Proponents of green growth endorse the desirability and feasibility of aligning environmental goals with continued economic expansion. However, a growing body of research, rooted in the concept of post-growth, is challenging the fundamental viability and desirability of green growth. A global survey conducted by researchers at ICTA-UAB, involving 789 climate policy experts, revealed widespread scepticism towards green growth. Globally, 73% of researchers expressed views consistent with agrowth or degrowth perspectives. A statistically significant relationship was found, indicating that as the GDP per capita of their home country increased, respondents' positions shifted away from green growth towards degrowth. This supports the notion that as national income rises, environmental goals start to take precedence over economic growth. ICTA-UAB researcher Lewis King emphasized that "this finding underscores the importance of considering alternative post-growth perspectives, including agrowth and degrowth strategies". These findings have been published in *Nature* Sustainability.

King, L. C., Savin, I., & Drews, S. (2023). Shades of green growth scepticism among climate policy researchers. Nature Sustainability, 6(11), 1316-1320.

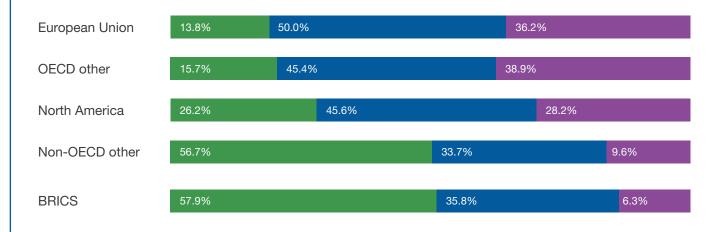


https://doi.org/10.1038/s41893-023-01198-2

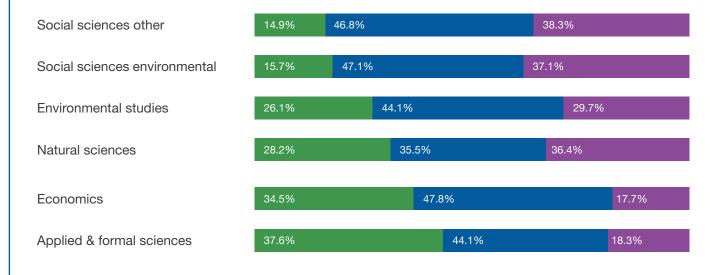
# Global average



# Country of origin



# Research discipline



Post-growth: A viable path to limiting global warming to 1.5°C



Existing climate mitigation scenarios assume future rates of economic growth that are significantly higher than what has been experienced in the recent past. In this article researchers explore how assuming lower growth changes the range of mitigation possibilities. The results show that low growth makes it more feasible to decrease emissions in a way that is consistent with 1.5°C–2°C of warming.

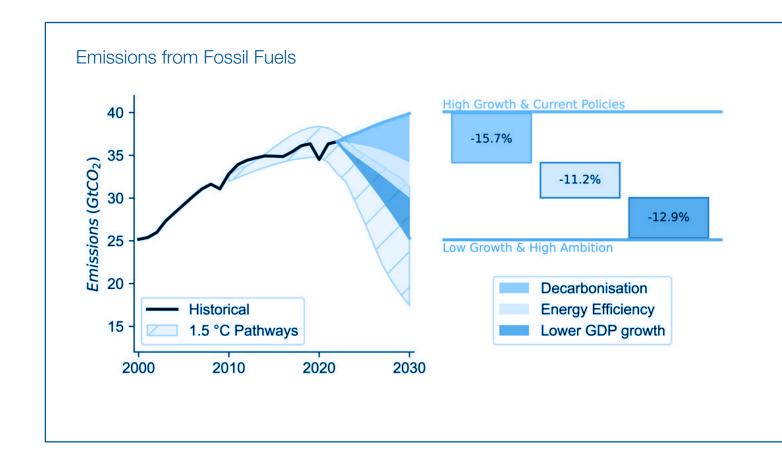
Moreover, low growth reduces the need to rely on unprecedented buildout of low-carbon energy infrastructure, and the unprecedented rates of energy-GDP decoupling that characterize existing scenarios. By contrast, pursuing higher growth rates jeopardizes the Paris Agreement.

The challenge is that lower growth is commonly associated with recession, which raises concerns about equity, and the ability to finance a low-carbon energy transition. Recent literature on achieving a "post-growth" transition points to novel policies that could address these problems, which should be explored and evaluated in future mitigation scenarios.

Slameršak, A., Kallis, G., O'Neill, D. W., & Hickel, J. (2024). Post-growth: A viable path to limiting global warming to 1.5°C. One Earth, 7(1), pp. 44-58.



https://doi.org/10.1016/j.oneear.2023.11.004



The results show that low growth makes it more feasible to decrease emissions in a way that is consistent with 1.5°C-2°C of warming.



SA.3

Mapping environmental conflicts

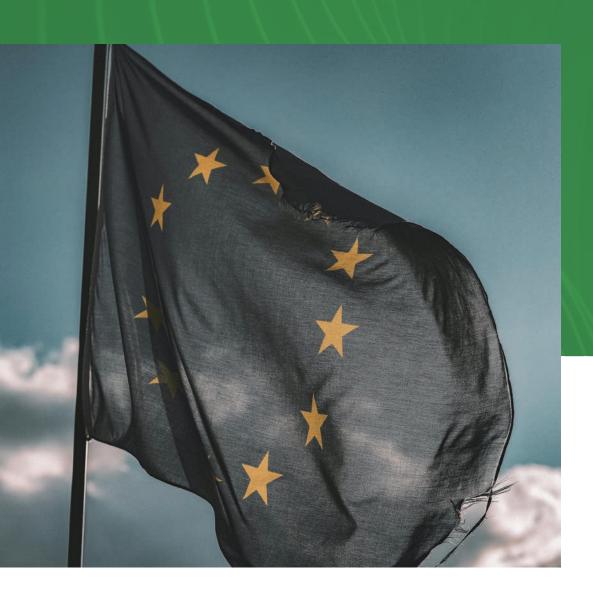


Around the world, environmental conflicts are mounting. The situation underscores the urgent need for justice in the face of ecological harm. In this context, ICTA-UAB develops the Environmental Justice Atlas (EJAtlas.org) that has reached 4 000 entries by early 2024, and should grow further, enlarging its geographical and thematic coverage. This global database draws on both activist and academic knowledge to document conflicts across more than 100 fields. It captures the commodities at stake, the involved

actors, impacts, forms of mobilization, and outcomes. This comprehensive approach allows for analyses of comparative political ecology aimed at developing a general theory of ecological distribution conflicts. The project also explores the efficacy of grassroots protests versus institutional public policies. Over 80 academic papers based on the EJAtlas have been published by ICTA members between 2014 and 2024.

8

Our funding comes from a variety of sources. Most of our projects are funded by EU collaborative or European-Council projects, with a substantial part of our research budget also coming from competitive calls launched by Spanish, Catalan, and Barcelona public funding agencies.



# Projects awarded during 2023 (chronological order by starting date)

Study of the content of airborne pollens and spores from two sampling stations of the Xarxa Aerobiològica de Catalunya (XAC), in Camp de Tarragona and in Terres de l'Ebre 2023

Jordina Belmonte Soler

Diputació de Tarragona: 69.943,73 €

 $1/01/2023 \rightarrow 31/12/2023$ 

**REAL:** A post growth deal

Jason Hickel and Giorgos Kallis

European Commission: 6.594.932,5 € 1/05/2023 → 30/04/2029 **CCS-B30:** Citizen science and sustainability in the B30 territory

Cristina Madrid-López

Fundación Española para la Ciencia y la Tecnología (FECYT): 35.000 € 1/07/2023 → 30/06/2025

**ESBN:** Systematization of nature-based solutions in Spain

Johannes Langemeyer

Fundación Biodiversidad: 159.824 € 1/08/2023 → 30/05/2025 **GreenME:** Advancing greencare in Europe: an integrated multi-scalar approach for the expansion of nature-based therapies to improve mental health equity

Margarita Triguero Mas and Helen Cole

European Commission: 460.705,25 € 1/09/2023 → 31/08/2027 RECOUNT: Unveiling the irrigation paradox: a multi-methods study of technological frames and mental accounting across Spanish water user

Sergio Villamayor-Tomás

Ministerio de Ciencia e Innovación: 188.583 € 1/09/2023 → 31/08/2025

PostReNex: Tackling the paradox of growth and sustainability - A SDG indicator framework for water, energy, land, and materials based on postgrowth and resource nexus thinking

Giorgos Kallis

European Commission: 165.312,95 € 1/10/2023 → 30/09/2025 ClimateJusticeReady

Isabelle Anguelovski

European Commission: 149.998,9 € 1/10/2023 → 30/03/2025 **CONFETI:** Green valorization of CO<sub>2</sub> and nitrogen compounds of making fertilizers

Laura Talens Peiró

European Commission: 191,488 € 1/11/2023 → 31/10/2026 **PANIS:** Nutritional and health poverty in Barcelona

Gonzalo Gamboa Jiménez

Ajuntament de Barcelona, Fundación "La Caixa": 33.630 € 10/11/2023 → 10/05/2025 **FOCUSE:** Food production and provisioning through circular urban systems in European cities

Xavier Gabarrell i Durany

*Ministerio de Ciencia e Innovación: 182.710 €* 22/12/2023 → 21/12/2026 **CLIMGROW:** Climate policy vs economic growth: Opinions, models, and novel strategies

Jeroen van den Bergh

European Commission: 2.453.999,5 € 1/01/2024 → 31/12/2028

**NUTRISOIL:** Healthy soil for urban agriculture through nutrient and carbon circularity

Gara Villalba Méndez

European Commission: 149.985,1 € 1/01/2024 → 30/06/2025 **IEK-CHANGES:** Assessing long-term changes in indigenous environmental knowledge

Alvaro Fernández-Llamazares

European Commission: 1.499.922,6 € 1/01/2024 → 31/12/2028

#### **FOODCITYBOOST:**

Integrated assessment of urban farming impacts and policies for boosting sustainable urban agricultural development linking urban, peri-urban and rural areas

Xavier Gabarrell i Durany

European Commission: 310.500 € 1/01/2024 → 31/12/2027

**EPOG-DN:** Economic policies for the global bifurcation - Doctoral network

Giacomo D'Alisa

European Commission: 503.942,4 € 1/03/2024 → 29/02/2028 **ReHousin:** Contextualized pathways to reduce housing inequalities in the green and digital transition

Isabelle Anguelovski and Panagiota Kotsila

European Commission: 326.200 € 1/03/2024 → 28/02/2027

REFUTURE: The most important think tank you've never heard of: Resources for the future and the history of economic thought in environmental practice

Giorgos Kallis

European Commission: 216.699,6 € 1/06/2024 → 30/11/2026

# Individual fellowships and mobility grants

ICTA-UAB researchers at different career stages are funded by international, Spanish and Catalan research agencies.

## Senior

#### **RAMON Y CAJAL 2022**

Panagiota Kotsila

Ministerio de Ciencia e Innovación: 244.350 €

 $1/09/2024 \rightarrow 31/08/2029$ 

#### **RAMON Y CAJAL 2022**

Johannes Langemeyer

Ministerio de Ciencia e Innovación: 244.350 €

 $1/09/2024 \rightarrow 31/08/2029$ 

#### Postdoc

# PROGRAMA INVESTIGO 2023

Paula de Prado Bert

Agència de Gestió d'Ajuts Universitaris i de Recerca (AGAUR), Universitat Autònoma de Barcelona (UAB): 66.217,84 €

 $1/09/2023 \rightarrow 31/12/2023$ 

#### **JUAN DE LA CIERVA 2022**

Paula de Prado Bert

Ministerio de Ciencia e Innovación: 67.400 €

 $1/01/2024 \rightarrow 31/12/2025$ 

#### **BEATRIU DE PINOS 2022**

Arpita Bisht

Agència de Gestió d'Ajuts Universitaris i de Recerca (AGAUR): 152.348,45 € 1/01/2024 → 31/12/2026

# Research support technician

#### **PROGRAMA INVESTIGO 2023**

Clara Esteve Jordà

Agència de Gestió d'Ajuts Universitaris i de Recerca (AGAUR), Universitat Autònoma de Barcelona (UAB): 66.217,84 €

 $1/09/2023 \rightarrow 31/08/2025$ 

#### **PROGRAMA INVESTIGO 2023**

Susana Antón Quílez

Agència de Gestió d'Ajuts Universitaris i de Recerca (AGAUR), Universitat Autònoma de Barcelona (UAB): 66.217,84 €

 $1/09/2023 \rightarrow 31/08/2025$ 

#### Predoc

#### FI JOAN ORÓ 2023

Sergey Steblev

Agència de Gestió d'Ajuts Universitaris i de Recerca (AGAUR): 25.775,87 € 1/06/2023 → 31/05/2024

#### FI JOAN ORÓ 2023

Cristina Pérez Sánchez

Agència de Gestió d'Ajuts Universitaris i de Recerca (AGAUR): 25.775,87 € 1/06/2023 → 31/05/2024

#### FI JOAN ORÓ 2023

Gemma Morell Delgado

Agència de Gestió d'Ajuts Universitaris i de Recerca (AGAUR): 25.775,87 € 1/06/2023 → 19/10/2023

#### FI JOAN ORÓ 2023

Svetlana Khromova

Agència de Gestió d'Ajuts Universitaris i de Recerca (AGAUR): 25.775,87 € 1/06/2023 → 31/05/2024

#### **INPHINIT-INCOMING 2023**

Fernando Ruiz Iglesias

Fundación "La Caixa": 117.900 € 1/10/2023 → 30/09/2026

#### **INPHINIT-INCOMING 2023**

Andrés Navarro Álvarez

Fundación "La Caixa": 117.900 € 20/10/2023 → 19/10/2026

#### **INPHINIT-RETAINING 2023**

Gemma Morell Delgado

Fundación "La Caixa": 117.900 € 20/10/2023 → 19/10/2026

#### CONTRATO PARA FORMACIÓN DE DOCTORES FPI 2022

Gemma Morell Delgado

Ministerio de Ciencia e Innovación: 111.758 € 1/12/2023 → 30/11/2027 (renounced)

#### CONTRATO PARA FORMACIÓN DE DOCTORES FPI 2022

David Andres Matamoros García

Ministerio de Ciencia e Innovación: 111.758 € 1/12/2023 → 30/11/2027

## **Research contracts**

ICTA-UAB researchers have also received support from a variety of private and public agencies as well as foundations.

Collaboration agreement between the Fundación Mujeres por Africa and UAB to participate in the project "Ellas investigan"

Isabel Pont Castejón

Fundación Mujeres Por África 28/01/22 → 27/01/24 Study of the efficacy of an air purifier on the viability and allergenicity of pollen grains

Jordina Belmonte Soler

Corporación Empresarial Altra SL. 3/04/2023 → 2/08/2023 Global Atlas of Environmental Justice (EJAtlas)

Arnim Scheidel

Universitat Autònoma de Barcelona (UAB) 16/05/2023 → 15/05/2024

Socio-Environmental Vulnerability in Rural Spain

Sergio Villamayor Tomas

Centre d'Estudis Demogràfics 19/05/2023 → 18/05/2024 **Botanical workshop** 

Jordina Belmonte Soler

Laboratorios Leti, S.L. 19/05/2023 → 18/05/2024 Mapping water distribution conflicts in Iran

Marcel Llavero Pasquina

Fundació Autònoma Solidària

 $1/07/2023 \rightarrow 3/04/2024$ 

Donation of the Holberg award to contract technical personnel to ICTA for the consolidation and expansion of the Environmental Justice Atlas

Joan Martínez-Alier

 $10/07/2023 \rightarrow 10/07/2026$ 

IVU: Inèdit Innovació SL.

Jordi Oliver-Solà, Julia Martínez Blanco, Ramon Farreny Gaya

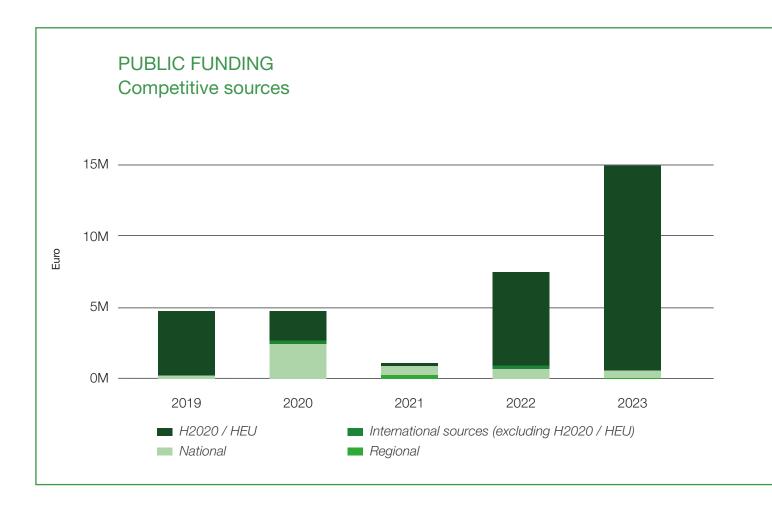
 $7/12/2023 \rightarrow 6/12/2026$ 

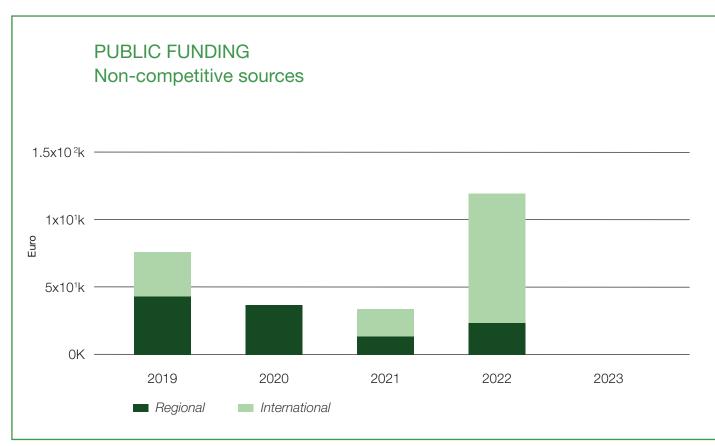
Support in the scientific and technical advising of the Picasso's house of the Parc de la Ciutadella in Barcelona, in relation to the exhibition at the Hivernacle de la Ciutadella

Xavier Gabarrell i Durany

Barcelona Regional. Agència Metropolitana de Desenvolupament Urbanístic i d'Infraestructures, S.A.

22/12/2023 → 21/08/2024





## Articles

to on the opport street

Our research is published in leading, high-impact-factor journals. 18 articles were published in Nature and Science-related journals, as well as in The Lancet, among others.

Overall, about 225 scientific articles were published in peer-reviewed journals in 2023, across more than 160 different scientific journals. Over 49% of the articles appeared in journals with an impact factor of five or higher.

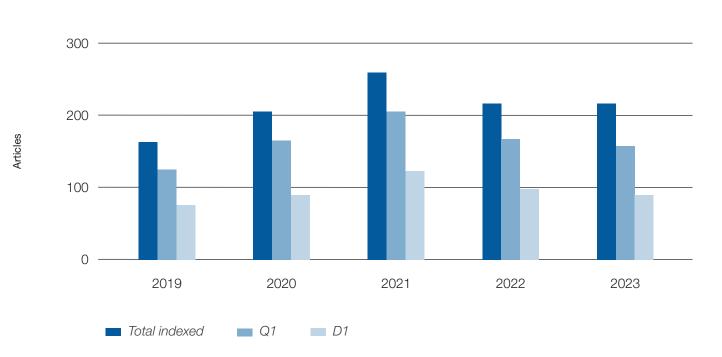


227 Indexed Articles

156 Articles Published in 1st Quartile

88 In 1st Decile

#### **PEER - REVIEW PUBLICATIONS**



#### Selected publications in indexed journals

Langemeyer, J., Ghermandi, A., Keeler, B., & van Berkel, D. (2023)

The future of crowdsourced cultural ecosystem services assessments

Ecosystem Services, 60, Article 101518

☑ https://doi.org/10.1016/j. ecoser.2023.101518 Alarcón, M., Rodríguez-Solà, R., Casas-Castillo, M.C., Molero, F., Salvador, P., Periago, C., Belmonte, J. (2023)

Influence of synoptic meteorology on airborne allergenic pollen and spores in an urban environment in Northeastern Iberian Peninsula

Science of the Total Environment, 896,165337

☑ https://doi.org/10.1016/j. scitotenv.2023.16533

Ziveri, P., Gray, W.R., Anglada-Ortiz, G., Manno, C., Grelaud, M., Incarbona, A., Rae, J.W.B., Subhas, A.V., Pallacks, S., White, A., Adkins, J.F., Berelson, W. (2023)

Pelagic calcium carbonate production and shallow dissolution in the North Pacific Ocean

Nature Communications, 14(1),805

☑ https://doi.org/10.1038/s41467-023-36177-w

Toboso-Chavero, S., Montealegre, A.L., García-Pérez, S., Sierra-Pérez, J., Muñoz-Liesa, J., Gabarrell Durany, X., Villalba, G., Madrid-López, C. (2023)

The potential of local food, energy, and water production systems on urban rooftops considering consumption patterns and urban morphology

Sustainable Cities and Society, 95,104599

☑ https://doi.org/10.1016/j. scs.2023.104599

Davtian, N., Penalva Arias, N., Rosell-Mele, A., & Villanueva Ribes, J. (2023)

Selective extraction of levoglucosan and its isomers from complex matrices using ligand exchange-solid phase extraction for analysis by liquid chromatography-electrospray ionization-tandem mass spectrometry

Journal of Chromatography A, 1695, Article 463935

☑ https://doi.org/10.1016/j. chroma.2023.463935

Scheidel, A., Fernández-Llamazares, Á., Bara, A. H., Del Bene, D., David-Chavez, D. M., Fanari, E., Garba, I., Hanaček, K., Liu, J., Martínez-Alier, J., Navas, G., Reyes-García, V., Roy, B., Temper, L., Thiri, M. A., Tran, D., Walter, M., & Whyte, K. P. (2023)

Global impacts of extractive and industrial development projects on Indigenous Peoples' lifeways, lands, and rights

Science advances, 9(23), Article eade9557

☑ https://doi.org/10.1126/sciadv. ade9557

Cubells, J., Miralles-Guasch, C., & Marquet, O. (2023)

Gendered travel behaviour in micromobility? Travel speed and route choice through the lens of intersecting identities

Journal of Transport Geography, 11

☑ https://doi.org/10.1016/j. jtrangeo.2022.103502

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. Article 104836

☐ https://doi.org/10.1016/j. landurbplan.2023.104836

Fontanals-Coll, M., Soncin, S., Talbot, H. M., Tersch, M. V., Gibaja, J. F., Colonese, A. C., & Craig, O. E. (2023)

Stable isotope analyses of amino acids reveal the importance of aquatic resources to Mediterranean coastal hunter-gatherers

Proceedings of the Royal Society B: Biological Sciences, 290(1993), Article 20221330

☑ https://doi.org/10.1098/ rspb.2022.1330

Waylen, K. A., Blackstock, K. L., Matthews, K. B., Juarez-Bourke, A., Hague, A., Wardell-Johnson, D. H., Miller, D. G., Kovacic, Z., Völker, T., Guimaraes Pereira, A., & Giampietro, M. (2023)

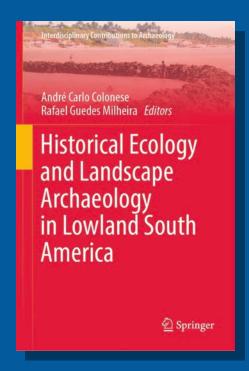
Post-normal science in practice: Reflections from scientific experts working on the European agri-food policy nexus

Environmental Science and Policy, 141, 158-167

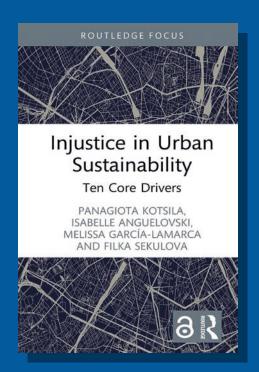
☑ https://doi.org/10.1016/j. envsci.2023.01.007



## Books



# Historical Ecology and Landscape Archaeology in Lowland South America



# Injustice in Urban Sustainability Ten Core Drivers

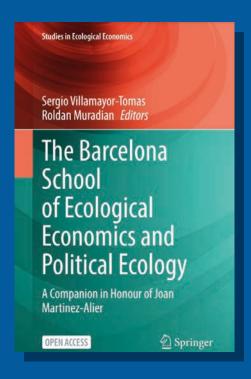
Springer, 2023. André Carlo Colonese, Rafael Guedes Milheira

This edited volume delves into how pre-Columbian societies shaped lowland South America, impacting biodiversity and landscapes. It encompasses diverse disciplines, presenting recent research on human-environment interactions from pre-Columbian to Colonial times, offering insights for modern conservation and development. Suitable for students, archaeologists, and Latin American studies enthusiasts.

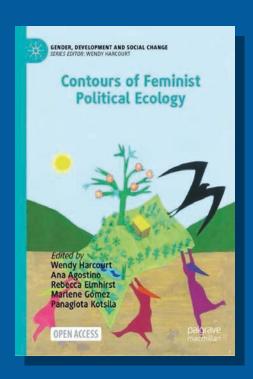
Routledge, 2023.

Panagiota Kotsila, Isabelle Anguelovski,
Melissa García-Lamarca, Filka Sekulova

This book challenges common assumptions about urban sustainability, using a typology of ten core injustice drivers. Aligned with environmental justice studies, it argues that true sustainability requires protecting housing, public space, and infrastructure rights. Empirical case studies from Europe and North America illustrate the risks of neglecting systemic inequities.







**Contours of Feminist Political Ecology** 

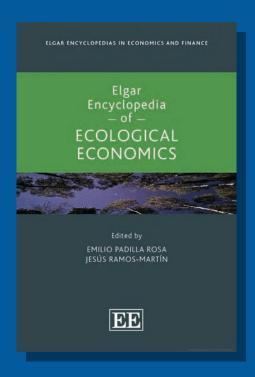
Springer, 2023. Sergio Villamayor-Tomás, Roldan Muradian

This open access book merges ecological economics and political ecology into a unified academic approach. It provides a common ground for diverse voice, addressing urgent issues at the intersection of society, economy, and the environment. Suitable for both experienced and younger researchers, it explores the Barcelona School's foundational concepts: social metabolism, environmental justice, and self-reflective science.

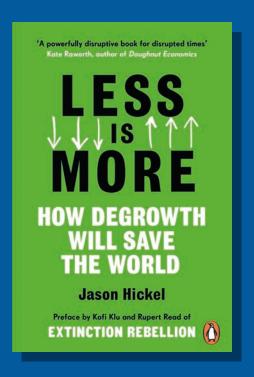
Springer, 2023.

Wendy Harcourt, Ana Agostino, Rebecca Elmhirst, Marlene Gómez, Panagiota Kotsila

This open access book delves into feminist political ecology, showcasing diverse perspectives in the ongoing discourse. With contributions from Well-Being Ecology Gender Communities (WEGO) network, it explores climate change, extractivism, health, and more, providing new insights into politics, justice, and alternatives to capitalist development.







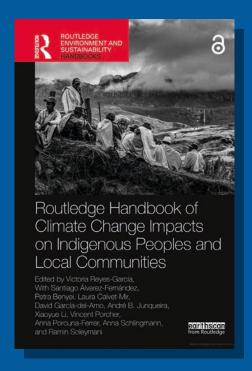
Less is More
How Degrowth Will Save the World

Edward Elgar Publishing, 2023. Jesus Ramos. Emilio Padilla

With contributions from over 100 international authors, this book is a comprehensive summary of the developments of ecological economics from the fundamental contributions to the more recent methodological debates in the field. It covers sustainable development, the limits to growth, agroecology, implications of thermodynamic laws for economics, integrated ecologic-economic modelling, valuation of natural resources and services, and renewable and non-renewable resources management.

Random House International, 2023. Jason Hickel

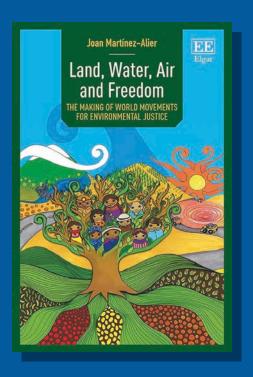
Facing a planetary crisis, Jason Hickel advocates for immediate change to a sustainable future. Rejecting perpetual growth, in this book he proposes degrowth as the solution, shifting from exploitative capitalism to a regenerative system. Addressing concerns about employment, health and progress, Hickel envisions a just, interconnected, and life-abundant post-capitalist economy.



#### Handbook of Climate Change Impacts on Indigenous Peoples and Local Communities

Routledge, 2023. Victoria Reyes-García

This open-access handbook explores the impacts of climate change on Indigenous People and local communities, drawing on diverse field research. It assesses their responses, emphasizing the significance of untapped indigenous knowledge systems for understanding and addressing climate change effects. Essential for students and scholars across various disciplines.

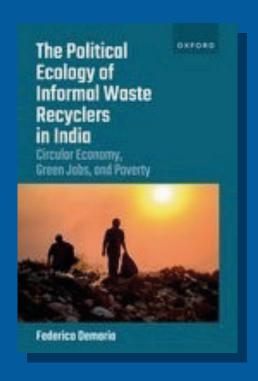


## Land, Water, Air and Freedom

The Making of World Movements for Environmental Justice

Edward Elgar, 2023. Joan Martínez-Alier

This open-access, ground-breaking book explores global environmental justice through 500 empirical analyses. Martinez-Alier highlights commonalities among environmental defenders and offenders, revealing circularity gaps in the industrial economy. Emphasizing diverse narratives, it's essential for scholars and activists in environmental social sciences, anthropology, geography, and ecology.



## The Political Ecology of Informal Waste Recyclers in India

Circular Economy, Green Jobs, and Poverty

Oxford University Press, 2023. Federico Demaria

This book delves into waste management's political dimensions, highlighting conflicts and power dynamics in recycling, particularly focusing on informal waste recyclers. Through case studies, including ship breaking and Delhi's waste management, it underscores environmental injustices and calls for repoliticizing waste metabolism globally.



Since July 2022, ICTA-UAB has deployed its first Gender Equity Policy, framed within the institute's commitment to advancing gender equity at all levels through actions that strengthen the presence and the role of female and non-binary scientists at the institution, make visible their research contributions, and enable the development and implementation of protocols to address gender-based discrimination and sexual harassment.

### GENDER EQUITY POLICY

ICTA-UAB's new Gender Equity
Policy reflects its commitment to
advancing gender equity at all
levels.

- Representation of female and non-binary scientists
- Working conditions and work-life balance
- **Gender awareness**
- Non-sexist and inclusive language
- Prevention of genderbased discrimination and harrassment

This initiative forms part of the policies being developed by the UAB, specifically the "IV Action Plan for Gender Equity at the Universitat Autònoma de Barcelona 2019-2023", and the María de Maeztu program of Excellence 2020-2023 at ICTA-UAB.

Prior to this policy, a series of activities were developed to address gender equity challenges at the institute.

Asurvey led by two postdoctoral researchers gathered data on gender issues and a series of workshops were facilitated to analyze human relations, power relations, conflicts between different groups, and the areas that needed to improve gender equity within ICTA-UAB.

Following these initiatives, other activities continued to foster debate and reflection on these issues, such as the creation in 2021 of a working group composed of PhD and Postdoctoral fellows specifically dedicated to gender equity and power relations.

In September 2021, 65 members of the ICTA-UAB community participated in an introductory workshop on gender equity and social justice, which fed into a Gender Audit conducted by an external organization, Col·lectiu Punt6, in late 2021. This audit was then the base of the Gender Equity Policy prepared, discussed, and approved in July 2022 and which is accompanied by a series of priority actions.



In July 2022, ICTA-UAB approved its first Gender Equity Policy



# Awards and Recognitions

11



#### **Xavier Gabarrell i Durany**

New Vice-Rector for Campus and Sustainability

ICTA-UAB researcher Xavier Gabarrell i Durany will be the new Vice-Rector for Campus and Sustainability at the UAB, replacing Carmen Miralles. This was announced by the rector of the UAB, Javier Lafuente, who approved the change in the UAB Governing Team.



#### Panagiota Kotsila

**ERC Consolidator Grant** 

ICTA-UAB researcher Panagiota Kotsila was awarded a Consolidator Grant from the European Research Council (ERC) to develop the project "Embracing Immigrant Knowledges for Just Climate Health Adaptation" (IMBRACE).



#### Josep Enric Llebot

New ICTA-UAB Ombudsman

Since last October, Dr. Josep Enric Llebot has been the new ICTA-UAB Ombudsman Officer, a new position created in the Institute with the aim of receiving and evaluating complaints and observations made on the functioning of the Institute, in order to decide whether to follow up with legal procedures.



#### Victoria Reyes-García

Women in Science Award from Muy Interesante magazine

Victoria Reyes-García, anthropologist and researcher at ICTA-UAB, has been recognized by the magazine Muy Interesante with the Women in Science Award in the Anthropology category.



## **Grettel Navas and Laura Simon Sánchez**

ICTA-UAB Best Prizes for female postdoctoral researchers

Grettel Navas and Laura Simón Sánchez are the two ICTA-UAB female postdoctoral researchers awarded in the first edition of the ICTA-UAB Best Prizes, organized as part of the institute's Gender Policy.







#### Alvaro Fernández-Llamazares, Johannes Langemeyer and Oriol Marquet

**ERC Starting Grant** 

Three ICTA-UAB researchers were awarded a Starting Grant from the European Research Council (ERC) to develop projects on sustainable mobility, indigenous environmental knowledge, and the role of the Internet in the protection of the natural environment. Together they will receive a total of 4.5 million euros.



#### Gara Villalba Méndez

**ERC Proof of Concept grant** 

Gara Villalba Méndez is one of the top 66 scientists to receive an ERC Proof of Concept grant in the second round of the 2023 call.



#### Ana Beatriz Pierri Daunt

New representative in the IALE-Europe Executive Committee

ICTA-UAB researcher Ana Beatriz Pierri Daunt was selected as new member of the executive committee of the European Association for Landscape Ecology - IALE-Europe.



#### Lucía Argüelles Ramos, Ariane Arias Ortiz, Petra Benyei Peco and Sarah Paradis Vilar

PhD Extraordinary Award

Four ICTA-UAB researchers of the PhD programme in Environmental Science and Technology coordinated by ICTA-UAB received the PhD Extraordinary Award for their doctoral thesis developed during 2018-2020. The award ceremony was held on Friday May 19th at 18h.



#### Lewis King, Pablo Knobel Guelar, Martí Rufí Salís and Susana Toboso Chavero

PhD Extraordinary Award

Four ICTA-UAB researchers of the PhD programme in Environmental Science and Technology received the PhD Extraordinary Award for their doctoral thesis developed during 2020-2021. The award ceremony was held on Friday November 17th at 18h. In conjunction with this event, Director Isabel Pont Castejón and Secretary Laura Talens Peiró received Mari Carmen Romera Puga, Martí Rufí Salis, Susana Toboso Chabero and Perla Zambrano Prado in which Xavier Gabarrell i Durany, coordinator of the Alumni program, also participated.



#### Martí Boada i Juncà

2023 Water Prize

ICTA-UAB honorary researcher Martí Boada i Juncà was awarded one of the 2023 Water Prizes conferred annually by the Catalan Association of Friends of Water in recognition for his numerous scientific and academic achievements



#### Joan Martínez-Alier

Environmental Justice Scholar Joan Martinez-Alier named 2023 Holberg Prize Laureate

The Holberg Prize—one of the largest international prizes awarded annually to an outstanding researcher in the humanities, social sciences, law or theology—named Catalan scholar Joan Martinez-Alier as its 2023 Laureate.



## Aljoša Slameršak and Giorgos Kallis

Special mention at the City of Barcelona Award

A scientific study on a low-carbon energy transition carried out by ICTA-UAB researchers Aljoša Slameršak and Giorgos Kallis has been awarded a special mention in the City of Barcelona Award in the category of Environmental and Earth Sciences.



#### Victoria Reyes-García

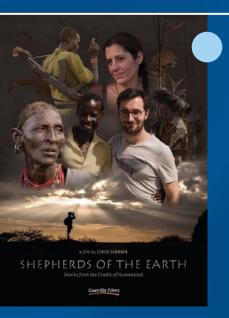
New member of the Academy of Agriculture of France

ICTA-UAB researcher Victoria Reyes-García was appointed as a new member of the French Academy of Agriculture, in a ceremony that took place on January 4 at the headquarters of the institution, located in Paris.



The GROOF project receives an Energy Globe Award

The GROOF project, of which ICTA-UAB is a partner, was awarded the prestigious Energy Globe Award for its outstanding contribution to sustainable energy solutions.



The film Shepherds of the Earth nominated for the 2023 Jussi Awards

The film Shepherds of the Earth: Stories from the Cradle of Humanity, starring Álvaro Fernández-Llamazares, ethnobiologist at ICTA-UAB, is one of the works competing in the Documentary Feature category of the Finnish National Film Awards, the 2023 Jussi Awards.

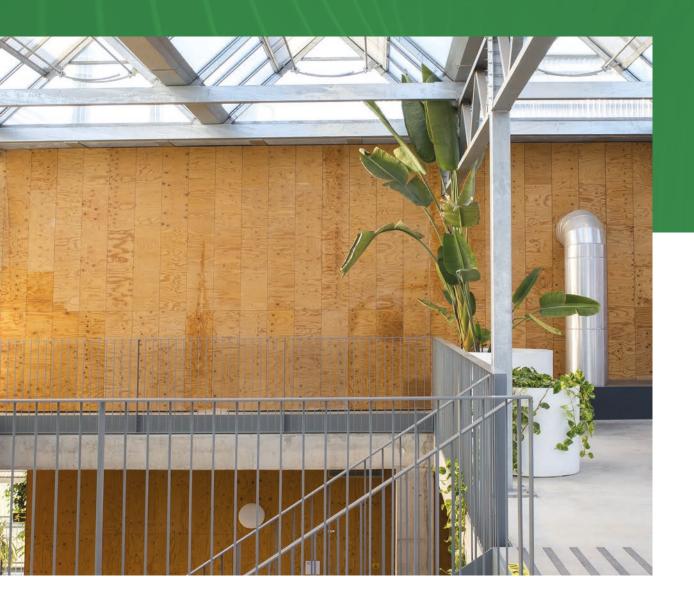


Special mention at the Transformative Action 2022 awards

The Barcelona City Council's project"Joves per l'emergència climàtica" (Youth for the Climate Emergency), in which ICTA-UAB researchers Laura Talens Peiró and Oriol Marquet Sardà participated, was awarded a special mention at the awards Transformative Action 2022 awards granted by the platform European Sustainable Cities.



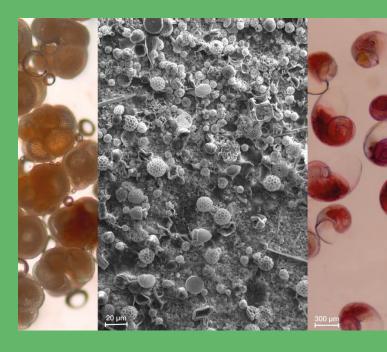
This section highlights some of the most important outreach and societal impact articles or activities developed under each of our research challenges (see section 5).



#### Oceans



ICTA-UAB urges european parliament to combat mediterranean sea pollution



New finding provides better understanding of oceans' capacity to absorb atmospheric CO<sub>2</sub>

Ziveri, P., Grelaud, M., Pato, J. 2023, Research for REGI Committee – [Study on Actions of cities and regions in Mediterranean Sea area to fight sea pollution; Reducing marine litter and plastic pollution], European Parliament, Policy Department for Structural and Cohesion Policies, Brussels.

The implementation of effective policies at local and regional level, and the cooperation of all countries in the Mediterranean Sea basin is urgently needed to successfully reverse the environmental problems in this marine area.

Ziveri, P., Gray, W.R., Anglada-Ortiz, G., Manno, C., Grelaud, M., Incarbona, A., Rae, J.W.B., Subhas, A.V., Pallacks, S., White, A., Adkins, J.F., Berelson, W. (2023). Pelagic calcium carbonate production and shallow dissolution in the North Pacific Ocean. Nature Communications, 14(1),805.

A new study by ICTA-UAB demonstrates the important role of a common group of marine calcifying phytoplankton (coccolithophores) in the regulation of carbon dioxide (CO<sub>2</sub>) concentrations in the atmosphere.

Language in https://www.europarl.europa.eu/RegData/etudes/ STUD/2023/733123/IPOL\_STU(2023)733123\_EN.pdf

#### Land



The voices of indigenous peoples and local communities as an important part of the climate fight



Nature conservation needs to incorporate the human approach

Local Indicators of Climate Change Impacts. The Contribution of Local Knowledge to Climate Change Research. Reyes-García, V., Cámara-Leret, R., Halpern, B.S., O'Hara, C., Renard, D., Zafra-Calvo, N., Díaz, S. (2023). Biocultural vulnerability exposes threats of culturally important species. Proceedings of the National Academy of Sciences of the United States of America 120 (2).

Indigenous Peoples and local communities around the world have a rich and extensive general knowledge of climate change impacts and possible ways to adapt. This knowledge should be recognized by both science and climate policy.

An international study led by the Institute of Environmental Science and Technology of the Universitat Autònoma de Barcelona (ICTA-UAB) stresses the need to apply a biocultural approach in nature conservation programs.

#### Consumption



Study links consumption of ultraprocessed foods to mental health problems in adolescents



How humans around the world spend their time on an average day

Reales-Moreno, M., Tonini, P., Escorihuela, R. M., Solanas, M., Fernández-Barrés, S., Romaguera, D., & Contreras-Rodríguez, O. (2022). Ultra-Processed Foods and Drinks Consumption Is Associated with Psychosocial Functioning in Adolescents. Nutrients, 14(22), Article 4831.

Adolescents who consume a greater amount of ultra-processed foods and drinks have more difficulties in terms of mental health, according to new research carried out by ICTA-UAB and the Girona Biomedical Research Institute (IDIBGI), which analyses the habits of five hundred Spanish adolescents aged between 13 and 18.

Fajzel, W., Galbraith, E. D., Barrington-Leigh, C., Charmes, J., Frie, E., Hatton, I., Le Mézo, P., Milo, R., Minor, K., Wan, X., Xia, V., Xu, S. (2023). The global human day. Proceedings of the National Academy of Sciences of the United States of America 120 (25), [e2219564120].

Everyone has 24 hours per day.
Across the global population of
8 billion people this adds up to
approximately 190 billion human
hours. How those hours are spent
determines the impacts we have on
our surroundings as well as how we
experience life.

#### **Cities**







Social media content opens new frontiers for sustainability science researchers

Ghermandi, A., Langemeyer, J., et al. (2023). Social media data for environmental sustainability: A critical review of opportunities, threats, and ethical use. One Earth, 6(3), 236-250.

An international group of researchers led by ICTA-UAB recently launched a groundbreaking mobile app designed to make city regions more bikeable and enhance the overall cycling experience for urban cyclists.

With more than half of the world's population active on social media networks, user-generated data has proved to be fertile ground for social scientists who study attitudes about the environment and sustainability.

#### **Policies**



Green growth loses weight as a consensus position in the European Parliament



Solving the climate crisis requires collaboration between natural and social scientists

Kallis, G., Mastini, R., & Zografos, C. (2023). Perceptions of degrowth in the European Parliament. Nature Sustainability.

Politicians in the European Parliament are supportive of post-growth and ecosocialist positions to tackle the climate crisis, and not only green growth. This is the main conclusion of a study carried out by researchers at ICTA-UAB and the Department of Political and Social Sciences at Pompeu Fabra University.

Graham, S., Wary, M., Calcagni, F., Cisneros, M., de Luca, C., Gorostiza, S., Stedje Hanserud, O., Kallis, G., Kotsila, P., Leipold, S., Malumbres-Olarte, J., Partridge, T., Petit-Boix, A., Schaffartzik, A., Shokry, G., Tirado-Herrero, S., van den Bergh, J., Ziveri, P. (2023). An interdisciplinary framework for navigating social—climatic tipping points. People and Nature 5 (5).

Now that the world has experienced its hottest day in history, it is more urgent than ever for natural and social scientists to work together to address the climate crisis and keep global temperature increases below 2°C.

L https://doi.org/10.1038/s41893-023-01246-x

#### Knowledge transfer and scientific dissemination

#### Educational programs

ICTA-UAB teaches the "Mad about Sustainability" course at the Catalunya-La Pedrera Foundation.

From January to October 2023

Project with Escola Bellaterra in the framework of the Citizen Arenas program on climate change and better water management.

From January to December

La Pau School starts an alliance with ICTA-UAB within the framework of the Magnet program.

30 April 2023

Michaël Grelaud and Andrea Vidal from the Cartographic and Geological Institute of Catalonia (ICGC) launch the project "Schools in Action: Microplastics" to educate grade school students about the environmental threat of microplastics.

8 May 2023

ICTA-UAB participates in the UAB Summer School through several researchers.

June & July 2023

Laura Talens Peiró participates in the Cientifiks en Joc program of Generalitat de Catalunya.

25 May 2023

Two hundred schoolchildren fromFundació Autònoma Solidària'sCROMA program visit ICTA-UAB.

30 May 2023

ICTA-UAB organizes a new edition of LIPHE4 Summer School.

10-14 July 2023

The Knowledge Alliance SE4Ces releases new resources to boost social economy education.

20 July 2023

Brazilian children visit ICTA-UAB to take part in the first activity of the Science for Brazilians program organized by the Consulate of Brazil in Barcelona.

24 July 2023

Laura Talens Peiró and Oriol Marquet Sardà participate in the program Joves per l'Emergència Climàtica, organized by Ajuntament de Barcelona.

Starting in September

Irene Alorda Montiel participates in the Reto Experimenta project of the FECYT.

Starting in September

ICTA-UAB teaches the Youth, Science and Ethics program organised by the Fundació Catalana de REcerca i Innovació (FCRI) in collaboration with the Generalitat de Catalunya.

#### Exhibitions and fairs

ICTA-UAB is part of the Xè Congrés d'Energia de Catalunya Recerca i Innovació.

9 February 2023

Helen Cole participates as curator of the Biennal Ciutat i Ciència Barcelona.

21-26 February 2023

ICTA-UAB participates in the Water Innovation Day.

23 February 2023

Isabelle Anguelovski participates in the conference Ciutats de Ciència: Com connectem la ciència i la ciutadania.

16 March 2023

Helen Cole and Margarita Triguero-Mas take part in the global summit Science, Nature and Health. Practical Application of Scientific Evidence.

30 March 2023

Isabelle Anguelovski participates in the Policy Dialogues: Superblocks, Health and Equity in Barcelona, organized by the Johns Hopkins University - Universitat Pompeu Fabra Public Policy Center.

18 April 2023

ICTA-UAB CARES group launches a Film Forum with a screening of "El sostre groc" by Isabel Coixet.

19 April 2023

Sara Maestre participates in the Cafe Prismatic seminar: Nature-based solutions to create more resilient, just and livable cities.

17 May 2023

Gemma Simón Mas participates in the seminar: BiciBús movement? A mapping experience on the outreach and directions of the BiciBús program.

25 May 2023

Isabel Pont Castejón participates in the event El Futur és Ara at the CCCB in Barcelona.

10 June 2023

ICTA-UAB participates in the Festa de la Ciència.

11 June 2023

Jordina Belmonte Soler participates in a series of talks titled "Genòmica i biodiversitat" coordinated by Iniciativa Catalana for the Earth Biogenome Project and Institut d'Estudis Catalans (IEC).

22 June 2023

ICTA-UAB Summer Day.

ICTA-Alumni activities kick off with Dr Esther Sanyé Mengual.

September 2023

12 June 2023

Participation at the European Mobility Week. Webinar on "Why is important to have a policy on sustainable travel?" by Michela Osnato, ICTA-UAB researcher.

19 September 2023

Laura Talens Peiró participates in the Zero Waste Festival.

26 October 2023

Sostenipra research group from ICTA-UAB participates in the Innovation Week of the UAB to present the SIRAH irrigation prototype for urban gardens.

16 October 2023

Isabelle Anguelovski participates in the Alumni event The Future of Healthy Cities organized by The School of Public Health of the University of Michigan.

8 November 2023

Participation in the 100xCiencia Congress organized by the SOMMa Alliance in Granada.

23 and 24 October 2023

Sergio Villamayor-Tomás speaks about irrigation at the Prismàtic Program.

12 December 2023

ICTA-UAB Winter Symposium.

14 December 2023

#### Companies

The ICTA-UAB and Ambit B30 organize a course on environmental sustainability.

31 March 2023

BiciZen, a new mobile app to transform urban cycling experiences, is launched by ICTA-UAB researchers Jordi Honey Rosés and Gemma Simón Mas.

6 June 2023

Susana Toboso Chavero and Bet Noguer Pich from Experta Solar company offer the conference "Fomentem la transició energètica i els terrats verds".

22 June 2023

Tectum Garden is now part of the UAB business ecosystem.

24 August 2023

ICTA-UAB participates in the initiative Viaja en Verde organized by Eco-Union, Ecodes, Fundación Renovables and Transport & Environment.

19 September 2023

Weekly pollen forecast reports by Jordina Belmonte Soler project on aerobiology.

#### Policymaking

ICTA-UAB organizes the workshop "Bridging Shades of Blue" to start coconstructing key features of the Intergovernmental Panel for Ocean Sustainability IPOS.

March 2023

Meeting with Mireia Moya Busquet general director of Environmental Quality and Climate Change and Leo Bejarano head of the Catalan Office for Climate Change to exchange impressions about the future.

23 March 2023

ICTA-UAB demands the European Parliament to take action to fight pollution in the Mediterranean Sea.

5 May 2023

"La mobilitat de Barcelona, a debat". Key electoral debate for the future of mobility in Barcelona involving City Lab Barcelona of ICTA-UAB.

9 May 2023

Hickel discusses limits to growth with Ursula von der Leyen in the European Parliament.

17 May 2023

Arnau Queralt i Bassa, Director of the Consell Assessor per al Desenvolupament Sostenible (CAD) visits ICTA-UAB to exchange opinions with our director Isabel Pont Castejón.

23 May 2023

150+ economists and experts including Jason Hickel call on Paris Summit leaders to redirect trillions from fossils, debt, and the 1%.

19 June 2023

Special Session on Environmental Research and Policy at the WHO Ministerial Conference on Environment and Health.

6 July 2023

The delegate of the Government of Catalonia in Barcelona Joan Borras i Alborch visits ICTA-UAB to learn about our research projects.

25 July 2023

Management team meeting with with Marc Vilahur Chiaraviglio, General Director for Environmental Policies, Generalitat de Catalunya.

13 September 2023

Xavier Gabarrell i Durany talks about sustainability at the BBVA Awards.

19 September 2023

Sergio Villamayor-Tomás and Esteve Corbera Elizalde organize the symposium, Indicators of rural development: achievements and future challenges, in CosmoCaixa Madrid.

22 September 2023

Isabel Pont participates in a conference on climate justice and diplomacy organized by the Fundació Irla and the Centre d'Estudis en Relacions Internacionals (CERI).

30 September 2023

Joan Martínez Alier talks about environmental rights at the DESC Observatory.

30 September 2023

ICTA-UAB researchers from the LIVEN project organize an Expert Workshop to discuss the draft of the MITECO's Integrated National Energy and Climate Plan (PNIEC).

26 October 2023

Menjadors Ecològics, ICTA-UAB and Colectiva organize a Responsible Food Public Procurement Workshop.

14 November 2023

#### Activism

The EJAtlas project from ICTA-UAB endorses the Indigenous Peoples' Rights International joint submission on the OECD Guidelines for Multinational Enterprises and their Implementation, titled Procedures Business Standards for Multinational Enterprises in relation to Indigenous Peoples' rights.31 January 2023.

31 January 2023

ICTA-UAB researchers participated in the Resistance and Liberation Roundtable II: Emerging Threats to Land & Preparing for COP28, alongside dozens of climate and environmental justice organizations to discuss common strategy ahead of COP28.

14 March 2023

ICTA-UAB researchers founded Action and Research for Environmental Justice (AREJ), a non-profit organization that aims to support and promote environmental justice in public policy and civil society spaces.

20 april 2023

ICTA-UAB participates in the founding of the environmental organization Oikos.

9 February 2023

ICTA-UAB researchers support activists from Plataformad'habitatges Afectats dels Tres Turonsin meeting with Rosa Alarcón Montañés and technicians from district government of Horta-Guinardo regarding plans for future park and fears of gentrification and destruction of cultural heritage.

10 March 2023

ICTA-UAB is one of the signatories of the Brussels Statement of Scientific Institutions for Ocean Sustainability.

18 April 2023

ICTA-UAB researcher gives talk on green gentrification trends in Barcelona with Plataforma Afectats per l'Abaceria i Abaceria Respira in an activist-led event against new market development in Gracia, Barcelona.

22 April 2023

ICTA-UAB researcher supports activists from Plataforma d'habitatge affectats dels Tres Turons in meeting with deputy mayor Janet Sanz Cid and technicians from department of Urbanisme, Transició Ecològica, Serveis Urbans i Habitatge of the City Hall of Barcelona regarding plans for future park and fears of gentrification and destruction of cultural heritage.

8 May 2023

Participation of ICTA-UAB in the End Fossils BCN campout, which resulted in the Generalitat de Catalunya to consider making the ecosocial crisis a compulsory curriculum subject.

9 May 2023

Participation in the Ecomarcha 2023 organized by Ecologistas en Acción.

17 July 2023

ICTA-UAB researchers participate in the launch of the Blood Carbon campaign by Survival España.

18 September 2023

ICTA-UAB researcher takes part in session with Plataformad'habitatges Afectats dels Tres Turonsinforming neighbors about how the 'Pla dels Tres Turons' will affect their homes.

1 December 2023

ICTA-UAB researcher aids in a plan with activists from the Plataforma d'habitatge Affectats dels Tres Turons with the aim of creating a bottom-up vision of how neighbors envision a future park in their neighborhood.

ICTA-UAB researchers take part in the Beyond Gas global network of organizations against the expansion of oil and gas. ICTA-UAB researchers collaborated with LINGO in the creation of the Protected Carbon map.

Ongoing

ICTA-UAB researchers collaborated with Corporate Accountability in exposing the environmental conflicts of oil and gas companies lobbying the COP28 conference.

ICTA-UAB researchers coordinated a media strategy with a network of French and multinational climate justice organizations including Amis de la Terre, Greenpeace France and Bloom among others for the publication of a research article and a featured map on TotalEnergies environmental conflicts globally.

ICTA-UAB researchers collaborated with Stay Grounded in the elaboration of an interactive map documenting environmental justice struggles against airports around the world.



#### Keynote speakers

Daniel García-Castellanos, CSIC researcher at Geociencias Barcelona

"What caused the most extreme environmental change since 65 million years ago? A mechanistic approach to the Messinian Salinity Crisis"

26 January 2023

Jasper Schipperijn,
Professor in Active Living
Environments at the
Department of Sports
Science and Clinical
Biomechanics, University of
Southern Denmark

"Using GPS and accelerometers to evaluate the behavioral effect of changes to the built environment"

2 March 2023

Chelsey Geralda Armstrong, Assistant Professor and Director of the Historical-Ecological Research Lab in Indigenous Studies at Simon Fraser University

"Land use is dissent: Anti-colonial historical ecology and forest garden management in the Pacific Northwest"

30 March 2023

Enrica De Cian, Professor in Environmental Economics at Ca' Foscari University of Venice

"Adaptation to climate change: insights from the ENERGYA project"

18 April 2023

Prof. Sara Moreno Colom, Professor at UAB Department of Sociology

"Menos tiempo de cocina, más tiempo de consumo: ¿más igualdad de género?" 19 May 2023 Aaron Hipp, Associate Professor of Community Health and Sustainability at Center for Geospatial Analytics, North Carolina State University

"Whose environment, whose science, whose technology?"

22 May 2023

Richard D. Norris, Professor at Scripps Institution of Oceanography, University of California San Diego

"Sliding, not Rolling Stones: Rock trails on a dry lake in in Death Valley and other places"

1 June 2023

Richard Norris, Professor at Scripps Institution of Oceanography, University of California, San Diego.

"The Neolithic transition in the oceans-marine fisheries and human exploitation at the dawn of agriculture"

5 July 2023

Benjamin Sovacool, Professor of Energy Policy at the Science Policy Research Unit (SPRU), University of Sussex Business School

"Scales, impacts, and vulnerable groups: A critical justice perspective on four low-carbon transitions"

5 September 2023

Prof. Tommaso Luzzati,
Associate Professor
of Economics at the
Department of Economics
and Management, University
of Pisa

"Economy vs nature:
An unsolvable conflict?
Empirical evidence framed within the 'doughnut economics' approach"

18 September 2023

Naomi Millner, Associate Professor in Human Geography at University of Bristol, and Patrick Bresnihan, Associate Professor in the Department of Geography at Maynooth University

"All we want is the earth: Land, labour and movements beyond environmentalism"

16 November 2023

Dagmar Haase, professor at the Humboldt Universität zu Berlin, and Annegret Haase, professor at Helmholtz Centre for Environmental Research

"Socio-environmental justice struggles in European cities: Experiences across methodological approaches"

20 November 2023

Unai Pascual, Ikerbasque Research Professor in ecological economics at the Basque Centre for Climate Change (BC3)

"Diverse Values of Nature for Sustainability: The IPBES view and experience"

30 November 2023

Björn Vollan, Professor at the University of Marburg

"Behavioural experiments in sustainability research: Applications from uncovering causality to deepening system understanding and collective learning"

4 December 2023

112

#### **Visitors**

Giulia Benati, Visiting postgraduate

1/5/2022-31/12/2023, Università di Roma La Sapienza Danielle Vico, Visiting postgraduate

1/1/2023-1/10/2023, <u>Universitat de Barcelona</u> Jonica Doliente, PIF-FENIX

1/1/2023-29/11/2023, University of York

Katryn Gougelet, Visiting postgraduate

1/1/2023-31/12/2023, University of California Santa Cruz Marouko Tsagkari, Guest researcher

1/1/2023-31/12/2023, Universitat de Barcelona -Prog. Margarita Salas Leonie Alena Saleth, Visiting postgraduate

2/1/2023-31/7/2023, University of Copenhagen

Frederic Hans, Guest researcher

10/1/2023-22/12/2023, NewClimate Institute for Climate Policy and Global Sustainability Akshyeta Suryanarayan, Visiting postgraduate

23/1/2023-31/3/2023, UPC-Universitat Pompeu Fabra Theoni Baniou, Visiting postgraduate

23/1/2023-31/3/2023, Institut Català d'Arqueologia Clàssica

Lucila Chang, Visiting postgraduate

30/1/2023-30/4/2023, Universidad Tecnológica de Panamá Victoria D. Jepson, Visiting postgraduate

30/1/2023-30/4/2023, INRS Université du Québec Ana Beatriz Daunt, Guest researcher

1/2/2023-31/12/2023, Swiss National Science Foundation

Alexandre Toshiro, Guest researcher

2/2/2023-31/1/2024, Universidade de Sao Paulo Shania Jansen, Visiting postgraduate

6/2/2023-28/7/2023, <u>University of Amsterdam</u> Giulia Cellitti, Visiting postgraduate

13/2/2023-13/8/2023, Università degli Studi "G. D'Annunzio" Chieti – Pescara Laura Isla, Guest researcher

1/3/2023-31/5/2023, Universidad de Buenos Aires Oriol García Antunez, Visiting postgraduate

1/3/2023-1/8/2023, University of Copenhagen Nathan Clay, Guest researcher

3/3/2023-31/12/2023, Stockholm University

Gianluigi de Tommasi, PIF-FENIX

10/3/2023-31/10/2024, University of Bari Henrique Back Medeiros, PIF- FENIX

13/3/2023-30/11/2023, Universidade Federal de Santa Catarina Richard Norris, Guest researcher

15/3/2023-15/7/2023, University of California San Diego

Jan de Rueda, Visiting undergraduate

20/3/2023-14/7/2023, Institut de Terrassa Lucia Argüelles, Guest researcher

20/3/2023-19/6/2023, UOC-Universitat Oberta de Catalunya Ana Vargas Castillo, Visiting undergraduate

27/3/2023-15/4/2023, Escoles Garbí

Lucia Marcos, Visiting undergraduate

27/3/2023-15/4/2023, Escoles Garbí Stefano Fiaschi, PIF-FENIX

28/3/2023-31/12/2023, Università degli Studi Firenze Chiara Toccarelli, Visiting postgraduate

3/4/2023-31/8/2023, Università di Bologna

Mateo Rey, Visiting postgraduate

3/4/2023-28/7/2023, IHEAL-Institut des Hautes Etudes de l'Amerique Latine Pelayo Quintanilla, Visiting undergraduate

11/4/2023-15/7/2023, Institut La Románica Fabian Cantieri, Visiting postgraduate

15/4/2023-30/9/2023, Pontifical Catholic University of Rio de Janeiro Gabriel Bohnke, Visiting postgraduate

1/5/2023-1/8/2023, Université Catholique de Louvain Naomi Millner, Guest researcher

5/5/2023-12/12/2023, University of Bristol Linnea Arala, Visiting postgraduate

3/6/2023-3/7/2023, Tampere University

Izan Corcoles, Visiting undergraduate

5/6/2023-22/9/2023, Institut La Romànica Leon Fauste, Visiting postgraduate

9/6/2023-12/7/2023, INRIA-National Institute for Research in Digital Science and Technology Lucia Rizzo, Guest researcher

23/6/2023-7/7/2023, CNR-ISPA Centro Nazionale delle Ricerche-Istituto di Scienze delle Produzioni Alimentari

Luiza Friedrichsen Canellas, Visiting postgraduate

1/8/2023-31/12/2023, Universidade de São Paulo Forrest Fleischman, Guest researcher

6/9/2023-15/8/2024, University of Minnesota Stefania Bianco, Visiting postgraduate

12/9/2023-31/12/2023, Università di Pavia

Jacqueline Hernandez, Visiting postgraduate

18/9/2023-30/11/2023, Universidad Nacional Autónoma de México Brittany Bounce, Guest researcher

16/10/2023-12/4/2024, Women for Africa-University of the Western Cape Eider Etxebarria, Visiting postgraduate

16/10/2023-15/4/2024, University of Wageningen

Elise Andrew, Visiting postgraduate

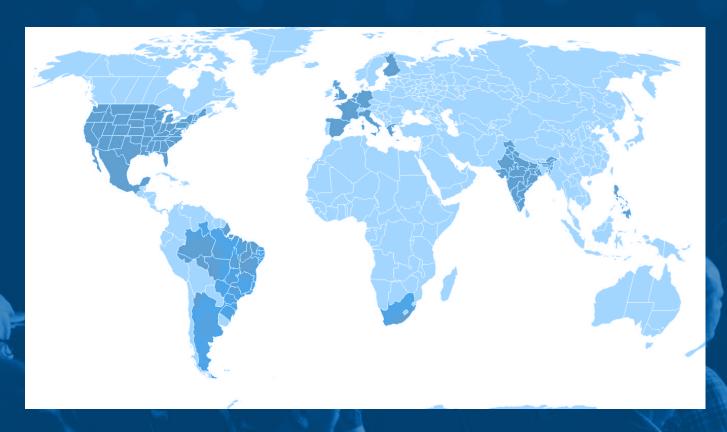
1/11/2023-31/12/2023, Technical University of Denmark Alberto Marchan Fernandez, Visiting postgraduate

6/11/2023-20/11/2023, Universidad de Salamanca Maria del Pilar Martin Ramos, Visiting postgraduate

7/11/2023-20/12/2023, Universidad de la Laguna Pieter Groot, Visiting postgraduate

16/11/2023-31/12/2023, University of Wageningen Jörn Magnus Merkle, Visiting postgraduate

20/11/2023-31/12/2023, NMBU-Norwegian University of Life Sciences

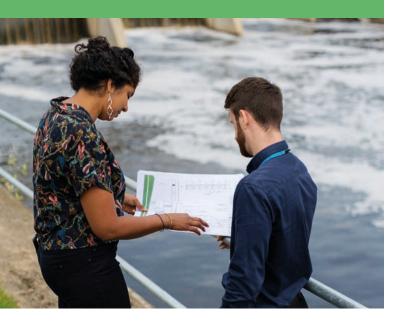


ICTA-UAB has received visitors from over a dozen countries including the US, and from South America, Europe, Asia, and Africa.



### **PhD Program**

Phd in Environmental Science and Technology

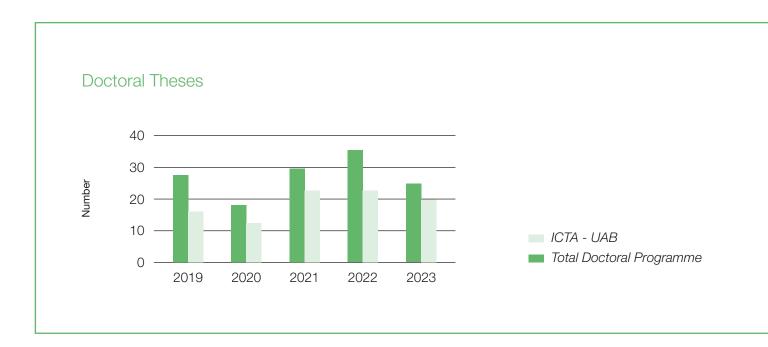


The PhD in Environmental Science and Technology is a UAB program adapted to the European Higher Education Area (EHEA) and is governed by Royal Decree 99/2011 of January 28, 2011 of the Government of Spain. The PhD Program in Environmental Science and Technology was awarded in 2022 after AQU Catalunya's evaluation with the highest overall assessment: Accredited in progress towards excellence. It covers 10 lines of research framed in 4 thematic areas: ccological economics and environmental management, environmental technology, climate and global change, and industrial and urban ecology.



Coordinator: Prof. Adriana Artola Casacuberta

Academic board: Dr Sergio Villamayor-Tomás, Prof Graham Mortyn, Prof Xavier Gabarrell i Durany, and Dr Laura Talens Peiró



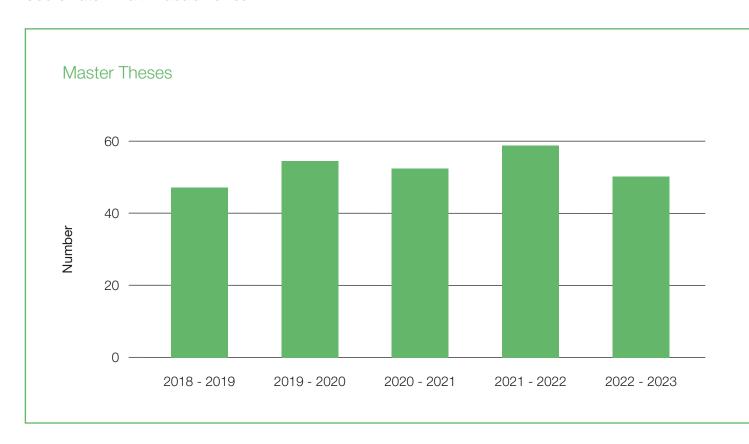
#### **Masters**

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



Coordinator: Alaitz Zabala Torres

The master's degree offers a mixed approach, offering advanced course components for graduates of Environmental Sciences, while meeting the needs of other graduates interested in incorporating environmental knowledge and skills into their academic training, based on fields such as Ecological **Economics and Environmental** Management, Analysis of the Natural Environment, Environmental Technology, Industrial Ecology or Global Change, all of which are considered specializations in this master's degree. Of the 60 credits, 30 belong to compulsory core subjects and the rest form part of each specialization. This master's degree has been offered since the 1997/98 academic year.



## Master's Degree in Political Ecology, Degrowth and Environmental Justice



Directors: Ksenija Hanaček and Giacomo D'Alisa

This is the first master of its kind within the flourishing fields of Political Ecology, Degrowth and Environmental Justice, now in its 5th edition with 36 enrolled students.

The master is co-organized by ICTA-UAB and Research & Degrowth (R&D), an academic association dedicated to

research, awareness-raising, and events organization around the topic of degrowth, bringing together the scholarly excellence of ICTA-UAB researchers with hands-on experience in activism and policy-making of R&D.

#### **Additional Training Courses**

Online Master on Degrowth: Ecology, Economics and Policy



Coordinator: Claudio Cattaneo

The ICTA-UAB and Research & Degrowth have launched the first online master's on "Degrowth: Ecology, Economics and Policy", an international master's fully dedicated on research and policy for degrowth. The course is ideal for those who want to learn more about degrowth,

whether after a bachelor's degree, master's degree, or to redirect the topic of their PhD towards degrowth. This master is explicitly research-focused and oriented towards policy-making in the Global North. MOOC Sustainability of Social-Ecological Systems



Coordinator: Mario Giampietro

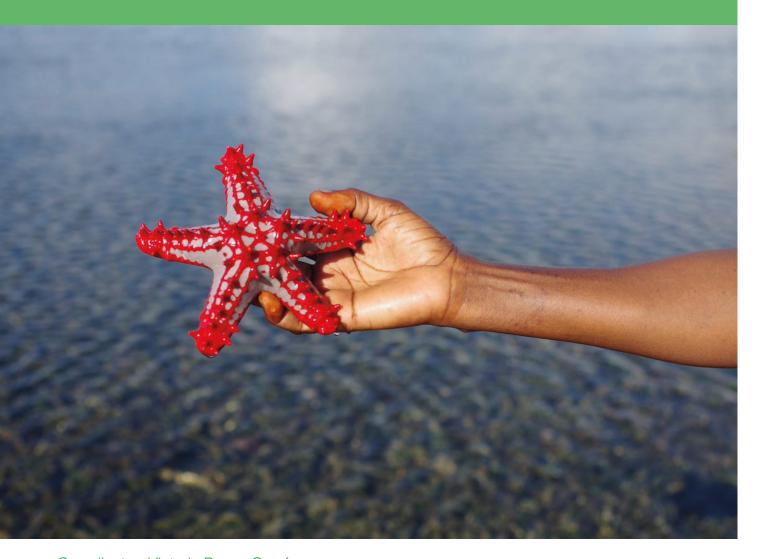
The master's degree offers a mixed approach, offering advanced course components for graduates of Environmental Sciences, while meeting the needs of other graduates interested in incorporating environmental knowledge and skills into their academic training, based on fields such as Ecological Economics and Environmental Management, Analysis of the Natural Environment, Environmental Technology, Industrial Ecology or Global Change, all of which are considered specializations in this master's degree.

Of the 60 credits, 30 belong to compulsory core subjects and the rest form part of each specialization. This master's degree has been offered since the 1997/98 academic year.



Of the 60 credits, 30 belong to compulsory core subjects and the rest form part of each specialization.

## MOOC Climate change and Indigenous Peoples and Local Communities



Coordinator: Victoria Reyes-García

This MOOC tackles the key notions related to Climate Change and Indigenous peoples and local communities' knowledge systems. Students study the differentiated impacts that climate change has on Indigenous Peoples and local communities (IPLC), familiarize themselves

with different responses to climate change impacts led by IPLC, and learn about different strategies aiming to incorporate IPLC to climate change research and policy.

#### **MDM Training Activities**



Coordinator: Michela Osnato

We offer general and specific training activities through the María de Maeztu program, on an annual basis and at the start of each academic year, from September to October.

- Open science
- Good practices in research
- Gender equity and social justice

- Skills and approaches towards a culture of care
- Interactive data analysis
   & visualization with R shiny
- Research design
- Statistical analysis with R
- Systematic literature reviews and related methods

Specialization Course in Promoting Agroecological Farming at the Local Level



The Specialization Diploma in Agroecological Local Dynamization offers an innovative strategy for local development and a methodological proposal that integrates social research and participatory techniques, to promote the Agroecological Transition of local agri-food systems to make them healthier, more just and more sustainable. The course is focused on interpreting the processes that affect rural areas and urban and peri-urban agriculture, with special emphasis on the recovery of traditional agroecological knowledge and the creation of alternative food networks. All this, from a participatory perspective, which places agricultural production at the center of territorial, economic and social development.

The course combines virtual sessions covering theoretical knowledge, and in-person sessions where participatory methodologies are put into practice and visits are made to agroecological initiatives. The course is organized by ICTA-UAB with the Institute of Government and Public Policy (IGOP-UAB), and with the participation of the Chair of Agroecology and Food Systems (UVic-UCC), the Institut Metròpoli and the cooperative Arran de terra SCCL in the coordination board.

Coordinators: Victoria Reyes-García and Josep Espluga Trenc

#### **Degrowth Summer School**

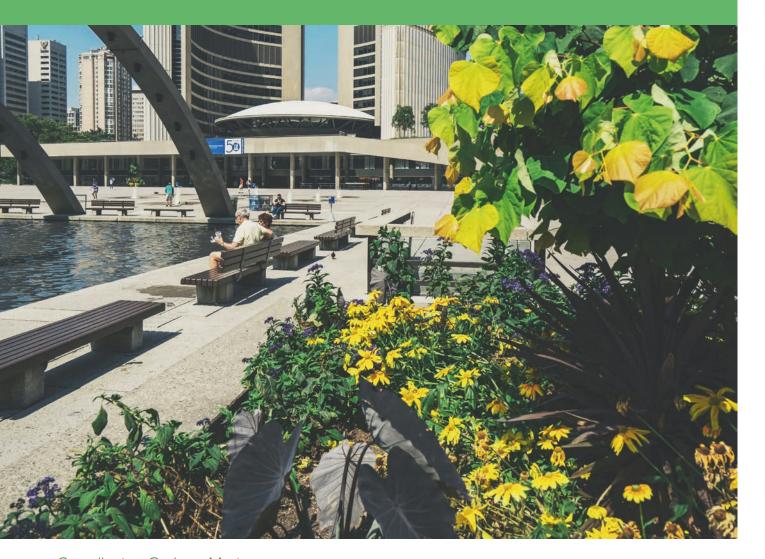


Coordinator: Research & Degrowth

The Degrowth Summer School started in 2014 and has brought together academics, students, practitioners, artists, activists and community organizers to collectively learn and debate about topics related to degrowth and environmental

justice. The school is organized by Research & Degrowth (R&D) and customarily takes place over two weeks in Barcelona, at ICTA-UAB and a rural part of Catalonia.

#### UAB Summer School | Geography of Global Change



Coordinator: Graham Mortyn

Geography of Global Change (GGC) is an all-encompassing global course that critically considers aspects of environmental threat today, especially climate change. The course begins with basic principles of evaluation, including spatial and temporal scales, principles of "change", followed by distinct impacts

spheres of the Earth, including the atmosphere, oceans, and land surfaces. Special attention is applied to the oceans given the particular importance of this realm on our blue planet. There are two field trips: one to Barcelona to discuss aspects of urban global change, and to the ICTA-UAB campus.

## UAB Summer School | Ecological economics and degrowth principles



Coordinator: Claudio Cattaneo

The course Ecological Economics and Degrowth Principles aims at presenting a new perspective in the economic field by relating it to the environment (planetary boundaries) and sustainable development goals. It considers the limits of the green circular economy, growth's main dilemmas

and its implications for society and the environment. You will contrast the trade-offs between economic growth (and job creation) and environmental protection with social justice and will learn about the new perspective of Degrowth.



ICTA-UAB is equipped with world-class laboratory and analytical facilities for inorganic and organic chemistry, with applications across a range of scientific fields and temporal scales. These are managed by research groups (IMPACTANT, EARLYFOODS, MERS, SOSTENIPRA) working at the forefront of current knowledge on modern and past socioecological systems, from ocean acidification, microplastic pollution and urban agriculture, to past climate and human societies. The Environmental Radioactivity Laboratory, ICTA's associated facility in the Department of Physics, offers academic and commercial services in the application of radionuclides as tracers of a wide range of environmental processes, including dating and water determination for oceanographic and hydrogeological studies. In 2023 we established research collaborations and offered consultancy and commercial services to dozens of Spanish and international institutions, notably in the fields of climate, ecology and archaeology.





Organic and inorganic chemistry



Microplastic extraction laboratory



Organic geochemistry and environmental laboratory



Agro-urban lab: i-RTG integrated rooftop greenhouse



Biomolecular archaeology and palaeoecology



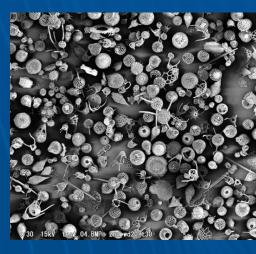
GHG monitoring network of the metropolitan area of Barcelona



Stable isotope analysis



Sedimentology



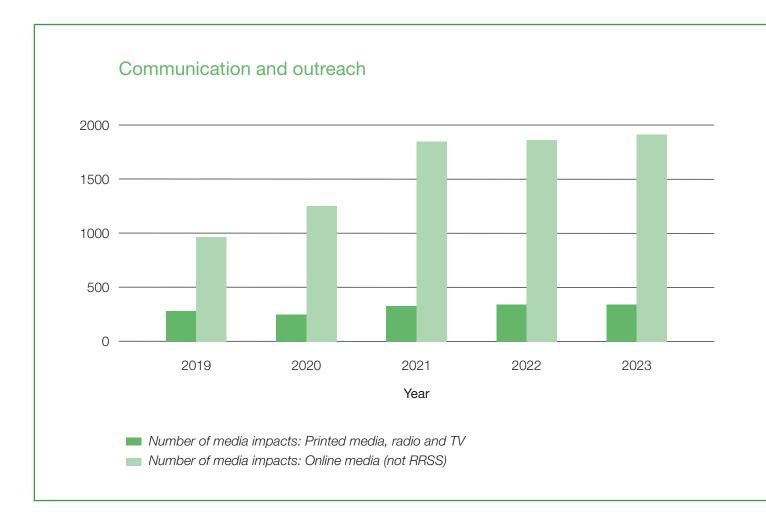
Micropalaeontology



In 2023, ICTA-UAB hosted 147 seminars, workshops and events.

42 press releases related to our research findings were published by newspapers, radio and TV, (local, national and international). These have resulted in 2.042 impacts in newspapers, TV channels and radios.





In social media, we published about 998 tweets, which had over one million of visualizations; the twitter account achieved 11.253 followers by the end of the year. Our website had 53.984 users who visited 133.630 pages.

ICTA-UABs scientific findings and activities were also publicized through a monthly online newsletter, which has 1.660 subscribers from all over the world.

# In 2023, ICTA-UAB hosted 147 seminars, workshops and events.





#### Telenotícies TV3

All aquatic species in river mouths are contaminated by microplastics.



#### RNE

Overfishing and habitat degradation found to cause marine life decline in South Atlantic.



#### LA RAZON

Amazon: the world's lung is dying of thirst and its inhabitants with it.



#### **MONGABAY**

Over a third of conflicts over development projects affect Indigenous people: Study.



#### PHYS.ORG

Green growth loses favour with climate policy scientists.

#### THE GUARDIAN



Rich countries with high greenhouse gas emissions could pay \$170tn in climate reparations.



#### TVE

The logic of the Snail.



#### NATIONAL GEOGRAPHIC MAGAZINE

What will we eat in the future?



#### LA VANGUARDIA

More than 45 million tonnes of food are discarded every year in Catalonia before they reach the markets.



#### LA VANGUARDIA

Greener cities promote social and climate inequalities.



#### BBC

People Fixing The World, Catching the 'bike bus'.

#### EL PAÍS

**EL PAÍS** 

Public funds being swallowed up by scientific journals with dubious articles.

elPeriódico

#### EL PERIODICO DE CATALUNYA

Joan Martínez Alier, ecological economist: "Economists are in charge too much".

17

**Doctoral Theses** Annex I

Annex II **Publications** 

Annex III Active Projects

Annex IV

Gender Equity and Responsible Travel Strategy

Annex V Press releases

### Annex I

## Doctoral Theses [in alphabetical order]

Alfonso Bécares, Diana. 2023. With strings attached: A multiscale approach to explore option spaces for conservation in rural systems. Co-directors: Tarik Serrano, Esteve Corbera, Mario Giampietro. Tutor: Esteve Corbera.

Alorda Kleinglass, Aaron. 2023. Submarine groundwater discharge feedbacks on ecosystem services. Co-directors: Valentí Rodellas, Isabel Ruiz Mallen. Tutor: Valentí Rodellas.

Amorim Maia, Ana Terra. 2023. Intersectional Climate Justice: Theory, Praxis, Lived Experience. Co-directors: Isabelle Anguelovski, James Connolly, Eric K. Chu. Tutor: Isabelle Anguelovski.

Appolloni, Elisa. 2023. Diversified applications of supplemental LED light for greenhouse tomato production in the Mediterranean context. Co-directors: Francesco Orsini, Xavier Gabarrell. Tutor: Xavier Gabarrell.

Calderón Argelich, Amalia. 2023. Situating Gender in the Integration of Environmental Justice within Urban Greening. Co-directors: Francesc Baró, Isabelle Anguelovski, James Conolly. Tutor: Victoria Reyes-García.

Castro Vargas, María Soledad. 2023. Plantations, pesticides, and the State: The making and unmaking of the Térraba-Sierpe delta. Co-directors: Esteve Corbera, Marion Werner, Laura Martín. Tutor: Esteve Corbera

**Hoffmann, Patrick. 2023.** Moving beyond modernization as a panacea: Pathways towards more sustainable water use in community-based irrigation systems. Director: Sergio Villamayor-Tomas. Tutor: Sergio Villamayor-Tomas.

**Johnson, Roberta.** 2023. Calcifying planktonic organisms in a high CO<sub>2</sub> Mediterranean Sea. Director: Patrizia Ziveri. Tutor: Patrizia Ziveri.

Manfroni, Michele. 2023. Relational analysis of the oil metabolism. Exploring biophysical limits to the development of social-ecological systems. Co-directors: Raúl Velasco, Mario Giampietro. Tutor: Mario Giampietro.

Marcos Valls, Alejandro. 2023. Identity, landscape, and adaptation for sustainability in Menorca. Advancing integration for governance in complexity through Post-Normal Science (PNS). Co-directors: Zora Kovacic, Mario Giampietro, Giorgos Kallis. Tutor: Mario Giampietro.

Martin, Nicholas. 2023. Expanding the role of environmental, material and bio-economic factors in energy transition decision making. Co-directors: Laura Talens, Cristina Madrid. Tutor: Gara Villalba.

Music, Marta. 2023. Towards a Pluriverse of Systemic Alternatives: Decolonial Feminist Perspectives. Co-directors: Federico Demaria, Rosalba Icaza. Tutor: Giorgos Kallis.

Neidig, Julia. 2023. The making of a green city ideal: Challenges and opportunities for (g)local climate action. Co-directors: Unai Pascual, Isabelle Anguelovski, Aitor Albaina. Tutor: Isabelle Anguelovski.

Pallacks, Sven. 2023. The Trident of Climate Change Impacts on Marine Ecosystems: Warming, Acidification and Deoxygenation - Insights from Mediterranean sedimentary records. Co-directors: Patrizia Ziveri, Eric Galbraith. Tutor: Patrizia Ziveri.

Pérez Sánchez, Laura. 2023. Studies on societal metabolism – from households to the global economy. Co-directors: Raúl Velasco, Mario Giampietro. Tutor: Mario Giampietro.

**Porcher, Vincent. 2023.** Budding botanists: Diversity and distribution of children's ethnobotanical knowledge in Madagascar. Co-directors: Victoria Reyes-Garcia, Stéphanie Carrière, Sandrine Gallois. Tutor: Victoria Reyes-Garcia, Victoria.

Sanz Sebastian, Maria Teresa. 2023. Articulating change across environmental conflict stages: Socio-spatial transformation through art activism in Chile, the Philippines, and the United States. Director: Beatriz Rodriguez Labajos. Tutor: Giorgos Kallis.

Slamersak, Aljosa. 2023. The end of energy abundance: Embracing biophysical limits to a low-carbon energy transition. Codirectors: Giorgos Kallis, Jason Hickel, Daniel O'Neill. Tutor: Giorgos Kallis.

Smith, David Jonathan. 2023. Integrated Environmental System Management Approaches and Stakeholder Chosen Visualisations for Coastal Management in the Global South. Director: Beatriz Rodriguez Labajos. Tutor: Montserrat Sarra.

Tran, Dalena Le. 2023. Unnamed Woman: Uncovering links between gendered violence, murder, and environmental conflicts. Co-directors: Joan Martinez Alier, Ksenija Hanacek. Tutor: Esteve Corbera.

## Annex II

Publications
[in alphabetical order by journal]

#### **Articles**

Wang, X., García-Orellana, J., Chen, X., Liu, J., Zhang, F., Qu, J., Zhu, Z., Du, J. (2023). Seasonal metal fluxes derived by the interaction of surface water and groundwater in an aquaculture estuary. *Acta Oceanologica Sinica 42 (8). doi: 10.1007/s13131-023-2232-4* 

Honey-Rosés, J., Ortega, V., Dejaegher, S., Corbera, E. (2023). Bicycle Parking Use Patterns, Occupancy and Rotation Rates in the Streets of Barcelona. *Active Travel Studies 3 (2)7. doi:* 10.16997/ats.1392

Mwamidi, D.M., Nunow, A.A., Dominguez, P. (2023). Customary ecological conservation of Mwanda-Marungu Pastoral Commons in Taita Hills, south-west Kenya. *African Journal of Range and Forage Science* 40 (1). doi: 10.2989/10220119.2022.2138972

Benitez-Altuna, F., Materia, V.C., Bijman, J., Gaitán-Cremaschi, D., Trienekens, J. (2023). Farmer–buyer relationships and sustainable agricultural practices in the food supply chain: The case of vegetables in Chile. *Agribusiness. doi: 10.1002/agr.21829* 

Porcuna-Ferrer, A., Labeyrie, V., Alvarez-Fernandez, S., Calvet-Mir, L., Faye, N.F., Ouadah, S., Reyes-García, V. (2023). Crop biocultural traits shape seed networks: Implications for social-ecological resilience in south eastern Senegal. *Agricultural Systems 211 Art. no. 103750. doi:* 10.1016/j.agsy.2023.103750

Mansfield, B., Werner, M., Berndt, C., Shattuck, A., Galt, R., Williams, B., Argüelles, L., Barri, F.R., Ishii, M., Kunin, J., Lapegna, P., Romero, A., Caicedo, A., Abhigya., Castro-Vargas, M.S., Marquez, E., Ojeda, D., Ramirez, F., Tittor, A. (2023). A new critical social science research agenda on pesticides. *Agriculture and Human Values. doi: 10.1007/s10460-023-10492-w* 

Facchini, F., López-García, D., Villamayor-Tomás, S., Corbera, E. (2023). Intersectional coalitions towards a just agroecology: weaving mutual aid and agroecology in Barcelona and Seville. *Agriculture and Human Values. doi:* 10.1007/s10460-023-10529-0

Appolloni, E., Paucek, I., Pennisi, G., Manfrini, L., Gabarrell, X., Gianquinto, G., Orsini, F. (2023). Winter Greenhouse Tomato Cultivation: Matching Leaf Pruning and Supplementary Lighting for Improved Yield and Precocity. *Agronomy 13(3). Art. no 671. doi: 10.3390/agronomy13030671* 

Anguelovski, I., Corbera, E. (2023). Integrating justice in Nature-Based Solutions to avoid nature-enabled dispossession. *Ambio 52 (1). doi: 10.1007/s13280-022-01771-7* 

Orlove, B., Sherpa, P., Dawson, N., Adelekan, I., Alangui, W., Carmona, R., Coen, D., Nelson, M.K., Reyes-García, V., Rubis, J., Sanago, G., Wilson, A. (2023). Placing diverse knowledge systems at the core of transformative climate research. *Ambio 52 (9). doi: 10.1007/s13280-023-01857-w* 

Martin, N., Talens-Peiró, L., Villalba-Méndez, G., Nebot-Medina, R., Madrid-López, C. (2023). An energy future beyond climate neutrality: Comprehensive evaluations of transition pathways. *Applied Energy 331. Art. no 120366. doi: 10.1016/j.apenergy.2022.120366* 

Sekulova, F., Bonilla, F., Laín, B. (2023). Life Satisfaction and Socio-Economic Vulnerability: Evidence from the Basic Income Experiment in Barcelona. *Applied Research in Quality of Life* 18(4). doi: 10.1007/s11482-023-10176-x

Galimany, E., Lucas, A., Maynou, F., Solé, M., Pelejero, C., Ramón, M. (2023). Experimental determination of differential seasonal response in seed of the Manila clam, Ruditapes philippinarum, in context of climate change. *Aquaculture 576. Art. no 739891. doi: 10.1016/j. aquaculture.2023.739891* 

Breu-Barcons, A., Vijande-Vila, E., Cantillo-Duarte, J., Comes, P., Heron, C., Villanueva, J., Ramos-Muñóz, J. (2023). Diversified pottery use across 5th and 4th millennium cal BC Neolithic coastal communities along the Strait of Gibraltar. *Archaeological and Anthropological Sciences* 15(4) Art. no. 51. doi: 10.1007/s12520-023-01751-2

Vélez-Pereira, A. M., De linares, C., Canela, M. A., Belmonte, J. (2023). A Comparison of Models for the Forecast of Daily Concentration Thresholds of Airborne Fungal Spores. *Atmosphere 14 (6), [1016]. doi: 10.3390/atmos14061016* 

Badia, A., Vidal, V., Ventura, S., Curcoll, R., Segura, R., Villalba, G. (2023). Modelling the impacts of emission changes on O3 sensitivity, atmospheric oxidation capacity, and pollution transport over the Catalonia region. *Atmospheric Chemistry and Physics 23 (18). doi: 10.5194/acp-23-10751-2023* 

Carmenta, R., Barlow, J., Bastos Lima, M.G., Berenguer, E., Choiruzzad, S., Estrada-Carmona, N., França, F., Kallis, G., Killick, E., Lees, A., Martin, A., Pascual, U., Pettorelli, N., Reed, J., Rodriguez, I., Steward, A.M., Sunderland, T., Vira, B., Zaehringer, J.G., Hicks, C. (2023). Connected Conservation: Rethinking conservation for a telecoupled world. *Biological Conservation 282 Art. no. 110047. doi: 10.1016/j.biocon.2023.110047* 

Torrents-Ticó, M., Broekhuis, F., Burgas, D., Cabeza, M., Miliko, E., Komoi, T.T., Fernández-Llamazares, Á. (2023). Using the centre-periphery framework to explore human-carnivore relations. *Biological Conservation 283 Art. no. 110125. doi: 10.1016/j.biocon.2023.110125* 

Molnár, Z., Fernández-Llamazares, Á., Schunko, C., Teixidor-Toneu, I., Jarić, I., Díaz-Reviriego, I., Ivascu, C., Babai, D., Sáfián, L., Karlsen, P., Dai, H., Hill, R. (2023). Social justice for traditional knowledge holders will help conserve Europe's nature. *Biological Conservation 285 Art. no 110190. doi: 10.1016/j.biocon.2023.110190* 

Beattie, M., Fa, J.E., Leiper, I., Fernández-Llamazares, Á., Zander, K.K., Garnett, S.T. (2023). Even after armed conflict, the environmental quality of Indigenous Peoples' lands in biodiversity hotspots surpasses that of non-Indigenous lands. *Biological Conservation 286 Art. no. 110288.* doi: 10.1016/j.biocon.2023.110288

Deng, L., Shangguan, Z., Bell, S.M., Soromotin, A.V., Peng, C., An, S., Wu, X., Xu, X., Wang, K., Li, J., Tang, Z., Yan, W., Zhang, F., Li, J., Wu, J., Kuzyakov, Y. (2023). Carbon in Chinese grasslands: meta-analysis and theory of grazing effects. *Carbon Research 2 (1). doi: 10.1007/s44246-023-00051-7* 

Cossa, D., Guédron, S., Coquery, M., Calafat, A., Zuñiga, D., Stavrakakis, S., Radakovitch, O., Buscail, R., García-Orellana, J., Heussner, S. (2023). Mercury deposition in the Eastern Mediterranean: Modern fluxes in the water column and Holocene accumulation rates in abyssal sediment. *Chemical Geology 636. Art. no 121652. doi: 10.1016/j.chemgeo.2023.121652* 

Anguelovski, I., Honey-Rosés, J., Marquet, O. (2023). Equity concerns in transformative planning: Barcelona's Superblocks under scrutiny. *Cities & Health. doi:* 10.1080/23748834.2023.2207929

Benyei, P., Skarlatidou, A., Argyriou, D., Hall, R., Theilade, I., Turreira-García, N., Latreche, D., Albert, A., Berger, D., Cartró-Sabaté, M., Chang, J., Chiaravalloti, R., Cortesi, A., Danielsen, F., Haklay, M., Jacobi, E., Nigussie, A., Reyes-García, V., Rodrigues, E., Sauini, T., Shadrin, V., Siqueira, A., Supriadi, Mr., Tillah, m., Tofighi-Niaki, A., Vronski, N., Woods, T. (2023). Challenges, Strategies, and Impacts of Doing Citizen Science with Marginalised and Indigenous Communities: Reflections from Project Coordinators. *Citizen Science: Theory and Practice 8 (1). doi: 10.5334/cstp.514* 

Ventura, S., Miró, J.R., Peña, J.C., Villalba, G. (2023). Analysis of synoptic weather patterns of heatwave events. *Climate Dynamics* 61 (9-10). doi: 10.1007/s00382-023-06828-1

Garriga-Baraut, T., Moncín, M.M.S.M., Tena, M., Labrador-Horrillo, M., Asensio, O., Bartra, J., Belmonte, J., Bobolea, I., De Linares, C., Farrarons, L., Miquel, S., Muñoz-Cano, R. Padró-Casas, C., Pedemonte, C., Raga, E., Viñas, M. (2023). INMUNOCAT study: The impact of molecular diagnosis on immunotherapy prescription in pollen polysensitized patients from Catalonia. *Clinical and Translational Allergy 13(5) Art. no. E12246. doi: 10.1002/clt2.12246* 

Cavaleri Gerhardinger, L, Brodie Rudolph, T., Gaill, F., Mortyn, G., Littley, E., Vincent, A., Firme Herbst, D., Ziveri, P., Jeanneau, L., Laamanen, M., Cavallé, M., Marisca Gietzelt, J., Glaser, M., Chambon, M., Jacquemont, J., Ahmed Selim, S., Brugere, C. (2023). Bridging Shades of Blue: Co-constructing Knowledge with the International Panel for Ocean Sustainability. *Coastal Management* 51 (4). doi: 10.1080/08920753.2023.2244082

ter Steege, H., Pitman, N.C.A., do Amaral, I.L., de Souza Coelho, L., de Almeida Matos, F.D., de Andrade Lima Filho, D., Salomão, R.P., Wittmann, F., Castilho, C.V., Guevara, J.E., Veiga Carim, M.J., Phillips, O.L., Magnusson, W.E., Sabatier, D., Revilla, et al. (2023). Mapping density, diversity and species-richness of the Amazon tree flora. *Communications Biology 6(1) Art. no. 1130. doi: 10.1038/s42003-023-05514-6* 

Hatje, V., Copertino, M., Patire, V.F., Ovando, X., Ogbuka, J., Johnson, B.J., Kennedy, H., Masque, P., Creed, J.C. (2023). Vegetated coastal ecosystems in the Southwestern Atlantic Ocean are an unexploited opportunity for climate change mitigation. *Communications Earth and Environment 4(1) Art. no. 160. doi: 10.1038/s43247-023-00828-z* 

Pallacks, S., Ziveri, P., Schiebel, R., Vonhof, H., Rae, J.W.B., Littley, E., García-Orellana, J., Langer, G., Grelaud, M., Martrat, B. (2023). Anthropogenic acidification of surface waters drives decreased biogenic calcification in the Mediterranean Sea. *Communications Earth and Environment 4 Art. no 301. doi: 10.1038/s43247-023-00947-7* 

Reyes-García, V., García-del-Amo, D., Álvarez-Fernández, S., Benyei, P., Calvet-Mir, L., Junqueira, A.B., Labeyrie, V., Li, X., Miñarro, S., Porcher, V., Porcuna-Ferrer, A., Schlingmann, A., Schunko, C., Soleymani, R., Tofighi-Niaki, A., Abazeri, M., et al. (2023). Indigenous Peoples and local communities report ongoing and widespread climate change impacts on local social-ecological systems. *Communications Earth and Environment 5(1) Art. no. 29. doi: 10.1038/s43247-023-01164-y* 

James, A., Broome, N.P. (2023). A Fine Balance? Value-relations, Post-capitalism and Forest Conservation - A Case from India. *Conservation and Society 21 (3). doi: 10.4103/cs.cs\_112\_22* 

Simkins, A.T., Donald, P.F., Beresford, A.E., Butchart, S.H.M., Fa, J.E., Fernández-Llamazares, A.O., Garnett, S.T., Buchanan, G.M. (2023). Rates of tree cover loss in Key Biodiversity Areas on Indigenous Peoples' lands. *Conservation Biology. doi: 10.1111/cobi.14195* 

Galappaththi, E. K., Schlingmann, A. (2023). The sustainability assessment of Indigenous and local knowledge-based climate adaptation responses in agricultural and aquatic food systems. *Current Opinion in Environmental Sustainability 62. doi: 10.1016/j.cosust.2023.101276* 

Gerhardinger, L.C., Mills, E., Mesquita, B., Rivera, V.S., Kefalás, H.C., Colonese, A.C. (2023). Challenging the Blue Economy: Voices from Artisanal Fishing Communities in Latin America and the Caribbean. *Development 66 (1-2). doi: 10.1057/s41301-023-00366-3* 

Calcagni, F., Connolly, J.J.T., Langemeyer, J. (2023). Plural relational green space values for whom, when, and where? - A social media approach. *Digital Geography and Society 5 Art. no.* 100065. doi: 10.1016/j.diggeo.2023.100065

Delclòs, X., Peñalver, E., Barrón, E., Peris, D., Grimaldi, D. A., Holz, M., Labandeira, C. C., Saupe, E. E., Scotese, C. R., Solórzano-Kraemer, M. M., Álvarez-Parra, S., Arillo, A., Azar, D., Cadena, E. A., Dal corso, J., Kvaček, J., Monleón-Getino, A., et al. (2023). Amber and the Cretaceous Resinous Interval. *Earth-Science Reviews 243 [104486]. doi: 10.1016/j. earscirev.2023.104486* 

López-Baucells, A., Revilla-Martín, N., Mas, M., Alonso-Alonso, P., Budinski, I., Fraixedas, S., Fernández-Llamazares, Á. (2023). Newspaper Coverage and Framing of Bats, and Their Impact on Readership Engagement. *EcoHealth 20 (1). doi: 10.1007/s10393-023-01634-x* 

Foramitti, J. (2023). A framework for agent-based models of human needs and ecological limits. *Ecological Economics* 204 [107651]. doi: 10.1016/j.ecolecon.2022.107651

Olk, C., Schneider, C., Hickel, J. 2023. How to pay for saving the world: Modern Monetary Theory for a degrowth transition. *Ecological Economics 214 Art. no. 107968. doi: 10.1016/j. ecolecon.2023.107968* 

Foramitti, J., Savin, I., van den Bergh, J.C.J.M. (2023). How carbon pricing affects multiple human needs: An agent-based model analysis. *Ecological Economics 217 Art. no. 108070. doi:* 10.1016/j.ecolecon.2023.108070

Coenen, J., Sonderegger, G., Newig, J., Meyfroidt, P., Challies, E., Bager, S., Busck-Lumholt, L., Corbera, E., Friis, C., Frohn Pedersen, A., Laroche, P., Parra Paitan, C., Qin, S., Roux, N., Zaehringer, J. (2023). Toward spatial fit in the governance of global commodity flows. *Ecology and Society 28 (2) art 24. doi: 10.5751/ES-14133-280224* 

Gallois, S., van Andel, T., Ambassa, A., van Bemmel, S. (2023). The Future Is in the Younger Generations: Baka Children in Southeast Cameroon Have Extensive Knowledge on Medicinal Plants. *Economic Botany. doi:* 10.1007/s12231-023-09589-4

Li, M., Keyßer, L., Kikstra, J.S., Hickel, J., Brockway, P.E., Dai, N., Malik, A., Lenzen, M. (2023). Integrated assessment modelling of degrowth scenarios for Australia. *Economic Systems Research. doi:* 10.1080/09535314.2023.2245544

Dunlop, T., Völker, T. (2023). The politics of measurement and the case of energy efficiency policy in the European Union. *Energy Research and Social Science* 96 Art. no. 102918. doi: 10.1016/j.erss.2022.102918

Asara, V., Kallis, G. (2023). The prefigurative politics of social movements and their processual production of space: The case of the indignados movement. *Environment and Planning C: Politics and Space 41 (1). doi: 10.1177/23996544221115279* 

Castro Vargas, M. S., Werner, M. (2023). Regulation by impasse: Pesticide registration, capital and the state in Costa Rica. *Environment and Planning E: Nature and Space 6 (2). doi:* 10.1177/25148486221116742

Mempel, F., Corbera, E., Labajos, B. R., Challies, E. (2023). From railroad imperialism to neoliberal reprimarization: Lessons from regime-shifts in the Global Soybean Complex. *Environment and Planning E: Nature and Space. doi: 10.1177/25148486231201216* 

Torres López, S., Barrionuevo, M.A., Rodríguez-Labajos, B. (2023). A new operational approach for understanding water-related interactions to achieve water sustainability in growing cities. *Environment, Development and Sustainability 25 (1). doi: 10.1007/s10668-021-02045-0* 

Alfonso-Bécares, D., Giampietro, M., Corbera, E., Serrano-Tovar, T. (2023). Advancing the understanding of forest conservation dynamics through livelihood and landscape change scenarios: a case study in Chiapas, Mexico. *Environment, Development and Sustainability. doi:* 10.1007/s10668-023-02965-z

Kovacic, Z., Marcos-Valls, A. (2023). Institutionalising interdisciplinarity in PhD training: challenging and redefining expertise in problem-oriented research. *Environmental Education Research* 29 (3). doi: 10.1080/13504622.2023.2174252

Sekulova, K., Anguelovski, I., Argüelles, L. (2023). Redefining success in organizing towards degrowth. *Environmental Innovation and Societal Transitions 48 (100764). doi: 10.1016/j. eist.2023.100764* 

Amorim-Maia, A.T., Anguelovski, I., Chu, E., Connolly, J. (2023). Governing intersectional climate justice: Tactics and lessons from Barcelona. *Environmental Policy and Governance. doi:* 10.1002/eet.2075

Garrick, D., Balasubramanya, S., Beresford, M., Wutich, A., Gilson, G. G., Jorgensen, I., Brozović, N., Cox, M., Dai, X., Erfurth, S., Rimšaitė, R., Svensson, J., Jones, J. T., Unnikrishnan, H., Wight, C., Villamayor-Tomás, S., Mendoza, K. V. (2023). A systems perspective on water markets: barriers, bright spots, and building blocks for the next generation. *Environmental Research Letters* 18 (3), [031001]. doi: 10.1088/1748-9326/acb227

Waylen, K. A., Blackstock, K. L., Matthews, K. B., Juarez-Bourke, A., Hague, A., Wardell-Johnson, D. H., Miller, D. G., Kovacic, Z., Völker, T., Guimaraes Pereira, A., Giampietro, M. (2023). Post-normal science in practice: Reflections from scientific experts working on the European agri-food policy nexus. *Environmental Science and Policy 141. doi: 10.1016/j. envsci.2023.01.007* 

Porcuna-Ferrer, A., Calvet-Mir, L., Guillerminet, T., Alvarez-Fernandez, S., Labeyrie, V., Porcuna-Ferrer, E., Reyes-García, V. (2023). "So many things have changed": Situated understandings of climate change impacts among the Bassari, south-eastern Senegal. *Environmental Science and Policy 148 Art. no 103552. doi: 10.1016/j.envsci.2023.103552* 

Mempel, F., Bidone, F. (2023). Re-MEDIAting distant impacts - how Western media make sense of deforestation in different Brazilian biomes. *Environmental Sociology 9 (1). doi:* 10.1080/23251042.2022.2106087

Savin, I., Novitskaya, M. (2023). Data-driven definitions of gazelle companies that rule out chance: application for Russia and Spain. *Eurasian Business Review 13 (3). doi: 10.1007/s40821-023-00239-2* 

Hansen, R., Buizer, M., Buijs, A., Pauleit, S., Mattijssen, T., Fors, H., van der Jagt, A., Kabisch, N., Cook, M., Delshammar, T., Randrup, T.B., Erlwein, S., Vierikko, K., Nieminen, H., Langemeyer, J., Soson Texereau, C., Luz, A.C., Nastran, M., et al. (2023). Transformative or piecemeal? Changes in green space planning and governance in eleven European cities. *European Planning Studies 31 (12). doi: 10.1080/09654313.2022.2139594* 

Tran, D. (2023). Gendered violence martyring Filipina environmental defenders. *Extractive Industries and Society 13 Art. no. 101211. doi: 10.1016/j.exis.2023.101211* 

Busch, H., Ramasar, V., Avila, S., Roy, B., van Ryneveld, T., Mandinic, A., Brandstedt, E. (2023). Mining coal while digging for justice: Investigating justice claims against a coal-phase out in five countries. *Extractive Industries and Society 15 (101275). doi: 10.1016/j.exis.2023.101275* 

Tran, D. (2023). Realities beyond reporting: women environmental defenders in South Africa. *Feminist Media Studies 23 (5). doi: 10.1080/14680777.2022.2045335* 

Salvatori, V., Marino, A., Ciucci, P., Galli, C., Machetti, M., Passalacqua, E., Ricci, S., Romeo, G., Rosso, F., Tudini, L. (2023). Managing wolf impacts on sheep husbandry: a collaborative implementation and assessment of damage prevention measures in an agricultural landscape. *Frontiers in Conservation Science 4 Art. no.* 1264166. doi: 10.3389/fcosc.2023.1264166

Li, Q., Huang, J., Zhang, Y., Gu, G., Brockington, D. (2023). Spatial variation of perceived equity and its determinants in a gateway community of Giant Panda National Park, China. *Frontiers in Ecology and Evolution 11 Art. no. 1129556. doi: 10.3389/fevo.2023.1129556* 

Darboe, S., Manneh, L., Stryamets, N., Prūse, B., Pieroni, A., Sõukand, R., Mattalia, G. (2023). "Forest is integral to life": people-forest relations in the lower river region, the Gambia. *Frontiers in Forests and Global Change 6 Article 1181013. doi: 10.3389/ffgc.2023.1181013* 

Lucas, C.C., Teixeira, C.E.P., Braga, M.D.A., Júnior, F.C., Paiva, S.V., Gurgel, A.L., Rossi, S., Soares, M.O. (2023). Heatwaves and a decrease in turbidity drive coral bleaching in Atlantic marginal equatorial reefs. *Frontiers in Marine Science 10 Art. num.* 1061488. doi: 10.3389/fmars.2023.1061488

Rigual-Hernández, A.S., Langer, G., Sierro, F.J., Bostock, H., Sánchez-Santos, J.M., Nodder, S.D., Trull, T.W., Ballegeer, A.M., Moy, A.D., Eriksen, R., Makowka, L., Béjard, T.M., Rigal-Muñoz, F.H., Hernández-Martín, A., Zorita-Viota, M., Flores, J.A. (2023). Reduction in size of the calcifying phytoplankton Calcidiscus leptoporus to environmental changes between the Holocene and modern Subantarctic Southern Ocean. *Frontiers in Marine Science 10 Art. no.* 1159884. doi: 10.3389/fmars.2023.1159884

Nogué-Algueró, B., Kallis, G., Ortega, M. (2023). Limits to fishing: the case for collective self-limitation illustrated with an example of small-scale fisheries in Catalonia. *Frontiers in Marine Science 10 Art. no 1134725. doi: 10.3389/fmars.2023.1134725* 

Tonini, P., Odina, P.M., Durany, X.G. (2023). Predicting food waste in households with children: socio-economic and food-related behavior factors. *Frontiers in Nutrition 10 Art. no. 1249310.* doi: 10.3389/fnut.2023.1249310

Ruiz Cayuela, S., García-Lamarca, M. (2023). From the squat to the neighbourhood: Popular infrastructures as reproductive urban commons. *Geoforum 144 Art. no 103807. doi: 10.1016/j. geoforum.2023.103807* 

Pierri Daunt, A.B., Lima Guimarães, S., Sanna Freire Silva, T. (2023). Identificação de vetores modificadores da paisagem no litoral norte de São Paulo durante os séculos XX e XXI. *Geografía 48 (1)* 

Gómez-Varo, I., Delclòs-Alió, X., Miralles-Guasch, C., Marquet, O. (2023). Accounting for care in everyday mobility: an exploration of care-related trips and their sociospatial correlates. *Geografiska Annaler, Series B: Human Geography. doi:* 10.1080/04353684.2023.2226157

Maciejewska, M., Vich, G., Delclòs-Alió, X., Miralles-Guasch, C. (2023). Gendered morphologies and walking: Evidence from smartphone tracking data among young adults in Barcelona. *Geographical Journal* 189 (4). doi: 10.1111/geoj.12500

Klintzsch, T., Geisinger, H., Wieland, A., Langer, G., Nehrke, G., Bizic, M., Greule, M., Lenhart, K., Borsch, C., Schroll, M., Keppler, F. (2023). Stable Carbon Isotope Signature of Methane Released From Phytoplankton. *Geophysical Research Letters* 50 (12). doi: 10.1029/2023GL103317

Incarbona, A., Bonomo, S., Cacho, I., Lirer, F., Margaritelli, G., Pecoraro, D., Ziveri, P. (2023). Solar forcing for nutricline depth variability inferred by coccoliths in the pre-industrial northwestern Mediterranean. *Global and Planetary Change 224 Art. no. 104102. doi: 10.1016/j. gloplacha.2023.104102* 

Buchadas, A., Jung, M., Bustamante, M., Fernández-Llamazares, Á., Garnett, S. T., Nanni, A. S., Ribeiro, N., Meyfroidt, P., Kuemmerle, T. (2023). Tropical dry woodland loss occurs disproportionately in areas of highest conservation value. *Global Change Biology 29 (17). doi:* 10.1111/gcb.16832

Galiana, N., Lurgi, M., Montoya, J.M., Araújo, M.B., Galbraith, E.D. (2023). Climate or diet? The importance of biotic interactions in determining species range size. *Global Ecology and Biogeography 32 (7). doi: 10.1111/geb.13686* 

Diego F. Correa, Pablo R. Stevenson, Maria Natalia Umaña, Luiz de Souza Coelho, Diógenes de Andrade Lima Filho, Rafael P. Salomão, Iêda Leão do Amaral, Florian Wittmann, Francisca Dionízia de Almeida Matos, Carolina V. Castilho, Oliver L. Phillips, et al. (2023). Geographic patterns of tree dispersal modes in Amazonia and their ecological correlates. *Global Ecology and Biogeography 32 (1). doi: 10.1111/geb.13596* 

Zhang, Y., Hu, F., Zhang, Y., Du, C., Brockington, D. (2023). Exploring the relationship between local participation and perceived Co-management performance: Evidence from China's Giant Panda National Park. *Global Ecology and Conservation 45 Art. no. E02517. doi: 10.1016/j. gecco.2023.e02517* 

Shattuck, A., Werner, M., Mempel, F., Dunivin, Z., Galt, R. (2023). Global pesticide use and trade database (GloPUT): New estimates show pesticide use trends in low-income countries substantially underestimated. *Global Environmental Change 81Art. no. 102693. doi: 10.1016/j. gloenvcha.2023.102693* 

Bontempi, A., Venturi, P., Del Bene, D., Scheidel, A., Zaldo-Aubanell, Q., Zaragoza, R.M. (2023). Conflict and conservation: On the role of protected areas for environmental justice. *Global Environmental Change 82 Art. no. 102740. doi: 10.1016/j.gloenvcha.2023.102740* 

Conde, M., Walter, M., Wagner, L., Navas, G. (2023). Slow justice and other unexpected consequences of litigation in environmental conflicts. *Global Environmental Change 83* (102762). doi: 10.1016/j.gloenvcha.2023.102762

McIntosh, A., Anguelovski, I., Cole, H. (2023). "The trauma machine expands faster than our services": Health risks for unhoused people in an early-stage gentrifying area. *Health and Place 83 (103035). doi: 10.1016/j.healthplace.2023.103035* 

Macall, D.M., Madrigal-Pana, J., Smyth, S.J., Gatica Arias, A. (2023). Costa Rican consumer perceptions of gene-editing. *Heliyon 9 (8), e19173. doi: 10.1016/j.heliyon.2023.e19173* 

Hartmann, P., Marcos, A., Castro, J., Apaolaza, V. (2023). Perspectives: Advertising and climate change–Part of the problem or part of the solution?. *International Journal of Advertising 42(2).* doi: 10.1080/02650487.2022.2140963

Benitez-Altuna, F., Trienekens, J., Gaitán-Cremaschi, D. (2023). Categorizing the sustainability of vegetable production in Chile: a farming typology approach. *International Journal of Agricultural Sustainability 21(1) Art. no. 2202538. doi: 10.1080/14735903.2023.2202538* 

Oña-Serrano, X., Viteri-Salazar, O., Cadillo Benalcazar, J.J., Buenaño Guerra, X., Quelal-Vásconez, M.A. (2023). Reducing environmental pressures produced by household food waste: initiatives and policy challenges. *International Journal of Environment and Sustainable Development 22(4). doi: 10.1504/IJESD.2023.133828* 

Honey-Rosés, J., Zapata, O. (2023). Green Spaces with Fewer People Improve Self-Reported Affective Experience and Mood. *International Journal of Environmental Research and Public Health 20(2) Art. no. 1219. doi: 10.3390/ijerph20021219* 

Marquet, O., Tello-Barsocchini, J., Couto-Trigo, D., Gómez-Varo, I., Maciejewska, M. (2023). Comparison of static and dynamic exposures to air pollution, noise, and greenness among seniors living in compact-city environments. *International Journal of Health Geographics 22(1) Art. no 3. doi:* 10.1186/s12942-023-00325-8

Llorach-Massana, P., Cirrincione, L., Sierra-Perez, J., Scaccianoce, G., La Gennusa, M., Peña, J., Rieradevall, J. (2023). Environmental assessment of a new building envelope material derived from urban agriculture wastes: the case of the tomato plants stems. *International Journal of Life Cycle Assessment 28 (7). doi: 10.1007/s11367-023-02152-2* 

Apostolopoulou, E. (2023). Navigating neoliberal natures in an era of infrastructure expansion and uneven urban development. *Investigaciones Regionales 55. doi: 10.38191/iirr-jorr.23.007* 

Admiraal, M., Jordan, P.D., Talbot, H.M., Bondetti, M., Serna, A., Taché, K., von Tersch, M., Hendy, J., McGrath, K., Craig, O.E., Lucquin, A. (2023). The role of salmon fishing in the adoption of pottery technology in subarctic Alaska. *Journal of Archaeological Science 157 Art. no.* 105824. doi: 10.1016/j.jas.2023.105824

Breu, A., Rosell-Melé, A., Heron, C., Antolín, F., Borrell, F., Edo, M., Fontanals, M., Molist, M., Moraleda, N., Oms, F.X., Tornero, C., Vergès, J.M., Vicente, O., Bach-Gómez, A. (2023). Resinous deposits in Early Neolithic pottery vessels from the northeast of the Iberian Peninsula. *Journal of Archaeological Science: Reports 47 Art. no 103744. doi: 10.1016/j. jasrep.2022.103744* 

Castro-Santa, J., Drews, S., Bergh, J.V.D. (2023). Nudging low-carbon consumption through advertising and social norms. *Journal of Behavioral and Experimental Economics 102 Art. no 101956. doi: 10.1016/j.socec.2022.101956* 

van den Bergh, J.C.J.M. (2023). Climate policy versus growth concerns: Suggestions for economic research and communication. *Journal of Behavioral and Experimental Economics* 107 (102125). doi: 10.1016/j.socec.2023.102125

Bontempi, A., Del Bene, D., Di Felice, L.J. (2023). Counter-reporting sustainability from the bottom up: the case of the construction company WeBuild and dam-related conflicts. *Journal of Business Ethics* 182 (1). doi: 10.1007/s10551-021-04946-6

Cunha, F.F.M.D., Tonon, A.P., Machado, F., Travassos, L.R., Grazzia, N., Possatto, J.F., Sant'ana, A.K.C.D., Lopes, R.D.M., Rodrigues, T., Miguel, D.C., Gadelha, F.R., Arruda, D.C. (2023). Astaxanthin induces autophagy and apoptosis in murine melanoma B16F10-Nex2 cells and exhibits antitumor activity in vivo. *Journal of Chemotherapy. doi:* 10.1080/1120009X.2023.2264585

Davtian, N., Penalva, N., Rosell-Melé, A., Villanueva, J. (2023). Selective extraction of levoglucosan and its isomers from complex matrices using ligand exchange-solid phase extraction for analysis by liquid chromatography-electrospray ionization-tandem mass spectrometry. *Journal of Chromatography A 1695 Art. no. 463935. doi: 10.1016/j. chroma.2023.463935* 

Castro-Santa, J. (2023). Climate change mitigation under uncertainty and inequality: A classroom experiment. *Journal of Economic Education 54 (2). doi:* 10.1080/00220485.2023.2176388

Midões, C., de Crombrugghe, D. (2023). Assumption-light and computationally cheap inference on inequality measures by sample splitting: the Student t approach. *Journal of Economic Inequality 21 (4). doi: 10.1007/s10888-023-09574-w* 

Drews, S., van den Bergh, J. (2023). Behavioral Interventions for Climate Mitigation in Developing Countries: Overview and Prospects. *Journal of Environment and Development* 32(3). doi: 10.1177/10704965231190118

Arce Bastias, F., Rodríguez, P.D., Arena, A.P., Talens Peiró, L. (2023). Measuring the symbiotic performance of single entities within networks using an LCA approach. *Journal of Environmental Chemical Engineering* 11(5) Art. no. 111023. doi: 10.1016/j.jece.2023.111023

Josa, I., Petit-Boix, A., Casanovas-Rubio, M.M., Pujadas, P., de la Fuente, A. (2023). Environmental and economic impacts of combining backfill materials for novel circular narrow trenches. *Journal of Environmental Management 341 art. 118020. doi: 10.1016/j. jenvman.2023.118020* 

Gamboa, G., Otero, I., Bueno, C., Arilla, E., Ballart, H., Camprubí, L., Canaleta, G., Tolosa, G., Castellnou, M. (2023). Participatory multi-criteria evaluation of landscape values to inform wildfire management. *Journal of Environmental Management 327 (1), [116762]. doi: 10.1016/j. jenvman.2022.116762* 

Reyes-García, V. (2023). Beyond artificial academic debates: for a diverse, inclusive, and impactful ethnobiology and ethnomedicine. *Journal of Ethnobiology and Ethnomedicine 19(1) Art. no. 36. doi: 10.1186/s13002-023-00611-6* 

De Linares, C. D., Navarro, D., Puigdemunt, R., Belmonte, J. (2023). Aspergillus Conidia and Allergens in Outdoor Environment: A Health Hazard?. *Journal of Fungi 9 (6). doi: 10.3390/jof9060624* 

Estruch, C., Belviso, S., Badia, A., Vidal, V., Curcoll, R., Udina, M., Grossi, C., Morguí, J.-A., Segura, R., Ventura, S., Sola, Y., Villalba, G. (2023). Exploring the Influence of Land Use on the Urban Carbonyl Sulfide Budget: A Case Study of the Metropolitan Area of Barcelona. *Journal of Geophysical Research: Atmospheres* 128(24) Art. no. e2023JD039497. doi: 10.1029/2023JD039497

Gutiérrez-Martín, D., Gil-Solsona, R., Saaltink, M.W., Rodellas, V., López-Serna, R., Folch, A., Carrera, J., Gago-Ferrero, P. (2023). Chemicals of emerging concern in coastal aquifers: Assessment along the land-ocean interface. *Journal of Hazardous Materials 448 Art. no.* 130876. doi: 10.1016/j.jhazmat.2023.130876

Leipold, S., Petit-Boix, A., Luo, A., Helander, H., Simoens, M., Ashton, W.S., Babbitt, C.W., Bala, A., Bening, C.R., Birkved, M., Blomsma, F., Boks, C., Boldrin, A., Deutz, P., Domenech, T., Ferronato, N., Gallego-Schmid, A., Giurco, D., Hobson, K., et al. (2023). Lessons, narratives, and research directions for a sustainable circular economy. *Journal of Industrial Ecology 27 (1). doi: 10.1111/jiec.13346* 

Bisht, A., Martinez-Alier, J. (2023). Coastal sand mining of heavy mineral sands: Contestations, resistance, and ecological distribution conflicts at HMS extraction frontiers across the world. *Journal of Industrial Ecology 27 (1). doi: 10.1111/jiec.13358* 

Navas, G. (2023). 'If there's no evidence, there's no victim': undone science and political organisation in marginalising women as victims of DBCP in Nicaragua. *Journal of Peasant Studies 50 (4). doi: 10.1080/03066150.2021.2024517* 

Scheidel, A., Liu, J., Del Bene, D., Mingorria, S., Villamayor-Tomás, S. (2023). Ecologies of contention: how more-than-human natures shape contentious actions and politics. *Journal of Peasant Studies 50 (7). doi: 10.1080/03066150.2022.2142567* 

Wheeler, G.L., Sturm, D., Langer, G. (2023). Gephyrocapsa huxleyi (Emiliania huxleyi) as a model system for coccolithophore biology. *Journal of Phycology* 59 (6). doi: 10.1111/jpy.13404

Gómez-Varo, I., Delclòs-Alió, X., Miralles-Guasch, C., Marquet, O. (2023). Youth Perception of Urban Vitality: A PhotoVoice Study on the Everyday Experiences of Public Space. *Journal of Planning Education and Research. doi:* 10.1177/0739456X231171098

Maaßen, C., Rovira, R., Urbano, D. (2023). A Process Model for Sustainable Entrepreneurship: Evidence from a Highly Entrepreneurial European Region. *Journal of Social Entrepreneurship.* doi: 10.1080/19420676.2023.2221262

Bidone, F. (2023). Investigating Forest Governance through Environmental Discourses: An Amazonian Case Study. *Journal of Sustainable Forestry 42 (1). doi:* 10.1080/10549811.2021.1933537

Bretones, A., Marquet, O. (2023). Riding to health: Investigating the relationship between micromobility use and objective physical activity in Barcelona adults. *Journal of Transport and Health 29 Art. no. 101588. doi: 10.1016/j.jth.2023.101588* 

Cubells, J., Miralles-Guasch, C., Marquet, O. (2023). E-scooter and bike-share route choice and detours: Modelling the influence of built environment and sociodemographic factors. *Journal of Transport Geography 111 Art. no. 103664. doi: 10.1016/j.jtrangeo.2023.103664* 

Oscilowicz, E., Anguelovski, I., García-Lamarca, M., Cole, H.V.S., Shokry, G., Perez-del-Pulgar, C., Argüelles, L., Connolly, J.J.T. (2023). Grassroots mobilization for a just, green urban future: Building community infrastructure against green gentrification and displacement. *Journal of Urban Affairs. doi: 10.1080/07352166.2023.2180381* 

Shokry, G., Anguelovski, I., Connolly, J. J. T. (2023). (Mis-)belonging to the climate-resilient city: Making place in multi-risk communities of racialized urban America. *Journal of Urban Affairs.* doi: 10.1080/07352166.2022.2160339

Madrid-Solorza, S., Marquet, O., Fuentes, L., Miralles-Guasch, C. (2023). Urban Vitality Conditions and Neighborhood Satisfaction in a Latin American City: The Case of Santiago de Chile. *Journal of Urban Planning and Development 149(3) Art. no. 05023018. doi: 10.1061/JUPDDM.UPENG-4332* 

Zambrano-Prado, P., Josa, A., Rieradevall, J., Alamús, R., Pérez, F., Marchan, J., Gassó, S., Gabarrell, X. (2023). Mapping Roof Materials in Cities for Food, Water, and Energy Production: A Mediterranean Metropolitan Area Case Study. *Journal of Urban Technology 30 (5). doi:* 10.1080/10630732.2023.2270900

Marull, J., Padró, R., La Rota-Aguilera, M.J., Pino, J., Giocoli, A., Cirera, J., Ruiz-Forés, N., Coll, F., Serrano-Tovar, T., Velasco-Fernández, R. (2023). Modelling land use planning: Socioecological integrated analysis of metropolitan green infrastructures. *Land Use Policy 126 Art. no. 106558. doi: 10.1016/j.landusepol.2023.106558* 

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). doi: 10.1016/j.landurbplan.2023.104836

Piquer-Rodríguez, M., Friis, C., Andriatsitohaina, R.N.N., Boillat, S., Roig-Boixeda, P., Cortinovis, C., Geneletti, D., Ibarrola-Rivas, M.-J., Kelley, L.C., Llopis, J.C., Mack, E.A., Nanni, A.S., Zaehringer, J.G., Henebry, G.M. (2023). Global shocks, cascading disruptions, and (re-)connections: viewing the COVID-19 pandemic as concurrent natural experiments to understand land system dynamics. *Landscape Ecology 38 (5). doi: 10.1007/s10980-023-01604-2* 

Leiva-Dueñas, C., Graversen, A.E.L., Banta, G.T., Holmer, M., Masque, P., Stæhr, P.A.U., Krause-Jensen, D. (2023). Capturing of organic carbon and nitrogen in eelgrass sediments of southern Scandinavia. *Limnology and Oceanography 68 (3). doi: 10.1002/lno.12299* 

Luger, J., Kotsila, P., Anguelovski, I. (2023). The notion of justice in funded research on urban sustainability: performing on a postpolitical stage or staging the political?. *Local Environment* 28 (1). doi: 10.1080/13549839.2022.2113867

Muns-Pujadas, L., Dallarés, S., Constenla, M., Padrós, F., Carreras-Colom, E., Grelaud, M., Carrassón, M., Soler-Membrives, A. (2023). Revealing the capability of the European hake to cope with micro-litter environmental exposure and its inferred potential health impact in the NW Mediterranean Sea. *Marine Environmental Research 186 Art. no. 105921. doi: 10.1016/j. marenvres.2023.105921* 

Lucas, C.C., Lima, I.C., García, T.M., Tavares, T.C.L., Carneiro, P.B.M., Teixeira, C.E.P., Bejarano, S., Rossi, S., Soares, M.O. (2023). Turbidity buffers coral bleaching under extreme wind and rainfall conditions. *Marine Environmental Research 192 Art. no. 106215. doi:* 10.1016/j.marenvres.2023.106215

Addante, M., Grelaud, M., Langer, G., Maiorano, P., Bonomo, S., Álvarez, M., Johnson, R., Ziveri, P. (2023). Local hydrodynamic in coastal system affects the coccolithophore community at a short spatial scale. *Marine Micropaleontology 185 Art. no. 102309. doi: 10.1016/j. marmicro.2023.102309* 

Soares, M.O., Brandão, D.B., Teixeira, C.E.P., Cavalcante, R.M., Oliveira, A.H.B.D., Bezerra, L.E.A., Barros, E.L. (2023). Déjà vu: New oil spill poses cumulative risks to protected coastal environments in the South Atlantic. *Marine Policy 155 Art. Num. 105764. doi: 10.1016/j. marpol.2023.105764* 

Lafratta, A., Serrano, O., Masqué, P., Fernandes, M., Gaylard, S., Lavery, P.S. (2023). Seagrass soils sequester up to half the metal emissions of one of the world's largest smelters. *Marine Pollution Bulletin 197 Art. no. 115684. doi: 10.1016/j.marpolbul.2023.115684* 

van den Hurk, Y., Riddler, I., McGrath, K., Speller, C. (2023). Active Whaling, Opportunistic Scavenging or Long-Distance Trading: Zooarchaeological, Palaeoproteomic, and Historical Analyses on Whale Exploitation and Bone Working in Anglo-Saxon Hamwic. *Medieval Archaeology* 67 (1). doi: 10.1080/00766097.2023.2204674

Nehrke, G., Langer, G. (2023). Proxy Archives Based on Marine Calcifying Organisms and the Role of Process-Based Biomineralization Concepts. *Minerals* 13(4) Art. no. 561. doi: 10.3390/min13040561

Ziveri, P., Gray, W.R., Anglada-Ortiz, G., Manno, C., Grelaud, M., Incarbona, A., Rae, J.W.B., Subhas, A.V., Pallacks, S., White, A., Adkins, J.F., Berelson, W. (2023). Pelagic calcium carbonate production and shallow dissolution in the North Pacific Ocean. *Nature Communications* 14(1) *Art. no* 805. doi: 10.1038/s41467-023-36177-w

Fanning, A.L., Hickel, J. (2023). Compensation for atmospheric appropriation. *Nature Sustainability* 6 (9). doi: 10.1038/s41893-023-01130-8

Tran, D., Hanaček, K. (2023). A global analysis of violence against women defenders in environmental conflicts. *Nature Sustainability 6 (9). doi: 10.1038/s41893-023-01126-4* 

King, L.C., Savin, I., Drews, S. (2023). Shades of green growth scepticism among climate policy researchers. *Nature Sustainability 6 (11). doi: 10.1038/s41893-023-01198-2* 

Roques, A., Ren, L., Rassati, D., Shi, J., Akulov, E., Audsley, N., Auger-Rozenberg, M-A., Avtzis, D., Battisti, A., Bellanger, R., Bernard, A., Bernadinelli, I., Branco, M., Cavaletto, G., Cocquempot, C., Contarini, M., Courtial, B., Courtin, C., Denux, et al. (2023). Worldwide tests of generic attractants, a promising tool for early detection of non-native cerambycid species. *NeoBiota 84. doi: 10.3897/NEOBIOTA.84.91096* 

Aznarez, C., Svenning, J.-C., Pacheco, J.P., Have Kallesøe, F., Baró, F., Pascual, U. (2023). Luxury and legacy effects on urban biodiversity, vegetation cover and ecosystem services. npj *Urban Sustainability 3 (1) Art. no. 47. doi: 10.1038/s42949-023-00128-7* 

Kennedy, C.M., Fariss, B., Oakleaf, J.R., Garnett, S.T., Fernández-Llamazares, Á., Fa, J.E., Baruch-Mordo, S., Kiesecker, J. (2023). Indigenous Peoples' lands are threatened by industrial development; conversion risk assessment reveals need to support Indigenous stewardship. *One Earth 6 (8). doi: 10.1016/j.oneear.2023.07.006* 

Nirmal, B., Mohan, K., Tripati, A., Christensen, B.A., Mortyn, P.G., De Vleeschouwer, D., Prakasam, M., Saravanan, K. (2023). Agulhas leakage extension and its influences on South Atlantic surface water hydrography during the Pleistocene. *Palaeogeography, Palaeoclimatology, Palaeoecology 615 Art. no. 111447. doi: 10.1016/j.palaeo.2023.111447* 

Neidig, J., Anguelovski, I., Lliso, B., Pascual, U. (2023). Pluralizing environmental values for urban planning: How to uncover the diversity of imaginaries about socio-natures from Vitoria-Gasteiz (Basque Country, Spain). *People and Nature 5 (4). doi: 10.1002/pan3.10506* 

Graham, S., Wary, M., Calcagni, F., Cisneros, M., de Luca, C., Gorostiza, S., Stedje Hanserud, O., Kallis, G., Kotsila, P., Leipold, S., Malumbres-Olarte, J., Partridge, T., Petit-Boix, A., Schaffartzik, A., Shokry, G., Tirado-Herrero, S., van den Bergh, J., Ziveri, P. (2023). An interdisciplinary framework for navigating social–climatic tipping points. *People and Nature 5* (5). doi: 10.1002/pan3.10516

Mateo-Martín, J., Benítez, G., Gras, A., Molina M., Reyes-García V., Tardío J., Verde, A., Pardo-de-Santayana, M. (2023). Cultural importance, availability and conservation status of Spanish wild medicinal plants: Implications for sustainability. *People and Nature 5 (5). doi: 10.1002/pan3.10511* 

Llavero-Pasquina, M. (2023). Neglecting the Marginalized: Corporate Valuation Discourses in Environmental Struggles. *Perspectives on Global Development and Technology 21 (5-6). doi:* 10.1163/15691497-12341647

Osnato, M. (2023). BREEDIT: Fast breeding tools to match the fast pace of climate change. *Plant Cell 35 (1). doi: 10.1093/plcell/koac328* 

Mattalia, G., Graetz, F., Harms, M., Segor, A., Tomarelli, A., Kieser, V., Zerbe, S., Pieroni, A. (2023). Temporal Changes in the Use of Wild Medicinal Plants in Trentino–South Tyrol, Northern Italy. *Plants 12 (12), Art. no. 2372. doi: 10.3390/plants12122372* 

Parra-Ovalle, D., Miralles-Guasch, C., Marquet, O. (2023). Pedestrian street behavior mapping using unmanned aerial vehicles. A case study in Santiago de Chile. *PLoS ONE 18(3) Art. Num. E0282024. doi: 10.1371/journal.pone.0282024* 

Hoffmann, P., Villamayor-Tomás, S., Lopez, M.C. (2023). Analyzing group communication dynamics and content in a common-pool resource experiment. *PLoS ONE 18(5) Art. no. E0283196. doi: 10.1371/journal.pone.0283196* 

Fossile, T., Herbst, D.F., McGrath, K., Toso, A., Giannini, P.C.F., Milheira, R.G., Gilson, S.-P., Ferreira, J., Da Rocha Bandeira, D., Haimovici, M., Ceretta, B., Bender, M.G., Colonese, A.C. (2023). Bridging archaeology and marine conservation in the Neotropics. *PLoS ONE 18(5) Art. no. E0285951. doi: 10.1371/journal.pone.0285951* 

Reyes-García, V., Álvarez-Fernández, S., Benyei, P., García del-Amo, D., Junqueira, A. B., Labeyrie, V., Li, X., Porcher, V., Porcuna-Ferrer, A., Schlingmann, A., Soleymani, R. (2023). Local indicators of climate change impacts described by indigenous peoples and local communities: Study protocol. *PLoS ONE 18 (1), [e0279847]. doi: 10.1371/journal.pone.0279847* 

Herbst, D. F., Rampon, J., Baleeiro, B., Silva, L. G., Fossile, T., Colonese, A. C., Mackenzie, B. R. (2023). 180 years of marine animal diversity as perceived by public media in southern Brazil. *PLoS ONE 18 (6), [e0284024]. doi: 10.1371/journal.pone.0284024* 

Vela Almeida, D., Kolinjivadi, V., Ferrando, T., Roy, B., Herrera, H., Vecchione Gonçalves, M., Van Hecken, G. (2023). The "Greening" of Empire: The European Green Deal as the EU first agenda. *Political Geography 105 [102925]. doi: 10.1016/j.polgeo.2023.102925* 

Andreucci, D., García López, G., Radhuber, I. M., Conde, M., Voskoboynik, D.M., Farrugia, J. D., Zografos, C. (2023). The coloniality of green extractivism: Unearthing decarbonisation by dispossession through the case of nickel. *Political Geography 107 Article 102997. doi:* 10.1016/j.polgeo.2023.102997

Appolloni, E., Pennisi, G., Paucek, I., Cellini, A., Crepaldi, A., Spinelli, F., Gianquinto, G., Gabarrell, X., Orsini, F. (2023). Potential application of pre-harvest LED interlighting to improve tomato quality and storability. *Postharvest Biology and Technology 195 [112113]. doi:* 10.1016/j.postharvbio.2022.112113

Reyes-García, V., Cámara-Leret, R., Halpern, B.S., O'Hara, C., Renard, D., Zafra-Calvo, N., Díaz, S. (2023). Biocultural vulnerability exposes threats of culturally important species. *Proceedings of the National Academy of Sciences of the United States of America 120 (2). doi:* 10.1073/pnas.2217303120

Harris, N.C., Murphy, A., Green, A.R., Gamez, S., Mwamidi, D.M., Nunez-Mir, G.C. (2023). Socio-ecological gap analysis to forecast species range contractions for conservation. *Proceedings of the National Academy of Sciences of the United States of America 120 (7) Art. num. E2201942119. doi: 10.1073/pnas.2201942119* 

Fajzel, W., Galbraith, E. D., Barrington-Leigh, C., Charmes, J., Frie, E., Hatton, I., Le Mézo, P., Milo, R., Minor, K., Wan, X., Xia, V., Xu, S. (2023). The global human day. *Proceedings of the National Academy of Sciences of the United States of America 120 (25), [e2219564120]. doi: 10.1073/pnas.2219564120* 

Davtian, N., Bard, E. (2023). A new view on abrupt climate changes and the bipolar seesaw based on paleotemperatures from Iberian Margin sediments. *Proceedings of the National Academy of Sciences of the United States of America 120 (12), [e2209558120]. doi: 10.1073/pnas.2209558120* 

Hatton, I. A., Galbraith, E. D., Merleau, N. S. C., Miettinen, T. P., Smith, B. M., Shander, J. A. (2023). The human cell count and size distribution. *Proceedings of the National Academy of Sciences of the United States of America 120 (39). doi: 10.1073/pnas.2303077120* 

Arroyo-Rodríguez, V., Rito, K.F., Farfán, M., Navía, I.C., Mora, F., Arreola-Villa, F., Balvanera, P., Bongers, F., Castellanos-Castro, C., Catharino, E.L.M., Chazdon, R.L., Dupuy-Rada, J.M., Ferguson, B.G., Foster, P.F., González-Valdivia, N., Griffith, D.M., et al. (2023). Landscape-scale forest cover drives the predictability of forest regeneration across the Neotropics. *Proceedings of the Royal Society B: Biological Sciences 290(1990) Art. num. 20222203. doi: 10.1098/rspb.2022.2203* 

Fontanals-Coll, M., Soncin, S., Talbot, H. M., Tersch, M. V., Gibaja, J. F., Colonese, A. C., Craig, O. E. (2023). Stable isotope analyses of amino acids reveal the importance of aquatic resources to Mediterranean coastal hunter–gatherers. *Proceedings of the Royal Society B: Biological Sciences 290 (1993), [20221330]. doi: 10.1098/rspb.2022.1330* 

Johnson, R., Manno, C., Ziveri, P. (2023). Shelled pteropod abundance and distribution across the Mediterranean Sea during spring. *Progress in Oceanography 210 Art. no. 102930. doi:* 10.1016/j.pocean.2022.102930

Anglada-Ortiz, G., Meilland, J., Ziveri, P., Chierici, M., Fransson, A., Jones, E., Rasmussen, T. L. (2023). Seasonality of marine calcifiers in the northern Barents Sea: Spatiotemporal distribution of planktonic foraminifers and shelled pteropods and their contribution to carbon dynamics. *Progress in Oceanography 218 Art. no. 103121. doi: 10.1016/j.pocean.2023.103121* 

Vázquez-Loureiro, D., Sáez, A., Gonçalves, V., Buchaca, T., Hernández, A., Raposeiro, P.M., de Boer, E.J., Masqué, P., Giralt, S., Bao, R. (2023). Recent global warming induces the coupling of dissimilar long-term sedimentary signatures in two adjacent volcanic lakes (Azores Archipelago, Portugal). *Quaternary Science Reviews 303 Art. no. 107968. doi: 10.1016/j. quascirev.2023.107968* 

McMichael, C.N.H., Levis, C., Gosling, W.D., Junqueira, A.B., Piperno, D.R., Neves, E.G., Mayle, F., Peña-Claros, M., Bongers, F. (2023). Spatial and temporal abilities of proxies used to detect pre-Columbian Indigenous human activity in Amazonian ecosystems. *Quaternary Science Reviews 321 Art. no. 108354. doi: 10.1016/j.quascirev.2023.108354* 

Alves, E.Q., MacArio, K.D., Scheel-Ybert, R., Oliveira, F.M., Colonese, A.C., Giannini, P.C.F., Guimarães, R., Fallon, S., Muniz, M., Chivall, D., Bronk Ramsey, C. (2023) Assessing the 14C marine reservoir effect in archaeological contexts: data from the Cabeçuda shell mound in Southern Brazil. *Radiocarbon 65 (1). doi: 10.1017/RDC.2022.75* 

Obossou, E.A.R., Chah, J.M., Anugwa, I.Q., Reyes-García, V. (2023). Gender dimensions in the adoption of climate-smart agriculture technologies in response to climate change extremes in Benin. *Regional Environmental Change 23 (3). doi: 10.1007/s10113-023-02085-4* 

Caviedes, J., Ibarra, J.T., Calvet-Mir, L., Junqueira, A.B. (2023). "Listen to us": small-scale farmers' understandings of social-ecological changes and their drivers in Important Agricultural Heritage Systems. *Regional Environmental Change 23(4) Art. no. 158. doi: 10.1007/s10113-023-02145-9* 

Palmeros Parada, M., Randazzo, S., Gamboa, G., Ktori, R., Bouchaut, B., Cipolina, A., Micale, G., Xevgenos, D. (2023). Resource recovery from desalination, the case of small islands. *Resources, Conservation and Recycling 199 Art. no. 107287. doi: 10.1016/j. resconrec.2023.107287* 

Jordà, C.E. (2023). Jurisprudencia constitucional ambiental (segundo semestre 2023). *Revista Catalana de Dret Ambiental 14 (2). doi: 10.17345/rcda3705* 

Jeanjean, M., McGrath, K., Valenzuela-Lamas, S., Nieto-Espinet, A., Schafberg, R., Parés-Casanova, P.M., Jiménez-Manchón, S., Guintard, C., Tekkouk, F., Ridouh, R., Mureau, C., Evin, A. (2023). ZooMS confirms geometric morphometrics species identification of ancient sheep and goat. *Royal Society Open Science* 10(9) *Art. no.* 230672. doi: 10.1098/rsos.230672

Peripato, V., Levis, C., Moreira, G.A., Gamerman, D., ter Steege H., Pitman, N.C.A., De Souza, J. G., Iriarte, J., Robinson, M., Junqueira A.B., Trindade, T. B., de Almeida, F.O., de Paula Moraes, C., Lombardo, U., Tamanaha, E.K., et al. (2023). More than 10,000 pre-Columbian earthworks are still hidden throughout Amazonia. *Science 382 (6666). doi: 10.1126/science. ade2541* 

Scheidel, A., Fernández-Llamazares, Á., Bara, A. H., Del bene, D., David-Chavez, D. M., Fanari, E., Garba, I., Hanacek, K., Liu, J., Martínez-Alier, J., Navas, G., Reyes-García, V., Roy, B., Temper, L., Thiri, M. A., Tran, D., Walter, M., Whyte, K. P. (2023). Global impacts of extractive and industrial development projects on Indigenous Peoples' lifeways, lands, and rights. *Science Advances 9 (23), [eade9557]. doi: 10.1126/sciadv.ade9557* 

Mendoza Beltran, A., Padró, R., La Rota-Aguilera, M.J., Marull, J., Eckelman, M.J., Cirera, J., Giocoli, A., Villalba, G. (2023). Displaying geographic variability of peri-urban agriculture environmental impacts in the Metropolitan Area of Barcelona: A regionalized life cycle assessment. *Science of the Total Environment 858 Art. no 159519. doi: 10.1016/j. scitotenv.2022.159519* 

Molazadeh, M., Liu, F., Simon-Sánchez, L., Vollersten, J. (2023). Buoyant microplastics in freshwater sediments – How do they get there?. Science of the Total Environment 860 Art. no. 160489. doi: 10.1016/j.scitotenv.2022.160489

Stringari, G., Villanueva, J., Rosell-Melé, A., Moraleda-Cibrián, N., Orsini, F., Villalba, G., Gabarrell, X. (2023). Assessment of greenhouse emissions of the green bean through the static enclosure technique. *Science of the Total Environment 874 Art. no. 162319. doi: 10.1016/j. scitotenv.2023.162319* 

Mazarrasa, I., Neto, J.M., Bouma, T.J., Grandjean, T., García-Orellana, J., Masqué, P., Recio, M., Serrano, Ó., Puente, A., Juanes, J.A. (2023). Drivers of variability in Blue Carbon stocks and burial rates across European estuarine habitats. *Science of the Total Environment 886 Art. no.* 163957. doi: 10.1016/j.scitotenv.2023.163957

Alarcón, M., Rodríguez-Solà, R., Casas-Castillo, M. C., Molero, F., Salvador, P., Periago, C., Belmonte, J. (2023). Influence of synoptic meteorology on airborne allergenic pollen and spores in an urban environment in Northeastern Iberian Peninsula. *Science of the Total Environment* 896 [165337]. doi: 10.1016/j.scitotenv.2023.165337

Blanco, G. D., Fernández-Llamazares, Á., Blanco, G. D., Baker, J., Tagliari, M. S. M., Hayata, M. A., Campos, M. L., Hanazaki, N. (2023). The impacts of mining on the food sovereignty and security of Indigenous Peoples and local communities: A global review. *Science of the Total Environment* 855 [158803]. doi: 10.1016/j.scitotenv.2022.158803

Soares, M.O., García, T.M., Giarrizzo, T., Filho, J.E.M., Tavares, T.C.L., Ziveri, P., Smith, T.B., Bejarano, S., Teixeira, C.E.P. (2023). Marine debris provide long-distance pathways for spreading invasive corals. *Science of the Total Environment 900 Art. no 165637. doi: 10.1016/j. scitotenv.2023.165637* 

Arcas-Pilz, V., Gabarrell, X., Orsini, F., Villalba, G. (2023). Literature review on the potential of urban waste for the fertilization of urban agriculture: A closer look at the metropolitan area of Barcelona. *Science of the Total Environment 905. doi: 10.1016/j.scitotenv.2023.167193* 

Chaabane, S., de Garidel-Thoron, T., Giraud, X., Schiebel, R., Beaugrand, G., Brummer, G.-J., Casajus, N., Greco, M., Grigoratou, M., Howa, H., Jonkers, L., Kucera, M., Kuroyanagi, A., Meilland, J., Monteiro, F., Mortyn, G. et al. (2023). The FORCIS database: A global census of planktonic Foraminifera from ocean waters. *Scientific Data 10, 354. doi:10.1038/s41597-023-02264-2* 

Pos, E., de Souza Coelho, L., de Andrade Lima Filho, D., Salomão, R.P., Amaral, I.L., de Almeida Matos, F.D., Castilho, C.V., Phillips, O.L., Guevara, J.E., de Jesus Veiga Carim, M., López, D.C., Magnusson, W.E., Wittmann, F., Irume, M.V., Martins, M.P., et al. (2023). Unraveling Amazon tree community assembly using Maximum Information Entropy: a quantitative analysis of tropical forest ecology. *Scientific Reports 13 (1U). doi: 10.1038/s41598-023-28132-y* 

Tarifa-Mateo, N., Saña, M., Clop, X., Rosell-Melé, A., Camalich-Massieu, M.D., Martín-Socas, D. (2023). Investigating livestock management in the early Neolithic archaeological site of Cabecicos Negros (Almería, Spain) from the organic residue analysis in pottery. *Scientific Reports* 13(1) Art. no 4797. doi: 10.1038/s41598-023-31036-6

Bordiga, M., Lupi, C., Langer, G., Gianoncelli, A., Birarda, G., Pollastri, S., Bonanni, V., Bedolla, D.E., Vaccari, L., Gariani, G., Cerino, F., Cabrini, M., Beran, A., Zuccotti, M., Fiorentino, G., Zanoni, M., Garagna, S., Cobianchi, M., Di Giulio, A. (2023). Unexpected silicon localization in calcium carbonate exoskeleton of cultured and fossil coccolithophores. *Scientific Reports* 13(1) *Art. no.* 7417. doi: 10.1038/s41598-023-34003-3

Yseki, M., Pezo-Lanfranco, L., Machacuay, M., Novoa, P., Shady, R. (2023). Analysis of starch grains trapped in human dental calculus in Áspero, Peru during the Initial Formative Period (3000–1800 BCE). *Scientific Reports* 13(1) Art. no. 14143. doi: 10.1038/s41598-023-41015-6

Admiraal, M., Colonese, A.C., Milheira, R.G., Da rocha bandeira, D., Demathe, A., Pereira dos santos, A. M., Fossile, T., Talbot, H. M., Bondetti, M., Lucquin, A., Montalvo-Cabrera, J., Prates, L., Serna, A., Craig, O.E. (2023). Chemical analysis of pottery reveals the transition from a maritime to a plant-based economy in pre-colonial coastal Brazil. *Scientific Reports* 13(1),16771. doi: 10.1038/s41598-023-42662-5

Charoud, H., Costedoat, S., Izquierdo-Tort, S., Moros, L., Villamayor-Tomás, S., Castillo-Santiago, M.Á., Wunder, S., Corbera, E. (2023). Sustained participation in a Payments for Ecosystem Services program reduces deforestation in a Mexican agricultural frontier. *Scientific Reports* 13 (1) Art. no. 22314. doi: 10.1038/s41598-023-49725-7

van der Sluis, L.G., McGrath, K., Thil, F., Cersoy, S., Pétillon, J.-M., Zazzo, A. (2023). Identification and tentative removal of collagen glue in Palaeolithic worked bone objects: implications for ZooMS and radiocarbon dating. *Scientific Reports 13 (1) Art. no. 22119. doi:* 10.1038/s41598-023-49242-7

Savin, I., Chukavina, K., Pushkarev, A. (2023). Topic-based classification and identification of global trends for startup companies. *Small Business Economics* 60(2). doi: 10.1007/s11187-022-00609-6

O'Neill, E., Cole, H.V.S., García-Lamarca, M., Anguelovski, I., Gullón, P., Triguero-Mas, M. (2023). The right to the unhealthy deprived city: An exploration into the impacts of state-led redevelopment projects on the determinants of mental health. *Social Science and Medicine* 318 Art. num. 115634. doi: 10.1016/j.socscimed.2022.115634

Estevo, M.D.O., Junqueira, A.B., Reyes-García, V., Campos-Silva, J.V. (2023). Understanding Multidirectional Climate Change Impacts on Local Livelihoods through the Lens of Local Ecological Knowledge: A Study in Western Amazonia. *Society and Natural Resources 36 (3).* doi: 10.1080/08941920.2022.2153294

Fernández-Manteca, M.G., Martínez-Minchero, M., García-Escárzaga, A., Ocampo-Sosa, A.A., Mirapeix, J., Valdiande, J.J., López-Higuera, J.M., Rodríguez-Cobo, L., Cobo, A. (2023). Comparison of light capturing approaches in Laser-Induced Breakdown Spectroscopy (LIBS) for multichannel spectrometers. *Spectrochimica Acta, Part B: Atomic Spectroscopy 201 Art. no. 106617. doi: 10.1016/j.sab.2023.106617* 

Iglesias-Émbil, M., Abadías, A., Valero, A., Calvo, G., Reuter, M.A., Ortego, A. (2023). Criticality and Recyclability Assessment of Car Parts—A Thermodynamic Simulation-Based Approach. *Sustainability (Switzerland)* 15(1) Art. no 91. doi: 10.3390/su15010091

Bach, X., Miralles-Guasch, C., Marquet, O. (2023). Spatial Inequalities in Access to Micromobility Services: An Analysis of Moped-Style Scooter Sharing Systems in Barcelona. Sustainability (Switzerland) 15(3) Art. Num. 2096. doi: 10.3390/su15032096

Hoffmann, P., Villamayor-Tomás, S. (2023). Irrigation modernization and the efficiency paradox: a meta-study through the lens of Networks of Action Situations. *Sustainability Science 18 (1).* doi: 10.1007/s11625-022-01136-9

Méndez, P.F., Clement, F., Palau-Salvador, G., Diaz-Delgado, R., Villamayor-Tomás, S. (2023). Understanding the governance of sustainability pathways: hydraulic megaprojects, socialecological traps, and power in networks of action situations. *Sustainability Science 18 (1). doi:* 10.1007/s11625-022-01258-0

Cazcarro, I., Villamayor-Tomás, S., Lobera, M.P., Murría, J., Bernechea, M. (2023). Networks of action situations in point-source pollution: the case of winery wastewater in Aragon, Spain. *Sustainability Science 18 (1). doi: 10.1007/s11625-022-01273-1* 

Sanz, T., Rodríguez-Labajos, B. (2023). Arts, place, and sacrifice zones: restoration of damaged relational values in a Chilean sacrifice zone. Sustainability Science 18 (3). doi: 10.1007/s11625-022-01252-6

Blackstock, K. L., Waylen, K. A., Matthews, K. B., Juarez-Bourke, A., Miller, D. G., Hague, A., Wardell-Johnosn, D. H., Giampietro, M. (2023). Implementing post-normal science with or for EU policy actors: using quantitative story-telling. *Sustainability Science* 18 (3). doi: 10.1007/s11625-022-01265-1

Giampietro, M. (2023). Reflections on the popularity of the circular bioeconomy concept: the ontological crisis of sustainability science. *Sustainability Science 18 (2). doi: 10.1007/s11625-022-01267-z* 

Van den Bergh, J., Savin, I. (2023). The role of interest in the unsustainability of growth: analytical findings using an accounting model. *Sustainability: Science, Practice, and Policy 19* (1). doi: 10.1080/15487733.2023.2262830

Toboso-Chavero, S., Montealegre, A.L., García-Pérez, S., Sierra-Pérez, J., Muñoz-Liesa, J., Gabarrell Durany, X., Villalba, G., Madrid-López, C. (2023). The potential of local food, energy, and water production systems on urban rooftops considering consumption patterns and urban morphology. Sustainable Cities and Society 95 Art. no. 104599. doi: 10.1016/j.scs.2023.104599

Henfrey, T., Feola, G., Penha-Lopes, G., Sekulova, F., Esteves, A.M. (2023). Rethinking the sustainable development goals: Learning with and from community-led initiatives. *Sustainable Development 31 (1). doi: 10.1002/sd.2384* 

Bell, K., Hickel, J., Arbon, R., Zoomkawala, H. (2023). Which direction for sustainable development? A time series comparison of the impacts of redistributive versus market policies in Bolivia and South Korea. *Sustainable Development 31 (5). doi: 10.1002/sd.2592* 

Cirone, F., Petruzzelli, M., De Menna, F., Samoggia, A., Buscaroli, E., Durante, E., Orsini, F., Rufí-Salís, M., Tonini, P., Durany, X.G., Graamans, L., Fargue-Lelièvre, A., Saint-Ges, V., Fox-Kämper, R., Specht, K., Pascual-Fernández, J.J., Vittuari, M. (2023). A sustainability scoring system to assess food initiatives in city regions. *Sustainable Production and Consumption 36.* doi: 10.1016/j.spc.2022.12.022

Martínez-Minchero, M., Cobo, A., Méndez-Vicente, A., Pisonero, J., Bordel, N., Gutiérrez-Zugasti, I., Roberts, P., Arrizabalaga, Á., Valdiande, J., Mirapeix, J., López-Higuera, J.M., García-Escárzaga, A. (2023). Comparison of Mg/Ca concentration series from Patella depressa limpet shells using CF-LIBS and LA-ICP-MS. *Talanta 251 Art. no. 123757. doi: 10.1016/j. talanta.2022.123757* 

Savin, I. (2023). Evolution and recombination of topics in Technological Forecasting and Social Change. *Technological Forecasting and Social Change 194 Art. no 122723. doi: 10.1016/j. techfore.2023.122723* 

Vogel, J., Hickel, J. (2023). Is green growth happening? An empirical analysis of achieved versus Paris-compliant CO2–GDP decoupling in high-income countries. The Lancet Planetary Health 7 (9). doi: 10.1016/S242-5196(23)00174-2

Martínez-Alier, J. (2023). The EJAtlas and the Making of the World Movement for Environmental Justice. A "Sociology of Absences"?. *Tocqueville Review 44(1). doi: 10.3138/ttr.44.1.25* 

Murray, I., Fletcher, R., Blázquez-Salom, M., Blanco-Romero, A., Cañada, E., Sekulova, F. (2023). Tourism and degrowth. *Tourism Geographies. doi: 10.1080/14616688.2023.2293956* 

Bach, X., Marquet, O., Miralles-Guasch, C. (2023). Assessing social and spatial access equity in regulatory frameworks for moped-style scooter sharing services. *Transport Policy 132. doi:* 10.1016/j.tranpol.2023.01.002

Murillo-Munar, J., Gómez-Varo, I., Marquet, O. (2023). Caregivers on the move: Gender and socioeconomic status in the care mobility in Bogotá. *Transportation Research Interdisciplinary Perspectives 21 Art. no 100884. doi: 10.1016/j.trip.2023.100884* 

Bardutz, E., Bigazzi, A., Honey-Rosés, J., Gill, G. (2023). Rules Versus Risk: Why Perceptions of Pedestrian Comfort and Safety Differ for Interactions with Self-Driving versus Human-Driven Vehicles. *Transportation Research Record. doi:10.1177/03611981231213077* 

Molnár, Z., Aumeeruddy-Thomas, Y., Babai, D., Díaz, S., Garnett, S. T., Hill, R., Bates, P., Brondízio, E. S., Cariño, J., Demeter, L., Fernández-Llamazares, Á., Guèze, M., Mcelwee, P., Öllerer, K., Purvis, A., Reyes-García, V., Samakov, A., & Singh, R. K. (2023). Towards richer knowledge partnerships between ecology and ethnoecology. Trends in Ecology and Evolution. doi: 10.1016/j.tree.2023.10.010

Ibarra, JT., Caviedes, J., Marchant, D., Mathez-Stiefel, SL., Navarro-Manquilef, S., Sarmiento, FO. (2023). Mountain social-ecological resilience requires transdisciplinarity with Indigenous and local worldviews. *Trends in Ecology and Evolution. doi: 10.1016/j.tree.2023.07.004* 

Fossile, T., McGrath, K., Presslee, S., Fogarty, G., Pavei, D.D., Alves, M.C., Ferreira, J., Montes, T.A., Bandeira, D.D.R., Borba, F.M., Colonese, A.C. (2023). Long-Term Perspective on Fishing and Mammal Defaunation in the Atlantic Forest Coast of Brazil Using Archaeological Faunal Remains. *Tropical Conservation Science 16. doi: 10.1177/19400829231218419* 

Planas-Carbonell, A., Anguelovski, I., Oscilowicz, E., Pérez-del-Pulgar, C., Shokry, G. (2023). From greening the climate-adaptive city to green climate gentrification? Civic perceptions of short-lived benefits and exclusionary protection in Boston, Philadelphia, Amsterdam and Barcelona. *Urban Climate 48 Art. no. 101295. doi: 10.1016/j.uclim.2022.101295* 

Calderón-Argelich, A., Anguelovski, I., Connolly, J. J. T., Baró, F. (2023). Greening plans as (re)presentation of the city: toward an inclusive and gender-sensitive approach to urban greenspaces. *Urban Forestry and Urban Greening 86 Art. no. 127984. doi: 10.1016/j. ufug.2023.127984* 

Armstrong, A., Bulkeley, H., Tozer, L., Kotsila, P. (2023). Border troubles: urban nature and the remaking of public/private divides. *Urban Geography 44 (8). doi:* 10.1080/02723638.2022.2125669

Kaika, M., Varvarousis, A., Demaria, F., March, H. (2023). Urbanizing degrowth: Five steps towards a Radical Spatial Degrowth Agenda for planning in the face of climate emergency. *Urban Studies 60 (7). doi: 10.1177/00420980231162234* 

Ortego, A., Russo, S., Iglesias-Embil, M., Valero, A., Magdalena, R. (2023). Exergy Assessment of Plastic Car Parts. *Vehicles 5 (3). doi: 10.3390/vehicles5030067* 

Savin, I., Creutzig, F., Filatova, T., Foramitti, J., Konc, T., Niamir, L., Safarzynska, K., van den Bergh, J. (2023). Agent-based modeling to integrate elements from different disciplines for ambitious climate policy. *Wiley Interdisciplinary Reviews: Climate Change 14 (2), e811. doi:* 10.1002/wcc.811

Sullivan, D., Hickel, J. (2023). Capitalism and extreme poverty: A global analysis of real wages, human height, and mortality since the long 16th century. *World Development 161 Art. no.* 106026. doi: 10.1016/j.worlddev.2022.106026

Castro-Diaz, L., García, M.A., Villamayor-Tomás, S., Lopez, M.C. (2023). Impacts of hydropower development on locals' livelihoods in the Global South. *World Development 169 Art. no. 106285. doi: 10.1016/j.worlddev.2023.106285* 

#### **Books**

Harcourt, W., Agostino, A., Elmhirst, R., Gómez, M., Kotsila, P. Contours of Feminist Political Ecology. Springer. 2023

Padilla, E., Ramos-Martín, J. Elgar Encyclopedia of Ecological Economics. Edward Elgar Publishing. 2023

Reyes-García, V. Handbook of Climate Change Impacts on Indigenous Peoples and Local Communities. Routledge. 2023

Colonese, A.C., Milheira, R.G. Historical Ecology and Landscape Archaeology in Lowland South America. Springer. 2023

Kotsila, P., Anguelovski, I., García-Lamarca, M., Sekulova, F. Injustice in Urban Sustainability - Ten Core Drivers. Routledge. 2023

Martínez-Alier, J. Land, Water, Air and Freedom. The Making of World Movements for Environmental Justice. Edward Elgar. 2023

Hickel, J. E. Less is More: How Degrowth Will Save the World. Random House International. 2023

Villamayor-Tomás, S., Muradian, R. The Barcelona School of Ecological Economics and Political Ecology: A Companion in Honour of Joan Martinez-Alier. Springer Nature. 2023

**Demaria, Federico.** The Political Ecology of Informal Waste Recyclers in India. Circular Economy, Green Jobs, and Poverty. Oxford University Press. 2023

### **Book chapters**

López-Gay, A., Solana-Solana, M., Sales-Favà, J., Cole, H. V. S., & Ortiz-Guitart, A. (2023). Housing insecurity, lived reality, and the right to stay put in a gentrified southern European neighborhood: The case of Sant Antoni in Barcelona. In A Research Agenda for Gentrification. *Edward Elgar Publishing. doi:* 10.4337/9781800883208.00016

Kirchner, R., Casas-Castillo, M. C., Rodríguez-Solà, R., Alarcón, M., Periago, C., De linares, C., & Belmonte, J. (2023). Comparative Study Between the Effects of Autumn and Winter Rainfall on Aerobiological Variables in the NE of the Iberian Peninsula. In Air Pollution Modeling and its Application XXVIII. *Springer. doi:10.1007/978-3-031-12786-1\_36* 

Drews, S., & van den Bergh, J. C. J. M. (2023). A critical assessment of the effectiveness of low-carbon nudges. In Behavioural economics and the environment: a research companion. *Taylor and Francis AS. doi:* 10.4324/9781003172741-16

Reyes-García, V., & Junqueira, A. B. (2023). Postface: Climatic and Ecological Change in the Americas: A Perspective from Historical Ecology. In Climatic and Ecological Change in the Americas: A Perspective from Historical Ecology. *Taylor and Francis AS. doi:* 10.4324/9781003316497-14

Virtanen, P.K., Apurinã, F., & Fernández-Llamazares, A. (2023). Long-Term Ecological and Climate Changes Through Amazonian Indigenous Oral Histories. In Climatic and Ecological Change in the Americas: A Perspective from Historical Ecology. *Taylor and Francis AS. doi:* 10.4324/9781003316497-12

Apostolopoulou, E. (2023). Political ecology. In Concise Encyclopedia of Human Geography. *Edward Elgar Publishing. doi: 10.4337/9781800883499.ch53* 

lengo, I., Kotsila, P., & Nelson, I. L. (2023). Ouch! Eew! Blech! A Trialogue on Porous Technologies, Places and Embodiments. In Contours of Feminist Political Ecology. *Springer. doi:* 10.1007/978-3-031-20928-4 4

Agostino, A., Elmhirst, R., Gómez, M., Harcourt, W., & Kotsila, P. (2023). Sketching Out the Contours. In Contours of Feminist Political Ecology. *Palgrave Macmillan, Cham. doi:* 10.1007/978-3-031-20928-4\_1

Barca, S., Chiro, G. D., Harcourt, W., Iengo, I., Kotsila, P., Kulkarni, S., Leonardelli, I., & Sato, C. (2023). Caring Communities for Radical Change: What Can Feminist Political Ecology Bring to Degrowth? In Contours of Feminist Political Ecology. *Palgrave Macmillan, Cham. doi:* 10.1007/978-3-031-20928-4\_8

Van den bergh, J. (2023). Agrowth. In Dictionary of Ecological Economics: Terms for the New Millennium. *Edward Elgar Publishing. doi:* 10.4337/9781788974912.a.24

Drews, S. (2023). Behavioral ecological economics. In Dictionary of Ecological Economics: Terms for the New Millennium. *Edward Elgar Publishing. doi: 10.4337/9781788974912.B.4* 

Martínez-Alier, J. (2023). Circularity gap. In Dictionary of Ecological Economics: Terms for the New Millennium. *Edward Elgar Publishing. doi:* 10.4337/9781788974912.C.26

Kallis, G. (2023). Coevolution. In Dictionary of Ecological Economics: Terms for the New Millennium. *Edward Elgar Publishing. doi:* 10.4337/9781788974912.C.46

Scheidel, A. (2023). Ecological distribution conflicts. In Dictionary of Ecological Economics: Terms for the New Millennium. *Edward Elgar Publishing. doi: 10.4337/9781788974912.E.15* 

Mastini, R. (2023). Green New Deal. In Dictionary of Ecological Economics: Terms for the New Millennium. *Edward Elgar Publishing. doi: 10.4337/9781788974912.G.30* 

Martínez-Alier, J. (2023). Incommensurable. In Dictionary of Ecological Economics: Terms for the New Millennium. *Edward Elgar Publishing. doi: 10.4337/9781788974912.I.10* 

Martínez-Alier, J. (2023). Incommensurable values. In Dictionary of Ecological Economics: Terms for the New Millennium. *Edward Elgar Publishing. doi: 10.4337/9781788974912.i.11* 

Giampietro, M., & Mayumi, K. (2023). Multi-scale integrated analysis of societal and ecosystem metabolism (MuSIASEM). In Dictionary of Ecological Economics: Terms for the New Millennium. *Edward Elgar Publishing. doi:* 10.4337/9781788974912.m.70

Demaria, F. (2023). Post-development. In Dictionary of Ecological Economics: Terms for the New Millennium. *Edward Elgar Publishing. doi: 10.4337/9781788974912.P.46* 

Navas, G. V. (2023). Violence in environmental conflict. In Dictionary of Ecological Economics: Terms for the New Millennium. *Edward Elgar Publishing.* doi: 10.4337/9781788974912.V.6

Fioramonti, L., & Mastini, R. (2023). Well-being economy. In Dictionary of Ecological Economics: Terms for the New Millennium. *Edward Elgar Publishing. doi:* 10.4337/9781788974912.W.21

Van den Bergh. (2023). Agrowth. In Elgar Encyclopedia of Ecological Economics. *Edward Elgar Publishing. doi:* 10.4337/9781802200416.ch03

Villamayor-Tomás, S. (2023). Common property and environmental governance. In Elgar Encyclopedia of Ecological Economics. *Edward Elgar Publishing. doi:* 10.4337/9781802200416.ch12

Bliss, S., & Kallis, G. (2023). Degrowth. In Elgar Encyclopedia of Ecological Economics. *Edward Elgar Publishing. doi:* 10.4337/9781802200416.ch17

Scheidel, A. (2023). Land grabbing. In Elgar Encyclopedia of Ecological Economics. *Edward Elgar Publishing. doi:* 10.4337/9781802200416.ch57

Corbera, E., & Izquierdo-Tort, S. (2023). Payments for ecosystem services. In Elgar Encyclopedia of Ecological Economics. *Edward Elgar Publishing. doi:* 10.4337/9781802200416.ch71

Brand, U., Muraca, B., Pineault, É., Sahakian, M., Schaffartzik, A., Novy, A., Streissler, C., Haberl, H., Asara, V., Dietz, K., Lang, M., Kothari, A., Smith, T., Spash, C., Brad, A., Pichler, M., Plank, C., Velegrakis, G., Jahn, T. et al. (2023). Planetary Boundaries. In Handbook of the Anthropocene: Humans between Heritage and Future. Springer International Publishing AG. doi: 10.1007/978-3-031-25910-4 15

Demaria, F., & Gómez-Baggethun, E. (2023). Leaving development behind: The case for degrowth. In Handbook on International Development and the Environment. *Edward Elgar Publishing.* doi: 10.4337/9781800883789.00010

Colonese, A. C., Brugere, C., Ramires, M., Clauzet, M., Brandi, R., Bandeira, A. M., Guedes, L., Wiedemann, M., Reyes-García, V., & Begossi, A. (2023). The Legacy of Pre-Columbian Fisheries to Food Security and Poverty Alleviation in the Modern Amazon. In Historical Ecology and Landscape Archaeology in Lowland South America. *Springer. doi: 10.1007/978-3-031-32284-6\_1* 

Fossile, T., De sá, J. C., Ferreira, J., & Colonese, A. C. (2023). The Onset of Deep-Water Fishing in Southern Brazil. In Historical Ecology and Landscape Archaeology in Lowland South America 9. *Springer. doi:* 10.1007/978-3-031-32284-6\_9

Crestani, M., Talens Peiró, L., & Toboso Chavero, S. (2023). The Environmental Impact of Textiles and Clothing: A Regional and a Country Approach. In Progress on Life Cycle Assessment in Textiles and Clothing. *Springer. doi:* 10.1007/978-981-19-9634-4\_8

Lizarzaburu-Egüez, L., Toboso-Chavero, S., & Rufí-Salís, M. (2023). The Role of Life Cycle Assessment in Analyzing Circular Economy Strategies in the Clothing Sector: A Review. In Progress on Life Cycle Assessment in Textiles and Clothing. *Springer. doi: 10.1007/978-981-19-9634-4* 

Marcos-Valls, A. (2023). Chapitre 5. Choix entre biodiversité, industrie et tourisme: une approche métabolique à Minorque. In Réserves de biosphère et objectifs de développement durable 2. *ISTE Editions*.

Vich, G., Gómez-Varo, I., & Marquet, O. (2023). Measuring the 15-Minute City in Barcelona. A geospatial three-method comparison. In Resilient and Sustainable Cities: Research, Policy and Practice. *Elsevier. doi:* 10.1016/B978-0-323-91718-6.00004-9

Reyes-García, V., Álvarez-Fernández, S., Benyei, P., Calvet-Mir, L., Chambon, M., Garcíadel-Amo, D., Junqueira, A.B., Li, X., Porcher, V., Porcuna-Ferrer, A., Schlingmann, A., Soleymani, R., & Tofighi-Niaki, A. (2023). Introduction: Understanding climate change impacts on Indigenous Peoples and local communities: A global perspective from local studies. In Routledge Handbook of Climate Change Impacts on Indigenous Peoples and Local Communities. *Routledge. doi: 10.4324/9781003356837-1* 

Mattalia, G, Stryamets, N., Rivalta, VT., & Reyes-García, V. (2023). Correspondence between local and scientific knowledge of climate change: The case of Hutsuls, Northern Romanian Carpathians. In Routledge Handbook of Climate Change Impacts on Indigenous Peoples and Local Communities. *Routledge. doi:* 10.4324/9781003356837-4

García-del-Amo, D., Calvet-Mir, L., Mortyn, PG., & Reyes-García, V. (2023). Network analysis of climate change impacts reported by local communities of Sierra Nevada, Spain. In Routledge Handbook of Climate Change Impacts on Indigenous Peoples and Local Communities. *Routledge. doi:* 10.4324/9781003356837-8

Reyes-García, V., Benyei, P., Junqueira, A.B., Huanca, T., & Conde, E. (2023). A complex matrix. Reports of environmental change and its drivers by the Tsimane', Bolivian Amazon in Routledge Handbook of Climate Change Impacts on Indigenous Peoples and Local Communities. *Routledge. doi: 10.4324/9781003356837-13* 

Chao, O., Li, X., & Reyes-García, V. (2023). Faith, reciprocity, and balance: Inner Mongolian Ovoo offering ritual and its contribution to climate change adaptation. In Routledge Handbook of Climate Change Impacts on Indigenous Peoples and Local Communities. *Routledge. doi:* 10.4324/9781003356837-26

Singh, P., Schulman, D., Charan, D., Reyes-García, V., Schlingmann, A., Singh, A.A., & Railoa, K. (2023). Climate change adaptation in Fiji. In Routledge Handbook of Climate Change Impacts on Indigenous Peoples and Local Communities. *Routledge. doi:* 10.4324/9781003356837-29

Scheidel, A., Sorman, A. H., Avila, S., Bene, D. D., & Ott, J. (2023). Renewables grabbing: Land and resource appropriations in the global energy transition. In Routledge Handbook of Global Land and Resource Grabbing. *Taylor and Francis AS. doi:* 10.4324/9781003080916-17

Castro-Vargas, MS.& Mempel, F. (2023). Latin America in the chemical vortex of agrarian capitalism. In Routledge Handbook of Latin America and the Environment. *Taylor and Francis AS. doi:* 10.4324/9780429344428-16

Jiménez, D., Rodríguez, T., Navas, G., & Scheidel, A. (2023). From Chico Mendes to Berta Cáceres. Responses to the murders of environmental defenders. In Routledge Handbook of Latin America and the Environment. *Taylor and Francis AS. doi: 10.4324/9780429344428-29* 

Anguelovski, I. (2023). (In)Justice in Urban Greening and Green Gentrification. In The Barcelona School of Ecological Economics and Political Ecology. Studies in Ecological Economics. *Springer, Cham. doi:* 10.1007/978-3-031-22566-6\_20

Martínez-Alier, J. (2023). A Barcelona School of Ecological Economics and Political Ecology. In The Barcelona School of Ecological Economics and Political Ecology. Studies in Ecological Economics. *Springer, Cham. doi: 10.1007/978-3-031-22566-6\_2* 

Conde Puigmal, M., & Orta-Martínez, M. (2023). Activism Mobilizing Science Revisited. In The Barcelona School of Ecological Economics and Political Ecology. Studies in Ecological Economics. *Springer, Cham. doi:* 10.1007/978-3-031-22566-6\_22

Ramos Martín, J., & Falconí, F. (2023). Biophysical approaches to food system analysis in Latin America. In The Barcelona School of Ecological Economics and Political Ecology. Studies in Ecological Economics. *Springer, Cham. doi: 10.1007/978-3-031-22566-6\_12* 

Villamayor-Tomás, S., García-López, G., & D'Alisa, G. (2023). Commons Regimes at the Crossroads: Environmental Justice Movements and Commoning. In The Barcelona School of Ecological Economics and Political Ecology. Studies in Ecological Economics. *Springer, Cham. doi:* 10.1007/978-3-031-22566-6\_19

Van den bergh, J. C. J. M. (2023). Contribution of Global Cities to Climate Change Mitigation Overrated. In The Barcelona School of Ecological Economics and Political Ecology. Studies in Ecological Economics. *Springer, Cham. doi:* 10.1007/978-3-031-22566-6\_29

Kallis, G. (2023). Degrowth and the Barcelona School. In The Barcelona School of Ecological Economics and Political Ecology. Studies in Ecological Economics. *Springer, Cham. doi:* 10.1007/978-3-031-22566-6

Scheidel, A. (2023). Does the Social Metabolism Drive Environmental Conflicts?. In The Barcelona School of Ecological Economics and Political Ecology. Studies in Ecological Economics. *Springer, Cham. doi:* 10.1007/978-3-031-22566-6\_16

Roy, B., & Hanaček, K. (2023). From the Environmentalism of the Poor and the Indigenous Toward Decolonial Environmental Justice. In The Barcelona School of Ecological Economics and Political Ecology. Studies in Ecological Economics. *Springer, Cham. doi: 10.1007/978-3-031-22566-6 26* 

Reyes-García, V. (2023). Indigenous and Local Knowledge Contributions to Social-Ecological Systems' Management. In The Barcelona School of Ecological Economics and Political Ecology. Studies in Ecological Economics. *Springer, Cham. doi: 10.1007/978-3-031-22566-6\_7* 

Muradian, R., & Villamayor-Tomás, S. (2023). Justification and Scope of the Book. In The Barcelona School of Ecological Economics and Political Ecology. Studies in Ecological Economics. *Springer, Cham. doi:* 10.1007/978-3-031-22566-6\_1

Giampietro, M. (2023). Multi-scale integrated analysis of societal and ecosystem metabolism. In The Barcelona School of Ecological Economics and Political Ecology. Studies in Ecological Economics. *Springer, Cham. doi:* 10.1007/978-3-031-22566-6\_10

Demaria, F., Kothari, A., Salleh, A., Escobar, A., & Acosta, A. (2023). Post-development: From the Critique of Development to a Pluriverse of Alternatives. In The Barcelona School of Ecological Economics and Political Ecology. Studies in Ecological Economics. *Springer, Cham. doi:* 10.1007/978-3-031-22566-6\_6

Villamayor-Tomás, S., Roy, B., & Muradian, R. (2023). The Barcelona School of Ecological Economics and Political Ecology: Building Bridges Between Moving Shores. In The Barcelona School of Ecological Economics and Political Ecology. Studies in Ecological Economics. *Springer, Cham. doi:* 10.1007/978-3-031-22566-6\_3

Corbera, E., & Izquierdo-Tort, S. (2023). The Environmentalism of the Paid. In The Barcelona School of Ecological Economics and Political Ecology. Studies in Ecological Economics. *Springer, Cham. doi:* 10.1007/978-3-031-22566-6\_32

Fernández-Llamazares, Á., Huanca, T. L., & Reyes-García, V. (2023). Supernatural Gamekeepers Among the Tsimane' of Bolivian Amazonia. In The History and Environmental Impacts of Hunting Deities. *Springer Cham. doi: 10.1007/978-3-031-37503-3\_13* 

Schlager, E., & Villamayor-Tomás, S. (2023). The IAD Framework and Its Tools for Policy and Institutional Analysis. In Theories of the Policy Process: Fifth Edition. *Taylor and Francis AS.* doi: 10.4324/9781003308201-8

## Conference papers

Bergamini, E., Savin, I., & Van den Bergh, J. C. J. M. (2023). Exploring expert opinion on climate policy using Twitter. 5th International Conference on Advanced Research Methods and Analytics (CARMA2023). doi:10.4995/CARMA2023.2023.16470

Caballeros-Finkelstein, A., Ramos-Martín, J., & Madrid-López, C. (2023). An energy transition without externalization?. 5th International Conference on Advanced Research Methods and Analytics (CARMA2023). doi: 10.4995/CARMA2023.2023.16496

Stringari, G., Villanueva, J., Orsini, F., Villalba, G., Gabarrell, X. (2023). Timeline of the development of a reproducible and easy methodology for volatile emissions assessment in the framework of urban agriculture. *15th Mediterranean Congress of Chemical Engineering – MEECE. doi:10.48158/MeCCE-15.T3-O-43* 

Appolloni, E., Strano, A., Paucek, I., Pennisi, G., Crepaldi, A., Orsini, F., Gabarrell, X., & Gianquinto, G. (2023). Evaluation of tomato seedlings growth response under different qualities of supplemental LED light. *Acta Horticulturae*, 1377, 367-376. doi: 10.17660/actahortic.2023.1377.44

Vidal, V., Cortés, A., Badia, A., & Villalba, G. (2023). Downscaling WRF-Chem: Analyzing Urban Air Quality in Barcelona City. In Computational Science – ICCS 2023 - 23rd International Conference, Proceedings (pages 61-73). (Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)); Vol. 14073 LNCS). Springer Science and Business Media Deutschland GmbH. doi: 10.1007/978-3-031-35995-8\_5

Honey-Rosés, J., Batista, P., Benatallah, B., Brussel, M., Flacke, J., Häkli, J., Kallio, K.P., Liebscht, L., Lynn, T., Mäkelä, M., Simón-i-Mas, G., Velázquez, L. (2023). Bicizen: Una Plataforma colaborativa para hacer ciudades más ciclables. *Congreso Ibérico La Bicicleta y la ciudad. https://citylabbcn.org/wp-content/uploads/2023/10/Honey-Roses-et-al-2023-BiciZen-Spanish-2.pdf* 

Di Felice, L.J., & Diaconescu, A. (2023). Hierarchy Beyond Top-Down Control: The Architecture of Self-Organised Social Systems. In 2023 IEEE International Conference on Autonomic Computing and Self-Organizing Systems Companion (ACSOS-C), Toronto, ON, Canada, 2023 pp. 80-85. doi: 10.1109/ACSOS-C58168.2023.00042

Vidal, V., Carrillo, C., Cortés, A., Badia, A., & Villalba, G. (2023). Automatic Green Land-Use Generator for Urban Areas. Proceedings 2023 IEEE 19th International Conference on e-Science, e-Science 2023. *Institute of Electrical and Electronics Engineers Inc. doi:* 10.1109/e-science58273.2023.10254800

#### **Editorials**

Singh, G., & Hickel, J. (2023). Capitalogenic disease: social determinants in focus. *BMJ Global Health 8(12) Art. no. E013661. doi: 10.1136/bmjgh-2023-013661* 

Martinez-Alier, J. (2023). Environmental conflicts and the making of world movements for environmental justice. *Economia Politica 40(3). doi: 10.1007/s40888-023-00306-x* 

Colonese, A. C., & Milheira, R. G. (2023). Preface. *Interdisciplinary Contributions to Archaeology Part F13* 

Kimmich, C., Ehlers, M. H., Kellner, E., Oberlack, C., Thiel, A., & Villamayor-Tomás, S. (2023). Networks of action situations in social-ecological systems: current approaches and potential futures. *Sustainability Science* 18(1). doi: 10.1007/s11625-022-01278-w

#### **Letters**

Langemeyer, J., Ghermandi, A., Keeler, B., & van Berkel, D. (2023). The future of crowd-sourced cultural ecosystem services assessments. *Ecosystem Services*, 60, Article 101518. doi: 10.1016/j.ecoser.2023.101518

Santos de lima, L., Magalhães de oliveira, H. F., Fleischmann, A. S., & Macedo, M. N. (2023). Extreme drought is again isolating people in Amazonia. *Nature, 622(7984), 697-697. doi: 10.1038/d41586-023-03311-z* 

Sandbrook, C., Albury-Smith, S., Allan, J. R., Bhola, N., Bingham, H. C., Brockington, D., Byaruhanga, A. B., Fajardo, J., Fitzsimons, J., Franks, P., Fleischman, F., Frechette, A., Kakuyo, K., Kaptoyo, E., Kuemmerle, T., Kalunda, P. N., Nuvunga, M., O'Donnell, B. et al. (2023). Social considerations are crucial to success in implementing the 30x30 global conservation target. *Nature Ecology and Evolution 7 (6). doi: 10.1038/s41559-023-02048-2* 

Van den Bergh, J. C. J. M., & Savin, I. (2023). Political leadership, climate policy, and renewable energy. *Proceedings of the National Academy of Sciences of the United States of America*, 120(14), Article e2301291120. doi: 10.1073/pnas.2301291120

#### **Notes**

Steubing, B., Mendoza Beltran, A. & Sacchi, R. (2023). Conditions for the broad application of prospective life cycle inventory databases. *International Journal of Life Cycle Assessment 28*, 1092–1103. doi: 10.1007/s11367-023-02192-8

Van den Bergh, J., Van beers, C., & King, L. C. (2023). Climate activists - rethink fossil-fuel subsidy cuts. *Nature*, *617*(7961), *465-465. doi:* 10.1038/d41586-023-01620-x

Bell, S. M., Raymond, S. J., Yin, H., Jiao, W., Goll, D. S., Ciais, P., Olivetti, E., Leshyk, V. O., & Terrer, C. (2023). Quantifying the recarbonization of post-agricultural landscapes. *Nature Communications*, *14*(1), *Article 2139. doi: 10.1038/s41467-023-37907-w* 

Carlo Colonese, A., & McGrath, K. (2023). Genetic insights into Brazil's ancient shell mound builders. *Nature Ecology and Evolution 7 (8). doi: 10.1038/s41559-023-02134-5* 

Deivanayagam, T. A., Selvarajah, S., Hickel, J., Guinto, R. R., de Morais Sato, P., Bonifacio, J., English, S., Huq, M., Issa, R., Mulindwa, H., Nagginda, H. P., Sharma, C., & Devakumar, D. (2023). Climate change, health, and discrimination: action towards racial justice. *The Lancet* 401 (10370). doi: 10.1016/S0140-6736(22)02182-1

Kotsila, P., & Anguelovski, I. (2023). Justice should be at the centre of assessments of climate change impacts on health. *The Lancet Public Health 8 (1). doi: 10.1016/S2468-2667(22)00320-6* 

# Reports and other publications

Fossile, T., Ferreira, J., & Colonese, A. C. (2023). Brazilian Zooarch Database: banco de dados da fauna arqueológica do Brasil. Revista de Arqueologia, 36(3), 311-331. doi: 10.24885/sab. v36i3.1088

Moros, L., Izquierdo-Tort, S., & Corbera, E. (2023). Conservando el norte del Amazonas mediante pagos. Documento de políticas, proyecto PES-EMOTIVE. Policy brief. http://estevecorbera.com/wp-content/uploads/2024/02/PES-EMOTIVE-policy-brief\_Colombia\_diciembre23.pdf

Segura, R., Estruch, C., Badia, A., Ventura, S., Krayenhoff, ES., & Villalba, G. (2023). Evaluating the impact of urban parks on the thermal comfort during a heat wave episode in a Mediterranean city. doi: 10.5194/egusphere-egu23-1367

Ventura, S., Villalba, G., Miro, JR., & Peña, JC. (2023). Evaluation of the main heatwave patterns in the northeast of the Iberian Peninsula using ERA5 and CORDEX models. doi: 10.5194/egusphere-egu23-7451

Chaves, L. M., Arenas, A., Liebscht, L., Parera, E., & Honey-Rosés, J. (2023). Informe Pedala i Reporta: Aproximación al Estado de la Intraestructura Ciclista en Barcelona. https://ddd.uab.cat/pub/estudis/2023/fb1d62f879c3/Informe-Pedala-i-Reporta.pdf

**Walter, M.** (2023). Mapping the Impacts and Conflicts of Rare-Earth Elements Challenges for the Green and Digital Transition. <a href="https://odg.cat/wp-content/uploads/2023/11/Mapping-Impacts-Conflicts-Rare-Earth-Elements.pdf">https://odg.cat/wp-content/uploads/2023/11/Mapping-Impacts-Conflicts-Rare-Earth-Elements.pdf</a>

**Hickel, J. & Sullivan, D.** (2023). Capitalism, global poverty, and the case for democratic socialism. Monthly Review. https://monthlyreview.org/2023/07/01/capitalism-global-poverty-and-the-case-for-democratic-socialism/

**Hickel, J.** (2023). The double objective of democratic ecosocialism. Monthly Review. *https://monthlyreview.org/2023/09/01/the-double-objective-of-democratic-ecosocialism/* 

**Hickel, J.** (2023). On technology and degrowth. Monthly Review. *https://monthlyreview.org/2023/07/01/on-technology-and-degrowth/* 

Honey-Rosés, J., Ubalde, M., Abiétar, D. G., Antentas, G., Aparicio, O., Ballbé Ortí, A., Calvo Sanchez, R., Cholbi, J., Fernandez, G., Flores, G., Hurtado, A., Jurado, B., Martí, C., Palomeque, O., & Sobrino, M. (2023). Protegim Les Escoles: Avaluació dels Entorns Pacificats del Programa Protegim Les Escoles 2021 de la Ciutat de Barcelona.

**Ziveri, P., Grelaud, M., & Pato, J.** (2023). Research for REGI Committee-Actions of cities and regions in the Mediterranean Sea area to fight sea pollution. EPRS: European Parliamentary Research Service. <a href="https://policycommons.net/artifacts/3792891/research-for-regi-committee/4598691/">https://policycommons.net/artifacts/3792891/research-for-regi-committee/4598691/</a>

Badia, A., Vidal, V., Ventura, S., Curcoll, R., Segura, R., & Villalba, G. (2023). Response of the ozone chemistry to changes in emissions over the Catalonia region. doi: 10.5194/egusphere-egu23-1453

de Tomás Pascual, A., Sierra i Montoya, M., Nebot-Medina, R., Soleymani-Fard, R., Villalba, G., & Madrid-Lopez, C. (2023). Socio-environmental metabolic pattern and associated impacts of energy system scenarios. Deliverable 2.2. SEEDS project. doi: 10.5281/zenodo.7994038

da Mata, P.T., de Oliveira, A.R.S., Arnan, X. Reyes-García, V. & da Silva, T.C. (2023). Teenagers' ecological knowledge about dry forests in Northeastern Brazil: theoretical and practical implications in ethnobiology. SN Soc Sci 3, 58. doi:10.1007/s43545-023-00636-4

#### Reviews

Zhang, Y., West, P., Thakholi, L., Suryawanshi, K., Supuma, M., Straub, D., Sithole, S.S., Sharma, R., Schleicher, J., Ruli, B., Rodríguez-Rodríguez, D., Rasmussen, M.B., Ramenzoni, V.C., Qin, S., Pugley, D.D., Palfrey, R., Oldekop, J., Nuesiri, E.O., et al. (2023). Governance and Conservation Effectiveness in Protected Areas and Indigenous and Locally Managed Areas. *Annual Review of Environment and Resources, 48(1), 559-588. doi: 10.1146/annurevenviron-112321-081348* 

- Cole, H. V. S., Anguelovski, I., Triguero-Mas, M., Mehdipanah, R., & Arcaya, M. (2023). Promoting Health Equity Through Preventing or Mitigating the Effects of Gentrification: A Theoretical and Methodological Guide. *Annual Review of Public Health*, *44(1)*, *193-211. doi:* 10.1146/annurev-publhealth-071521-113810
- Ladle, R. J., Alves-Martins, F., Malhado, A. C. M., Reyes-García, V., Courchamp, F., Di Minin, E., Roll, U., Jarić, I, & Correia, R. A. (2023). *Biocultural aspects of species extinctions. Cambridge Prisms: Extinction, 1, e22. doi: 10.1017/ext.2023.20*
- Zanjani, L. V., Govan, H., Jonas, H. C., Karfakis, T., Mwamidi, D. M., Stewart, J., Walters, G., & Dominguez, P. (2023). Territories of life as key to global environmental sustainability. *Current Opinion in Environmental Sustainability, 63, Article 101298. doi: 10.1016/j.cosust.2023.101298*
- Lele, S., Del Bene, D., Avcı, D., Roa-Avendaño, T., Roy, B., Sahu, G., Harris, M., & Moore, D. (2023). Values and knowledges in decision-making on environmentally disruptive infrastructure projects: insights from large dams and mines. *Current Opinion in Environmental Sustainability*, 64, Article 101346. doi: 10.1016/j.cosust.2023.101346
- Santa, J. C., & Drews, S. (2023). Heuristic processing of green advertising: Review and policy implications: Review and policy implications. *Ecological Economics (Amsterdam), 206, Article 107760. doi: 10.1016/j.ecolecon.2023.107760*
- Cheng, H., & Apostolopoulou, E. (2023). Locating the Belt and Road Initiative's spatial trilectics. *Geography Compass*, 17(4), Article e12683. doi: 10.1111/gec3.12683
- Mendoza, J. N., Hanazaki, N., Prūse, B., Martini, A., Bittner, M. V., Kochalski, S., Macusi, E., Ciriaco, A., Mattalia, G., & Sõukand, R. (2023). Ethnobotanical contributions to global fishing communities: a review. *Journal of ethnobiology and ethnomedicine, 19(1), Article 57. doi:* 10.1186/s13002-023-00630-3
- Bretones, A., Marquet, O., Daher, C., Hidalgo, L., Nieuwenhuijsen, M., Miralles-Guasch, C., & Mueller, N. (2023). Public Health-Led Insights on Electric Micro-mobility Adoption and Use: a Scoping Review. *Journal of Urban Health*, 100(3), 612-626. doi: 10.1007/s11524-023-00731-0
- Ghermandi, A., Langemeyer, J., Van Berkel, D., Calcagni, F., Depietri, Y., Egarter Vigl, L., Fox, N., Havinga, I., Jäger, H., Kaiser, N., Karasov, O., McPhearson, T., Podschun, S., Ruiz-Frau, A., Sinclair, M., Venohr, M., & Wood, S. A. (2023). Social media data for environmental sustainability: A critical review of opportunities, threats, and ethical use. *One Earth*, 6(3), 236-250. doi: 10.1016/j.oneear.2023.02.008
- Adams, V. M., Chauvenet, A. L. M., Stoudmann, N., Gurney, G. G., Brockington, D., & Kuempel, C. D. (2023). Multiple-use protected areas are critical to equitable and effective conservation. *One Earth, 6(9), 1173-1189. doi: 10.1016/j.oneear.2023.08.011*
- Slameršak, A., Kallis, G., O'neill, D. W., & Hickel, J. (2023). Post-growth: A viable path to limiting global warming to 1.5°C. *One Earth. doi: 10.1016/j.oneear.2023.11.004*

Osnato, M. (2023). Evolution of flowering time genes in rice: From the paleolithic to the anthropocene. *Plant, Cell and Environment 46(4). doi: 10.1111/pce.14495* 

Facchini, F., Villamayor-Tomás, S., Corbera, E., Ravera, F., Pocull-Bellés, G., & Codina, G. L. (2023). Socio-ecological vulnerability in rural Spain: research gaps and policy implications. *Regional Environmental Change, 23(1), Article 26. doi: 10.1007/s10113-022-01996-y* 

Chambon, M., Miñarro, S., Alvarez Fernandez, S., Porcher, V., Reyes-García, V., Tonalli Drouet, H., & Ziveri, P. (2023). A synthesis of women's participation in small-scale fisheries management: why women's voices matter. *Reviews in Fish Biology and Fisheries. doi: 10.1007/s11160-023-09806-2* 

Viñals, E., Maneja, R., Rufí-Salís, M., Martí, M., & Puy, N. (2023). Reviewing social-ecological resilience for agroforestry systems under climate change conditions. *Science of the total environment*, 869, *Article 161763. doi: 10.1016/j.scitotenv.2023.161763* 

Lemkow Zetterling, L. (2023). Impact of COVID-19 inequalities on children: An intersectional analysis. *Sociology of Health and Illness*, *45*(1), *145-162. doi: 10.1111/1467-9566.13557* 

Espinosa-Aquino, B., Gabarrell Durany, X., & Quirós Vargas, R. (2023). The Role of Informal Waste Management in Urban Metabolism: A Review of Eight Latin American Countries. *Sustainability*, 15(3), *Article* 1826. doi: 10.3390/su15031826

Deivanayagam, T. A., English, S., Hickel, J., Bonifacio, J., Guinto, R. R., Hill, K. X., Huq, M., Issa, R., Mulindwa, H., Nagginda, H. P., De Morais Sato, P., Selvarajah, S., Sharma, C., & Devakumar, D. (2023). Envisioning environmental equity: climate change, health, and racial justice. *The Lancet, 402(10395), 64-78. doi: 10.1016/S0140-6736(23)00919-4* 

Apostolopoulou, E., Cheng, H., Silver, J., & Wiig, A. (2023). Cities on the new silk road: the global urban geographies of China's belt and road initiative. *Urban Geography, 1-20. doi:* 10.1080/02723638.2023.2247283

# Annex III

Active Projects
[in chronological order]

Greenhouses to Reduce CO2 on Roofs (GROOF). NWE 474. *European Commission.* 20/09/2017-30/06/2023. PI Gabarrell i Durany, Xavier

Behavioral-evolutionary analysis of climate policy: Bounded rationality, markets and social interactions. H2020-741087-EVOCLIM. *European Commission.* 1/01/2018-30/06/2023. PI Van den Bergh, Jeroen

Local Indicators of Climate Change Impacts. The Contribution of Local Knowledge to Climate Change Research. H2020-771056-LICCI. *European Commission.* 1/6/2018-31/5/2023. *PI Reyes-Garcia, Victoria* 

Integrated System Analysis of Urban Vegetation and Agriculture. H2020-818002-URBAG. *European Commission.* 1/9/2019-31/8/2025. PI Villalba Méndez, Gara

Co-designed Welfare Monitoring Platform for Pig and Dairy Cattle. H2020-862919-ClearFarm. European Commission. 1/10/2019-31/3/2024. Pl Gabarrell i Durany, Xavier

Digital Platform for Circular Economy in Cross-sectorial Sustainable Value Networks. H2020-873111-DigiPrime. *European Commission*. 1/1/2020-31/12/2023. Pl Talens Peiró, Laura

Socio-Environmental VulnErability in RurAl Spain (SEVERAS). SR0419. *Obra Social la Caixa.* 1/1/2020-31/10/2023. *Pl Villamayor Tomás*, *Sergio* 

"María de Maeztu" Programme for Units of Excellence ICTA-UAB. CEX2019-000940-M. Ministerio de Ciencia, Innovación y Universidades. 1/1/2020-31/12/2024. PI Corbera Elizalde, Esteve

Food Systems in European Cities. H2020-862663-FoodE. *European Commission.* 1/2/2020-31/1/2024. PI Gabarrell i Durany, Xavier

Payments for ecosystem services: long-term effectiveness and motivations for the conservation of forest ecosystems. PID2019-109758GB-l00. *Ministerio de Ciencia e Innovación*. 1/6/2020-31/5/2023. PI Corbera Elizalde, Esteve

Pathways delivering solutes into coastal lagoons: overlooked drivers of ecosystem degradation. PID2019-110311RB-C21. *Ministerio de Ciencia e Innovación.* 1/6/2020-31/5/2023. PI Rodellas Vila, Valentí, García Orellana, Jordi

Next generation water-smart management systems: large scale demonstrations for a circular economy and society. H2020-869474-WATER-MINING. *European Commission*. 1/9/2020-31/8/2024. PI Lemkow Zetterling, Louis

Dispersión e impactos de micro y nanoplásticos en los océanos tropicales y templados: desde la interfaz regional tierra-océano hasta el océano abierto. PCI2020-112059. *Ministerio de Ciencia e Innovación. 1/9/2020-31/12/2023. PI Ziveri, Patrizia* 

International cooperation to restore and connect urban environments in Latin America and Europe. H2020-869324-INTERLACE. *European Commission.* 1/9/2020-31/8/2024. PI Langemeyer, Johannes

Implementing a Mediterranean biorefinery to boost forest management through the production of added value products. LIFE19 ENV/ES/000544. *European Commission*. 1/10/2020-30/9/2024. PI Fabregas Martinez, Esteve

Social Economy 4Ces: Joining Social Economy Forces towards Community development, Connected societies, Co-creation of knowledge and Collaborative education practices. 621511-EPP-1-2020-1-EL-EPPKA2-KA. Erasmus+: Knowledge Alliances. *European Commission*. 1/1/2021-31/12/2023. PI Kallis, Giorgos

Balzan Prize for Environmental Challenges: Responses from the Social Sciences and the Humanities. *International Balzan Foundation*. 1/1/2021-31/12/2023. PI Martínez Alier, Joan

SEEDS. Stakeholder-Based Environmentally-Sustainable and Economically Doable Scenarios for the Energy Transition. PCI2020-120710-2. *Ministerio de Ciencia e Innovación.* 1/2/2021-31/1/2024. PI Villalba Méndez, Gara

Economic Policy in Complex Environments. H2020-956107-EPOC. *European Commission*. 1/3/2021-28/2/2025. *PI van Den Bergh*, *Jeroen* 

Governing ResOurce UrbanisaTion: Multi-stakeholder governance of extractive industries in the era of planetary urbanization. H2020-897072-GROUT. *European Commission*. 15/3/2021-17/11/2024. PI Anguelovski, Isabelle

Biodiversidad global de calcificadores planctónicos marinos. PID2020-113526RB-I00. *Ministerio de Ciencia e Innovación. 1/9/2021-31/8/2025. PI Ziveri, Patrizia* 

Baterías biodegradables y compostables para agricultura de precisión y sistemas energéticos descentralizados (BIDEKO). PLEC2021-007801. *Ministerio de Ciencia e Innovación (MICINN)*. 1/10/2021-30/09/2023 PI Talens Peiró, Laura

Pilot Application in Urban Landscapes towards integrated city observatories for greenhouse gases. H2020-101037319-PAUL. *European Commission.* 1/10/2021-31/12/2025. PI Villalba Méndez, Gara

Laboratorio vivo sobre modelización ambiental para la planificación energética. PID2020-119565RJ-I00. *Ministerio de Ciencia e Innovación.* 1/12/2021-30/11/2024. PI Madrid López, Cristina

SIRAH: Promoting access to open urban agriculture from the Fertilecity lab to the city. PDC2021-121054-C21. *Ministerio de Ciencia e Innovación.* 1/12/2021-30/11/2023. PI Gabarrell i Durany, Xavier

Nature's Integration in Cities' Hydrologies, Ecologies and Societies. PCI2022-133011. *Ministerio de Ciencia e Innovación.* 1/4/2022-31/3/2025. PI Langemeyer, Johannes

Effects of temperature and air pollution on mental health in Barcelona and its metropolitan area considering sociodemographic and geographical inequalities. 22S07326-001. *Ajuntament de Barcelona, Fundació La Caixa.* 19/5/2022-18/11/2023. PI Anguelovski, Isabelle

Empowering urban cyclists through citizen science. cs pilot 3 SMART-ER Citizen Science. *European Commission.* 1/6/2022-31/5/2023. PI Honey Rosés, Jordi

Research on Indigenous Data Governance Protocols: A toolkit for working with Indigenous Knowledge. HEU-101069311-RIDaGoP. *European Commission.* 1/7/2022-31/12/2023. PI Reyes-García, Victoria

Sistema de ventilación para escuelas integrado con la producción de alimentos: explorando la generación de CO2 en interiores a partir de la respiración para producir alimentos. PID2021-126845OB-C21. *Ministerio de Ciencia e Innovación.* 1/9/2022-31/8/2025. PI Gabarrell i Durany, Xavier

Paleodietary analyses of the first Andean cities: high-resolution assessment to macronutrients using a multiproxy approach. HEU-101062179-PACHAMAMA. *European Commission*. 1/10/2022-30/9/2024. PI Colonese, André

Just and effective governance for accelerating wind energy. HEU-101083936-JustWind4All. *European Commission.* 1/11/2022-31/10/2025. Pl Madrid López, Cristina

Conservation Data Justice. HEU-101054259-CONDJUST. *European Commission.* 1/12/2022-31/10/2027. PI Brockington, Daniel

Capture and Reuse Of biogenic gases for Negative-emission-sustainable biofUelS. HEU-101084405-CRONUS. *European Commission*. 1/12/2022-31/8/2026. PI Gamboa Jiménez, Gonzalo

Social Transport Equity by Planning for Proximity. SR22-00147. Fundació La Caixa. 1/12/2022-30/11/2024. Pl Marquet Sarda, Oriol

Agricultura integrada en edificios para una transición ecológica efectiva (BINAFET): recursos locales. TED2021-130047B-C21. *Ministerio de Ciencia e Innovación. 1/12/2022-30/11/2024. PI Gabarrell i Durany, Xavier* 

Analizando la externalización ambiental de la transición energética sostenible con herramientas de código abierto. TED2021-132032A-I00. *Ministerio de Ciencia e Innovación.* 1/12/2022-30/11/2024. PI Madrid López, Cristina

El papel de la resuspensión de sedimentos inducida por viento en los procesos de eutrofización del Mar Menor. TED2021-130710B-I00. *Ministerio de Ciencia e Innovación.* 1/12/2022-30/11/2024. *PI Rodellas Vila, Valentí* 

Liderando Transiciones de Sostenibilidad en la España Rural. TED2021-130822B-I00. *Ministerio de Ciencia e Innovación. 1/12/2022-30/11/2024. PI Villamayor Tomás, Sergio* 

ClimAte Policy AcceptaBiLity Economic framework. HEU-101056891-CAPABLE. *European Commission*. 1/01/2023-31/12/2025. PI Van den Bergh, Jeroen

Drivers of Demographic Dynamics. HEU-101043738-DEMODRIVERS. *European Commission*. 1/01/2023-31/12/2027. PI Lombardo, Umberto

Estudi del contingut de pòl·lens i espores a l'aire de dues estacions de mostreig de la Xarxa Aerobiològica de Catalunya (XAC), una al Camp de Tarragona i una a les Terres de l'Ebre 2023. Ref. 8004330008-2023-0008781. *Diputació de Tarragona. 1/01/2023-31/12/2023. Pl Belmonte Soler, Jordina* 

Towards a sustainable wellbeing economy: integrated policies and transformative indicators. HEU-101056891-ToBe. *European Commission*. 1/03/2023-28/02/2026. PI Hickel, Jason

A Post Growth Deal. HEU-101071647 - REAL. *European Commission*. 1/05/2023-30/04/2029. *PI Kallis*, *Giorgos*. *Hickel*, *Jason* 

Ciencia ciudadana y sostenibilidad en el territorio de la B30 (CCS-B30). FCT-22-18535. Fundación Española para la Ciencia y la Tecnología (FECYT). 1/07/2023-30/06/2025. PI Madrid Lopez, Cristina

Sistematización de las Soluciones Basadas en la Naturaleza en España. E:SBN\_BIODIVERSIDAD2023. *Fundación Biodiversidad. 1/08/2023-30/05/2025. PI Langemeyer, Johannes* 

Entendiendo la paradoja de la eficiencia en el regadío: un estudio multi-método sobre marcos interpretativos en comunidades de regantes españolas. CNS2022-136063. *Ministerio de Ciencia e Innovación (MICINN)*. 1/09/2023-31/08/2025. PI Villamayor-Tomas, Sergio

Advancing GReenCare in Europe: an integrated multi-scalar approach for the Expansion of Nature-based therapies to improve Mental health Equity. HEU-101084198-GreenME. *European Commission*. 1/09/2023-31/08/2027. PI Anguelovski, Isabelle

ClimateJusticeReady. HEU-101081926-ClimateJusticeReady. *European Commission*. 1/10/2023-30/03/2025. PI Anguelovski, Isabelle

Tackling the paradox of growth and sustainability - A SDG indicator framework for water, energy, land, and materials based on postgrowth and resource nexus thinking. HEU-101107208-PostReNex. *European Commission.* 1/10/2023-30/09/2025. PI Kallis, Giorgos

Green Valorization of CO2 and Nitrogen compounds of making fertilizers. HEU-101115182-CONFETI. *European Commission.* 1/11/2023-31/10/2026. PI Talens Peiró, Laura

PobrezA Nutricional y de Salud en Barcelona, PANIS. 23S06041-001. *Ajuntament de Barcelona, Fundación "La Caixa"*. 10/11/2023-10/05/2025. PI Gamboa Jimenez, Gonzalo Andres

Food production and provisioning through Circular Urban Systems in European Cities. PCI2023-145954-2. *Ministerio de Ciencia e Innovación (MICINN).* 22/12/2023-21/12/2026. PI Gabarrell i Durany, Xavier

Integrated assessment of urban farming impacts and policies for boosting sustainable urban agricultural development linking urban, peri-urban and rural areas. FOODCITYBOOST-101132315-HORIZON. *European Commission*. 1/01/2024-31/12/2027. PI Gabarrell i Durany, Xavier

Assessing long-term changes in Indigenous Environmental Knowledge. IEK-CHANGES-101117423-HORIZON. *European Commission*. 1/01/2024-31/12/2028. PI Fernandez Llamazares Onrubia, Alvaro

Healthy Soil for Urban Agriculture through Nutrient and Carbon Circularity. NUTRISOIL-101138151-HORIZON. *European Commission*. 1/01/2024-30/06/2025- PI Villalba Mendez, Gara

Climate Policy vs Economic Growth: Opinions, Models, and Novel Strategies. HEU-101097924-CLIMGROW. *European Commission*. 1/01/2024-31/12/2028. Pl Van den Bergh, Jeroen

Contextualized pathways to reduce housing inequalities in the green and digital transition. ReHousin-101132540-HORIZON. *European Commission*. 1/03/2024-28/02/2027. PI Anguelovski, Isabelle

Economic POlicies for the Global bifurcation - Doctoral Network. HEU-101120127-EPOG-DN. *European Commission.* 1/03/2024-29/02/2028. Pl d'Alisa, Giacomo

EXPRESS 2 Specify and Protect the EU Social Contract (EXPRESS2). 101132426-Express2-HORIZON-CL2-2023-DEMOCRACY-01. *European Commission*. 1/03/2024-28/02/2027. PI Abat Ninet, Antoni

The most important think tank you've never heard of: Resources for the Future and the history of economic thought in environmental practice. HEU-101108290-REFUTURE. *European Commission*. 1/06/2024-30/11/2026. PI Kallis, Giorgos

# Annex IV

Gender Equity and Responsible Travel Strategy

## **ICTA-UAB Gender Equity Audit and Policy**

True to its commitment to advancing gender equality at all levels, the ICTA-UAB has developed its Gender Equity Policy, through which it aims to implement actions that strengthen the presence and role of women and non-binary scientists at the institution, make their research contributions visible and enable the development and implementation of protocols to address gender-based discrimination and sexual harassment. The Gender Equity Audit and Policy is organized around five strategic lines.

Strategic Line 1 (Representativeness and Balance) analyzes the technical and organizational structure of the Institute, paying attention to how women and gendered minorities are represented in all areas, professional categories, and levels of responsibility.

Strategic Line 2 (Human Resources Policies and Work-Life balance) section examines the working conditions of ICTA-UAB community members and evaluates the salary structure, the professional development and the measures taken for reconciliation of personal, family and working life.

Strategic Line 3 (Gender Equity Commitment) analyzes the level of gender awareness of the Institute and the level of gender mainstreaming in all policies.

Strategic Line 4 (Institutional Communication and Language) evaluates the internal and external communication of the Institute, the use of non-sexist and inclusive language and ICTA-UAB's commitment to increase the visibility of women and gendered minorities.

Strategic Line 5 (Prevention of gender-based discrimination and sexual harassment) evaluates the mechanisms developed by the Institute in the prevention and detection of gender-based discrimination and sexual harassment, the degree of sensitiveness of the staff towards the equality of treatment, as well as the non-existence of attitudes of harassment.

Each of the Strategic Lines includes a series of actions that have been proposed and are being implemented.

## Summary of 2023 Gender Equity and Care Actions

#### ICTA-UAB Doctoral and Postdoctoral Prizes

Through the Maria de Maeztu program, in 2023 ICTA-UAB awarded two prizes to researchers for either defended or published work during 2022.

Laura Simon, winner of 2022 Best ICTA-UAB PhD thesis prize - PhD thesis from a doctoral female researcher or PhD thesis with a gender or feminist focus.

Grettel Naval, winner for 2022 Best ICTA-UAB Postdoctoral Article prize - Article from a Postdoctoral female Researcher or article with a gender or feminist focus.

#### Funding for Seed Research Projects

Through the Maria de Maeztu program, ICTA-UAB funded four seed projects led by women postdoctoral researchers or for postdoctoral research projects with a feminist or gender approach.

Transformative walks for rural degrowth strategies, Dr. Julia Grossinger.

Gendered biocultural conservation strategies? Cultural keystone species of Walser communities of the Western Alps, Dr. Giulia Mattalia.

Beyond urban land classification: assessing experts' knowledge to validate multidimensional land classification in São Paulo, Brazil, Dr. Beatriz Daunt.

Climate health vulnerability and the embodied knowledge(s) and practices of urban immigrant communities around adaptation: The case of heatwaves in Berlin, Germany, Dr. Panagiota Kotsila.

#### **Trainings**

The Maria de Maeztu program funds and organizes bi-annual trainings on gender equity and related topics of care led by an external facilitator to the whole ICTA-UAB community.

Gender Equity and Social Justice 2023.

Ethics of Care: Skills and Approaches towards a Culture of Care 2023.

#### **Communications**

ICTA-UAB communications materials pay close attention to visibilizing the role and challenges of women in science and to disseminating the work, research, and knowledge transfer and coproduction activities led by female researchers at the institute.

Audio-visual communication campaign with Girls and Women in Science Videos. 11 February 2023

Communications campaign for the International Women Day 8 March

Press releases about ICTA-UAB prizes, awards for women, and new research studies and published works on the ICTA-UAB website.

Gender-sensitive and female researchers-focused Twitter and Instagram posts.

Coffee Break sessions each Tuesday as an internal communication strategy.

Contest for Sant Jordi's Day "ICTA-UAB in 100 Words"

New webpage about ICTA-UAB institutional commitments around Gender, Equity, and Care and about available UAB resources around those topics.

#### New Hires of ICTA-UAB Senior female scientists

Dr. Panagiota Kotsila, an urban political ecologist and recent winner of an ERC Consolidator Grant, IMBRACE (2024-2029), on climate health justice and migration, joins the institute as a new Senior faculty. Her work explores the connection between urban environmental and climate injustice and health outcomes, the drivers and socio-spatial dynamics of these inequalities, and the community initiatives that can support a just climate resilience at local levels. Her works uses an intersectionality approach and follows a feminist methodological toolbox.

#### New ICTA-UAB Ombuds Officer

Dr. Josep Enric Llebot is ICTA-UAB's new Ombuds Officer. His role is to receive concerns and observations raised about the functioning of the institute, to ensure the respect of ICTA-UAB statutes, and to present non-binding resolution proposals to the competent bodies on issues submitted to his office by the members of the ICTA-UAB community.

#### Representing ICTA-UAB in committees on gender equity at the UAB and beyond

ICTA-UAB is part of the broader UAB-wide initiative launched by the Observatori per a la Igualtat and co-coordinated by the Secretari General de la UAB to strengthen its anti-

discrimination and harassment policies and procedures. It has been part of working groups to renew and disseminate the updated (December 2022) UAB anti-harassment protocol.

Through the SOMMa alliance of which ICTA-UAB is part, our institute is involved in working groups and supporting group on Best Practices to support gender equity and visibilize the work of female scientists based in the broader Spanish context. It also works closely with Catalan institutes (e.g. CRG, CREAF, ISGlobal) that have a strong commitment to those priorities and advocates for greater gender equity and gender equity in Catalan funding and evaluating agencies.

#### Ethics of Care

Gender Equity and Ethics of Care are tightly linked institutional priorities at ICTA-UAB, and they complement UAB codes and practices towards an academia that can better support inclusivity, diversity, and wellbeing for all. During 2023, ICTA-UAB started a process supported by several external facilitators to renew its vision, mission, values, and come together around a new set of agreed upon care practices for the years to come.

#### Cares Group

The 'ICTA-UAB Cares Group' aims at creating an equitable, supportive and diversity-enhancing research environment at the institute. As a voluntary bottom-up initiative, the group is made of a sub-community of PhDs, post-docs and other senior researchers and staff within ICTA-UAB who have self-organized to fight against abuse and discrimination of any and all kinds and support concerns and challenges experienced ICTA-UAB community members. To contact the Cares Group: cares@eines.uab.es

#### ICTA-UAB Responsible Travel Strategy

ICTA-UAB has designed a responsible travel strategy with the aim of helping researchers at the centre, as well as researchers from the rest of the UAB, to reduce the environmental impact of their research-related travels.

# Annex V

# Press Releases [in chronological order]

Nature conservation needs to incorporate the human approach 4 January 2023

The effect of competition in global value chain networks on economic growth 9 January 2023

Slameršak and Kallis, special mention at the City of Barcelona Award 31 January 2023

La prohibición de los patinetes eléctricos en el transporte público tendrá poco impacto en el uso del coche privado

3 February 2023

El ICTA-UAB i la escuela La Pau fomentarán juntos la ciencia ambiental 9 February 2023

Intensifying agriculture does not save forests, but Indigenous land stewardships does 10 February 2023

New finding provides better understanding of oceans' capacity to absorb atmospheric CO<sub>2</sub> 20 February 2023

Mediterranean hunter-gatherers relied on aquatic resources more than previously thought 22 February 2023

"Jóvenes por la emergencia climática", mención especial a los premios Transformative Action 2022 27 February 2023

ICTA-UAB, present at the UAB Barcelona Summer School 27 February 2023

La relación entre olas de calor, contaminación y salud mental, a estudio 1 March 2023

Environmental Justice Scholar Joan Martinez-Alier Named 2023 Holberg Prize Laureate 1 4 March 2023

Pollen spring to arrive late, but with high levels 17 March 2023

Social media content opens new frontiers for sustainability science researchers 20 March 2023

ICTA-UAB demands the European Parliament to take action to fight pollution in the Mediterranean Sea

5 May 2023

Hickel discussed limits to growth with Ursula von der Leyen 17 May 2023

Study links ultra-processed foods with psychosocial problems associated with mental health in adolescents

23 May 2023

Overfishing and degradation, causes of the decline of the South Atlantic Ocean in recent decades

25 May 2023

Joan Martinez-Alier to receive 2023 Holberg Prize Laureate 2 June 2023

Climate justice: Global North owes \$170 trillion for excessive CO<sub>2</sub> emissions, says study 6 June 2023

Innovative mobile app to transform urban cycling experiences 6 June 2023

Extractive and industrial development projects threaten the future of Indigenous Peoples 8 June 2023

At least 81 women globally have been murdered in retaliation for environmental activism 14 June 2023

How humans around the world spend their time on an average day 21 June 2023

Diving into History: Newspapers Offer Historical Perspectives on Brazil's Marine Biodiversity 5 July 2023

China's extreme poverty rate increased under capitalist reforms 14 July 2023

Abandoned agricultural lands as key carbon sinks in the fight against climate change 21 July 2023

Solving the climate crisis requires collaboration between natural and social scientists 28 July 2023

The voices of indigenous peoples and local communities as an important part of the climate fight 9 August 2023

Only 8% of the plants used as medicinal are threatened 7 September 2023

Green growth loses favour with climate policy scientists 13 September 2023

ICTA-UAB Best Prizes awarded to female postdoctoral researchers 21 September 2023

Social justice for traditional knowledge holders will help conserve Europe's nature 28 September 2023

Catalonia discards 26% of its horticultural production before being marketed 2 October 2023

Leticia Santos Lima writes in Nature about Amazon drought 26 October 2023

Poor image of bats undermines conservation efforts 30 October 2023

Avalanche of papers could erode trust in science 3 November 2023

Ocean acidification in the Mediterranean is already affecting the calcification of marine plankton 10 November 2023

All aquatic species in river mouths are contaminated by microplastics 15 November 2023

Green growth loses weight as a consensus position in the European Parliament 17 November 2023

A new map points at the impacts of Rare Earths 27 November 2023

Low economic growth can help keep climate change within the 1.5°C threshold 19 December 2023



twitter.com/icta-uab instagram.com/icta.stories/ youtube.com/@icta-uab

#### Contact

Edifici ICTA-ICP Carrer de les Columnes s/n Campus de la UAB 08193 Cerdanyola del Vallès

www.uab.cat/icta





