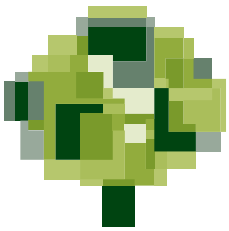
CREAF

Ecology moves us

ANNUAL REPORT 2020



CREAF

Ecology moves us

ANNUAL REPORT 2020

Text and graphics: CREAF
Coordination: Anna Ramon.
Design and infographics: Lucas Wainer
Cover and Sections photographs © J.Luis Ordóñez

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WHO WE ARE

OUR APPROACH

We are a public research center dedicated to terrestrial ecology, territorial analysis and global change, pursuing excellence in the generation and transfer of knowledge, management tools and methodologies.

We strive to create new knowledge and innovative solutions on terrestrial ecology management and land-atmosphere interaction that helps society to mitigate Global Change effects, creating adaptation plans and boosting the resilience of nature.

> "Through excellence in science we aim to be a Mediterranean and world-class research institution that pushes the frontiers of knowledge while addressing some of the biggest and more complex environmental challenges society faces this century."

Our aims

- Carry out innovative BASIC RESEARCH on ecology
- Promote APPLIED RESEARCH for the sustainable management of ecosystems
- Develop TOOLS to facilitate decision-making and environmental policies
- DISSEMINATE the research in ecology and its impact in society

About us

- Founded in 1987 (Decret 300/1987)
- A leading research center in Mediterranean ecosystems research
- Close to 150 scientists and experts grouped in fours research areas: biodiversity, global change, ecology and earth observation.
- CREAF headquarters are located at the campus of the Autonomous University of Barcelona, Spain.
- An independent center for governments, NGOs, scientists, business and local communities to find practical solutions for facing global change in the Mediterranean region
- 70 research projects with field studies and activities around the planet.
- Funded by governments, international and national research programs, private companies and foundations.
- Governed by a board of trustees formed by different public entities (administrations, universities, and research centers and institutes).

Governing organizations

CREAF is a public research center which exists as a consortium between different public entities (administrations, universities, and research centers and institutes).

BOARD OF TRUSTEES

Generalitat de Catalunya

UAB Universitat Autònoma de Barcelona

Universitat de Barcelona

Institut d'Estudis Catalans

CSIC Consejo Superior de Investigaciones Científicas

DISTINCTIONS

Excelencia Severo Ochoa

HR Excellence in Research

MEMBERS OF

Institució CERCA Centres de Recerca de Catalunya

SOMM Excellence Alliance

WITH SUPPORT FROM

ICREA

THE GOVERNING COUNCIL OF CREAF

PRESIDENT OF THE GOVERNING COUNCIL

Mr. Damià Calvet i Ravera, Counsellor of Territory and Sustainability

SECRETARY OF THE GOVERNING COUNCIL

Mr. Joan Pino Vilalta, Director of CREAF

MEMBERS OF THE GOVERNING COUNCIL

Mr. Javier Lafuente Sancho Rector of UAB
Mr. Joan Elías Garcia Rector of UB
Mr. Joandomènec Ros Aragonès, President of IEC
Ms. Sra. Rosa Menéndez, President of CSIC
Mr. Oriol Ansón Fradera, General Director of Forests (DARP)
Mr. Joan Nogué i Font, Director of the Landscape Observatory
Mr. Ferran Miralles i Sabadell, General Director of Environmental Policy (DTES)
Mr. Rancesc Xavier Grau Vidal Secretary of Universities and Research (DEC)
MR. Manel Pardo Sabartés, General Director of Prevention and Extinction of Forest Fires
Mr. Lluís Rovira, Director of the Foundation I-CERCA
Mr. Jaume Terradas, CREAF

EXECUTIVE COMMISSION OF CREAF

The Executive commission is named by the Governing Council and handles day-to-day issues of the Center. It is presided by the Director of CREAF.

PRESIDENT OF THE EXECUTIVE COMMISSION

Mr. Joan Pino Vilalta, Director of CREAF

MEMBERS OF THE EXECUTIVE COMMISSION

Ms. Marta Subirà Roca, Department of Territory and Sustainability (DTES)

Mr. Oriol Ansón, Department of Agriculture, Livestock, Fisheries and Environment (DARP)

Ms. Joan Gómez Pallarés, Department of Economy and Knowledge (DEC)

Mr. Rosa Maria Sebastián Pérez, Vicerectora d'Innovació i Projectes Estratègics (UAB)

Mr. Lluis Calvo, CSIC

Mr. Lluís Rovira, Fundació I-CERCA

Mr. Jordi Garcia Fernández, Vicerector de RecercaUB

Scientific Committee

Pep Canadell
CSIRO, Australia

John Grace
Edinburg University, UK

Rob Jackson
Duke's Center of Global Change, EUA

Ivan Janssens
Antwerpen University, Belgium

Ophélie Ronce
Institut des Sciences de l'Evolution de Montpellier, France

Bridget Emmett
Centre for Ecology and Hydrology, United Kingdom

Staff

SCIENTIFIC DIRECTOR
Pino Vilalta, Joan

SCIENTIFIC COORDINATOR
Pérez-Porro, Alicia

MANAGING DIRECTOR
Escobar, Joaquim

RESEARCHERS

CREAF Researchers

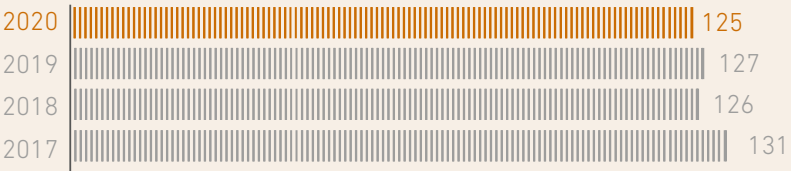
1. Andres Pastor, Pilar
2. Arnan Viadiu, Xavier
3. Avila Castells, Anna
4. Bosch Gras, Jordi
5. Doblas Miranda, Enrique
6. Espelta Morral, Jose Maria
7. Gracia Moya, Marc
8. Herrando Vila, Sergi
9. Llusia Benet, Joan
10. Marcer Batlle, Arnald
11. Masó Pau, Joan
12. Mayol Martinez, Maria
13. Pesquer Mayos, Lluis
14. Pla Rabes, Sergi
15. Sardans Galobart, Jordi
16. Vayreda Duran, Jordi
17. Verger Ten, Aleixandre

UAB Researchers

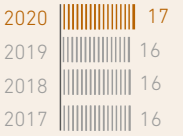
1. Alcañiz Baldellou, Josep M.
2. Claramunt López, Bernat
3. Cristobal Roselló, Jordi
4. Domene Casadesús, Xavier
5. Ferrandíz Rovira, Mariona
6. García Valdés, Raúl
7. Lloret Maya, Francisco
8. Marañón Jiménez, Sara

STAFF

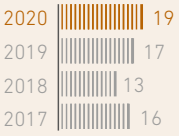
Researchers



CREAF researchers



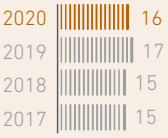
UAB researchers



UB researchers

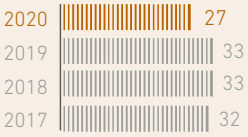
CSIC researchers

Associate researchers

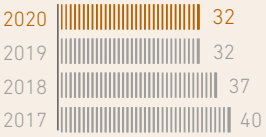


ICREA researchers

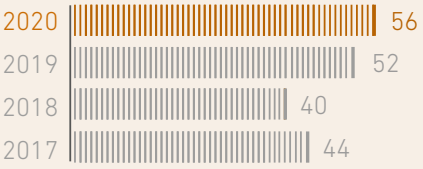
Post-Doctoral



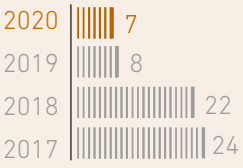
Doctoral Candidates



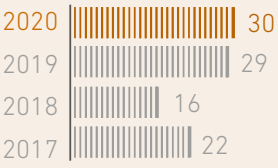
Technicians



Campaign Staff



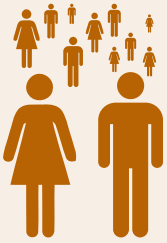
Administration



Total
2017 | 222

Total
2018 | 205

Total
2019 | 217



Total
2020 | 218

9. Martínez Vilalta, Jordi
10. Pino Vilalta, Joan
11. Piñol Pascual, Josep
12. Quevedo Dalmau, Lidia
13. Retana Alumbreros, Javier
14. Riba Rovira, Miquel
15. Ribas Artola, Angela
16. Rodrigo Domínguez, Anselm
17. Saura Mas, Sandra
18. Terradas Serra, Jaume
19. Vidal Durà, Andrea

UB Researchers:
1. Carnicer Cols, Jofre
2. Felip Benach, Marisol
3. Sabaté Jorba, Santiago
4. Sabater, Francesc

CSIC Researchers:
1. Brotons Alabau, Lluís
2. Catalan Aguilà, Jordi
3. Estiarte Garrofé, Marc
4. Filella Cubells, Iolanda
5. Peñuelas Reixach, Josep
6. Sol Rueda, Daniel

Catalonian Institute for Research and Advanced Studies (ICREA) Researchers
1. Bartumeus Ferré, Frederic
2. Mencuccini, Maurizio
3. Andreu Hayles, Laia

Associated Researchers
1. Bonal Andrés, Raúl
2. Cáceres Ainsa, Miquel
3. Calleja Alarcón, Juan Antonio
4. Castells, Eva
5. Coll Mir, Lluís
6. González Martínez, Santiago C
7. Guerrieri, Rossella
8. Jump, Alistar
9. Lefebvre, Louis
10. Montoya, José M
11. Muñoz, Alberto
12. Ojeda Castro, Gerardo
13. Piera Fernández, Jaume
14. Roman Cuesta, Rosa M.
15. Solé Ollé, Jordi
16. Stefanescu, Constantí

Post-Doctoral Researchers
1. Alvarez Nebot, Albert
2. Asensio Abella, M Dolores
3. Basnou, Corina
4. Batllori Presas, Enric
5. Cardador Bergua, Laura
6. Cruz Alonso, Verónica
7. Domingo Marimon, Cristina
8. Eritja Mathieu, Roger
9. Fernández, Marcos
10. Fernandez De Uña, Laura
11. Gargallo Garriga, Albert
12. Grau Fernandez, Oriol
13. Ladrón De Gueva Sáez De Eguilaz, Mónica
14. Lapiedra González, Oriol
15. Margalef Marrase, Olga
16. Melero Cavero, Yolanda
17. Ogaya Inurrigarro, Roma
18. Paniw, Maria
19. Peguero Gutiérrez, Guillermo
20. Poyatos Lopez, Rafael
21. Preece, Catherine
22. Romero Sotoca, Estela
23. Samso Campa, Roger
24. Valade, Aude
25. Vilà Cabrera, Albert
26. Yáñez Serrano, Ana María
27. Yin, Gaofei

Doctoral Candidates
1. Albacete González, Sergio
2. Blanquer Valderas, Laura
3. Boet Escarceller, Olga
4. Bookwalter, Jamie
5. Bórnez Mejías, Kevin
6. Da Sois, Luca

7. Daiyoub, Angham
8. De Pedro Rodríguez, Manuel
9. Descals Ferrando, Adrià
10. Fagin Garcia, Elena
11. Flo Sierra, Victor
12. Garcia Raventós, Aina
13. Jaime González, Luciana Andrea
14. Jimenez Elvira, Nuria
15. Llovet Martín, Alba
16. Margalef Marrase, Jordi
17. Mu, Zhaobin
18. Palmero Iniesta, Marina
19. Pesqueda, Argus
20. Riera Domínguez, Marc
21. Rodríguez Miret, Xènia
22. Sánchez Martínez, Pau
23. Sandoya, Verónica
24. Serrano Serrano, Tomàs
25. Silvestre Carbonell, Susana
26. Tan, Yu
27. Tie, Liheua
28. Torres, Karen
29. Vives Ingla, Maria
30. Yang, Kaijung
31. Zango Palau, Anna
32. Zhu, Jianxing

TECHNICIANS

CREAF Staff

1. Azagury García, Nikole-Eliana
2. Banque Casanovas, Mireia
3. Batalla Mercade, Meritxell
4. Batlles Climent, Carles
5. Brobia Ansoleaga, Alba
6. Broekman, Anne E.E.
7. Broncano Atencia, Maria Jose
8. Calaf Ramirez, Xavier
9. Carabassa Closa, Vicenç
10. Casanovas Berenguer, Rosa
11. Casbas Pinto, Guillem
12. Closa Santos, Guillem
13. Comas Boronat, Lluis
14. Cristobal Rosello, Jordi
15. Eritja, Roger
16. Escobar Rubies, Agustin
17. Español Escoda, Marc
18. Fernandez Garberi, Pere Roc
19. Fraile Torroella, Irene
20. Fuentes López, Laura
21. Galiano Perez, Lucia
22. Gascó Hoenisch, Aina
23. Garófano Gómez, Virginia
24. Garcia Gonzalez, Christian
25. Gordillo Cerrada, Javier
26. Granda García, Víctor
27. Home Mas, Orelys
28. Julià Selvas, Núria
29. Lázaro González, Alba
30. Lecina I Díaz, Judit
31. Marco Tresserras, Jana
32. Márquez Tur, Laura
33. Martin Martinez, Eneko
34. Maspons Ventura, Joan
35. Mattana, Stefania
36. Montero Estaña, Pau
37. Morral Cors, Montserrat
38. Oliveras Casas, Pol
39. Pascual Sanchez, Diana
40. Pau Garcia, Abel
41. Pladevall Vilavendrell, Marc
42. Peñarroya Polo, M Teresa
43. Pla Ferrer, Eduard
44. Prat Carrio, Ester
45. Ramírez Boixaderas, Marta.
46. Rotchés Ribalta, Roser
47. Sala Garcia, Javier
48. Sanchez Plaza, Ana Isabel
49. Serral Montoro, Ivette
50. Solà-Morales Capdevila, Faustina
51. Terraza I Rovira, Cristina
52. Toro Alvarez, Francisca Andrea
53. Vallicrosa Pou, Helena
54. Valls Sánchez, Aleix
55. Verkaik Witteveen, Iraima
56. Zuccarini, Paolo

UAB Staff

1. Pacios, Carme

ADMINISTRATION AND RESEARCH MANAGEMENT

1. Barcelo Perez, Marta
2. Blanco Cabrera, Raúl
3. Cardona Barreña, Alicia
4. Carreño Leal, Carlos
5. Cliville Morato, Adriana
6. Couto Antelo, Verónica
7. Del Hoyo Vinuesa, M Rosario
8. Estop Andrés, Diana
9. Heleine, Laura
10. Garcia Lopez, Cristina
11. Guzmán Martín, Pau
12. Justamante Rodríguez, Ángela
13. León Gil, Yolanda
14. Martín Fernández, Mª Elena
15. Martínez Gómez, Daniel
16. Mayor Eixarch, Gerard
17. Mazón Cardona, Pilar
18. Molowny Horas, Roberto
19. Morales Duran, David
20. Nadal Borras, Nuria
21. Ordoñez Garcia, Jose Luis
22. Pizarroso Velasco, Maite
23. Pujol Mardones, Magdalena
24. Ramon Revilla, Anna
25. Richter Boix, Alexander
26. Rionegro Perez, Raquel
27. Rosas Torrent, M Teresa
28. Soler Pastor, Nora
29. Roig Herrera, Olga
30. Vilar Navarro, Vanessa

VISITING RESEARCHERS FROM NATIONAL AND INTERNATIONAL INSTITUTIONS

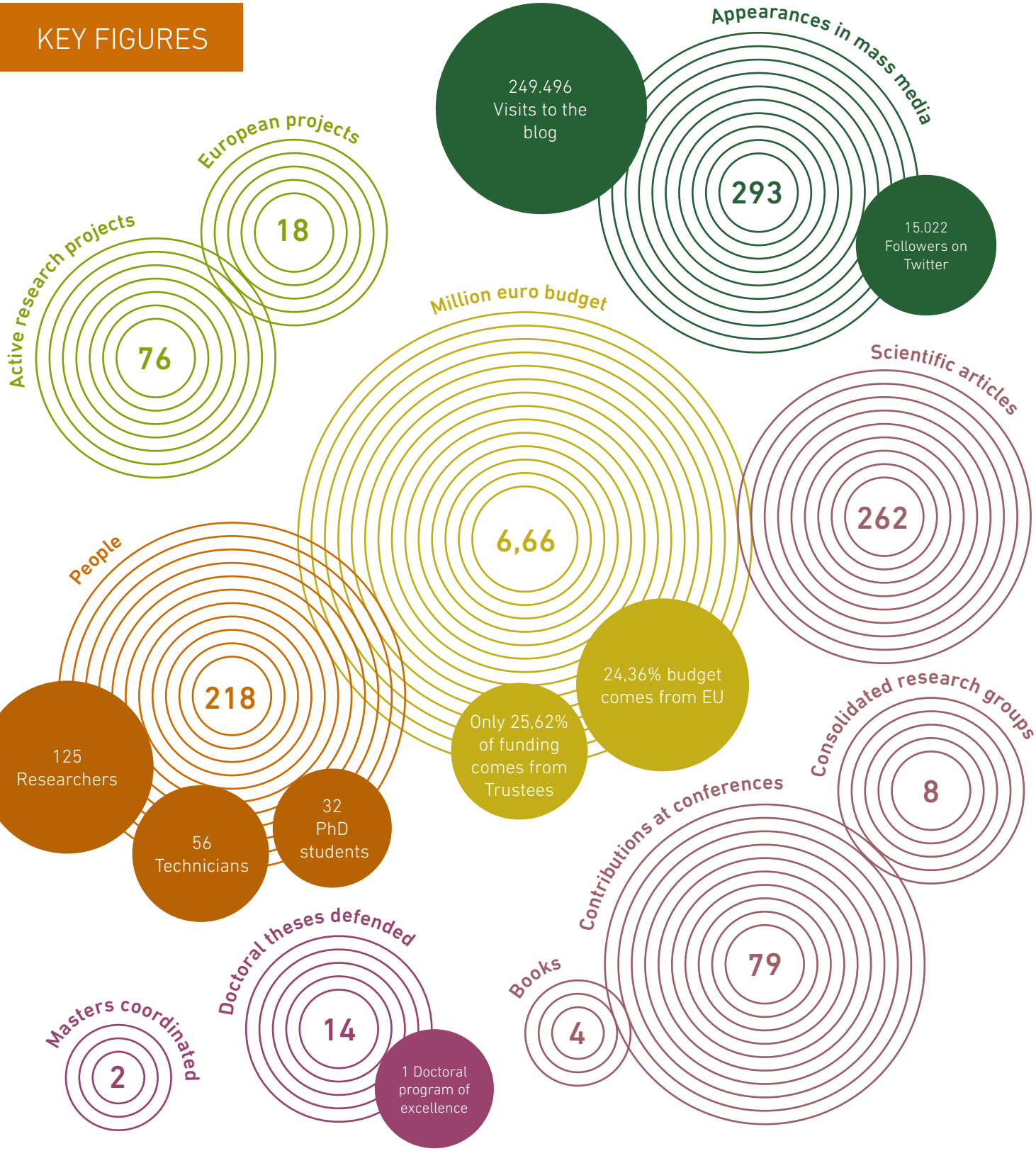
1. Jordan Benrezkallah University of Mons, Bèlgica
2. Christoph Bachofen EPFL de Lausanne, Suïssa
3. Fei Lun China Agricultural University

WITH FINALIZATION OF WITH CREAF DURING 2020

Personnel

Alvarez Nebot, Albert, Arnan Viadiu, Xavier, Asensio Abella, M Dolores, Azagury García, Nikole-Eliana, Casbas Pinto, Guillem, Chin, Juan, Cristobal Rossello, Jordi, Cruz Alonso, Verónica, Español Escoda, Marc, García Valdés, Raúl, Gargallo Garriga, Albert, Garófano Gómez, Virginia, Gascó Hoenisch, Aina, Grau Fernandez, Oriol, Hernández Castellano, Carlos, Jaumejoan Gil, Xènia, Lázaro González, Alba, Lecina I Díaz, Judit, Marco Tresserras, Jana, Margalef Marrase, Olga, Mattana, Stefania, Mazón Cardona, Pilar, Morral Cors, Montserrat, Otsu, Kaori, Paniw, Maria, Pareja Parcet, Eloi, Peguero Gutiérrez, Guillermo, Peñarroya Polo, M Teresa, Pérez Navarro, Mª Ángeles, Pladevall Vilavendrell, Marc, Ramírez Boixaderas, Marta, Reverté Saiz, Sara, Roquer Beni, Laura, Sala Garcia, Javier, Solà-Morales Capdevila, Faustina, Terraza I Rovira, Cristina, Valade, Aude, Verkaik Witteveen, Iraima, Zuccarini, Paolo, Zufiaurre Martínez, Aitziber

KEY FIGURES


249.496
Visits to the blog
Appearances in mass media
293
15.022
Followers on Twitter
European projects
18
Active research projects
76
Million euro budget
6,66
Scientific articles
262
People
218
125
Researchers
56
Technicians
32
PhD
students
24,36% budget comes from EU
Only 25,62% of funding comes from Trustees
Consolidated research groups
8
Contributions at conferences
79
Books
4
Doctoral theses defended
14
1 Doctoral program of excellence
Masters coordinated
2

ANNUAL HIGHLIGHTS

THE BIOENERGY CLUSTER OF CATALONIA AND CREAF WILL PROMOTE RESEARCH AND INNOVATION IN SUSTAINABLE FOREST MANAGEMENT

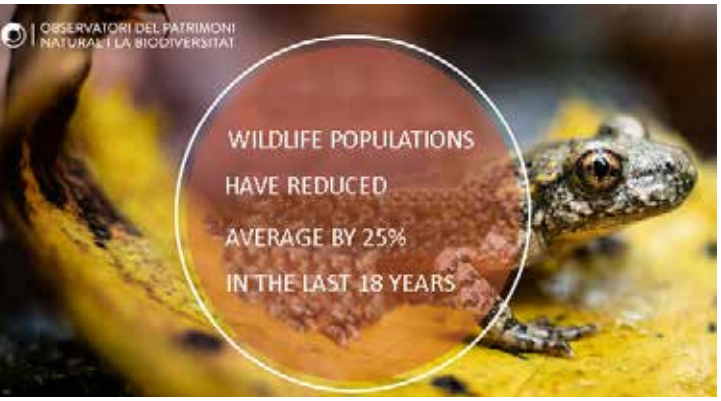
The two entities join forces with the aim of achieving a balance between the **extraction of forest biomass** and the conservation of the natural values of forest masses.

Author: CREAF

JOSEP PEÑUELAS, DISTINGUISHED AS A MEMBER OF THE LEADING AMERICAN ORGANIZATION IN ADVANCED EARTH AND SPACE SCIENCE

The scientific organization American Geophysical Union (AGU) has highlighted the researcher Josep Peñuelas as AGU Fellow, a distinguished member of the year 2020, "for his dedication and **exceptional contribution to Earth and space sciences** and for having contributed to advancing through research and innovation."

Josep Peñuelas. Autor: CREAF



Observatori del Patrimoni Natural I la Biodiversitat.

GENERALITAT DE CATALUNYA PUBLISHES THE STATE OF NATURE IN CATALONIA 2020

The report **'State of Nature in Catalonia 2020'** has been commissioned by the Department of Territory and Sustainability (DTES) of the Catalan government to CREAF and CTFC, which have prepared the document together with the Catalan Institute of Ornithology (ICO) and the Institute of Marine Sciences (ICM).

THE SERVEI METEOROLÒGIC DE CATALUNYA AND CREAF JOIN FORCES TO STUDY PHENOLOGY AND CLIMATE CHANGE THROUGH CITIZEN SCIENCE

Both institutions will collect data on how the **biological calendar of plants and animals** is altered to relate it to climate change. Currently, fruit trees bloom about fifteen days earlier than 50 years ago and fruit ripens about a month earlier.

Author: Toni Barrera-Escoda in iNaturalist (CC BY-NC 6.0).

Clarivate Analytics

Published by Clarivate Analytics

4 CREAF RESEARCHERS ON THE LIST OF THE MOST CITED IN THE WORLD

Jordi Martínez-Vilalta, Jordi Sardans, Maurizio Mencuccini and Josep Peñuelas appear on the list of the **most cited researchers in the world published** by Clarivate Analytics (leading company in the innovation sector) every year. and the Institute of Marine Sciences (ICM).

INTERNATIONAL HIGHLIGHTS

Barcelona views from the Tibidabo. Public Domain.

BARCELONA HAS BEEN APPOINTED BY THE EUROPEAN FOREST INSTITUTE TO ORGANISE ITS ANNUAL FOREST AND CITY CONFERENCE IN 2022

The European Forest Institute (EFI) has appointed Barcelona to organise its **annual forest and city conference** in 2022, an international recognition. This Catalan candidature is led by the AMB, CREAF, the Institute of Advanced Architecture of Catalonia (IAAC) and the Centre of Forest Science and Technology of Catalonia (CTFC).

CREAF, NEW MEMBER OF THE SOCIETY FOR ECOLOGICAL RESTORATION

Since mid-2020 CREAF is a new member of the *Society for Ecological Restoration* (SER), a global association of research, professionals and community leaders from Africa, Asia, Australia, Europe, New Zealand and North and South America, which is actively involved in the ecological recovery of degraded ecosystems, using a wide range of experience and knowledge.

CREAF, new member of the Society for Ecological Restoration. Image: Public domain

Pilar Andrés is one of the experts of the EKLIPSE EWG on restoration.

CREAF PARTICIPATES IN A EUROPEAN REPORT TO RESTORE BIODIVERSITY AND ECOSYSTEM SERVICES

The report has been prepared by an EKLIPSE expert working group, including researcher **Pilar Andrés**, and presentates a serie of key points at the scientific, political and social levels to improve the restoration of ecosystems. These results were included in the 2019 IPBES soil degradation conference.

Portada del document

CREAF COLLABORATES ON THE FIRST SUMMARY OF THE FUTURE MEDECC REPORT, THE ASSESSMENT OF THE IMPACTS AND RISKS OF CLIMATE AND ENVIRONMENTAL CHANGE IN THE MEDITERRANEAN

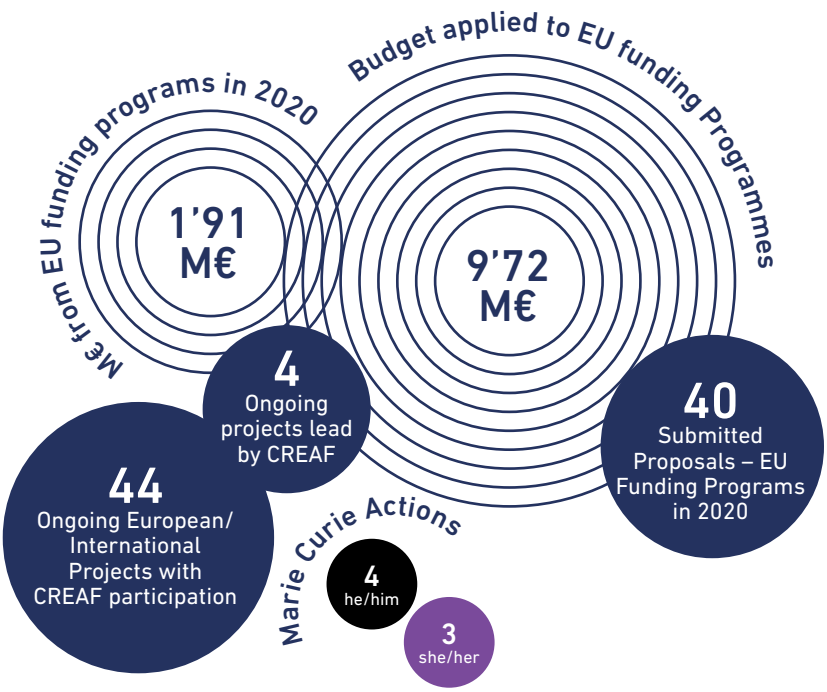
This 2020 Medecc, a network, with more than 80 scientists from all over the Euro-Mediterranean region, has published this pioneering and innovative report which is the largest scientific assessment of climate and environmental change at regional level in the Mediterranean. **Lluís Brotons** (CREAF), **Enrique Doblas-Miranda** (CREAF) and **Dr. Alejandra Morán Ordóñez** (CREAF – CTFC -Solsona) have participated on the repor.

CREAF, NEW MEMBER OF THE EUROPEAN OPEN SCIENCE CLOUD, EOSC

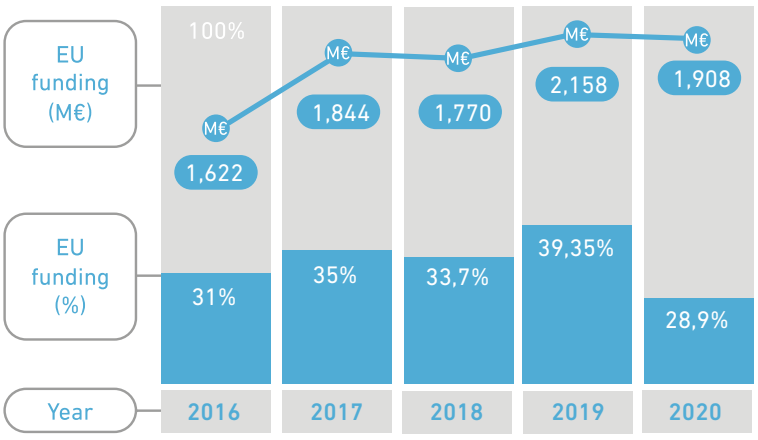
The recently formed 'European Open Science Cloud, EOSC' association incorporates CREAF among its members **Joan Masó** leads this action and other research centers and organizations across Europe. The objective of the EOSC is to **create a virtual infrastructure that brings together all the data, services, and open science tools** that generates Europe in the coming years to make them available to the entire scientific community. The consortium, together with the board of directors, will work to promote its development and implementation.

Image credit: European Open Science Cloud (EOSC) association website.

KEY FIGURES



Total EU funding and % of EU funding related to the total incomes per year



Submitted proposals

		12 she/her	28 he/him
40	**Submitted proposal** (13 coordinated by CREAF)	12	28
24	**H2020 - Excellent science**	6	17
1	**ERCs**	1	
1	ERC CoG	1	
14	**MSCA**	4	10
3	MSCA ITN		3
1	MSCA RISE		1
10	MSCA IF-EF	4	6
0	MSCA IF-GF		
1	**INFRAESTRUCTURES**		1
4	**SPACE**		4
1	**FET OPEN**		1
2	**FET PROACT**	1	1
4	**H2020 - Societal challenges** (Collaborative projects)		4
2	Sc5		2
1	Sc2		1
1	Security societies		1
4	**H2020 - ERAnet**	2	2
1	SUSCROP	1	
3	BIODIVERSA	1	2
1	**H2020 - ERASMUS +knowledge alliances**	1	
2	**H2020 - Science with and for Society**	2	
6	**LIFE +**	1	5
2	Climate change adaptation		2
3	LIFE+ Environment & resources effiency	1	2
1	LIFE+Preparatory		1

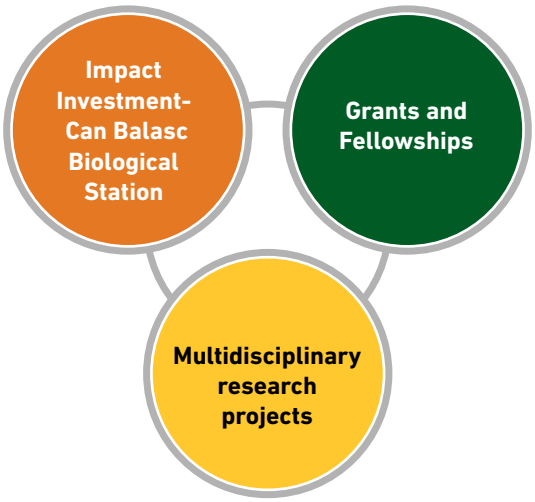
PHILANTHROPY & PRIVATE SECTOR ALLIANCES

We create **synergies** and develops strategic collaborations with the private sector that **promote high-impact, high quality research** designed to find solutions to the challenge of global change.

We are committed to **creating strategic partnerships** that contribute to achieving the global **Sustainable Development Goals (SDGs)**: working together towards early warning systems and sustainable solutions.

PRIVATE SECTOR COLLABORATIONS

CREAF offers new opportunities for collaboration with the private sector:



DEVELOPMENT OF THE NEW OFFICE

Meetings with foundations and companies- new opportunities for **quadruple helix collaborations:**

- Development of a **strategy plan** and base documentation, including ethical aspects of fundraising
- **Networking** and reactivation of contacts from the private sector
- Identification of **national and international foundations and businesses** whose values and core activity align with CREAF's mission and vision
- Research to understand **key challenges and needs**
- Creation of **high impact value propositions** for the private sector
- Generate **synergies** between the public and private sectors
  - explore new possible funding pathways to support research and applied science
  - identify strategic win-win partnerships

CREATING A PHILANTHROPIC CULTURE AT CREAF

HIGHLIGHTS

CREAF DEVELOPS A FIRST PHILANTHROPY STRATEGY WITH OUR CORE PARTNER FUNDACIÓ TERRA

Fundació Terra supports science at CREAF through a Partnership Agreement to boost research and the dissemination of results & science-based solutions linked to the conservation of the natural environment. The aim is to support science of excellence, share evidence of global change, promote science literacy to empower society, and facilitate dialogue between sectors to identify sustainable solutions.

CREAF ENGAGES WITH REGIONAL PHILANTHROPICAL COMMUNITY

Alicia Cardona, our Philanthropy and Private Sector Alliances Officer, joined **'Fundraising.cat'**, a network of professional fundraisers in Catalonia that aims to consolidate the profession by sharing best practices and boosting intersectorial collaborations, where she participates in general meetings and events, and engages in the 'Research Sector' Working Group"

CREAF ORGANIZES A FIRST INTERSECTORIAL NETWORKING EVENT

CREAF organizes a working event to present new opportunities for public-private collaborations The meeting took place in Can Balasc Biological Station, Collserola Park, with representatives from Fundació Catalunya-La Pedrera, Fundesplai, Fundació Emys, Familia Torres, ALDI España, Henkel, Anthesis Lavola, Suez and ELEMENTS Muntanyes d'Idees.

PARTICIPATION IN EVENTS

We attended over ten national events, including:

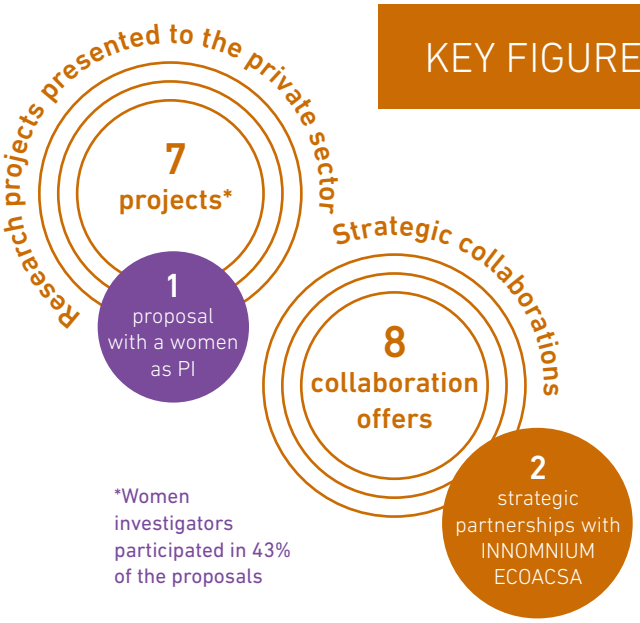
Environment & SDGs Marketplace- Tàndem BCN

Location: Hotel Alimara, Barcelona
Attendees: 76
Organizer: Club EMAS and Department of Territory and Sustainability of the Government of Catalonia (the EMAS Competent Body in Catalonia)

15th Research Café - Fundraising as a strategic tool to fund organizations

Location: Barcelona Science Park- University of Barcelona (UB)
Attendees: 122
Organizer: 'Coordinadora Catalana de Fundacions'Association-Technology and Research Commission

KEY FIGURES



We would like to extend a special thank-you to all of our past and current collaborators, including

Foundations/Associations
- FUNDACIÓN BANCARIA "LA CAIXA"
- FUNDACIÓ TERRA
- BBVA FOUNDATION
- FUNDESPLAI (FUNDACIÓ CATALANA DE L'ESPLAI)
- FUNDACIÓ UNIVERSITÀRIA BALMES (UNIVERSITAT DE VIC)
- ASSOCIACIÓ SÈLVANS
- AIDIMME - INSTITUTO TECNOLÓGICO
- INNOMNIUM Community Foundation

Business
- LOKIMIKA SA
- FAMILIA TORRES (Miquel Torres SA)
- PROMSA (PROMOTORA MEDITERRANEA-2, S.A.)
- ECOACSA Reserva de Biodiversidad

Oher
- NATIONAL GEOGRAPHIC SOCIETY
- EARTHWATCH INSTITUTE, INC
- OPEN GEOSPATIAL CONSORTIUM, INC

Important notice: the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) has meant that 2020 was a year of adaptation for CREAF and its private sector partners. Despite this, we have managed to progress on many fronts, thanks to the flexibility and adaptability of CREAF staff and private sector collaborators, and for that we extend a special thank-you to all of them.

GENDER

CREAF HAS HIRED A NEW GENDER OFFICER AND THE GENDER EQUALITY COMMITTEE IS UP AND RUNNING

CREAF has ended 2020 with a new institutional body, a new Gender office that together with the Gender Equality Committee (CIOG) set up on June 2019, will work in order to make gender equality effective. The Gender office will develop practical advice and tools through all stages of institutional change, from implementing the CREAF's Gender Equal Opportunities Plan to evaluating its real impact, with the final aim to structurally embed gender equality within the centre.

THREE TRAINING COURSES TO RAISE AWARENESS TO GENDER (IN-) EQUALITIES IN THE ACADEMIA AND RESEARCH

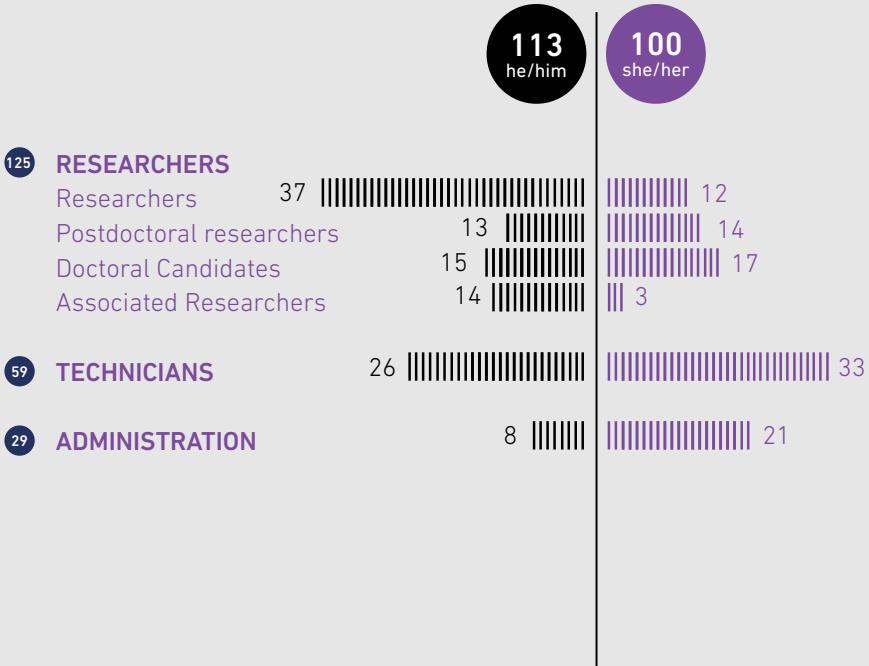
Three training courses have been organized during 2020 to stimulate sensitivity and strengthening people's knowledge and skills to engage with gender equality issues. Specifically, the topics covered have been: communication and non-sexist language, gender perspective and inclusive recruitment, and how to include the gender perspective in a research project. The courses were followed by 51 participants (60% woman and 40% man). Administration staff and postdoctoral researchers were the groups with the highest participation in the courses followed by technicians and doctoral candidates. Only 3 principal investigators join the trainings and thus, increase its participation will be one of the main challenges in the future editions.

THE DIRECTOR OF THE CREAF, ANNOUNCES THAT HE WILL NOT BE PART OF MALE-ONLY EXPERT PANELS

To commemorate International Woman's Day CREAF promoted the campaign #EMCOMPROMETO (I commit myself in Catalan), an initiative that made public through social networks the 38 staff personal commitments (60% made by woman and 40% made by man) in favour of an inclusive science. The director of CREAF also joined the institutional campaign making public his personal commitment that raise the voice against the so-called manel or all-man panels.

THE COURSE ON 'WOMEN AND ENVIRONMENTAL BIOLOGY' REACHES MORE THAN 4700 PARTICIPANTS

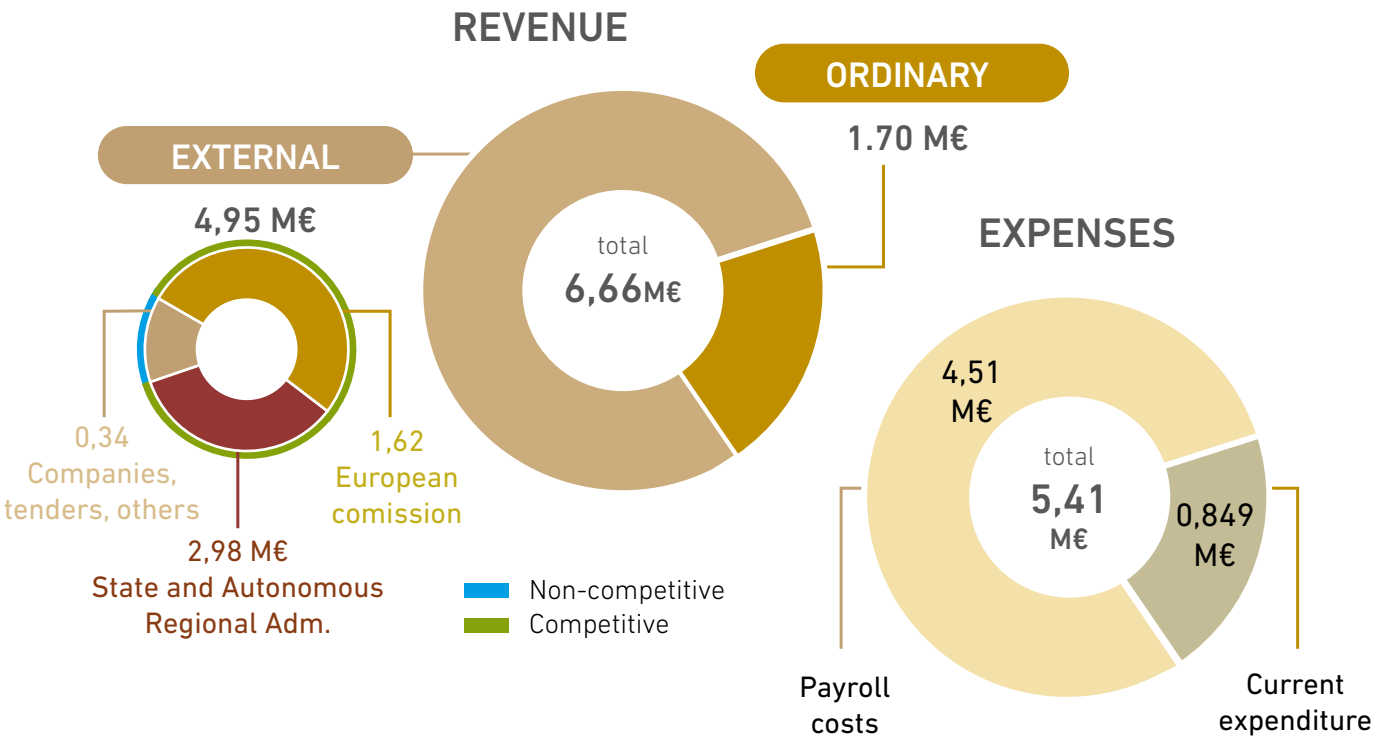
The free online Coursera course provided by CREAF and UAB researchers 'Women in Environmental Biology' offers training in 4 main blocks: biodiversity, ecosystems and humans, human health and the environment always with a special emphasis on the scientific contributions made by women. The course offers a new perspective to scientific current main challenges far from the mainstream androcentrism of ecology didactics that has been done so far.



OTHER HIGHLIGHTS

- Review of the gender perspective in 14 projects (3 European, 10 MSCA; 4 MINECO).
- Improvements in decision-making bodies: Management Support Team (5 women and 5 men), Panel Severo Ochoa (3 women and 4 men),
- Improvements in recruitment policy: Selection commissions for staff positions within the SO made up of 40% women and 60% men, and reservation of 2 out of 6 positions for SO postdocs for women researchers.

FINANCIAL OVERVIEW



Contributions from the Board of Trustees

UAB Universitat Autònoma de Barcelona

Researchers
and facilities
(560.000 + 150.000)
710.000

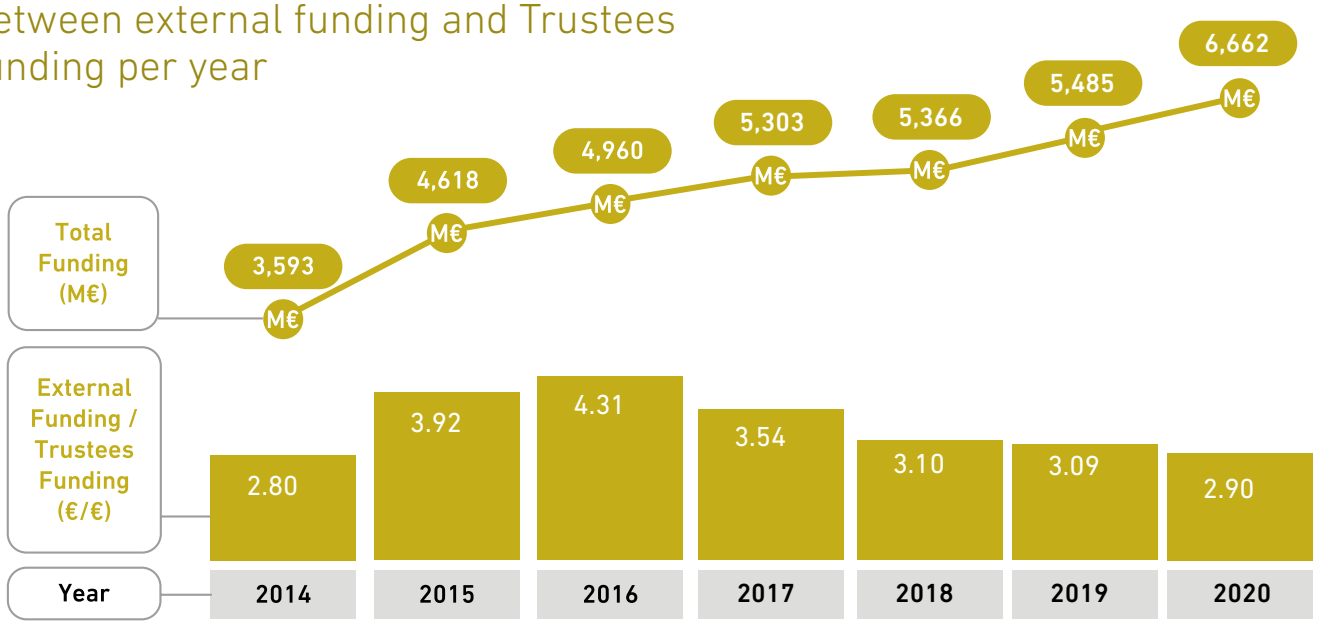
CSIC Consejo Superior de Investigaciones Científicas

Researchers
420.000

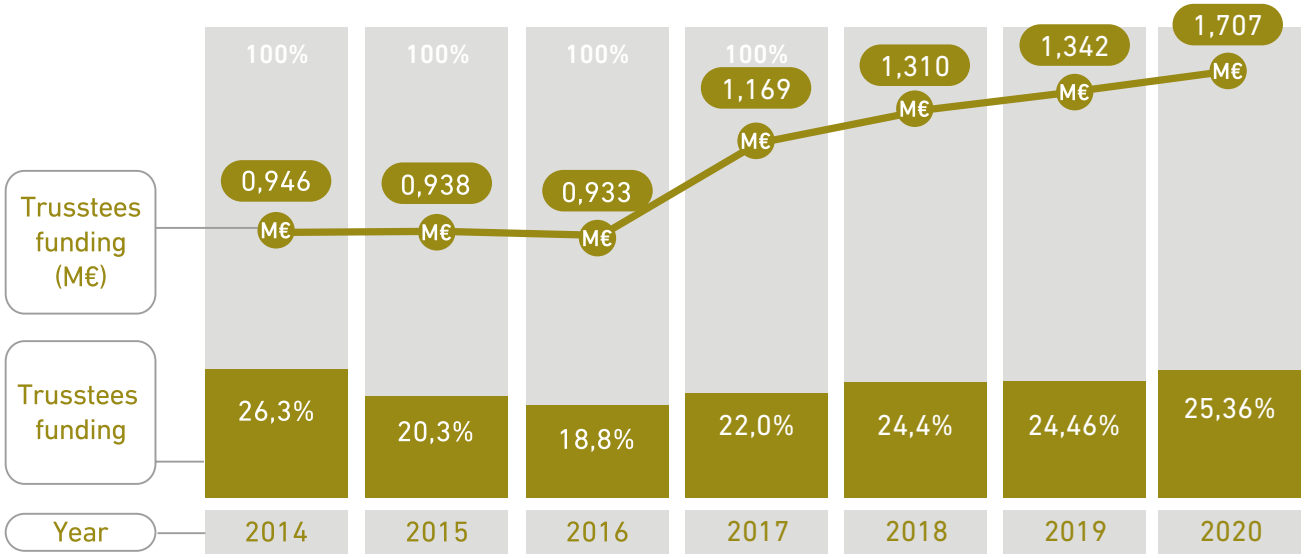
Universitat de Barcelona

Researchers
140.000

Total CREAF's funding and relationship between external funding and Trustees funding per year



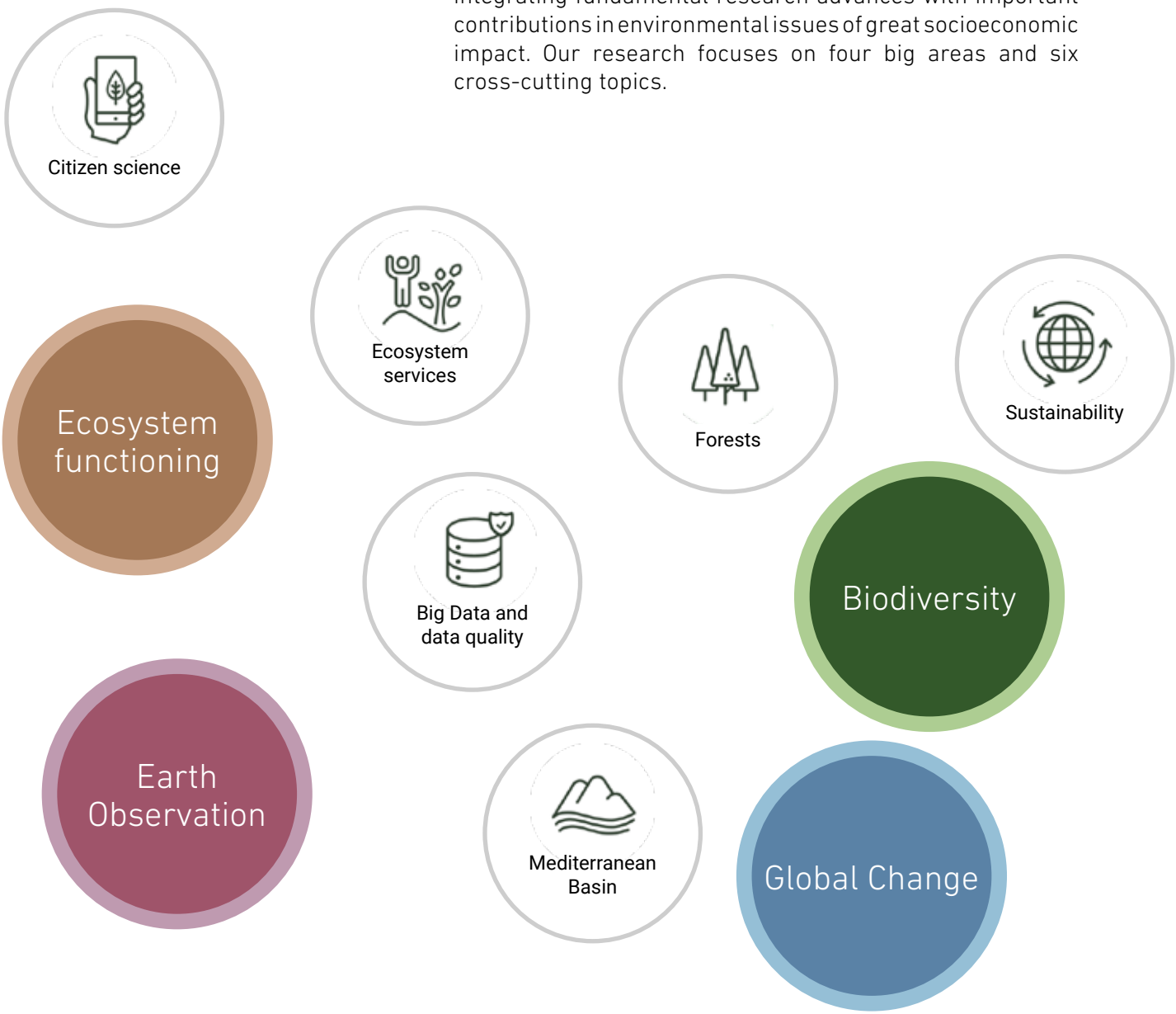
Total contribution of Trustees to CREAF's budget and % of Trustees funding related to the total incomes per year



RESEARCH HIGHLIGHTS

Our research has a global impact.

We have a broad and multidisciplinary research porfolio, integrating fundamental research advances with important contributions in environmental issues of great socioeconomic impact. Our research focuses on four big areas and six cross-cutting topics.



Biodiversity

The Mediterranean Basin is one of the principal points of biodiversity concentration on the planet. The loss of this biodiversity is one of the greatest environmental challenges which we have been obliged to face in the past few decades. Without biodiversity, it would be impossible to obtain the multitude of ecological goods and services which we need to live.

At CREAF we study the mechanisms which generate and maintain biodiversity in terrestrial ecosystems. We analyze territorial patterns of biodiversity and the factors which threaten it. We work with species and communities of plants and animals, with studies carried out from the molecular to ecosystem scale.

Research lines

- Behavior, ecology and evolution
- Population and community dynamics
- Evolutionary ecology
- Species distribution and phenology
- Ecological networks and species interactions

SCIENTIFIC ADVANCES

December, 3th 2020

New European Breeding Bird Atlas, a milestone for biodiversity research and nature conservation

A new European breeding bird atlas (EBBA2), an initiative of the European Bird Census Council (EBCC), is published with updated information on the distribution and abundance of all bird species in Europe, with high scientific standards and a citizen science approach. **Sergi Herrando** –from the EBBA2 coordination team and researcher at the Catalan Ornithological Institute (ICO) and at CREAF is on of the main authors.

European roller (Coracias garrulus), part of the European breeding bird atlas (EBBA2). Image: Xavier Riera.

November, 19th 2020

Global change requires new fire management to preserve biodiversity

The study published in *Science* examines how changing fire patterns on a global scale threaten to extinguish some species, harm biodiversity and transform terrestrial ecosystems. While many species are at risk by the increased frequency and intensity of fire, its suppression can be harmful to some life forms and ecosystems. The article is the result of an international collaboration involving **Andrea Duane, Enric Batllori, Sergi Herrando, Alejandra Morán-Ordóñez and Lluís Brotons from CREAF.**

Climate change, new land uses and the presence of invasive species are modifying fire activity and its impact on biodiversity. Credit: Public domain..

August, 28th 2020

Ozone affects plants, insects and microorganisms, and poses a threat to global biodiversity

According to a study co-authored by CREAF-based CSIC researcher **Josep Peñuelas** and published in ***Science Advances***, increases in ozone in Earth's atmosphere will be a danger to the biodiversity of the Mediterranean Basin, Japan and equatorial Africa by 2100.

Leaves in an urban environment. ClipArt CCBY.

SCIENCE FOR ENVIRONMENTAL MANAGEMENT

January, 16th 2020

To know the evolutionary potential to effective conservation management: the example of the yew

Yew is considered a species of interest from the point of view of conservation for its small and isolated populations. An international team led by **Maria Mayol** from CREAF has studied the **adaptive variation of their populations**, a crucial knowledge to develop correct conservation measures.

Yew. Author: Juanjo Alonso

HIGHLIGHTED BIODIVERSITY RESEARCH PROJECTS

LIFE-CALOTRITON ARNOLDI

Improving the conservation status of the Montseny newt (Calotriton arnoldi)

Principal investigator: Anna Àvila
Budget: 42.000 €
Entity: Generalitat de Catalunya
Period: 2018-2020

UBMS

uBMS proposes to create Citizen Observatory of Urban Butterflies with volunteers who prospect butterflies in big cities

Principal investigator: Yolanda Melero
Budget: 15.000 €
Entity: Fundación Biodiversidad
Period: 2018-2021

EXOCAT

Monitoring program of exotic species in Catalonia

Principal investigator: Joan Pino
Budget: 40.000 €
Entity: Generalitat de Catalunya
Period: 2010-2023

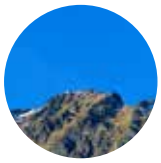
BIORGEST LIFE

Innovative Forest Management Strategies to Enhance Biodiversity in Mediterranean Forests

Principal investigator: Jordi Vayreda
Budget: 1.576.374 €
Entity: Life Program
Period: 2018-2023

WILDLIFE IN THE ANDORRAN PYRENEES

Long term survey of high elevation organisms and some of their interactions, to determine whether climate change and/or human pressure will lead to new communities



Principal investigator: Bernat Claramunt
Budget: 314.246 €
Entity: EarthWatch Institute
Period: 2018-2021

SISEBIO

Catalonian program for comprehensive biodiversity monitoring

Principal investigator: Javier Retana
Budget: 90.000 €
Entity: Generalitat de Catalunya
Period: 2016-2023

PODARCIS

Unraveling biological invasions: cosequences of a rapidly spreading snake invasion for a Mediterranean endemic lizard

Principal investigator: Oriol Lapiedra
Budget: 24.800 €
Entity: La Caixa Foundation
Period: 2020-2021

Check **Annexes** to see other research projects in Biodiversity Area

Global Change

Each organism, every community, and every ecosystem plays an important role in the regulation of cycles of energy and nutrients which keep the planet alive. Some of these roles have been modified due to atmospheric changes, climate change, increases in disturbances and changes in land use.

At CREAF we study the effects of **global change** (which includes all of the aforementioned changes) with an international and multidisciplinary focus. The methods of study require working at **diverse scales** (from the organism to the ecosystem), combining experimentation with modeling, and conducting **long-term** monitoring of different ecosystems.

Research lines:

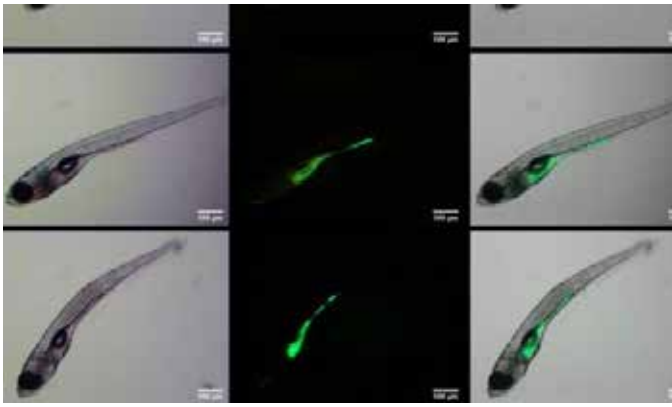
- Biological invasions
- Land use change and landscape dynamics
- Climate change
- Fires
- Integrative and adaptive management of water and the territory
- Urbanization and biodiversity

SCIENTIFIC ADVANCES

December, 21th 2020

Nanoplastics alter intestinal microbiome and threaten human health

A revised study led by **Mariana Teles** and **Josep Peñuelas**, from CREAF and the University of Aveiro concludes that nanoplastics change the composition and diversity of gut microbiome in vertebrates and invertebrates. The effects of a widespread and **prolonged exposure to nanoplastics** observed in animal models can be applied to humans.



Scheme of nanoplastics (in green) accumulated in zebrafish embryos.

December, 11th 2020

The greening of the earth is approaching its limit

A new study published in *Science* reveals that the fertilizing effect of excess CO_2 on vegetation is decreasing worldwide. The **lack of water and nutrients limit the greening** observed in recent years and can cause CO_2 levels in the atmosphere to rise rapidly, temperatures to increase and there to be increasingly severe changes in the climate. **Josep Peñuelas , Jordi Sardans** and **Marcos Fernández** signs de paper.

The lack of water and nutrients limit the greening observed in recent years and can cause CO2 levels in the atmosphere to rise temperatures to increase and to increase severe changes in the climate. Image: Public Domain

November, 5th 2020

Study shows how difficult it is for temperate forests to recover from severe drought

Climate change is making **forests all over the world more vulnerable to drought**, causing tree mortality episodes with serious ecological and social consequences. As yet, the traits of the vegetation replacing trees that have died as a result of drought are not known. The CREAF autors in this PNAS are **Enric Batllori, Francisco Lloret** and **Sandra Saura Mas**.

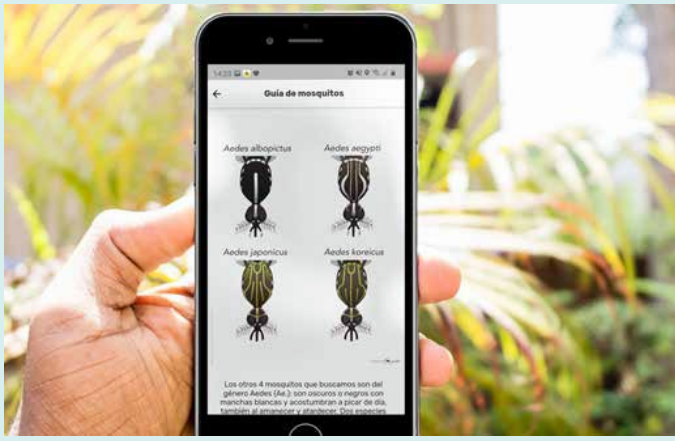
Nothofagus dombeyi affected by drought in the Andes, Patagonia. Credit: Francisco Lloret

SCIENCE FOR ENVIRONMENTAL MANAGEMENT

October , 9th 2020

The citizen science project Mosquito Alert is launched in Europe to track the spread of mosquitoes

The **Mosquito Alert app is now available in 18 European countries** from Europe and will help monitoring the spread of these insects, which can transmit viral diseases such as dengue or Japanese encephalitis. Is produced by the European network AIM-Cost Action and the H2020 project Versatile Emerging infectious disease Observatory (VEO). **Frederic Bartumeus**, ICREA researcher from CREAF and CEAB-CSIC leads Mosquito Alert.



The Mosquito Alert app will allow scientists to monitor the spread of insects that can transmit viral diseases such as dengue, chikungunya and Japanese encephalitis. Image: Mosquito Alert

HIGHLIGHTED GLOBAL CHANGE RESEARCH PROJECTS

LIFE MIDMACC

Mid-mountain adaptation to climate change

Principal investigator:
Javier Retana
Budget: 2.595.725 €
Entity: Life EU
Period: 2019-2024

PHUSICOS

The project aims to test natural-based solutions to counteract the increasing risk of hydrogeological disasters in the EU mountain regions

Principal investigator:
Pilar Andrés
Budget: 158.121,60 €
Entity: EU
Period: 2018-2022

CONEXUS

CO-producing NBS and restored Ecosystems - transdisciplinary neXus for Urban Sustainability

Principal investigator:
Corina Basnou
Budget: 4.999.940 €
Entity: EU
Period: 2020-2023

OCS

Citizen Observatory of Drought

Principal investigator:
Anabel Sànchez, Annelies Broekman, Javier Retana
Entity: FECYT
Period: 2020-2021

FERT-WARM

Investigating how warming, drought, and nutrient limitations and imbalances affect the C sink capacity of Earth terrestrial biosphere

Principal investigator:
Josep Peñuelas
Budget: 321.860,00 €
Entity: Ministerio Economía y Competitividad
Period: 2016-2019

REGIME-SHIFTS

Quantifying, observationally and experimentally, the responses to extreme drought conditions in model tree, shrub, plant and insect species

Principal investigator:
Jofre Carnicer
Budget: 79.860,00 €
Entity: EU
Period: 2016-2019

CLEARING HOUSE

Collaborative Learning in Research, Information-sharing and Governance on How Urban forest-based solutions support Sino-European urban futures

Principal investigator:
Joan Pino and Corina Basnou
Budget: 4.986.463 €
Entity: EU
Period: 2019-2023

Check **Annexes** to see other research projects in Global Change Area

Ecosystem functioning

Each organism, every community, and every ecosystem plays an important role in the regulation of cycles of energy and nutrients which keep the planet alive. Some of these roles have been modified due to atmospheric changes, climate change, increases in disturbances and changes in land use.

At CREAF we study the effects of global change (which includes all of the aforementioned changes) with an international and multidisciplinary focus. The methods of study require working at diverse scales (from the organism to the ecosystem), combining experimentation with modeling, and conducting long-term monitoring of different ecosystems.

Research lines:

- Functional biogeography
- Chemical ecology, ecotoxicology, metagenomics, and metabolomics
- Soil function and restoration
- Atmosphere-biosphere interactions
- Stores and flows of water, carbon, and nutrients

SCIENTIFIC ADVANCES

September, 29th 2020

The future of the Amazon rainforest, in the hands of the smallest trees

A new study in ***Plant, Cell & Environment***, led by the University of Exeter with the participation of **Maurizio Mencuccini**, ICREA research professor in CREAF, suggests small trees adapt better to droughts and could grow into a new generation to help the rainforest survive.

These forests receive more light but less water. Photo: CCBY Unsplash

July, 30th 2020

Climate change and population growth: key factors in the decline of Easter Island's civilization

The recent study Ecology of the collapse of Rapa Nui society involving CREAF researchers **Olga Margalef** and **Sergi Pla-Rabés** published in the journal ***Proceedings of the Royal Society B*** confirms that Easter Island's aboriginal Rapa Nui society did not suddenly collapse, as was once thought. It actually underwent a gradual decline due to sharp population growth and climate changes to which the Rapa Nui were unable to adapt, preventing them from producing enough food. Analysis of climate data and archaeological remains, including charcoal from hearths and tooth collagen, has shaped the conclusions of a study that innovatively combines geology, ecology, population dynamics and archaeology.

Climate change and population growth: key factors in the decline of Easter Island's civilization. Author: Olga Margalef & Sergi Pla-Rabés

January, 28th 2020

Trees' risk of climate change-induced death is reflected in their wood

According to a study led by the Spanish National Research Council (CSIC) with participation of **Jordi Martínez**, from CREAF, the way trees have responded to drought in the past could be a key indicator of their risk of mortality. The study examined growth rings to compare that response in dead and surviving trees.

Pines and firs affected by drought in Sequoia National Park (California, USA) in 2015. Photo: Jordi Martínez

SCIENCE FOR ENVIRONMENTAL MANAGEMENT

May, 26th 2020

Six essential techniques to discover regenerative agriculture!

The **Life-Polyfarming** regenerative agriculture project, coordinated by Planeses and **Marc Gràcia** from CREAF, has recently published six videos in which they explain, in an informative tone, the agricultural and livestock techniques carried out in the pilot farm in La Garrotxa, Catalonia. These techniques aim to recover fertile and profitable soil in a way that respects the environment.

Planeses' aerial photo. Author: Adrià Nebot.

HIGHLIGHTED ECOSYSTEM FUNCTIONING RESEARCH PROJECTS

DISTRESS

Understanding the mechanisms behind tree responses to drought-induced stress with increasing tree size

Principal investigator: Laura Fernández de Uña
Budget: 245.732 €
Entity: MSCA - EU
Period: 2019-2022

ELEMENTALSHIFT

Impacts of anthropogenic global changes in bioelemental stocks and flows on nature and humans

Principal investigator: Josep Peñuelas
Budget: 332.750,00 €
Entity: Ministerio de Ciencia, Innovación y Universidades
Period: 2020-2022

GREEN LINK

Restore desertified areas with an innovative tree growing method across the Mediterranean border to increase resilience

Principal investigator: Josep Maria Alcañiz
Budget: 2,891,702.00 €
Entity: European Comission (Life+)
Period: 2016-2020

INMODES

Integrated modeling and planning of forest biodiversity and ecosystem services in scenarios of global change

Principal investigator: Javier Retana
Budget: 145.200 €
Entity: Ministerio Economía y Competitividad
Period: 2018-2020

NEWFORLAND

New Iberian Forests: ecological role and potential vulnerability under climate change

Principal investigators: Josep Maria Espelta, Joan Pino
Budget: 160.930 €
Entity: Ministerio Ciencia Innovación y Universidades
Period: 2019-2021

M-TRAIT

Modeling tree response to aridity increase with traïts

Principal investigators: Aude Valade, Josep Peñuelas
Budget: 158.121 €
Entity: Marie Curie Actions UE
Period: 2018-2020

TIPMED

Tipping points en bosques Mediterráneos ante el cambio climático

Principal investigator: Enric Batllori
Budget: 78.529 €
Entity: Ministerio de Ciencia, Innovación y Universidades
Period: 2018-2020

Check **Annexes** to see other research projects in Ecosystem functioning Area

Earth Observation

Remote sensing and geographic information systems have permitted analysis of the territory at large scales, and which are at the same time increasingly detailed. These analyses become fundamental for making decisions about the sustainable management of natural resources, designing networks of protected areas, and facing the threats of global change.

Thanks to research carried out by CREAF in this area, we have been able to provide to the public a collection of digital maps of land use of various periods of time, design new formats for storing and distributing thematic cartography, and develop computing tools such as the MiraMon GIS, all of which permit the consultation and analysis of a large quantity of information about our natural heritage.

Research lines:

- Geospatial products and international standards
- Long term ecosystem monitoring
- GIS and remote sensing methodologies and applications
- Regional and global environmental information services

SCIENTIFIC ADVANCES

March, 16th 2020

Green infrastructure planned at European level is more efficient

The need to fit the pieces of a currently fragmented landscape has led the European Union and the various territorial administrations to promote green infrastructure. This type of planning could secure ecosystem services and increase the connectivity of the Natura 2000 network, while improving the coverage of species of conservation interest in the EU beyond the current protected areas. he study also involves the participation of **Lluis Brotons**, researcher from CREAF and the CSIC, and is published in the scientific journal ***Landscape and Urban Planning.***

Green infraestructure. Photo: CTFC.

October, 26st 2020

The EU highlights 4 projects on environmental observation in which CREAF is involved

In its periodic report of research results Pack Cordis, the European Union highlights 9 projects funded by Horizon 2020 on environmental observation, 4 of wich involve CREAF. The 4 projects involving CREAF are Ground Truth 2.0, ECOPotential, NextGEOSS and e-shape, initiatives on **environmental observation** that contribute to providing consistent information on climate change, the health of the planet and the impact of human activity.

The EU highlights 4 projects on environmental observation in which CREAF is involved. Image: Grumets research group

March, 9th 2020

Cos4Cloud, a European project to revolutionize the technology of citizen science

An ambitious project that will create cutting-edge technology services to improve citizen science platforms. Among other services it will include: integrating observations from different citizen science platforms into a portal, artificial intelligence tools that help citizens recognize species when they send an observation and standardize data from different platforms.
Joan Masó, researcher at CREAF and coordinator of the interoperability part in Cos4Cloud. One of the first challenges will be to establish a "common vocabulary" among all citizen science data.

Cos4Cloud's kick-off meeting. Photo: Cos4Cloud's team.

SCIENCE FOR ENVIRONMENTAL MANAGEMENT

November, 17th 2020

Ground Truth 2.0 demonstrates its social, economic and technological benefits on a global scale

One of its final results where CREAF has participated more actively is a tool to determine the quality of citizen science data integrated in a map browser, which includes the data collected by most observatories thanks to the implementation of international geospatial standards. The project is funded by Horizon 2020 and the Grumets research group has participated, as well as **Joan Masó, CREAF researcher, Ester Prat and Núria Julià -CREAF research techniques-, as well as Joan Pino and Corina Basnou, also researchers at CREAF.**

The Ground Truth 2.0 team has worked with 4 observatories in Europe and 2 in Africa in actual operating conditions. Credit: Joan Masó

HIGHLIGHTED EARTH OBSERVATION RESEARCH PROJECTS

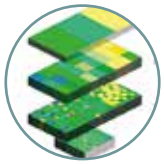
WEOBSERVE

An Ecosystem of Citizen Observatories for Environmental Monitoring

Principal investigator: Joan Masó
Budget: 1.069.507,50 €
Entity: European Comission
Period: 2017-2020

HRLandCoverCCI

ESA project that aims to study and investigate the role of the spatial resolution of Land Cover and its changes in supporting climate modelling research at regional scale



Principal investigator:
Lluís Pesquer
Entity: European Space Agency (ESA)
Period: 2018-2021

SMURBS. ERA-PLANET

SMart URBan Solutions for air quality, disasters and city growth

Principal investigator: Lluis Pesquer
Budget: ERA- Planet
Entity: European Comission (Joint Transnational Call of ERA-PLANET)
Period: 2017-2020

MIRAMON

The geographic information system and remote sensing software MiraMon

Principal investigator: Xavier Pons, UAB
Budget: 63.000,00 €
Entity: Generalitat de Catalunya
Period: 2019

E-SHAPE

EuroGEOSS SHowcases: Applications Powered by Europe

Principal investigator:
Joan Masó Pau
Budget: 15.876.336,75 €
Entity: European Comission
Period: 2018-2021

GEO-Essential. ERA-PLANET

Variables workflows for resource efficiency and environmental management

Principal investigator: Joan Masó
Budget: ERA-Planet
Entity: European Comission
Period: 2017-2020

ERA-PLANET

It will provide advanced decision support tools and technologies aimed to better monitor our global environment and share the information and knowledge in different domain of Earth Observation

Principal investigator: Nicola Pirrone (CNR – Istituto sull'Inquinamento Atmosferico)
CREAF: Joan Masó
Budget: 50.730.791,00 €
Entity: European Comission
Period: 2016-2021

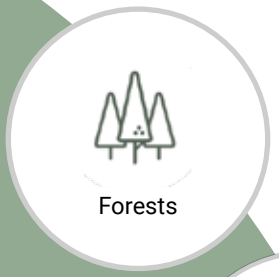
C-GLOPS1

Providing global biophysical variables and land surface phenology from Earth observation satellites

Principal investigator:
Aleixandre Verger
Budget: 216.000,00 €
Entity: EU
Period: 2015-2019

Check **Annexes** to see other research projects in Earth Observation Area

CROSS-CUTTING TOPICS



Forests

In this area, CREAF focuses its research on the structure, dynamics and functioning of forests. In particular, we study the decline, regeneration and global functioning of forests by studying nutrient and water cycles and uses. In addition, we develop mathematical models, carry out forest inventories, and create databases.

Lluis Comas

Featured news

March, 20th 2020

A year of respite for Catalonia's forests

With spring almost upon us, **Jordi Vayreda** and **Mireia Banqué** from CREAF are reporting that this year could be a chance for **Catalonia's forests to recover from accumulated past droughts** and the devastating effects of the pine processionary. There will be no let-up for the territory's undergrowth, however, with the box tree moth's continuing expansion leaving just 20% of box plants with new growth.

Highlighted project

MODOSIN

Monitoring and modelling integrated into a warning system of mountain forests' vulnerability

Principal investigator: Enric Batllori
Budget: 48.773,80 €
Entity: Ministerio de Economía y Competitividad
Period: 2020-2022

Despite the youth of this program at CREAF, we have already shown that citizen science can be used to set up early warning systems, environmental management systems, or even the collaborative drafting of climate change adaptation strategies.

Earth Observation provides consistent information on climate change, the health of the planet, and the impact of human activity, among others. Credit: Dominio público

Featured news

November, 17th 2020

Citizen science, reinforced thanks to Ground Truth 2.0 and its methodology

The project has recently finished and has demonstrated its social, economic and technological benefits on a global scale, with a flexible design methodology adjusted to local circumstances. One of its final results where CREAF has participated more actively is a tool to **determine the quality of citizen science data** integrated in a map browser, which includes the data collected by most observatories thanks to the implementation of international geospatial standards.

Highlighted project

Big Mosquito Bytes

Community-Driven Big Data Intelligence to Fight Mosquito-Borne Disease.

Principal investigator: Frederic Bartumeus
Budget: 1.000.000 €
Entity: Obra Social La Caixa
Period: 2019 - 2023

Sustainability

Given the contemporary challenges of global change, a transition towards a sustainable economic system is more imperative than ever. The production of sufficient primary products must be assured with minimal environmental or social impacts and without altering ecosystem services. In this context, sustainable management of resources such as forests and water is key.

Featured news

May, 14th 2020

Economic growth is incompatible with biodiversity conservation

The increase in resource consumption and polluting emissions as a result of economic growth is not compatible with biodiversity conservation. However, most international policies on biodiversity and sustainability advocate economic growth. These are the main conclusions of the study 'Biodiversity policy beyond economic growth', with the participation of **Lluis Brotons** the scientific journal ***Conservation Letters.***

Highlighted project

Mid-mountain adaptation to climate change

The main objective is to promote adaptation through the implementation and testing of different landscape management measures to meet climate change related challenges in marginal mid-mountain areas of Spain, while improving their socioeconomic development.

Principal investigator: Javier Retana
Budget: 2.595.725,00 €
Entity: Life Program
Period: 2019-2024

Big Data and data quality

Big data offers great opportunities for research but also requires new approaches for managing it efficiently, rigorously and accurately, all depending on the particularities of associated thematic information. On the other hand, the quality of the alphanumeric and spatial information of the available data must be analyzed. It is necessary to verify that access, maintenance and propagation of metadata is adequate and consistent.

"Remote sensing is astronomy in reverse: it entails looking at Earth through a powerful magnifier and exhaustively observing the entire planet.". Image: Joan Masó

Featured news

October, 20th 2020

Joan Masó against the digital Tower of Babel

CREAF researcher **Joan Masó** open a new section of profiles about our people. A physicist who specializes in spatial information and programming, Joan Masó has actively contributed to milestones such as the development of the MiraMon digital mapping software and the creation of the Web Map Tile Service standard. His work could be defined as using open data to create opportunities.

Highlighted project

EuroGEOSS SHowcases: Applications Powered by Europe

The E-Shape project is driven by the need to develop operational Earth Observation EO services with and for the users and to create a conducive environment whereby the strengths of Europe are exploited towards addressing societal challenges, fostering entrepreneurship and supporting sustainable development.

Principal investigator: Joan Masó
Budget: 15.876.336,75 €
Entity: EU
Period: 2019-2023

Ecosystem services

Ecosystem services are being moved to the center of national and European policies, and used as indicators of the quality of society's interaction with the environment. The next step is to place ecosystem services in the centre of decision-making and environmental policies. Once this is done we will have the tools to identify what management options can help mitigate the effects of global change, optimize the benefits, and avoid costs and potential risks to ecosystems and societies.

Geres Xures Reserve. Image: Wikipedia

Featured news

August, 28th 2020

Creating less flammable landscapes would as much as halve the area expected to be affected by fire in the next 30 years

Using mathematical models, a joint Spanish and Portuguese study has shown that altering the landscape, so as to reduce vegetation density and combustibility for example, and promoting farming activities of high natural value would drastically reduce the amount of land damaged by fire.

Highlighted project

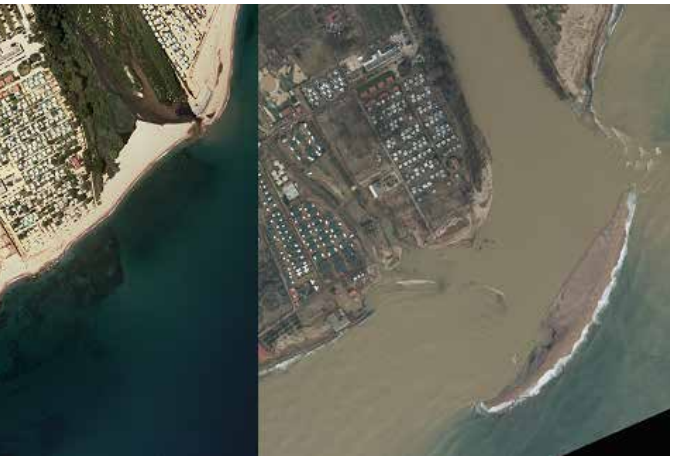
EUROPABON

Europa Biodiversity Observation Network: integrating data streams to support policy

Principal investigator: Lluís Brotons
Budget: 2.994.318,75 €
Entity: EU
Period: 2020-2023

Mediterranean Basin

CREAF has studied these ecosystems due to their ecological value as well as physical proximity to the center. It is for these reasons that many of CREAF's research lines center on this geographic area. The main objectives of this research are to measure the impact of global change on Mediterranean ecosystems by assessing the multiple interactions that occur between climate, living beings, fires, and human activity, also taking into account the region's evolutionary history.



The Tordera Delta before (left) and after (right) Storm Gloria.

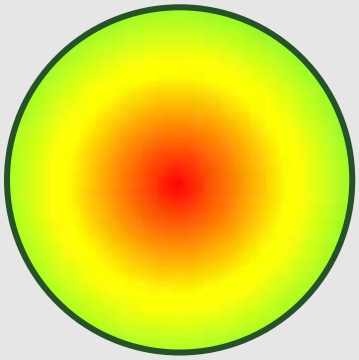
Featured news

February, 21th 2020

Lessons learned from Storm Gloria

Anneies Broekman and **Anabel Sánchez** coordinated the ISACC TorDelta and REDAPTA project, which, supported by the Spanish Ministry for Ecological Transition's Biodiversity Foundation, sought to identify strategies for adapting the Tordera Delta to the effects of climate change. They have consequently developed an approach to tackling such complex problems

Highlighted project



CITIZEN OBSERVATORY OF DROUGHT

Principal investigator: Annelies Broekman and Anabel Sánchez
Entity: Ministerio de Economía y Competitividad
Period: 2020-2021

CONSOLIDATED RESEARCH GROUPS

“CREAF coordinates seven Consolidated Research Groups recognized by the Government of Catalonia. This recognition is intended to support the research groups that work in the different scientific areas, in order to recognize and promote high-quality research, the transfer of knowledge and the internationalization of its scientific activities.”

BEEMed Biodiversity and evolution of mediterranean ecosystems

Research Group focused on the study of the processes generating and maintaining biodiversity in the Mediterranean region at different spatial and temporal scales, while analyzing the effects of global change on biodiversity. Studies include all levels of variation, from genes to organisms, landscapes and communities.


Research group lider, Maria Mayol

Forest dynamics and wildfires

Research Group focused on the study of the structure and functioning of forest ecosystems (forests, scrublands and natural grasslands) and the changes in forest ecosystems by different impacts of global change: fires, deforestation and climate change.


Research group lider, Javier Retana

GECA Environmental Change Ecology Group

Research Group that studies of the interdependence between the biogeodynamics of the biogeosphere (transport, storage and reactivity of materials and energy related to organisms) and the different ways that biodiversity manifests and distributes (genes, biological type, species, communities, biomes).


Research group lider, Jordi Catalan

Global Ecology Unit

Research Group that studies the global, climatic and anthropogenic local change effects on terrestrial ecosystems.

Grumets

The aim of the Methods and Applications in Remote Sensing and Geographic Information Systems Research Group, GRUMETS, is the development of new algorithms, theory and methodologies in these fields as well as the integration of the fields of geographic information science, geoservices and interoperability, standardization, metadata, applied work and software development.

PROTECSOLS Consolidated Research Group on Soil Protection

Research Group focused on the study of soil degradation associated with pollution, mining activities, infrastructures and wildfires.

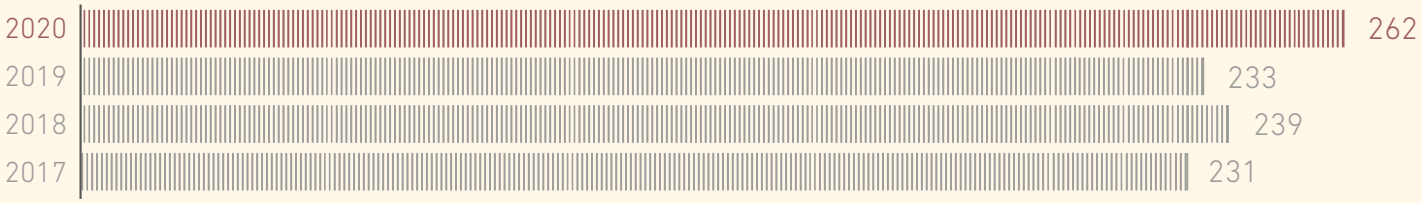
Response of terrestrial ecosystems to changing environmental gradients

Research Group that includes researches devoted to study terrestrial ecosystems functioning. The group focuses on ecosystem responses to environmental changes that at large extent are determined by human activity and are often related to global change. These studies correspond to several topics and methodological approaches.

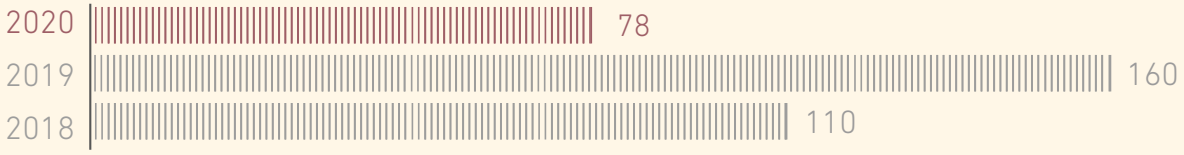
SCIENTIFIC OUTPUT

KEY NUMBERS

SCI publications

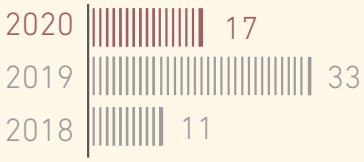


Contribution in national and international scientific conferences

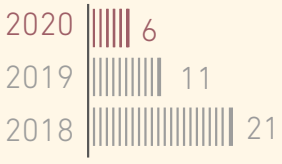


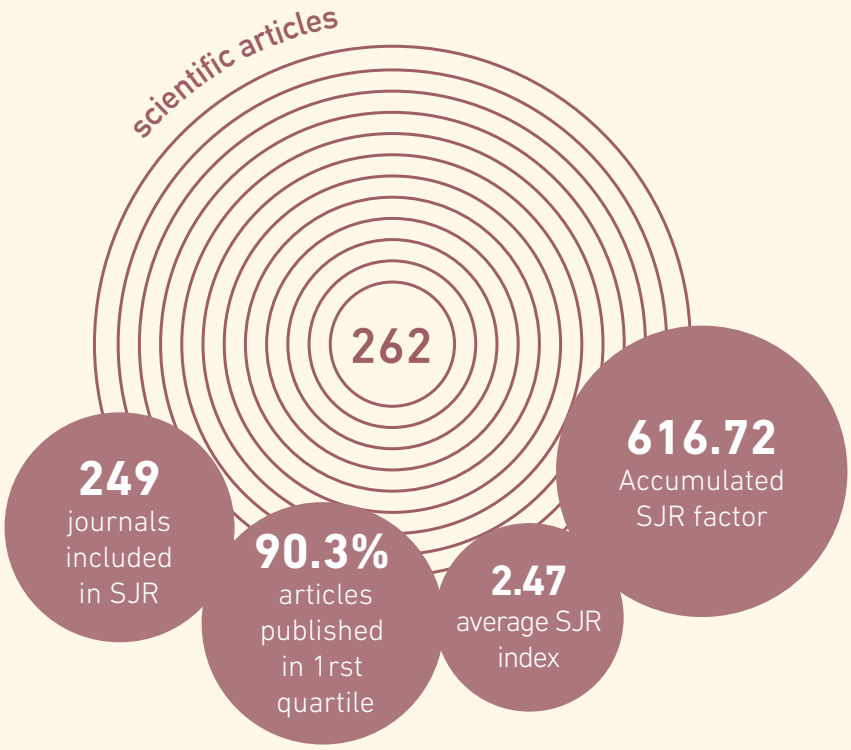
Books

Non SCI publications



Book chapters





Journals

JOURNAL	Article	Quartile	SJR index
Agricultural and Forest Meteorology	2	1	1,836
Agronomy	1	1	0,7
Animal Behaviour	1	1	1,353
Animal Conservation	1	1	1,375
Animals	1	1	0,601
Annals of Botany	1	1	1,615
Annals of Forest Science	4	1	0,834
Applied Vegetation Science	1	1	1,115
Archives of Environmental Contamination and Toxicology	1	2	0,714
Atmosphere	1	2	0,698
Behavioral Ecology	1	1	1,287
Behavioral Ecology and Sociobiology	1	1	1,166
Biogeochemistry	1	1	1,665
Biogeosciences	2	1	1,761
Biological Conservation	1	1	2,149
Biological Reviews	1	1	4,974
Biomass Conversion and Biorefinery	1	3	0,552
Biotropica	2	1	1,142
BMC Evolutionary Biology	1	1	1,531
Botanical Journal of the Linnean Society	1	1	1,571
Bulletin of Entomological Research	1	1	0,731
Catena	1	1	1,389
Climate	1	3	0,706
Climatic Change	1	1	1,908
Communications Biology	2	1	2,15
Conservation Biology	1	1	2,6411
Conservation Letters	1	1	3,563
Current Biology	1	1	3,958
Dendrochronologia	1	2	0,703
Earth's Future	1	1	2,68
Earth-Science Reviews	2	1	3,75
Ecography	1	1	3,155
Ecohydrology	1	1	1,067
Ecological Applications	1	1	2,086
Ecological Modelling	1	2	0,997
Ecology	2	1	2,507
Ecology and Evolution	4	1	5,603
Ecology Letters	3	1	6,731
Ecosphere	3	1	1,397
Ecosystem Services	2	1	2,672
Ecosystems	3	1	1,881
Ecosystems and People	1	1	0,95
Environmental and Experimental Botany	2	1	1,213
Environmental Geochemistry and Health	1	1	0,746
Environmental Research	1	1	2,675
European Journal of Forest Research	1	1	0,798
European Journal of Soil Science	1	1	1,267
Evolutionary Applications	1	1	2,013
FEMS Microbiology Ecology	1	1	1,483
Foods	1	2	0,661
Forest Ecology and Management	2	1	1,249
Forests	4	1	0,652
Frontiers in Ecology and Evolution	2	1	1,101

JOURNAL	Article	Quartile	SJR index
Frontiers in Plant Science	2	1	1,691
Geoderma	4	1	1,727
Geophysical Research Letters	1	1	2,442
Geoscientific Model Development	1	1	3,18
Global Change Biology	23	1	4,198
Global Ecology and Biogeography	5	1	3,535
Global Ecology and Conservation	1	1	1,165
Global Sustainability	1	2	0,905
IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing	1	1	1,48
Insect Conservation and Diversity	1	1	1,129
International Journal of Digital Earth	4	1	1,084
International Journal of Environmental Research and Public Health	3	2	0,739
ISPRS International Journal of Geo-Information	1	1	0,665
Journal of Advances in Modeling Earth Systems	1	1	2,741
Journal of Agricultural Science	1	2	0,523
Journal of Animal Ecology	4	1	2,446
Journal of Biogeography	1	1	1,847
Journal of Bryology	1	2	0,512
Journal of Cleaner Production	1	1	1,886
Journal of Ecology	1	1	2,715
Journal of Environmental Management	4	1	1,321
Journal of Horticultural Research	1	3	0,242
Journal of Hydrology	1	1	1,684
Journal of Hymenoptera Research	2	2	0,592
Journal of Plant Ecology	1	1	0,831
Journal of Soils and Sediments	1	1	0,844
Journal of Statistical Mechanics: Theory and Experiment	1	3	0,486
Journal of Sustainable Forestry	1	2	0,385
Journal of Vegetation Science	3	1	1,338
Land Degradation and Development	2	1	1,331
Landscape and Urban Planning	3	1	1,74
Landscape Ecology	1	1	1,601
Mammal Research	2	2	0,625
Marine Environmental Research	1	1	0,984
Metabolites	1	3	0,881
Methods in Ecology and Evolution	1	1	3,984
Metode	1	4	0,117
Molecules	1	2	0,698
Nature Communications	5	1	5,569
Nature Ecology and Evolution	3	1	5,603
Nature Plants	2	1	5,517
Nature Sustainability	3	1	3,488
New Forests	1	1	0,681
New Phytologist	6	1	3,702
Optics Express	1	1	1,533
PeerJ	1	1	1,533
Physical Review A	1	1	1,416

JOURNAL	Article	Quartile	SJR index
Plant and Soil	5	1	1,208
Plant Cell and Environment	2	1	2,739
PLoS ONE	1	1	1,023
Proceedings of the National Academy of Sciences of the United States of America	3	1	5,165
Proceedings of the Royal Society B: Biological Sciences	3	1	2,626
Remote Sensing	6	1	3,642
Remote Sensing of Environment	1	1	3,541
Restoration Ecology	1	1	1,188
Revue Suisse de Zoologie	1	3	0,421
Royal Society Open Science	1	1	0,966
Science	2	1	13,11
Science Advances	2	1	6,062
Science Bulletin	1	1	1,517
Science of the Total Environment	13	1	1,661
Scientific Data	1	1	3,099
Scientific Reports	9	1	1,341
Soil Biology and Biochemistry	2	1	2,63
Sustainability (Switzerland)	1	1	0,581
Sustainability Science	1	1	1,448
Trends in Ecology and Evolution	2	1	6,86
Trends in Plant Science	2	1	4,539
Urban Forestry and Urban Greening	1	1	1,181
Weed Research	1	1	0,64

Scientific articles

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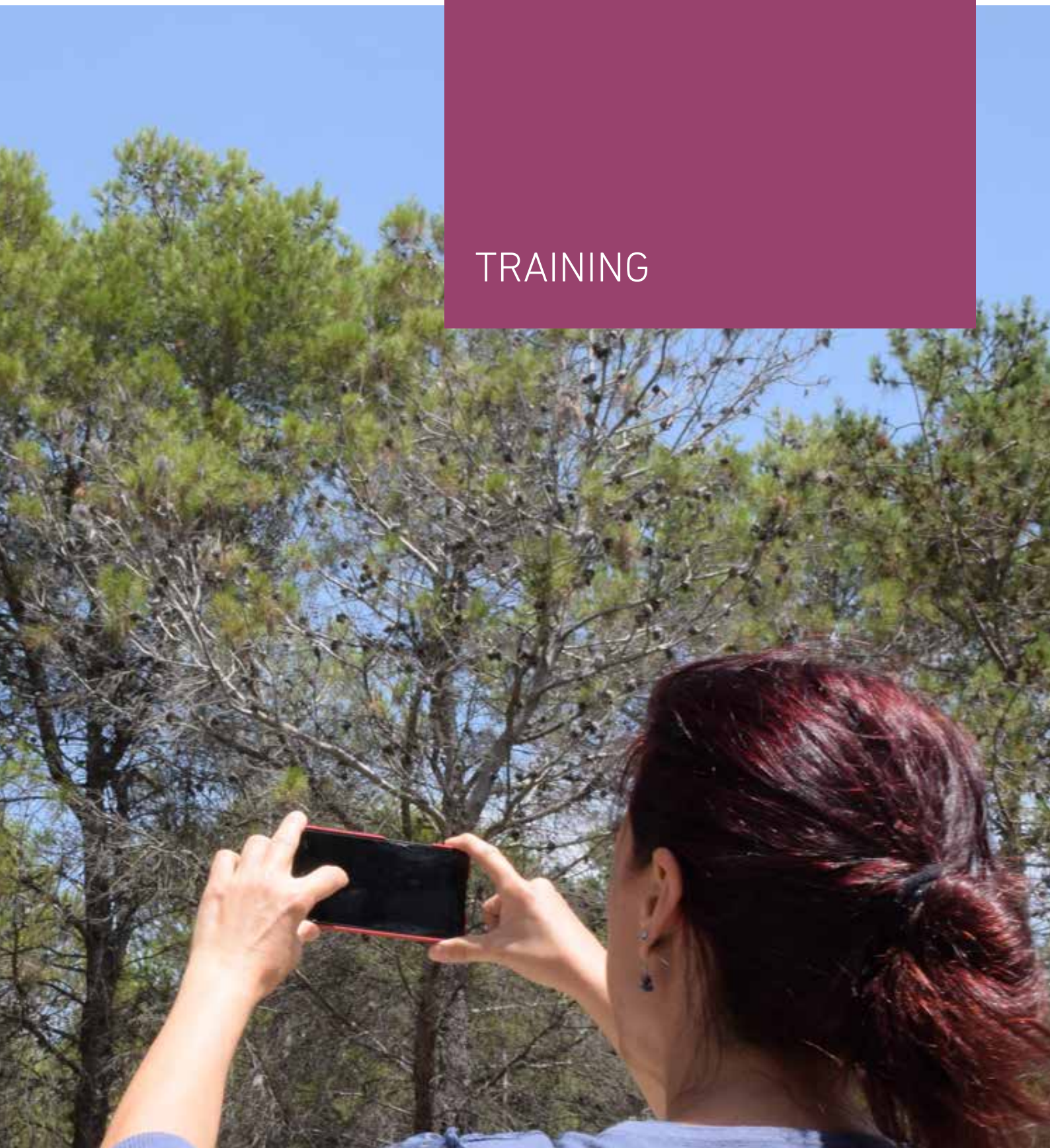
TRAINING



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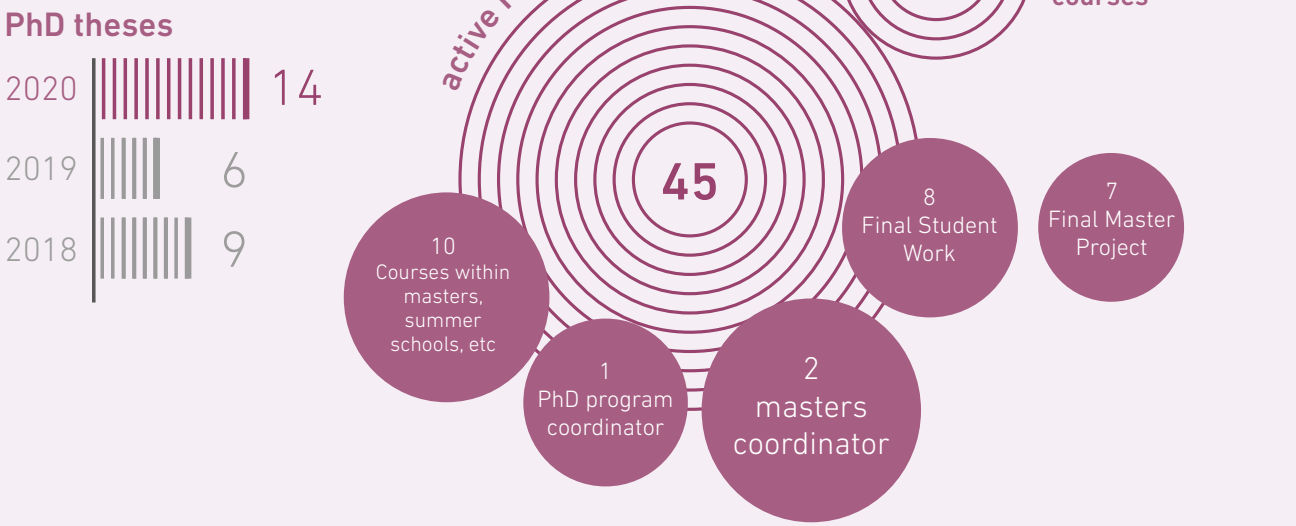


PHD IN TERRESTRIAL ECOLOGY

CREAF coordinates the PhD in Terrestrial Ecology which consists in writing, presenting and defending an original piece of research which, in this case, is framed within the ambit of the terrestrial ecology.

This PhD programme is aimed at students interested in understanding the processes involved in global environmental change and the loss of biodiversity, as well as possible actions to mitigate the damaging effects of environmental changes and the conservation of natural resources.

The PhD programme consists of 35 lecturers and associated researchers working on the following lines of research: Biodiversity, Functional ecology and global change; Forest ecology and fires; Soil protection and conservation; Remote sensing and GIS.

Coordinator: Anna Àvila
Lecturers: Josep Maria Alcañiz Balldellou, Pilar Andrés Pastor, Xavier Arnan, Anna Àvila Castells, Jordi Bosch Gras, Jofre Carnicer Cols, Jordi Catalan Aguilà, Bernat Claramunt López, Enrique Doblas Miranda, Xavier Domene Casadesús, Xavier Espadaler Gelabert, Josep Maria Espelta Morral, Iolanda Filella Cubells, Marc Estiarte Garrofé, Marc Gràcia Moya, Francisco Lloret Maya, Joan Llusià Benet, Arnald Marcer Batlle, Jordi Marínez Vilalta, Maria Mayol Martínez, Maurizio Mencuccini, Romà Ogaya Inurrigarro, Oriol Ortiz Perpinyà, Josep Peñuelas Reixach, Joan Pino Vilalta, Josep Piñol Pascual, Eduard Pla Ferrer, López, Javier Retana Alumbreros, Miquel Riba Rovira, Angela Ribas Artola, Ferran Rodà de Llanza, Anselm Rodrigo Domínguez, Jordi Sardans Galobart, Sandra Saura Mas, Robert Savé Montserrat, Daniel Sol Rueda, David Tarrasón.

PHD THESES

Cabon A. 2020 *Predicting forest responses to climate. Integrating water and temperature constraints from the cell to the region.*
Co-director: Jordi Martínez-Vilalta, Miguel de Cáceres

Carabassa Closa V. 2020 *Valorisation of organic waste in technosols and evaluation of degraded land restoration.*
Director: Josep Ma Alcañiz

Chin Pampillo J. 2020 *Environmental benefits of using biochar as an amendment in pineapple cultivation in Costa Rica: soil physicochemical and biological effects and interaction with agrochemicals.*
Co-directors: Josep Ma Alcañiz, Xavier Domene, Cristina Chinchilla

Hernández-Castellano C. (2020) *Effects of fragmentation and changes in community composition on plant-pollinator and host-parasitoid interaction networks.* Autonomous University of Barcelona.
Co-directors: J. Bosch, A. Rodrigo.

Ibáñez M. 2020 *Vegetation drives greenhouse gas exchange, and carbon and nitrogen cycling in grassland ecosystems".*
Mª Teresa Sebastià and Dr. Àngela Ribas.

Lecina J. 2020 *The key role of ecosystem services in forests: spatial relationships, conservation implications and risk to climate change hazards.*
Director: Javi Retana

Otsu K. 2020 *Assessing spatio-temporal impacts of pine processionary moth defoliation on Mediterranean forest dynamics using UAV remote sensing.*
Co-directors: Lluís Brotons, Javier Retana

Perez Navarro MA. 2020 *Plant species climatic niche and its relationship with population responses to extreme drought.*
Co-directors: Paco Lloret, Miguel Angel Esteve Selma

Prado López M. 2020 *Biotic and abiotic drivers of litter decomposition in drylands: The role of UV and trophic interactions.*
Co-directors: Jordi Moyà Laraño, Francisco Pugnaire

Reverté S. (2020) *Spatial variation in plant-pollinator relationships: consequences on pollination function. Autonomous University of Barcelona.*
Co-directors: J. Bosch, A. Rodrigo.

Roquer L. 2020 *Pollinator communities and pollination services in apple orchards: a trait-based approach.*
Co-directors: Jordi Bosch Anselm Rodrigo

Speranza C. 2020 *Paleoclimatic variability and paleoenvironmental changes in the semi-arid Chaco region of Argentina. Autonomous University of Barcelona.*
Co-directors: Bernat Claramunt, Julio José Kulemeyer, Liliana C. Lupo

Unzeta M. 2020 *Behavior and its role on reproductive performance under a life-history perspective.* Autonomous University of Barcelona.
Director: Daniel Sol

Zufiaurre Martínez, A. (2020) *Microbial assemblage response to nutrient fluctuations in high-mountain lakes.* Universitat Autònoma de Barcelona. (6/3/2020).
Co-directors: Jordi Catalan and Marisol Felip.

OFFICIAL MASTER IN TERRESTRIAL ECOLOGY AND BIODIVERSITY MANAGEMENT

This master's degree in Terrestrial Ecology and Biodiversity Management is addressed to students interested in the processes involved in the functioning of terrestrial ecosystems and the options for mitigating their future deterioration in a context of global environmental change, and also to students interested in the management and conservation of biological natural resources (flora and fauna). The master's degree takes up one academic year and is divided into 2 specialisations: Terrestrial Ecology and Management and Diversity of Fauna and Flora (marine and terrestrial). Master in Terrestrial Ecology and Biodiversity.

Coordinator: Francisco Lloret.
Directors: Francisco Lloret, Anna Morton.
Lecturers: Josep Maria Alcañiz, Pilar Andrés, Anna Àvila, Carme Biel, Jordi Bosch, Lluís Brotons, Juan Antonio Calleja, Eva Castells, Maite Carrasón, Jordi Catalan, Bernat Claramunt, Lluís Coll, Maria Constenla, Xavier Domene, Josep Maria Espelta, Marc Estiarte, Iolanda Filella, Mercè Galvany, Fernando García, Carles Gracia, Marc Gràcia, Iñigo Granzow, Laia Guàrdia, Santiago Lavin, Concepción de Linares, Francisco Lloret, Joan Llusià, Manel López Bejar, Javier López, Jordi López Olvera, Ignasi Marco, Jordi Martínez-Vilalta, Joan Masó, Maria Mayol, Maurizio Mencuccini, Ana Morton, Francesc Muñoz, Miquel Ninyerola, Romà Ogaya, Josep Peñuelas, Ramon Pérez, Joan Pino, Josep Piñol, Eduard Pla, Rafael Poyatos, Javier Retana, Miquel Riba, Àngela Ribas, Anselm Rodrigo, Santiago Sabaté, Llorenç Sáez, Sergi Santamaria, Jordi Sardans, Sandra Saura, Robert Savé, Emmanuel Serrano, Daniel Sol, Anna Soler, Constantí Stefanescu, Jaume Terradas, Emilio Valbuena, Jordi Vayreda.

OFFICIAL MASTER IN REMOTE SENSING AND GIS

The aim of this Master is to provide sound scientific training in techniques for observing the Earth and for generating and analyzing information in order to be able to study a given territory and manage its resources using GIS. The program is divided into 7 modules: 4 modules of mandatory subjects and 2 modules of elective advanced subjects. In addittion, the Master course is complemented by practical sessions with a tutor and a Final Project as the last mandatory module of the program.

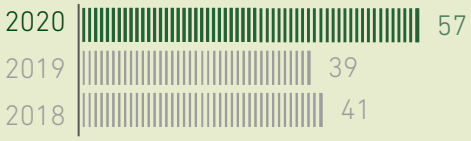
Coordinator: Xavier Pons.
Coordinator assistant: Cristina Cea
Lecturers: Joan Bech, Antoni Broquetas, José Ángel Burriel, Jaume Calvet, Adriano Camps, Cristina Cea, Bernat Codina, Carles Dalmases, Ricardo Díaz-Delgado, Josep A. Gili, Sergi Gumà, Jordi Isern, Agustín Lobo, Arnald Marcer, Joan Masó, Eduardo de Miguel, Maria Mira, Gerard Moré, Òscar Mora, Javier Muñoz, Miquel Ninyerola, Fernando Pérez, Lluís Pesquer, Joan Pino, Xavier Pons, Càrol Puig, Pere Serra, Jordi Vayreda, Alaitz Zabala.

Check Annexes to see all Training activity of CREAF

COMMUNICATION AND OUTREACH

KEY NUMBERS

Press releases



5400 subscriptors to our monthly newsletter

4045 followers in Linkedin

3400 likes in Facebook

3.000 Instagram

Blog sessions 249.496

followers on Twitter

Total

2020 | 15.022 followers

Total

2019 | 11.000 followers

Total

2018 | 9.817 followers

+ 199.407 unic visitors of our blog in 2019

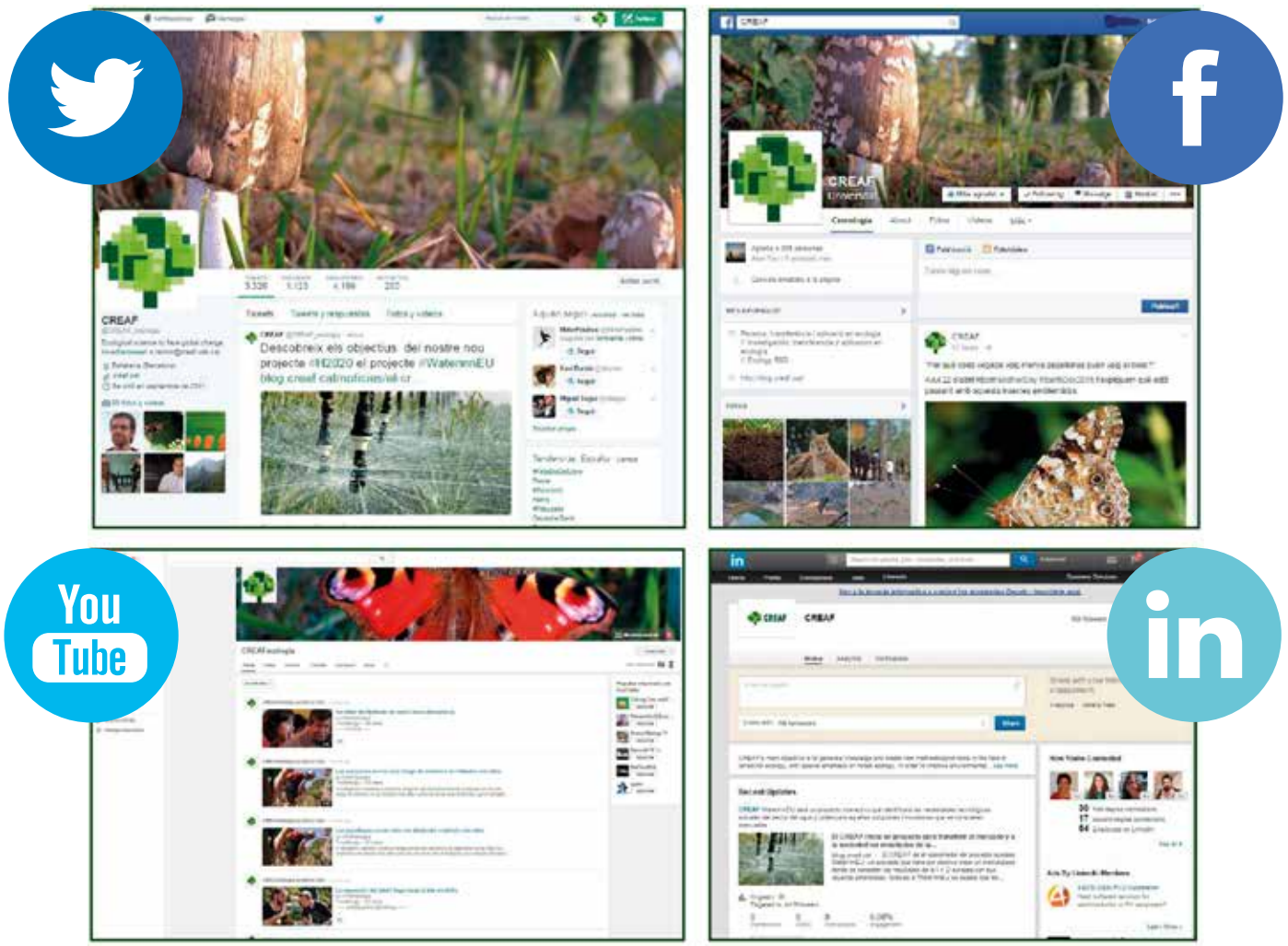
Blog sessions

JOIN OUR GROWING COMMUNITY

EXPLORE

Our free and online resources provide objective, fact-based analysis of the latest environment and development data and information. CREAF's blog is a great introduction to our work and covers all our topics. Check it out at www.creaf.cat

Connect
Our social media sites let you join the conversation about important issues and share ideas and information with your network.



KEY NUMBERS

Participation as organizer in other outreach conferences

OUTREACH CONFERENCES OR TECHNICAL SEMINARS

Organized by CREAF

Quality issues in georeferencing:From physical collections to digital data repositories for ecological research
Venue: Biological And Chemical Research Centre, University Of Warsaw, Warsaw, Poland
Date: Februrary 10-13, 2020
Number of attendees: 24
CREAF members involved in organising: Marcer A.

Crowdsourcing for Natural Science Collections - closing the circle of data flow
Venue: Virtual meeting
Date: November 2 & 9, 2020
Number of attendees: 207
CREAF members involved in organising: Marcer A.

LIFE The Green Link: results about the trials. Facing climate change adaptation in the Mediterranean: ecosystem restoration and management.
Venue: Institut d'Estudis Catalans, Barcelona
Date: February 17th
Numbers of attendees: 120
CREAF membres involved in organising: Carabassa, V., Alcañiz, J.M.

El "Cocoon": una metodologia innovadora per la restauració ecològica i l'agricultura de secà Venue: On-line
Date: June 12th
Numbers of attendees: 59
CREAF membres involved as co-organisers: Carabassa, V.

Presentació del nou protocol de seguiment d'activitats extractives amb drons
Venue: On-line
Date: July 14th
Numbers of attendees: 110
CREAF membres involved as co-organisers: Carabassa, V. Alcañiz, J.M.

El sistema "Cocoon": una metodologia innovadora per la reforestació i les plantacions de secà.
Venue: On-line
Date: September 28th
Numbers of attendees: 20
CREAF membres involved as co-organisers: Carabassa, V.

Llobregat&Co, 2nd co-learning workshop for researchers (CLEARING HOUSE H2020)
Venue: Metropolitan Laboratory of Ecology and Territory of Barcelona (LET), Campus UAB, Bellaterra
Date: December, 15th
Numbers of attendees: 6 (face-to-face, following COVID restrictions); 2 (online)
CREAF membres involved in organising: Basnou C.

WeObserve Roadshow: Observatoris Ciutadans per a la gestió de les inundacions
Venue: Online
Date: Oct 16th
Number of attendees: 16
CREAF membres involved in organising: Masó J., Prat E.

1st EOTIST Workshop Management training
Venue: Online
Date: 10 Dec
Number of attendees: 42
CREAF membres involved in organising: Pesquer Ll., Domingo C.

1st FASTER Specialised Training
Venue: Online
Date: 2-6 Nov
Number of attendees: 30
CREAF membres involved in organising: Pesquer Ll., Domingo C, Pascual D., Pla E., Doblas E., Broekman A., Sanchez A.

PROGRESS local stakeholders meeting on measurement of ecosystem services
Venue: Barcelona
Date: February 28th
Numbers of attendees: 8
CREAF membres involved in organising: Doblas, E.

PROGRESS local stakeholders meeting on integration of ES in the political agenda
Venue: online
Date: September 8th
Numbers of attendees: 8
CREAF membres involved in organising: Doblas, E

OUTREACH NEWS

DOWNLOAD THE NEW GUIDE ON CITIZEN SCIENCE, URBAN NATURE AND ENVIRONMENTAL EDUCATION NOW!

Fundesplai, together with CREAF, and with the collaboration of the ECODES Foundation, has developed a guide to promote Citizen Science as a space and a participatory, educational and transformative tool.

CREAF JOINS RED4C TO DEVELOP A GUIDE ON CLIMATE CHANGE AND CITIZEN SCIENCE

The Red4C project is creating a network of entities and organisations at national level that are dedicated to the field of citizen science and climate change, in which CREAF has joined. The main result of this network will be the development of a guide in this field.

THE PERAMÀS SCHOOL CREATES AN INTERACTIVE MAP OF MATARÓ'S BIRDS WITH CREAF'S ADVICE

On World Environment Day, 5 June, the Peramàs school in Mataró proposed to its pupils to get to know the birds of their city in order to take care of them. CREAF researchers recorded themselves on video to motivate the pupils to participate in the challenge and the result was an interactive map with a hundred bird observations. The collaboration is carried out within the framework of the Magnet school inclusion programme.

WHY NOT HOLD MORE CLASSES OUTDOORS?

The European project Clearing House has today launched a survey of primary and secondary school teachers throughout Catalonia to discover whether or not they hold classes outdoors, what they feel the drawbacks or obstacles to doing so are, and in what subject areas they bring up urban green spaces.

SABADELL PROMOTES GREENERY WITH THE HELP OF CREAF

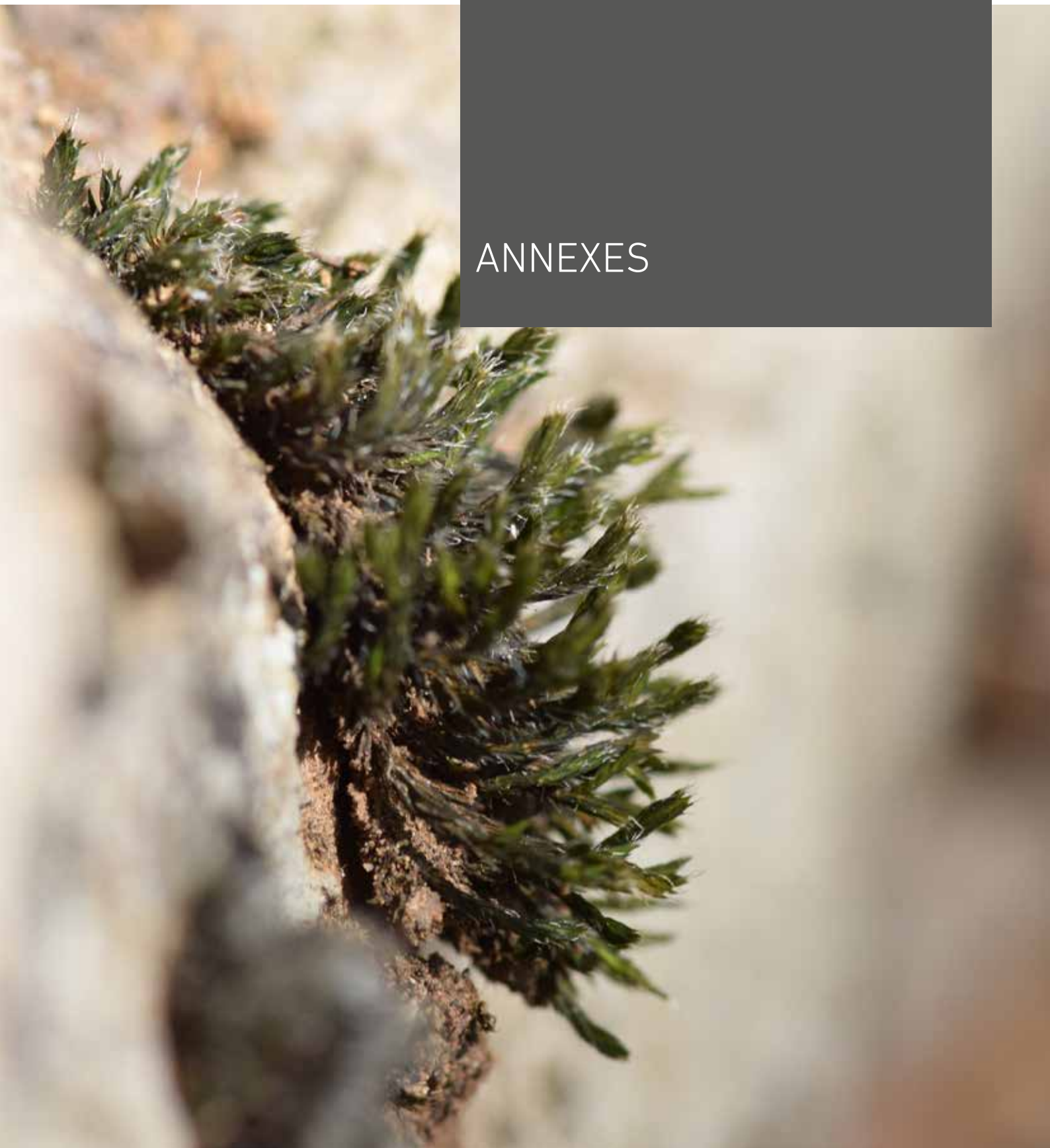
CREAF collaborates with the UAB and the CTTC in the project 'Vivim, respirem, replantegem Sabadell' led by ADENC, which presents a study on the state of urban fauna and flora, air quality in the city and mobility to provide solutions for a more sustainable and green city.

JOSEP PEÑUELAS ANSWERS CHILDREN'S QUESTIONS ON CLIMATE CHANGE AT INFOK

Students from different schools have sent a video of almost twenty questions to the CSIC researcher at CREAF and expert on global change Josep Peñuelas, who has answered through the InfoK news programme for young people on Televisió de Catalunya.

Check Annexes to see more CREAF outreach activity

ANNEXES



PUBLICATIONS

No SCI publications

Ariza-López F., Barreira P., Masó J., Zabala A., Rodríguez A., Moreno G., García J. (2020) Calidad de datos geoespaciales (ISSO 19157-1): evoluciona o muere. *Revista Cartográfica* 100: 129-154. DOI: 10.35424/rcarto.v0i100.692. https://doi.org/10.35424/rcarto.v0i100.692.

Arnan, X., Cerdá, X. & Rodrigo, A. (2020). Do forest fires make biotic communities homogeneous or heterogeneous? Patterns of taxonomic, functional, and phylogenetic ant beta diversity at local and regional scales. *Frontiers in Forests and Global Change*, 3:67.

Avila, A., Stefanescu, C. (2020). El fantàstic viatge de la papallona dels cards (Vanessa cardui) entre l'Africa tropical i el nord d'Europa. *Monografies del Montseny*; Vol. 35, 49-57 (A).

Avila, A., Stefanescu, C. (2020). The fantastic journey of the Painted Lady butterfly (Vanessa cardui) between tropical Africa and northern Europe. *Monografies del Montseny*. Vol. 35, 49-57 (A).

Fernández-Martínez, M., Sardans, J., Peñuelas, J. 2020. El fòsfor: constructor d'ecosistemes. *L'Atzavara*, 30: 51-56 (2020). Doi: 10.2436/20.1502.atz30.051. ISSN 0212-8993 eISSN 2339-9791

Garrido-Sanz L., Senar M.A., Piñol J. (2020) Estimation of the relative abundance of species in artificial mixtures of insects using low-coverage shotgun metagenomics. *Metabarcoding and Metagenomics*, 4, e48281

Herrando, S., Brotons, L., Regos, A., Anton, M. (2020). Canvi climàtic i ocells a Catalunya*. Informe del Programa de Seguiment d'Ocells Comuns a Catalunya* (SOCC) 18 (2020): 6–7.

Keller, V., Bauer, H._G., Herrando, S. and Voříšek, P. (2020). Vogelneozoen – eine europäische Übersicht. DER FALKE *Journal für Vogelbeobachter* 67 (2020): 9–12.

Lanuza, O., Espelta, J.M., Penuelas, J., Peguero, G. (2020).On the importance of seedling plasticity to improve trait-based species selection for tropical dry forest restoration. *Bulletin of the Ecological Society of America* 101(2) DOI: 10.1002/bes2.1686

Ogaya, R., Escolà, A., Liu, D., Barbeta, A., Peñuelas, J. (2020). Efectes de l'estassada en un alzinar amb baixa disponibilitat d'aigua. A: Trullols, A., Buqueras, X., Sancho, M. (coord.). Actes de les V Jornades sobre el Bosc de Poblet i les Muntanyes de Prades. Paratge Natural d'Interès Nacional de Poblet. Departament de Territori i Sostenibilitat. *Generalitat de Catalunya*. p. 327-337.

Peñuelas, J. (2020). L'ecologia de la COVID-19, per Josep Peñuelas Reixach. *Noticies de la ICHN* 150, 3-4.

Poyatos R., Flo V., Granda V., Steppe K., Mencuccini M., Martinez-Vilalta J. (2020). Using the SAPFLUXNET database to understand transpiration regulation of trees and forests. *Acta Horticulturae*, 1300 ISHS 2020, 179-186.

Poyatos, R., Granda, V., Flo, V., Adams, M.A., Adorján, B., Aguadé, D., Aidar, M.P.M., Allen, S., Alvarado-Barrientos, M.S., Anderson-Teixeira, K.J., Aparecido, L.M., Arain, M.A., Aranda, I., Asbjornsen, H., Baxter, R., Beamesderfer, E., Berry, Z.C., Berveiller, D., Blakely, B., Boggs, J., Bohrer, G., Bolstad, P.V., Bonal, D., Bracho, R., Brito, P., Brodeur, J., Casanoves, F., Chave, J., Chen, H., Cisneros, C., Clark, K., Cremonese, E., David, J.S., David, T.S., Delpierre, N., Desai, A.R., Do, F.C., Dohnal, M., Domec, J.-C., Dzikiti, S., Edgar, C., Eichstaedt, R., El-Madany, T.S., Elbers,

J., Eller, C.B., Euskirchen, E.S., Ewers, B., Fonti, P., Forner, A., Forrester, D.I., Freitas, H.C., Galvagno, M., Garcia-Tejera, O., Ghimire, C.P., Gimeno, T.E., Grace, J., Granier, A., Griebel, A., Guangyu, Y., Gush, M.B., Hanson, P., Hasselquist, N.J., Heinrich, I., Hernandez-Santana, V., Herrmann, V., Hölttä, T., Holwerda, F., Hongzhong, D., Irvine, J., Isarangkool Na Ayutthaya, S., Jarvis, P.G., Jochheim, H., Joly, C.A., Kaplick, J., Kim, H.S., Klemedtsson, L., Kropp, H., Lagergren, F., Lane, P., Lang, P., Lapenas, A., Lechuga, V., Lee, M., Leuschner, C., Limousin, J.-M., Linares, J.C., Linderson, M.-L., Lindroth, A., Llorens, P., López-Bernal, Á., Loranty, M.M., Lüttschwager, D., Macinnis-Ng, C., Maréchaux, I., Martin, T.A., Matheny, A., McDowell, N., McMahon, S., Meir, P., Mészáros, I., Migliavacca, M., Mitchell, P., Mölder, M., Montagnani, L., Moore, G.W., Nakada, R., Niu, F., Nolan, R.H., Norby, R., Novick, K., Oberhuber, W., Obojes, N., Oishi, C.A., Oliveira, R.S., Oren, R., Ourcival, J.-M., Paljakka, T., Perez-Priego, O., Peri, P.L., Peters, R.L., Pfautsch, S., Pockman, W.T., Preisler, Y., Rascher, K., Robinson, G., Rocha, H., Rocheteau, A., Röll, A., Rosado, B., Rowland, L., Rubtsov, A.V., Sabaté, S., Salmon, Y., Salomón, R.L., Sánchez-Costa, E., Schäfer, K.V.R., Schuldt, B., Shashkin, A., Stahl, C., Stojanović, M., Suárez, J.C., Sun, G., Szatniewska, J., Tatarinov, F., Tesař, M., Thomas, F.M., Torngern, P., Urban, J., Valladares, F., van der Tol, C., van Meerveld, I., Varlagin, A., Voigt, H., Warren, J., Werner, C., Werner, W., Wieser, G., Wingate, L., Wullschleger, S., Yi, K., Zweifel, R., Steppe, K., Mencuccini, M., Martínez-Vilalta, J., 2020. Global transpiration data from sap flow measurements: the SAPFLUXNET database. *Earth System Science Data Discussions* 1–57. https://doi.org/10.5194/essd-2020-227

Terradas, J. (2020). Creu Casas i Sicart. Semblança biogràfica. *Institut d'Estudis Catalans Barcelona*, 36 pp.

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Souto M., Gonçalves V., Ritter C., Pla-Rabés S., Richter N., Sáez A., Bao R., de Boer EJ., Benavente-Marín M., Hernández A., Giralt S. & Raposeiro P.M. Non-pollen palynomorphs preserved in sedimentary archives of Lake Caldeirão, Azores: Fungal and algal remains as paleoecological indicators. AIL. Murcia, Spain. 10/2020 ((oral communication)).

Strada, S., Penuelas, J., Fernández Martinez, M., Filella, I., Yanez-Serrano, A.M., Pozzer, A., Bauwens, M., Stavrakou, T., Giorgi,. 2020. Probing the relationship between formaldehyde column concentrations and soil moisture using mixed models and attribution analysis. BG2.7 – Remote Sensing applications in the Biogeosciences. EGU General Assembly 2020. Vienna, Austria 3-8 May, 2020. (oral communication)

Thonicke, K., Billing, M., von Bloh, W., Sakschewski, B., Niinemets, U., Penuelas, J., Cornelissen, H.C., van Bodegom, P., Shaepman, M.E., Schneider, F.D., Walz, A. 2020. Simulating co-existence of functionally diverse trees in European natural forests with LPJmL-FIT. BG3.6 – Plant traits, adaptation, and biogeochemical cycles – from measurements to models. EGU General Assembly 2020. Vienna, Austria 3-8 May, 2020. (oral communication)

Vallicrosa, H., and Global Ecology Unit CREAF-CSIC. 2020. Global foliar stoichiometry. 6th IMBALANCE-P Annual Meeting. 9-13 March 2020. On-line meeting.. (oral communication)

Vallicrosa, H., Sardans, J., Zuccarini, P., Maspons, J., Peñuelas, J. 2020. Neural Networks to estimate world forest foliar elemental composition and stoichiometry. BG3.6 – Plant traits, adaptation, and biogeochemical cycles – from measurements to models. EGU General Assembly 2020. Vienna, Austria 3-8 May, 2020. (oral communication)

Wehn U., Fraisl D., Masó J., Cerrato-Pargman T. (2020) Practice what we preach: co-creating value with participants in communities of practice on citizen science. ECSA Conference. Trieste (Italy) – Virtual. 7 Sep (oral communication).

Wieneke, S., et al. 2020. Non-monotonic relationship of sun-induced fluorescence to photosynthesis. BG3.33 – Emerging constraints of photosynthesis (including chlorophyll fluorescence), respiration, and transpiration at ecosystem to global scales. EGU General Assembly 2020. Vienna, Austria 3-8 May, 2020. (oral communication)

Zabala A., Masó J., Pons X. (2020) Managing the knowledge created by the users trough Geospatial User Feedback system. The NEXTGEOSS use case. EGU2020-18976. DOI: 10.5194/egusphere-egu2020-18976.https://doi.org/10.5194/egusphere-egu2020-18976. EGU General Assembly 2020. Vienna (Austria). 3-8 May (oral communication).

Datasets and software

DATASETS

Poyatos R., Granda V., Flo V., Molowny-Horas R., Steppe K., Mencuccini, M. Martínez-Vilalta J. & SAPFLUXNET contributors (2020). SAPFLUXNET: A global database of sap flow measurements (Version 0.1.5) [Data set]. Zenodo. https://doi.org/10.5281/zenodo.2530797.

OUTREACH PUBLICATIONS

Lloret, P. (2020) Mortalitat de troncs i decaïment forestal a l'alzinar mediterrani. UABDivulga

Ferrandiz Rovira, M. (2020) Bons o mals dispersors d'aglans? Cada ratolí dispersa en funció de la seva "personalitat". UAB Divulga.

Martínez-Vilalta J. (2020), El contingut d'aigua ajuda a predir la mortalitat forestal. UABdivulga, https://webedit.uab.cat/web/detall-de-noticia/el-contingut-d-aigua-ajuda-a-predir-la-mortalitat-forestal-1345469002000.html?noticiaid=1345832602149

Alay, O., Taüll, M., Pla, E., Villar, MP., Canals, J., Meya, D. (2020), Experiències de silvopastura preventiva a l'Alt Empordà. A: Tusell, J. M., Beltrán, M., Monserrate, A. (eds). XXXVII Jornades Tècniques Silvícoles Emili Garolera. Pp: 70-83. ISBN: 978-84-09-26724-8

Broekman, A. , Sánchez, A. (2020) Lessons learned from the Glòria storm Blog CREAF http://blog.creaf.cat/noticies/llicons-apreses-del-temporal-gloria/

Broekman, A. , Sánchez, A. (2020) Handbook for co-designing measures to adapt to global change. Lessons learned from the co-design process for the Tordera and Serpis river basins.http://isacc.creaf.cat/wp-content/uploads/2020/10/GuiaMetodologica_CA.pdf

Terradas, J. (2020). Indispensables, de vegades letals. Els microbis, els virus i nosaltres. http://blog.creaf.cat/coneixement/indispensables-de-vegades-letals-els-microbis-nosaltres/; http://blog.creaf.cat/es/coneixement/indispensables-a-veces-letales-los-microbios-y-nosotros/

Terradas, J. (2020). La pandèmia: jugant amb foc. Notícies de la ICHN, 149, maig-juny, pp. 2-3.

Terradas, J. (2020). Entrevista sobre epidèmies i ecología per Lidia Hervàs. Sostenible, 404. Maig. https://www.sostenible.cat/entrevista/jaume-terradas-en-ocells-i-mamifers-nhi-ha-prop-de-15-milions-de-virus-i-pot-ben-ser-que

Terradas, J. (2020). Ecologia de les malalties infeccioses. http://blog.creaf.cat/coneixement/ecologia-de-les-malalties-infeccioses/; http://blog.creaf.cat/es/conocimiento/ecologia-de-las-enfermedades-infecciosas/

Terradas, J. (2020). Aliments, mites i ecología humana. http://blog.creaf.cat/coneixement/aliments-mites-ecologia-humana/; http://blog.creaf.cat/es/conocimiento/alimentos-mitos-y-ecologia-humana/

Terradas, J. (2020). La reverència per la Natura; unes reflexions sobre Spinoza, alguns místics i Margalef. http://blog.creaf.cat/coneixement/reverencia-natura-reflexions-spinoza-mistics-margalef/ http://blog.creaf.cat/es/coneixement/reverencia-naturaleza-reflexiones-spinoza-misticos-y-margalef/

Participation in outreach conferences or seminars of knowledge transfer

Launch of the European Breeding Bird Atlas 2
Barcelona, Prague, Sempach and other cities (Streaming https://www.youtube.com/watch?v=lme2TBqoIEw)
3 December 2020
3,535 visualizations
CREAF membres involved as co-organizer: Herrando, S., Brotons, L.

Presentació a Catalunya del Segon Atles dels ocells nidificants d'Europa
Barcelona, Solsona, Praga, Sempach, Madrid, Moscou, Estambul, Atenes, Namur (Streaming https://www.youtube.com/watch?v=ZzyKm3mkylk&t=154s)
4 December 2020
2.103 visualitzacions
CREAF membres involved as co-organizer: Herrando, S., Brotons, L.

PASTUCAR: Pasturem per conservar el carboni al prat (II). Una visió integradora.
Venue: Online
Date: September 15th
Number of attendees: N/A
CREAF membres involved as speakers: Garcia M.

Activity title: Llobregat&Co, 1st co-learning workshop for administration (CLEARING HOUSE H2020)
Venue: AMB
Date: November 27th
CREAF membres involved as co-organizer: Basnou, C.

CO4EO Workshop: Citizen Science in a remote sensing context. From examples to best practices
Venue: online
Date: May 6th
Number of attendees: 56
CREAF members involved as co-organizer: Masó J., Prat E.

Transnational seminar: Natural risks and climate change in mountain areas, MONTCLIMA SUDOE project
Venue: Soria (Spain) and on-line
Date: October 20th and 21st
Numbers of attendees: 55 (first day) and 53 (second day)
CREAF membres involved as co-organizer: Pascual Sanchez D; Pla Ferrer E.

Workshop "Development of standardised procedures for assessing pressures and threats in habitat types of community interest" Series Natura 2000 Biogeographic process for the Mediterranean region. Tragsatec, Ministerio para la Transición Ecológica y el Reto Demográfico, European Comission.
Venue: On-line
Date: November 12
CREAF membres involved as coordinator: Lloret ,F.

Participation as speaker in outreach conferences or knowledge transfer seminars

Avila A. (2020) Climate crisis and societal action - Environmental alliances. Dialogues / Tables of the Third Sector. Organizers: Climate Change Panel of the Catalan Society of Environmental Education. Barcelona, 21 January 2020.

Avila A. (2020) Co-creation workshop: Llobregat & Co. The urban forest as a Nature Based Solution. ClearingHouse Project. CREAF-AMB. Campus UAB, 15 December 2020

Avila A. (2020) Crisi climàtica i acció a les entitats. Aliances ambientals. Diàlegs/ Taules del tercer sector. Organitzadors: Taula canvi climàtic-Societat Catalana d'Educació Ambiental (SCEA). Barcelona 21 January 2020.

Avila A. (2020) Taller de co-creació: Llobregat&Co. El bosc urbà com a solució basada en la natura. Projecte ClearingHouse. CREAF-AMB. Campus UAB. 15 December 2020.

Bosch J. (2020) Mason bees to pollinate orchard crops. Workshop on agroecological infrastructures. IRTA Mas Badia, La Tallada. 9 December 2020.

Carabassa, V. (2020) El Cocoon: precedents, funcionament i resultats al camp. El "Cocoon": una metodologia innovadora per la restauració ecològica i l'agricultura de secà. On-line seminar. June 12th.

Carabassa, V. (2020) El Cocoon: precedents, funcionament i resultats al camp. El sistema "Cocoon": una metodologia innovadora per la reforestació i les plantacions de secà. On-line seminar. September 28th.

Carabassa, V. (2020) LIFE The Green Link: results about the trials. Facing climate change adaptation in the Mediterranean: ecosystem restoration and management. Insitut d'Estudis Catalans, February 17th.

Carabassa, V. (2020) Presentació del protocol de seguiment d'activitats extractives amb drons. Jornada de presentació del nou protocol de seguiment d'activitats extractives amb drons On-line conference. July 14th.

Doblas-Miranda E (2020) La evaluación de la propuesta y la visión del evaluador (Ponencia por invitación) Taller de coordinadores y participantes de propuestas Fase 2. Bloque 1 Work Programme (2018-2020) Convocatorias de Bioeconomía (SFS, BG, RUR, FNR) Topics 2020. CDTI. Online. June 3rd 2020.

Espelta J.M. (2020). Is the forest back? Opportunities and uncertainties in forest expansion in agricultural mosaics. "The dynamic balance of crops / forest and how to plan jointly a territory to make it resilient to the climate reality", Virtual workshop.June, 3, 2020

Ferrandiz-Rovira M., Serra, O (2020) La importància de la biodiversitat urbana. Cafès Científics Sabadell 2020. Online. 4 de novembre de 2020.

Gràcia M.; Broncano M.J.; Retana J. (2021) Gestión integrada de los recursos aro-silvo-pastorales en fincas de montaña mediterrània: el proyecto Polyfarming. VIII Congreso Internacional de Agroecología. Online. 1-3 de julio de 2020.

Gràcia M.; Broncano M.J.; Retana J. (2021) LIFE POLYFARMING project: Demonstration of a new agro-silvo-pastoral land use to improve farm profitability in mountain areas. IFOAM International Animal Husbandry Alliance (IAHA). Online. 21st-23rd September 2020. https://www.youtube.com/watch?v=xRwNDgxtolY

Lopes L, Doblas-Miranda E (2020) Estudo Comparativo UE-Brasil (Ponencia por invitación) I Webinário Internacional Brasil-União Europeia: Justiça e políticas de proteção socioambiental", organized by the Brazilian National Justice Council. Online and in Brasilia, Brasil. November 17th 2020.

Marcer A. (2020). Some preliminary results on NHC georeferencing quality at GBIF. Quality issues in georeferencing: From physical collections to digital data repositories for ecological research. MOBILISE EU Cost Action CA17106 Annual Meeting. The Biological And Chemical Research Centre, University Of Warsaw, Warsaw, Poland, February 10-13, 2020

Marcer A., Groom Q., Haston E. and Uribe F (2020). Survey on georeferencing of Natural History Collections. Quality issues in georeferencing: From physical collections to digital data repositories for ecological research. MOBILISE EU Cost Action CA17106 Annual Meeting. The Biological And Chemical Research Centre, University Of Warsaw, Warsaw, Poland, February 10-13

Masó, J. (2020) Remote sensing as a driving tool for citizen science phenology monitoring campaigns. Citizen Science in a remote sensing context: From examples to best practices. Online. May 6th

Penuelas, J. (2020). "El professor Peñuelas nos dará su visión sobre el futuro del cambio climático y la habitabilidad del planeta (en la era post-covid-19)", PEP-TALKS. May 17

Penuelas, J. (2020). Biodiversity and global change, University of Athens. January 29,

Penuelas, J. (2020). L'acceleració del canvi climàtic. Raons i impactes, ATENEA – Agrupació de cultura del casino Menestral. XXXVII Cicle de Conferències Aula Oberta: La crisi climática. L'estat de la qëstió: Cinc reflexions. January 2.

Pla Ferrer E. (2020) Experiència de silvopastura preventiva a l'Alt Empordà (Ponencia por invitacion). XXXVII Jornades Tècniques Selvícoles Emili Garolera. On –line. October 9th 2020.

Rodrigo A. The pollinators decline and how to stop it.. Research to learn. Institute of Education Sciences. Autonomous University of Barcelona. 20 November 2020 (on-line)

Terradas, J. (2020). Aspectes ecològics i ambientals de les epidèmies i el seu control. Inaugural session of the course of the Societat Catalana de Biologia, Barcelona. November 17th, virtual. https://youtu.be/-lGmL_WsQqA

Terradas, J. (2020). Epidèmies: salut humana i salut ambiental. Annual Meeting of the Patronat d'Estudis Osonencs, Vic. November 14th. Virtual.

MAKING AND IMPACT THROUGH:

Participation in meetings or activities organised by administrations or social agents to advice or provide guidance based on the results of your research or scientific experience

Citizen Science and the Copernicus in-situ component
Venue: Online
Date: May 11th 2020
CREAF membres involved: Masó J., Prat E.

Analysis of data from the European breeding bird atlases 1 and 2. Changes in farmland birds over 30 years of changes in farmlands.
Venue: Ispra, Italy. Joint Research Centre of the European Commission.
Date: October 2020
CREAF membres involved: Herrando, S.

Production of reports or policy briefs

Brotons, L., Pou, N., Herrando, S., Bota, G., Villero, D., Garrabou, J., Ordóñez, J. L., Anton, M., Gual, G., Recoder, L., Alcaraz, J., Pla, M., Sainz de la Maza, P., Pont, S. & Pino, J. (2020) Estat de la Natura a Catalunya 2020. Departament de Territori i Sostenibilitat. Generalitat de Catalunya. http://mediambient.gencat.cat/web/.content/home/ambits_dactuacio/patrimoni_natural/sistemes_dinformacio/observatori-patrimoni-natural-biodiversitat/informe/estatgeneraldelabiodiversitatacatalunya-2020.pdf

Masó, J., Wehn, U. A. (2020) Roadmap for Citizen Science in GEO - The essence of the Lisbon Declaration. WeObserve policy brief. https://zenodo.org/record/4001683#.YFy3qlVKjIX

Avila, A. (2020) Informe sobre el quimisme de la pluja recollida per la Xarxa de Prevenció i Vigilància de la Pluja Àcida- Any 2019. Encàrrec de la Direcció General de Qualitat Ambiental. Departament de Territori i Sostenibilitat. Generalitat de Catalunya.

Basnou, C., Avila, A. (2020) Avaluació de la contaminació per metalls pesants als horts urbans de Barcelona. Informe del projecte Horts4U per a Barcelona Regional.

Avila, A. (2020) Report on the chemistry of rain collected by the Network for Prevention and Monitoring of Acid Rain - Year 2019. Encàrrec de la Direcció General de Qualitat Ambiental. Departament de Territori i Sostenibilitat. Generalitat de Catalunya.

Basnou, C. and Avila, A. (2020) Assessment of heavy metal pollution in Barcelona's urban gardens. Horts4U project report for Barcelona Regional.

Marcer A., Haston E., Groom Q., Ariño A., Chapman A.D., Bakken T., Braun P., Dillen M., Ernst M., Escobar A., Fichtmüller D., Livermore L., Nicolson N., Paragamian K., Paul D., Petterson L. B., Phillips S., Plummer J., Rainer H., Rey I., Robertson T., Röpert D., Santos J., Uribe F., Waller J. and Wieczorek J.R. (2020) Quality issues in georeferencing: From physical collections to digital data repositories for ecological research. MOBILISE EU CA17106.

Herrando, S., Villero, D. and Brotons, L. (2020) Development of a biodiversity indicator from EBBA2 modelled maps to model habitat maintenance as ecosystem service. Report for the Joint Research Centre of the European Commission.

Rodrigo, A., Bosch J. (2020) Flower mixtures for roadside restoration programs. Cooperative agreement with the Department of Territory and Environment of the Catalan Government.

Participation in projects involving co-creation of knowledge together with diverse stakeholdes including administrations

Pla S. Taxonomic intercalibration exercise between Spain and Portugal on the use of diatoms to assess water quality. Project ALBUFEIRA (INTEREG). Funding: Centro de Estudios y Experimentación de Obras Públicas (CEDEX, Ministerio de Fomento) Spain.

Pla S. CLAIMS Climate response of Alpine lakes: resistance variability and Management consequences for Ecosystem Services. Funding: Federal Ministry Republic of Austria Education Science and Research. Austrian Academy of Sciences.

Ferrandiz-Rovira M. Vivim, respirem, replantegem Sabadell. Sabadell

Basnou C. Co-design session for the project Transforming the schoolyards (Barcelona City Council), as part of the Plan for Play in Barcelona's Public Spaces
Barcelona City Council (online)

Granda García V., Banqué i Casanovas M., de Cáceres Ainsa M., Martínez-Vilalta J., Vayreda Duran J. Laboratori Forestal Català (https://laboratoriforestal.creaf.uab.cat/).

Sardans J, Peñuelas J. Improving soil carbon, nitrogen and microbial diversity in Catalan vineyards. Catalonia.

Pascual D., Pla E. 1st meeting of the stakeholders Supra-Regional Working Group of LIFE MIDMACC project. Zaragoza (Spain). 11 stakeholders from 9 institutions, 6 stakeholders from the administration.

Pascual D., Pla E. 2nd meeting of the stakeholders Catalan Regional Committee of LIFE MIDMACC project. On-line. 17

stakeholders from 16 institutions, 4 stakeholders from the administration.

Pascual D., Pla E. 2nd meeting of the stakeholders Riojan Regional Committee of LIFE MIDMACC project. On-line. 11 stakeholders from 8 institutions, 4 stakeholders from the administration

Pascual D., Pla E. 2nd meeting of the stakeholders Aragonese Regional Committee of LIFE MIDMACC project. On-line. 13 stakeholders from 9 institutions, 6 stakeholders from the administration.

Research related information/knowledge that has been incorporated within plan, strategies or management activities of diverse administrations or policy actors. Specify how.

Basnou C. Knowledge from CREAF related to biodiversity and greening (renaturing) has been incorporated to the strategic city programme: Transformem els patis (Transforming the schoolyards), which aims to creating greener and co-educative schoolyards through participation in the Technical Commission for this project (led by Barcelona City Council, Consell Educatiu Municipal, and Institut Infància i Adolescència de Barcelona).

TRAINING ANNEXES

Subjects in masters and postgraduate courses (only subjects in others masters outside CREAF sphere)

Disturbance regimes and forest management in protected natural areas. Ecosystem Management, Master in protected natural areas, UCLM-UAM-Fundación González Bernáldez. Madrid Autonomous University 2020. Josep Maria Espelta.

Biodiversity and global change. University of Athens. January 29, 2020. Josep Peñuelas.

Courses or workshops or seminars within masters, summer schools, meetings, etc.

L'acceleració del canvi climàtic. Raons i impactes. ATENEA – Agrupació de cultura del casino Menestral. XXXVII Cicle de Conferències Aula Oberta: La crisi climática. L'estat de la qüestió: Cinc reflexions. January 24, 2020. Josep Peñuelas.

El futuro del cambio climático y la habitabilidad del planeta (en la era post-covid-19), PEP-TALKS. May 17, 2020. Josep Peñuelas

What about a scientific career? 1st Research School on Forest Ecology and Management. JRU – CTFC/AGROTECNIO. Solsona. Feb 2020. Jordi Catalan.

Escolabs. Activity with the Institut Jaume Almera, with students of Bachillerato. Can Balasc (Barcelona), March 11 2020. Anabel Sanchez, Angela Ribas, Diana Pascual Sanchez and Eduard Pla Ferrer.

Adaptació al canvi climàtic a la Mediterrània. Algunes experiències i casos d'estudi. Màster de Canvi Ambiental, Universitat de Girona. On-line. April 20th 2020. Eduard Pla Ferrer.

Global change impacts. Specialized training in FASTER H2020 project. On-line. November 2nd 2020. Diana Pascual Sanchez and Eduard Pla Ferrer.

Climate change in the Mediterranean. Specialized training in FASTER H2020 project. On-line. November 2nd 2020. Diana Pascual Sanchez and Eduard Pla Ferrer.

Forest management and climate change adaptation. Specialized training in FASTER H2020 project. On-line. November 3rd 2020. Diana Pascual Sanchez and Eduard Pla Ferrer.

Water management and climate change adaptation. Specialized training in FASTER H2020 project. On-line. November 3rd 2020. Diana Pascual Sanchez and Eduard Pla Ferrer

La importancia de los rodales maduros como referentes para la ecología y la biodiversidad. Gestión Forestal en la Red Natura 2000. Programa emplea verde. On-line. May 26th, June 25th. Jordi Vayreda

Doctoral theses

Cabon A. 2020 Predicting forest responses to climate. Integrating water and temperature constraints from the cell to the region. Co-director: Jordi Martínez-Vilalta, Miguel de Cáceres

Carabassa Closa V. 2020 Valorisation of organic waste in technosols and evaluation of degraded land restoration. Director: Josep Ma Alcañiz

Chin Pampillo J. 2020 Environmental benefits of using biochar as an amendment in pineapple cultivation in Costa Rica: soil physicochemical and biological effects and interaction with agrochemicals. Co-directors: Josep Ma Alcañiz, Xavier Domene, Cristina Chinchilla

Hernández-Castellano C. (2020) Effects of fragmentation and changes in community composition on plant-pollinator and host-parasitoid interaction networks. Autonomous University of Barcelona. Co-directors: J. Bosch, A. Rodrigo.

Ibáñez M. 2020 Vegetation drives greenhouse gas exchange, and carbon and nitrogen cycling in grassland ecosystems". Mª Teresa Sebastià and Dr. Àngela Ribas.

Lecina J. 2020 The key role of ecosystem services in forests: spatial relationships, conservation implications and risk to climate change hazards. Director: Javi Retana

Otsu K. 2020 Assessing spatio-temporal impacts of pine processionary moth defoliation on Mediterranean forest dynamics using UAV remote sensing. Co-directors: Lluís Brotons, Javier Retana

Perez Navarro MA. 2020 Plant species climatic niche and its relationship with population responses to extreme drought. Co-directors: Paco Lloret, Miguel Angel Esteve Selma

Prado López M. 2020 Biotic and abiotic drivers of litter decomposition in drylands: The role of UV and trophic interactions. Co-directors: Jordi Moyà Laraño, Francisco Pugnaire

Reverté S. (2020) Spatial variation in plant-pollinator relationships: consequences on pollination function. Autonomous University of Barcelona. Co-directors: J. Bosch, A. Rodrigo.

Roquer L. 2020 Pollinator communities and pollination services in apple orchards: a trait-based approach. Co-directors: Jordi Bosch Anselm Rodrigo

Speranza C. 2020 Paleoclimatic variability and paleoenvironmental changes in the semi-arid Chaco region of Argentina. Autonomous University of Barcelona. Co-directors: Bernat Claramunt, Julio José Kulemeyer, Liliana C. Lupo

Unzeta M. 2020 Behavior and its role on reproductive performance under a life-history perspective. Autonomous University of Barcelona. Director: Daniel Sol

Zufiaurre Martínez, A. (2020) Microbial assemblage response to nutrient fluctuations in high-mountain lakes. Universitat Autònoma de Barcelona. (6/3/2020). Co-directors: Jordi Catalan and Marisol Felip.

Final Master Project

Coello Sanz, F. (2020) The Role of Nutrient Availability in the Functional and Phylogenetic Diversity of Tree Communities in Tropical Rainforests. Universitat Autònoma de Barcelona. Director: J. Peñuelas

Cuadros J.D. (2020) Remote Sensing Derived Ecosystem Functional Diversity in the management and conservation in Paraguay. Universitat Autònoma de Barcelona. Co-directors-L. Pesquer i C. Domingo-Marimon.

Fatecha B. (2020) Disturbances and land use changes as major drivers of recent community-level dynamics of Catalan forests in a context of global Change. Universitat Autònoma de Barcelona. Codirectors Drs. J. Martínez-Vilalta, M. De Cáceres i R. García-Valdés.

Ferrín, M. (2020) Decay of similarity across diverse tropical rainforest communities: integrating spatial and nutrient distances with scales of analysis. Universitat Autònoma de Barcelona. Director: Josep Peñuelas

García S. (2020) Estudio de la efectividad del dispositivo cocoon en diferentes condiciones climáticas en la cuenca mediterránea. Máster en Restauración de Ecosistemas. Universidad de Alcalá de Henares. Director: V. Carabassa

Jaumejoan X. (2020) Pollens collected by two commercial orchard pollinators, Osmia cornuta and Bombus terrestris: effects of local and landscape factors. Supervisors: J. Bosch, A. Rodrigo.

López M. (2020). Estimación de la erosión en taludes utilizando SIG e imágenes de dron: Estudio de caso en restauración minera. Máster en Teledetección y Sistemas De Información Geográfica (SIG). CREAF-Universitat Autònoma de Barcelona. Co-directors: V. Carabassa, J. C. Padró.

Final Student Work

Borrell R. (2020) Efectes del canvi climàtic en la distribució dels grans mamífers a l'àrtic. Universitat Autònoma de Barcelona. Co-directors S.Marañon i A. Ribas.

Díaz R. (2020) Factors influencing global bleaching: an example in the great barrier reef. Universitat Autònoma de Barcelona. Director M. Riba.

Gaya-Gas, G (2020) BioPorts Dissemination through social networks of Massís del Port biodiversity. Autonomous University of Barcelona.Tutor: A Rodrigo

Guinovart I. (2020) Discovering the Francolí valley. Autonomous University of Barcelona. Director: A Rodrigo

Martínez-García, E. (2020) Yungas, a fragmented ecoregion. Socio-ecological importance and conservation of its southern Distribution. Autonomous University of Barcelona.Director: A Rodrigo

Pamies-Harder M (2020) Differences in impact of Thaumetopoea pityocampa in the Aiguestores and Llac de sant Maurici National Park. . Autonomous University of Barcelona.Director: A Rodrigo

Toro E. (2020) Host-associated speciation in parasitoids. Universitat Autònoma de Barcelona. Director M. Riba.

Vazquez D., Estudi de les diferents solucions al problema de la papallona del boix (Cydalima perspectalis), una espècie invasora a Catalunya. Universitat de Vic, 2020. Director: Sergi Pla-Rabés

AWARDS

Awards and distinctions received by members of CREAF

Highly Cited Researcher 2020 (Clarivate analytics), Martínez-Vilalta J., Peñuelas J., Mencuccini M., Sardans J.

ICREA Academia 2020, Martínez-Vilalta J.

AGU Fellow 2020 for his exceptional contributions in the Earth and space sciences. Peñuelas J.

ACTIVE PROJECTS IN 2020

PROJECT NAME	ACRONYM	PRINCIPAL INVESTIGATOR	BUDGET	ENTITY	PERIOD
Biogeografia funcional: resposta dels ecosistemes terrestres als canvis i gradients ambientals	2017-2019 SGR/1001 LLORET	Francisco Lloret	37.367,00 €	AGAUR	2017-2021
Unitat d'Ecologia Global - Grup de Recerca Consolidat	2017-2019 SGR/1005 PEÑUELAS	Josep Peñuelas	60.216,00 €	AGAUR	2017-2021
Biodiversitat i evolució en ecosistemes mediterranis	2017-2019 SGR/1006 MAYOL	Maria Mayol	20.000,00 €	AGAUR	2017-2021
Protecció de sòls	2017-2019 SGR/761 ALCAÑIZ	Josep M.Alcañiz	0,00 €	AGAUR	2017-2021
Dinàmica forestal i incendis	2017-2019 SGR/857 RETANA	Javier Retana	59.463,30 €	AGAUR	2017-2021
GECA Grup d'Ecologia dels Canvis Ambientals	2017-2019 SGR/910 CATALAN	Jordi Catalán	60.216,00 €	AGAUR	2017-2021
Architecture Implementation Pilot Phase 4 (AIP-4) WCS and WFS tutorials	AIP-4-TUTORIALS	Joan Masó	21.095,80 €	OPEN GEOSPATIAL CONSORTIUM	2020
Valorització dels recursos bovins i silvopastorals del massís transfronterer Pirineus Mediterrani	ALBERAPASTUR	Marc Gràcia	1.376.386,00 €	EU	2018-2020
El gradient pH-alcalinitat en l'espai i el temps, un marc ecològic per a la biodiversitat de les aigües continentals.	ALKALDIA	Jordi Catalán	202.070,00 €	Ministerio de Ciencia, Innovación y Universidades	2020-2023
The role of behavior in evolution: an empirical study in the context of rapid environmental change	Beca Postdoctorado Junior Leader FBLC "la Caixa" 2020 - Oriol Lapiedra	Oriol Lapiedra	303.900,00 €	Fundació Bancària La Caixa	2020-2023
Ecologia evolutiva del comportament	BEHAVIOUR	Oriol Lapiedra	7.000,00 €	National Science Foundation	2020
Behavioural, Ecological and Socio-economic Tools for Modelling Agricultural Policy	BESTMAP	Joan Masó	3.995.811,25 €	EU	2019-2023
Intel·ligència de dades de ciència ciutadana i massives per lluitar contra les malalties trameses per mosquits	BIG MOSQUITO BYTES	Frederic Bartumeus	135.080,00 €	Fundació Bancària La Caixa	2019-2022
Bioclimatic niche and plant community dynamics in response to climate change	BIOCLIM	Francisco Lloret	193.600,00 €	Ministerio Economía y Competitividad	2016-2020
Xarxa Boscos Dinamica Natural	XARXA BOSCOS	Jordi Vayreda	35.000,00 €	Generalitat de Catalunya	2020

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Serveis Ecosistèmics	SERVEIS ECOSISTÈMICS	Joan Pino	50.000,00 €	Generalitat de Catalunya	2020
Conectivitat dels ecosistemes forestals i riparis de l'espai SUDOE	CERES	Jordi Vayreda	1.272.214,00 €	EU	2018-2021
Copernicus Global Land Service – Framework Contract for the operation, evaluation and evolution of the Global Land component of the Copernicus Land Service.	C-GLOPS1	Aleixandre Verger	222.312,00 €	EU	2015-2019
Collaborative Learning in Research, Information-sharing and Governance on How Urban tree-based solutions support Sino-European urban futures'	CLEARING HOUSE	Corina Basnou	4.986.463,75 €	EU	2019-2023
Serveis climàtic pel nexus Aigua-Energia-Sòl-Alimentació	CLISWELN	Jordi Martínez-Vilalta	1.004.303,20 €	ERANET (Ministerio Economía y Competitividad)	2017-2020
Caracterización y conservación de espacios forestales de alto valor ecológico y de su conectividad ecológica	CONECTFOR	Jordi Vayreda	878.273,76 €	EU	2019-2022
CO-producing Nature-based solutions and restored Ecosystems: transdisciplinary neXus for Urban Sustainability	CONEXUS	Corina Basnou	4.999.940,00 €	EU	2020-2024
Research and innovation in the control and restoration process of mining activities	PEDRERES	Josep Maria Alcañiz	40.000,00 €	Generalitat de Catalunya	2020
Co-designed Citizen Observatories Services for the EOS-Cloud	COS4CLOUD	Joan Masó / Anna Ramon	5.999.055,75 €	EU	2019-2023
La protecció del patrimoni en zones de conflicte a través d'eines digitals: el paper de la societat civil	CULTURAPP	Bernat Claramunt	9.500,00 €	CSIC	2019-2021
Una evaluación basada en datos de las respuestas a la sequía de los árboles y del uso del agua de los bosques a nivel global	DATAFORUSE	Rafael Poyatos	142.780,00 €	Ministerio de Ciencia, Innovación y Universidades	2019-2022
PYMEDEAS (BBDD modelització)	PYMEDEAS	Jordi Solé	30.000,00 €	Generalitat de Catalunya	2020
Differential adaptation capacity of dryland grasses to directional changes in water availability	DIAGRASS	Josep Peñuelas (Marie Curie Fellowship granted to Mónica Ladrón de Guevara)	239.191,20 €	EU	2018-2021

PROJECT NAME	ACRONYM	PRINCIPAL INVESTIGATOR	BUDGET	ENTITY	PERIOD
Estudi, l'anàlisi i divulgació de resultats de treballs silvícoles i de la dinàmica forestal resultants dels programes de prevenció d'incendis, restauració i millora forestal de la Diputació de Barcelona	DINFORREST	Josep Maria Espelta	87.650,00 €	Oficina Tècnica de Prevenció Municipal d'Incendis Forestals - DIBA)	2018-2020
Comprensió dels mecanismes subjacents a les respostes dels arbres a l'estrès per sequera en funció de la mida de l'arbre	DISTRESS	Jordi M. Vilalta (Marie Curie Fellowship granted to Laura Fernández de Uña)	245.732,16 €	EU	2019-2022
Uso del agua y estrategias de resistencia a la sequía a distintas escalas: desde los mecanismos homeostáticos a la dinámica regional de la vegetación	DRESS	Jordi Martínez-Vilalta	193.600,00 €	Ministerio de Ciencia, Innovación y Universidades	2018-2021
Wildlife in the Andorran Pyrenees (II)	EARTHWATCH PIRINEU (II)	Bernat Claramunt	314.246,28 €	EarthWatch Institute	2016-2020
Recerca en ecosistemes i espècies amenaçades en el marc de la gestió, la transdisciplinaritat i la sostenibilitat	ECOSPAM	Sandra Saura	5.308,00 €	Parc Natural Cap de Creus	2020
Impactes dels canvis globals antropogènics a les reserves i fluxes de bioelements sobre els ecosistemes i els humans - ELEMENTALSHIFT	ELEMENTAL-SHIFT	Josep Peñuelas	332.750,00 €	Ministerio de Ciencia, Innovación y Universidades	2020-2022
Capacitació en Ciència i Tecnologia de l'Observació de la Terra al Space Research Centre de la Polish Academy of Science	EOTIST	Lluís Pesquer	896.875,00 €	EU	2020-2023
The European network for observing our changing planet	ERA-PLANET	Joan Masó	50.730.791,00 €	EU	2016-2021
European Alliance on Interdisciplinary Learning and Business Innovation for Urban Forests	ERASMUS UFOREST	Corina Basnou	969.314,00 €	EU	2021-2023
EuroGEOSS Showcases: Applications Powered by Europe	E-SHAPE	Joan Masó	15.876.336,75 €	EU	2019-2023
"Europa Biodiversity Observation Network: integrating data streams to support policy"	EUROPABON	Lluís Brotons	2.994.318,75 €	EU	2020-2023
Spread to natural environment of the most planted alien plants in the green areas in Barcelona	EXO BCN 2	Joan Pino	103.683,69 €	Ajuntament de Barcelona	2017-2020

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Prismàtic, plataforma de coneixement per la gestió del patrimoni natural i de la biodiversitat	PRISMÀTIC	Anna Ramon	30.000,00 €	Generalitat de Catalunya	2020
POL.LINITZACIÓ	POL.LINITZACIÓ	Anselm Rodrigo / Jordi Bosch	20.000,00 €	Generalitat de Catalunya	2020
Farmers' Adaptation and Sustainability in Tunisia through Excellence in Research	FASTER	Javier Retana / Anabel Sànchez	998.250,00 €	EU	2018-2021
	FORGENIUS	Maurizio Mencuccini		EU	
Escenaris de Gestió Forestal per l'Adaptació i la Mitigació	FORMASAM	Santi Sabaté	3.600,00 €	EFI	2018-2020
"Farmer clusters for Realising Agrobiodiversity Management across Ecosystems"	FRAMEWORK	Joan Masó	7.997.600,76 €	EU	2020-2025
Efectes comportamentals i poblacionals d'aplicacions autoritzades de fungicides sobre pol·linitzadors de fruiters: estudis de laboratori, semi-camp i camp	FUNKY	Anselm Rodrigo / Jordi Bosch	199.650,00 €	Ministerio de Ciencia, Innovación y Universidades	2019-2021
Una ullada al futur àrtic: equipar un experiment natural únic per a la recerca d'ecosistemes de pròxima generació	FUTURE ARTIC	Josep Peñuelas	3.965.109,84 €	EU	2019-2023
Avaluació de la contaminació als horts urbans de Barcelona	HORTS4U	Corina Basnou	14.533,00 €	Barcelona Regional	2019-2020
Iniciativa de Canvi Climàtic de l'ESA. Variables Climàtiques Essencials: Cobertes del Sol d'elevada resolució espacial	HRLandCoverCCI	Lluís Pesquer	199.953,00 €	University of Trento	2018-2021
Effects of phosphorus limitations on Life, Society and the Earth System	IMBALANCE-P	Josep Peñuelas	13.600.579,00 €	EU	2014-2020
Modelització integrada i planificació de la biodiversitat i els serveis ecosistèmics dels boscos en escenaris de canvi global	INMODES	Javier Retana	145.200,00 €	Ministerio de Ciencia, Innovación y Universidades	2018-2020
PROmoting the Governance of Regional Ecosystem ServiceS	INTERREG PROGRESS	Enrique Doblas	1.640.000,00 €	EU	2019-2023
Creació i desplegament del Laboratori Metropolità d'Ecologia i Territori de Barcelona (LET-BCN)	LET-BCN	Joan Pino	72.000,00 €	IERMB	2018-2021
	LIFE BIOREFORMED	Jordi Vayreda		EU	

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Estratègies de Gestió Forestal Innovadores per millorar la Biodiversitat dels Boscos Mediterranis. Incentius i Eines de Gestió	LIFE BIORGEST	Jordi Vayreda	1.576.374,00 €	EU	2018-2023
Restore desertified areas with an innovative tree growing method across the Mediterranean border to increase resilience	LIFE GREEN LINK	Josep Maria Alcañiz	2.891.702,00 €	EU	2016-2020
Mid-mountain adaptation to climate change	LIFE MIDMACC	Javier Retana	2.595.725,00 €	EU	2019-2024
Reforestation & Climate Change Mitigation: tests, evaluation and transfer of innovative methods based on fog collection	LIFE NIEBLAS	Vicenç Carabassa	2.185.777,00 €	EU	2020-2024
Demonstration of a new agro-silvo-pastoral land use to improve farm profitability in mountain areas	LIFE POLYFARMING	Marc Gràcia	1.135.787,00 €	EU	2016-2021
Networks of knowledge and training for the effective management of Mediterranean forest habitats of Nature 2000	LIFE REDCAPACITA	Jordi Vayreda	590.154,00 €	EU	2016-2020
Recerca del patrimoni natural dels hàbitats de ribera del montseny, en el marc del life tritó montseny i del seguiment, de la biodiversitat del parc natural i reserva de la biosfera del Montseny	LIFE-TRITO	Anna Avila / Lluís Brotons / Jordi Vayreda / Anabel Sánchez / Annelies Broekman	42.000,00 €	Diputació de Barcelona	2018-2020
Low-carbon society: an enhanced modelling tool for the transition to sustainability	LOCOMOTION	Santi Sabaté / Jordi Solé	6.315.865,00 €	EU	2019-2023
OBSERVATORI	OBSERVATORI	Lluís Brotons / Anna Ramon	42.000,00 €	Generalitat de Catalunya	2020
Monitoratge i modelització integrats en un sistema d'alerta de la vulnerabilitat climàtica en boscos de muntanya	MODOSIN	Entic Batllori	48.773,80 €	Ministerio para la transición ecológica (Organismo Autónomo Parques Nacionales)	2019-2022
Montclima: clima y riesgos naturales en las montañas del sudoe	MONTCLIMA	Javier Retana	1.051.358,47 €	EU	2019-2021
Strengthening Barcelona's Defenses Against Disease-Vector Mosquitoes	MOSQUITO ALERT BCN	Frederic Bartumeus	149.978,00 €	Institut de Cultura de Barcelona	2019-2021

PROJECT NAME	ACRONYM	PRINCIPAL INVESTIGATOR	BUDGET	ENTITY	PERIOD
MOnitoring VEgetation status and functioning at high spatio-temporal resolution from Sentinel-2	MOVES	Aleixandre Verger (Marie Curie Fellowship granted to Gaofei Yin)	172.932,48 €	EU	2019-2021
Modelització de la resposta dels arbres a un augment de l'aridesa emprant trets funcionals	M-TRAIT	Josep Peñuelas (Marie Curie Fellowship granted to Aude Valade)	158.121,60 €	EU	2018-2020
Accions per a la conservació d'aus nocturnes, amfibis i orquídies a l'espai natural de Cànoves-Montseny	MUSSORGRA	Sandra Saura	1.500,00 €	SEO/BirdLife - Sociedad Española de Ornitología	2018-2019
Els nous boscos ibèrics: paper ecològic i vulnerabilitat potencial al canvi climàtic	NEWFORLAND	Joan Pino / Josep M.Espelta	160.930,00 €	Ministerio de Ciencia, Innovación y Universidades	2019-2021
Remote sensing oriented nature based solutions towards a NEW LIFE FOR DRYLANDS	NEWLIFE4DRYLANDS	Joan Masó / Vicenç Carabassa	490.073,00 €	EU	2021-2023
Monitoring network for observing the status of Catalonian forest	DEBOSCAT	Jordi Martínez-Vilalta / Jordi Vayreda	35.000,00 €	Generalitat de Catalunya	2020
MIRAMON	MIRAMON	Xavier Pons	42.000,00 €	Generalitat de Catalunya	2020
Paleolimnologia: tècniques i aplicacions	PALEO	Jordi Catalán	73.310,88 €	CEDEX / Instituto Pirenaico de Ecología / Diversos	2017-2020
La aceleración de los ciclos biogeoquímicos en la alta montaña durante el Antropoceno.	BIOGEOMONT	Jordi Catalán	60.753,35 €	Organismo Autónomo de Parques Nacionales	2020-2023
CSEOL Citizen Science Earth Observation Lab	PHENOTANDEM	Joan Masó	68.100,00 €	STICHTING IHE DELFT (UNESCO-IHE)	2019-2020
'According to nature' - solutions to reduce risk in mountain landscapes	PHUSICOS	Pilar Andrés	9.472.200,00 €	EU	2018-2022
Desenmascarant les invasions biològiques: conseqüències de la proliferació de serps invasores per una sargantana endàmica al Mediterrani	PODARCIS	Oriol Lapiedra	24.800,00 €	National Geographic Foundation	2020-2021
Gestió i avaluació de la composició química i l'acidesa de la precipitació de Catalunya	CARACTERITZACIÓ PLUGES	Anna Àvila	30.000,00 €	Generalitat de Catalunya	2020

PROJECT NAME	ACRONYM	PRINCIPAL INVESTIGATOR	BUDGET	ENTITY	PERIOD
Primary. Vulneracions de drets i desforestació del bosc tropical primari (Catalunya)	PRIMARY	Anna Ramon	20.000,00 €	Ajuntament de Barcelona i Agència Catalana de Cooperació al Desenvolupament	2020-2021
EXOCAT	EXOCAT	Joan Pino	50.000,00 €	Generalitat de Catalunya	2020
El sistema "Cocoon": ecotecnologia al servei de la restauració ecològica i l'agricultura a la conca mediterrània.	RESTOEMYS	Josep M.Alcañiz	29.930,00 €	Generalitat de Catalunya	2019-2020
Uso de espacios de gobernanza para la adaptación en tramos sensibles de ríos Mediterráneos.	REDAPTA	Javier Retana	56.640,00 €	Fundación Biodiversidad	2019-2020
Drought regime shifts and global warming: Impacts, mechanisms, forecasts and mitigation strategies	REGIME-SHIFTS	Jofre Carnicer	79.860,00 €	Ministerio Economía y Competitividad	2016-2020
CONNECTIVITAT DELTA	CONNECTIVITAT DELTA	Joan Pino	5.000,00 €	Generalitat de Catalunya	2020
CANVIS AMBIENTALS	FACTORS DE CANVI	X.Pons / J.Pino / Ll.Brotons	40.000,00 €	Generalitat de Catalunya	2020
SISEBIO	SISEBIO	Javier Retana	90.000,00 €	Generalitat de Catalunya	2020
Variación de historias vitales y perdia de diversidad biológica en los hábitats alterados por actividades humanas	SURVIVE_CHANGES	Daniel Sol	166.980,00 €	Ministerio de Ciencia, Innovación y Universidades	2018-2020
Tipping pointsen bosques Mediterráneos ante el cambio climático	TIPMED	Entic Batllori	78.529,00 €	Ministerio de Ciencia, Innovación y Universidades	2018-2020
Keys to understanding the transfer of atmospheric fluctuations to the dynamics of lake plankton	TRANSFER	Jordi Catalán	166.980,00 €	Ministerio Economía y Competitividad	2016-2020
Water scenarios For Copernicus Exploitation	WATERFORCE	Lluís Pesquer	2.999.575,00 €	EU	2021-2023
An Ecosystem of Citizen Observatories for Environmental Monitoring	WEOBSERVE	Joan Masó	1.069.507,50 €	EU	2017-2020
Gestió de poblacions d'Osmia cornuta per a la pol·linització de fruiters	WILD	Anselm Rodrigo / Jordi Bosch	139.730,10 €	WILDBIENE	2017-2020
Copernicus Assisted Lake Water Quality Emergency Monitoring Service	WQEMS	Joan Masó	1.499.506,25 €	EU	2021-2023
Canvi global i boscos - OCCC (Projecte Forestfuture)	OCCC	Jordi Vayreda	80.000,00 €	Generalitat de Catalunya	2020

CREAF

Campus UAB. Edifici C
08193 Bellaterra
(Barcelona)
Tel. + 34 93 581 13 12
Fax + 34 93 581 41 51
www.creaf.cat

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