



ChEESE

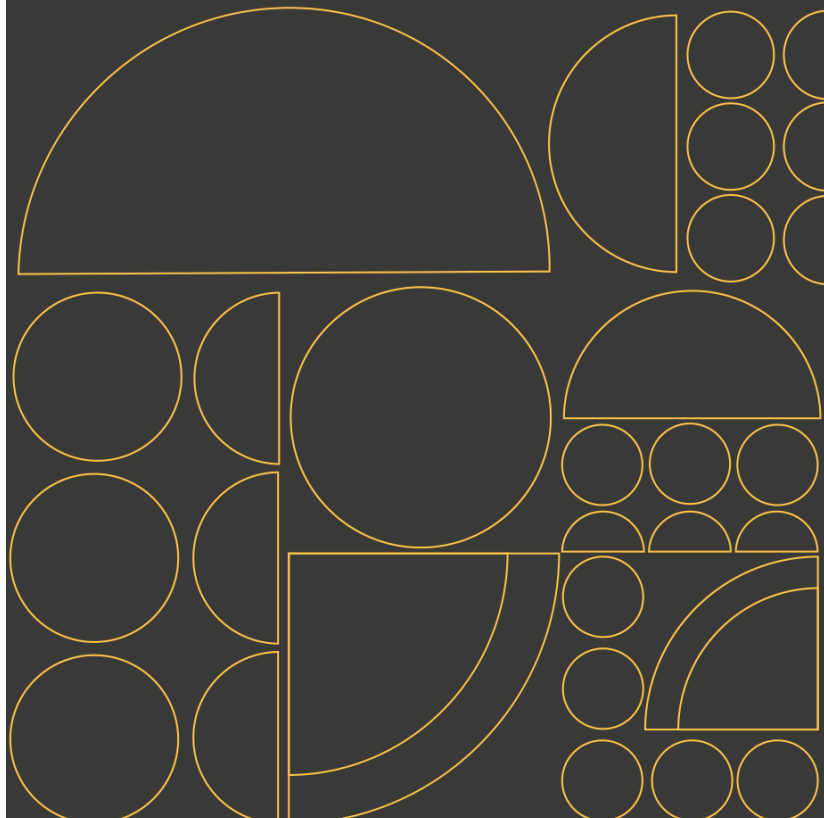
Consejo Superior de Investigaciones
Científicas

Project kick-off meeting Barcelona,
19-20 January 2023

Sílvia Zafrilla
Geosciences Barcelona (GEO3BCN-CSIC)



Project funded by EuroHPC under the grant agreement No 101093038.



01
CSIC

Spanish National Research
Council



A decorative vertical bar on the left side of the slide, featuring a dark grey background with yellow geometric patterns including circles, semi-circles, and arcs.

01

CSIC is a State Agency for **scientific research and technological development**, with a special legal status, its own assets and treasury, functional and managerial autonomy, full legal capacity and unlimited duration.

02

CSIC is the **largest public research institution in Spain**. Affiliated to the Ministry of Science and Innovation through the General Secretary for Research.

03

It is the main agent responsible for implementing the **Spanish System for Science, Technology and Innovation**.

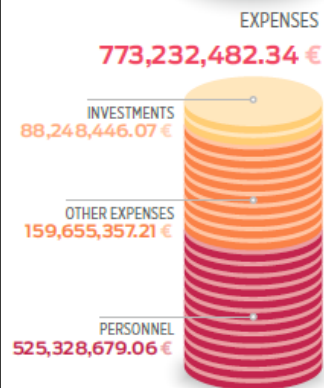
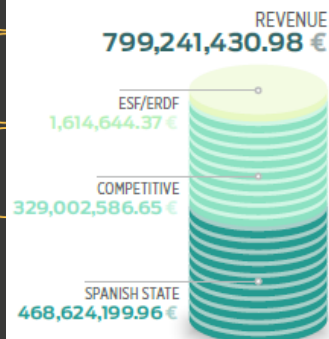
A small circular logo in the bottom right corner, divided into yellow and red segments.

2021. CSIC in numbers

HR DATA



ECONOMIC DATA



RESEARCH AND RESEARCH-SUPPORT STRUCTURES



EXCELENCIA SEVERO OCHOA
11 CENTRES



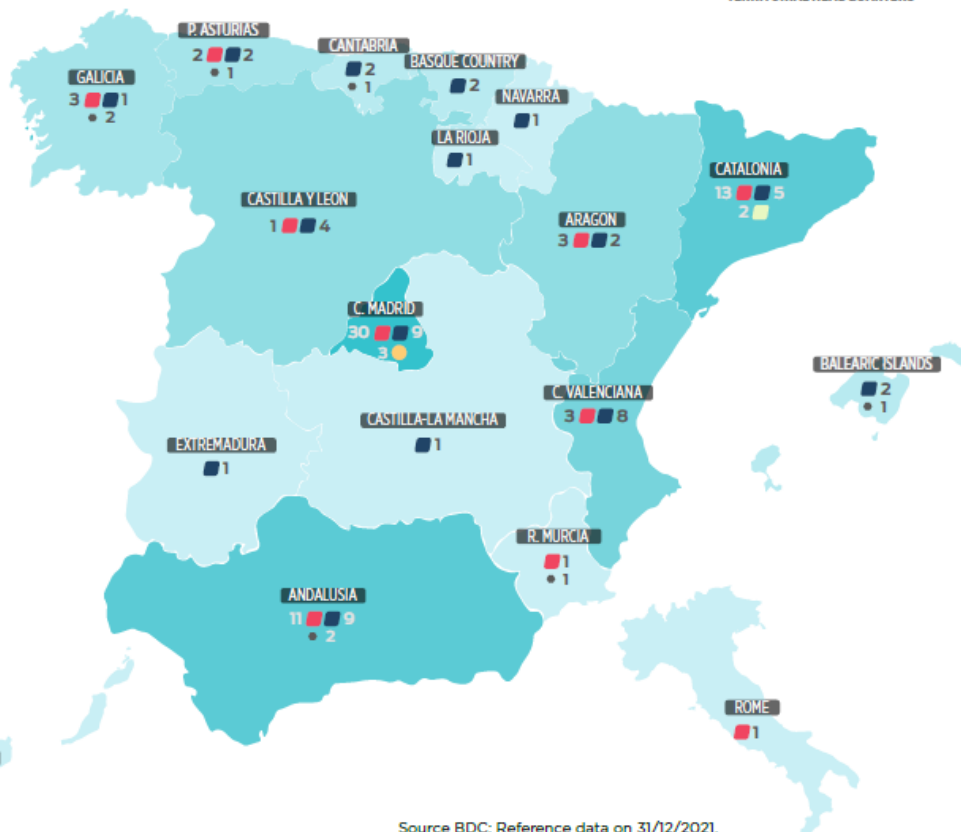
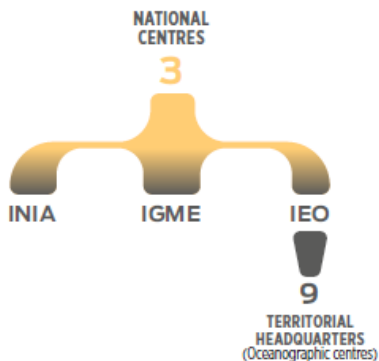
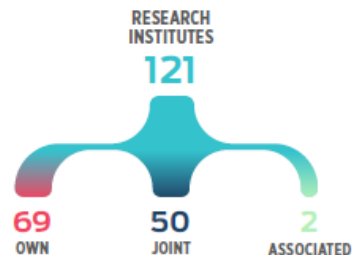
EXCELENCIA MARIA DE MAEZTU
5 UNITS

- **National centres.** These are research centres and technical services providing reference and support for certain government policies and, in this capacity, exercise the functions and "service obligations" established by sectoral regulations and by the CSIC's Governing Board.

They are organised internally into research groups, departments, territorial headquarters and other units that may be approved, and may comprise thematically related research institutes and specialised technical units.

CSIC RESEARCH INSTITUTES AND NATIONAL CENTRES

- OWN INSTITUTES
- JOINT INSTITUTES
- ASSOCIATED INSTITUTES
- NATIONAL CENTRES
- TERRITORIAL HEADQUARTERS



2021. CSIC in numbers

PROJECTS AND ACTIONS IN FORCE*

NATIONALLY FUNDED PROJECTS

4,226

NATIONAL PROGRAMME PROJECTS

FUNDED WITH
815,988,202 €

INTERNATIONALLY FUNDED PROJECTS

EUROPEAN

586

PROJECTS UNDER THE FRAMEWORK PROGRAMMES

FUNDED WITH
298,531,733.04 €

164

NON-FRAMEWORK PROGRAMME PROJECTS

FUNDED WITH
38,979,891.87 €

NON-EUROPEAN

103

OTHER INTERNATIONAL PROJECTS

FUNDED WITH
16,784,517.47 €

* Including those started and finished in 2021.

TRAINING

242

JAE INTRO

330

Bs THESES

162

JAE INTRO ICU

497

Ms THESES

38

JAE INTRO SOMdM

715

PhD THESES

FP INDIVIDUAL ERC PROJECTS IN FORCE



67

PROJECTS

AMOUNTING TO

106,048,411 €

13

ADVANCED GRANT

25,511,812 €

25

STARTING GRANT

33,752,777 €

25

CONSOLIDATOR GRANT

46,313,822 €

4

PROOF OF CONCEPT

470,000 €

KNOWLEDGE TRANSFER



193

PROTECTED ASSETS

137

PRIORITY PATENTS

115

PCT EXTENSIONS



1,857

NEW CONTRACTS AND AGREEMENTS SIGNED



81

LICENSED ASSETS



7

TECHNOLOGY-BASED COMPANIES (TBCs) CREATED



€ 34.6 M

LICENSED ASSETS

€ 3.18 M

ROYALTIES

SCIENTIFIC PRODUCTION

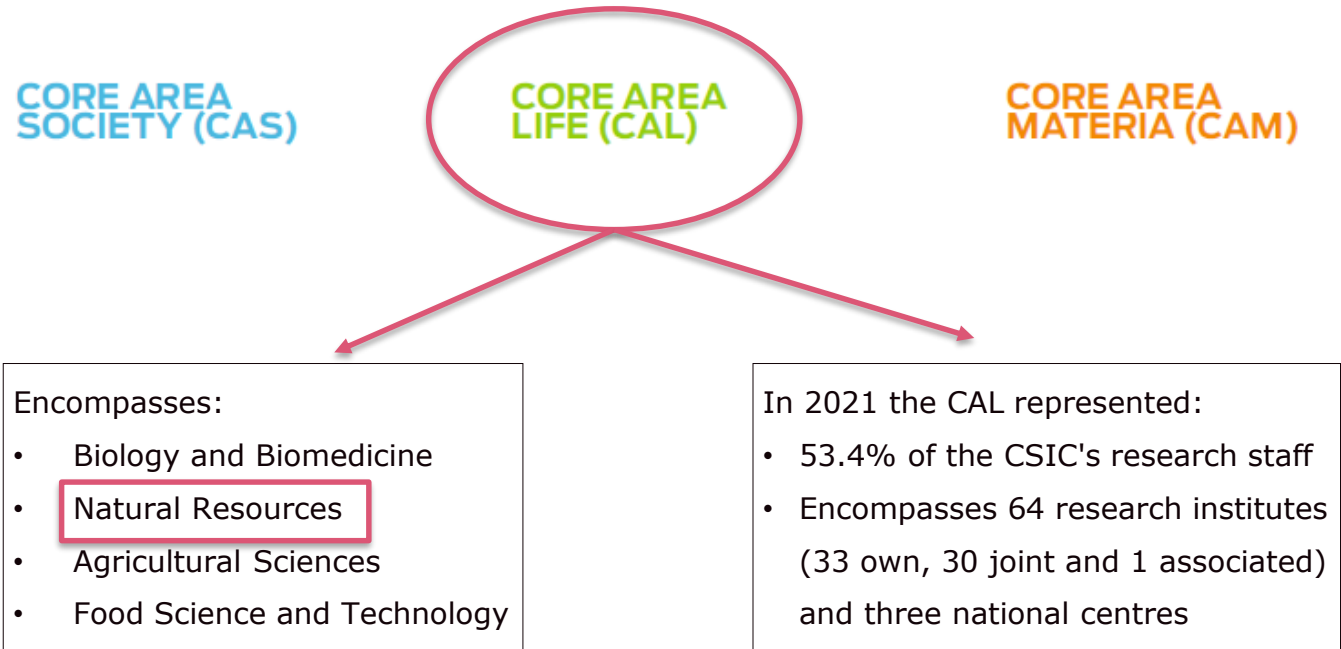
911
BOOK CHAPTERS

13,786
INDEXED ARTICLES

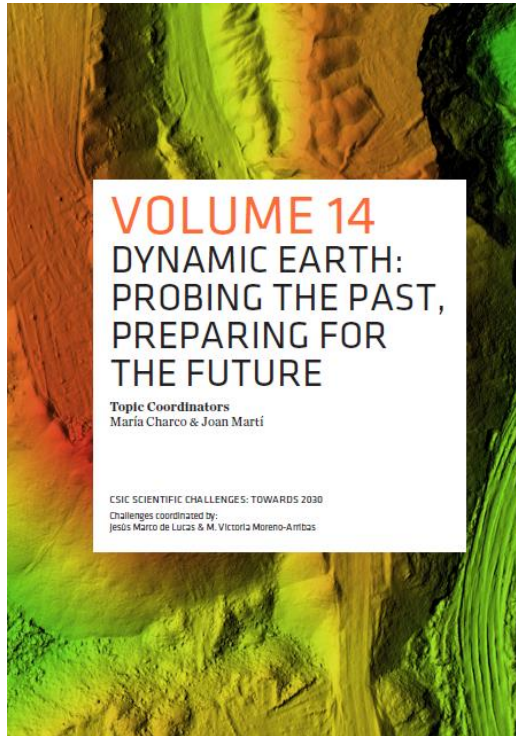
646
NON-INDEXED ARTICLES

213
BOOKS

3 Core Scientific-Technical Areas



CSIC SCIENTIFIC CHALLENGES: TOWARDS 2030



The document identifies Critical research challenges within the Earth Sciences:

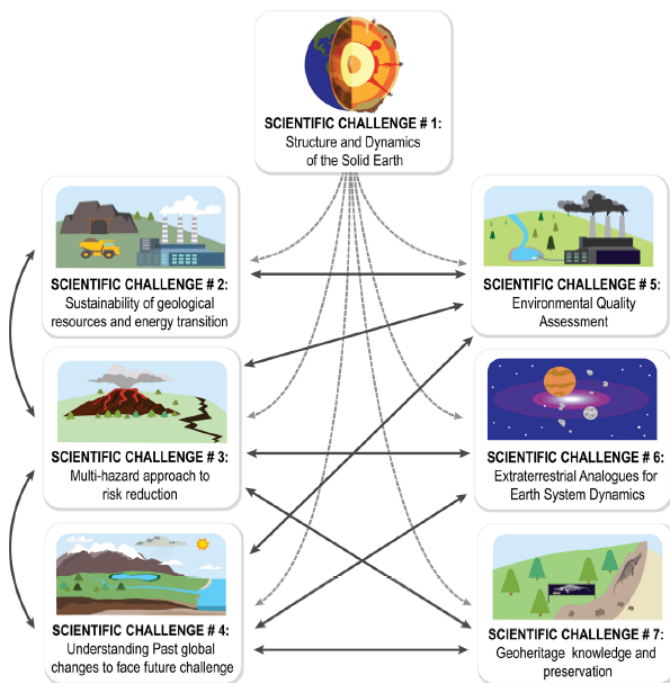
- STRUCTURE AND DYNAMICS OF THE SOLID EARTH
- SUSTAINABILITY OF GEOLOGICAL RESOURCES AND ENERGY TRANSITION
- MULTI-HAZARD APPROACH TO RISK REDUCTION
- UNDERSTANDING PAST GLOBAL CHANGES TO FACE FUTURE CHALLENGES
- ENVIRONMENTAL QUALITY ASSESSMENT
- EXTRATERRESTRIAL ANALOGUES FOR EARTH SYSTEM DYNAMICS
- GEOHERITAGE KNOWLEDGE AND PRESERVATION



CSIC SCIENTIFIC CHALLENGES: TOWARDS 2030

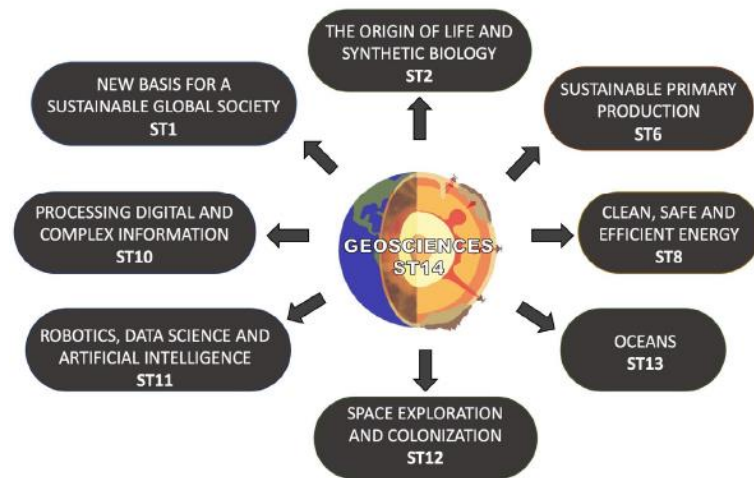
01

Interrelation between challenges included in Strategic Theme #14



02

Cross-links of Geosciences Theme with the other Strategic Themes



02

Geosciences Barcelona

GEO3BCN-CSIC



GEO3BCN

Geosciences Barcelona - CSIC





01

Geosciences Barcelona (GEO3BCN-CSIC) is an innovative new organisation set up in order to provide the best possible response to the requirements of our society with regard to Geosciences.

02

This international research center brings together **high profile research specialists** from different disciplines into a singular multidisciplinary and interdisciplinary research team.

03

We aim at **promoting geosciences** at a national and international level, as well as integrating Geosciences in society

04

GEO3BCN proposes a **holistic approach, from micro-scale to planetary scale**, to characterise planet Earth, encompassing three fundamental research challenges



Research focused on 3 major scientific challenges



Global Geodynamics



Georesources



Georisks and Global
Change



GEO3BCN in numbers

Total staff: 85



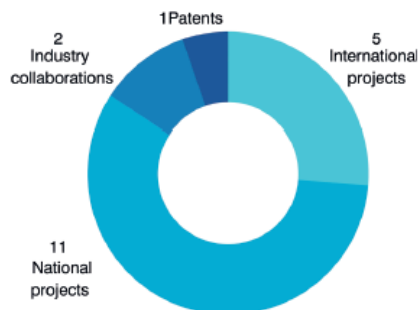
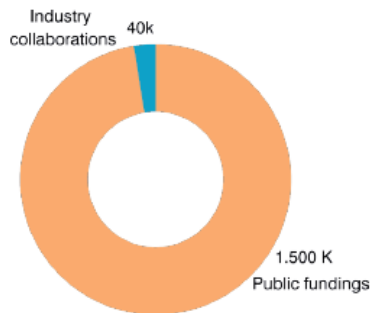
Publications since
2000



Publications
2021



Sum of citations
2021



Our units

GEO3BCN-CSIC has six general services that provide technical and administrative support on a wide variety of topics such as human resources, project management, communications, maintenance and computing. These are the six units of Geosciences Barcelona during 2021.



Administrative
support



Maintenance



Computing and
Communications
Service



Communications
Unit



Library



Front desk

Permanent personnel:

- Researchers: 25
- Administration: 8
- IT: 1
- Technical staff: 9
- Maintenance: 2

45

Long term personnel:

- Pre and post-doc researchers: 21
- Communication: 2

Total personnel: 74

PROYECTOS EUROPEOS E INTERNACIONALES

#	TÍTULO	ACRÓNIMO	IP	PROGRAMA	FINANCIACIÓN CONCEDIDA	INICIO	FIN
1	A Digital Twin for GEOphysical extremes	DT-GEO	Ramon Carbonell y Arnau Folch (Coordinadores)	Horizon Europe- INFRA	1,905,000.00	01/09/2022	31/08/2025
2	Agile Exploration and Geo-modelling for European Critical Raw Materials	AGEMERA	Ramon Carbonell	Horizon Europe-RIA	264,829.49	01/08/2022	31/07/2025
3	Vectors to Accessible Critical Raw Materials Resources in Sedimentary Basins	VECTOR	Ramon Carbonell	Horizon Europe-RIA	410,736.85	01/06/2022	31/05/2025
4	Exploration Information System	EIS	Ramon Carbonell	Horizon Europe-RIA	264,829.48	01/05/2022	30/04/2025
5	Developing enhanced weathering methods in mine tailings for CO2 sequestration	DETAILS	José Luis Fernández Turiel	H2020-MSCA	172,932.48	01/01/2022	31/12/2023
6	European Plate Observing System Sustainability Phase	EPOS SP	Ramon Carbonell	H2020-INFRA	30,758.00	01/02/2020	31/01/2023
7	Master in Entrepreneurship, Innovation and Technology, Integration in Mining	MEITIM	Maria José Jurado	EIT- Raw materials	28,538.00	01/01/2020	31/12/2022
8	Research infrastructures services advancing frontier knowledge	GeoINQUIRE	Adelina Geyer	HORIZON-INFRA	153,974.84	01/10/2022	30/09/2026
9	Brines of RIS countries as a source of CRM and energy supply	BrineRIS	Maria José Jurado	EIT- Raw materials-KIC	230,382.00	01/01/2022	31/12/2024
10	Center of Excellence for Exascale in Solid Earth - Second Phase	ChEESE-2P	Arnau Folch	HORIZON-EUROHPC	471,875.00	01/01/2023	31/12/2026
TOTAL					3,933,856.14		

Our laboratories

In terms of technical facilities to carry out the research, GEO3BCN has solid state-of-the-art infrastructures that are part of the CSIC's catalogue of services. During 2021, 11 laboratories were part of Geosciences Barcelona infrastructure.



**labGEOTOP Service
Geochemistry
Laboratory**



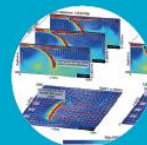
**Laboratory of
Geochronology
(Th-230/U-234)**



**Laboratory of
Hyperspectral
Imaging**



**Laboratory of
Optic and Electron
Microscopy and
Image Analysis
(MICROLab)**



**Laboratory of
Geodynamic
Modelling**



**Seismic Laboratory
(LabSis)**



**Laboratory of Raman
Spectroscopy and
Photoluminescence**



**Paleomagnetic
Laboratory
(CCiTUB-CSIC)**



**X-Ray Diffraction
Service**



**The SIMGEO Facility
(UB-CSIC)**



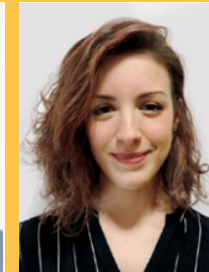
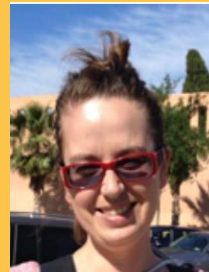
**Laboratory of
Palaeoecology
(PALAB)**



03

Geosciences Barcelona

Our role in the project





01

Coordination and Project management

02

Communication, dissemination, engagement and publicity

03

Research performer, provision of research and technology infrastructure

04

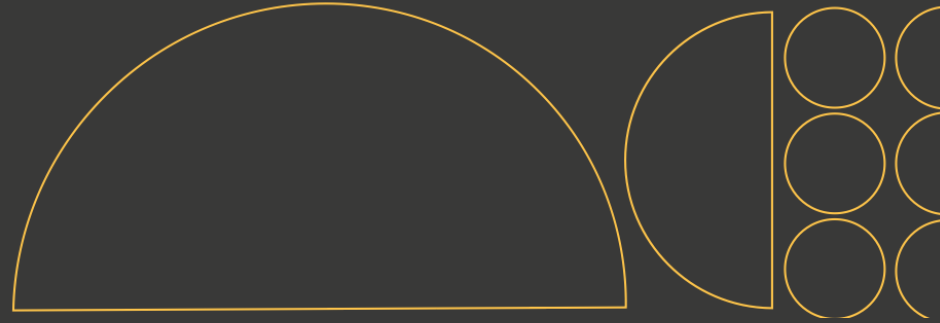
IPR management including technology transfer

05

Education and training



Thank you!



@cheese-coe



<http://cheese2.eu>



@cheese-coe



@cheese_coe@techhub.social

