

## HUMAN RESOURCES

# An HR policy based on the principles of professional competency, fairness, equality and career support

Despite the industrial action taken during the year concerning the employees' salary demands, which were duly passed on by the management to the supervisory ministries, the year 2023 saw an improvement in certain employee support schemes, as well as a review of the mapping of scientific and technical jobs. An independent assessment also confirmed the effectiveness of BRGM's Diversity-Inclusion policy.

"Mature" was the word chosen by Mixity (a consultancy specialising in diversity and inclusion) to describe BRGM's policy in this area, which received an overall score of 74/100. "This study enabled us to assess our policy objectively and situate ourselves in relation to other companies, while identifying areas for improvement," explains Marie Belossat. Several aspects were analysed, highlighting the company's performance in terms of disability inclusion (85/100), gender equality (80/100) and generational diversity (84/100). *"These positive scores are a result of a policy that has been in place for almost ten years. This policy is based on the principles of inclusion through the recognition of skills and the equal and fair treatment of all employees, based on formal commitments set out in company-specific agreements and actions aimed at reducing pay differences between employees, while also taking into consideration any difficulties employees may have."* A particular emphasis is also placed on

**MARIE BELOSSAT**  
Human Resources  
Director

**ANNE GAUTHIER**  
Deputy Human  
Resources Director

awareness-raising campaigns, notably covering all forms of disability, including less visible ones. In addition, a new agreement on Job and Career Management is currently being negotiated with staff representatives.

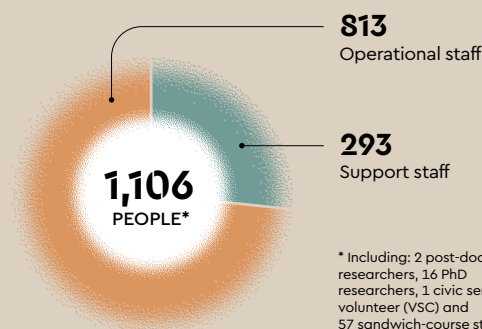
However, two other areas of BRGM's Diversity & Inclusion policy need to be reinforced, starting with the situation of LGBTQIA+ people (55/100).

*"We aim to prevent all forms of discrimination by raising awareness about sexual orientation and gender identity, notably through a major annual quiz," says Marie Belossat. A guide of best practices for supporting gender transition at work was also been produced and distributed in 2023. Equally, the multicultural aspect (56/100) needs to be improved "by reinforcing BRGM's attractiveness outside France and developing a policy to encourage the recruitment of foreign PhD students".*

## Internal mobility encouraged

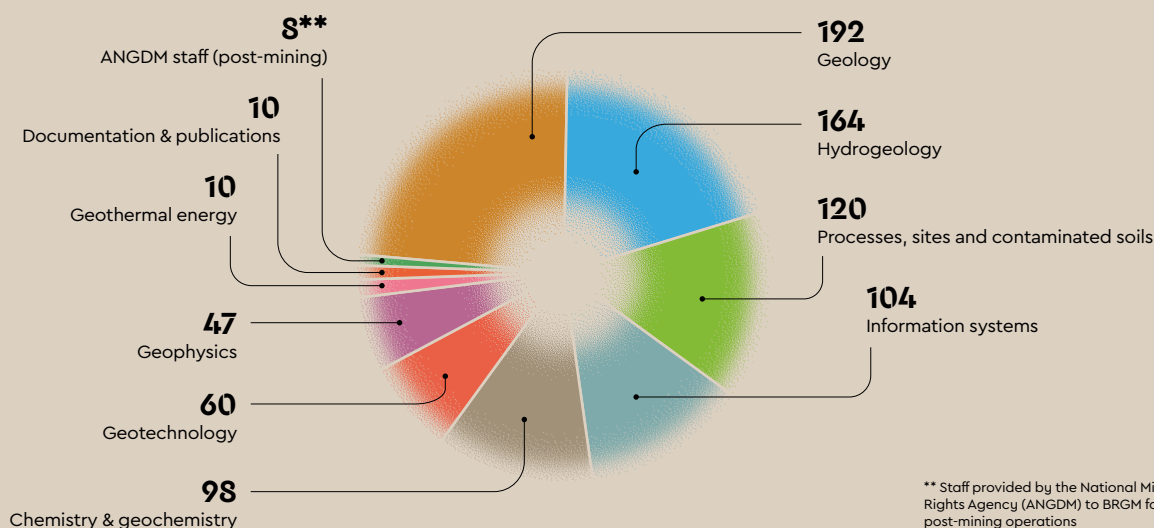
Internal mobility (69 employees in 2023) is another strong point of BRGM's HR policy, with 48% of job vacancies filled through this process last year (compared with a national average of 20%). *"This encourages the development of skills, and reinforces employee motivation and employability, while also improving our employees' understanding of the company, all with a view to retaining talents,"* says Marie Belossat. A new company-specific agreement was signed in 2023 to encourage internal mobility and provide better support for employees concerned by geographical relocation (with a specific section for French Overseas Departments). *"In addition to increasing the mobility bonus, it includes better provisions concerning the life-style changes involved in moving to a new place of work, both for the employee and his or her family."* For example, employees can now carry out on-site reconnaissance missions before making a decision. All these improvements are the result of

## BRGM'S WORKFORCE at 31/12/2023



## BREAKDOWN OF THE WORKFORCE BY PROFESSION

Staff in Operational professions



***"Our Diversity-Inclusion policy is based on inclusion through skills and a concern for fairness, with commitments formalised in establishment-specific agreements and actions to reduce the differences in remuneration of employees and take account of their difficulties."***

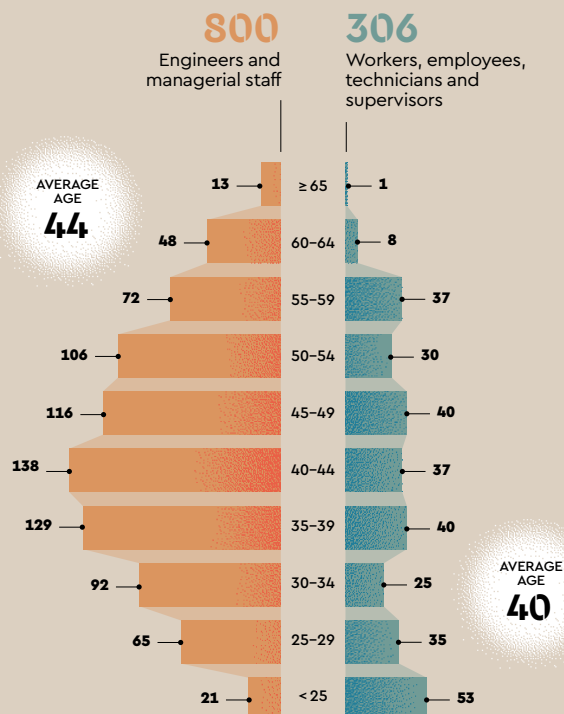
numerous discussions with employees who have already lived through the effects of geographical relocation as part of their mobility process.

### A new map of scientific jobs

Following its HRS4R (Human resources strategy for researchers) accreditation in 2021, BRGM has revised the map of its scientific and technical jobs, taking inspiration from best practice and the Euraxess European database and building on the reform of its scientific-research programming. "This new map is clearer, more comprehensive and more representative of the specific features of these activities, in particular by integrating the expertise-research continuum," emphasises Marie Belossat. "It also shows the career paths available in each sector." By the end of 2023, all the jobs concerned (over 600) had been repositioned. This review will continue in 2024 with the support and management functions.

## AGE PYRAMID BY CATEGORY

on 31/12/2023



## SUSTAINABLE DEVELOPMENT

# A comprehensive CSR policy that is expanding and gathering pace

As an integral part of its strategy and its 2023–2027 Contract of Objectives, Resources and Performance (COMP), BRGM's Corporate Social Responsibility (CSR) policy continues to develop and take shape. Designed and led by an enhanced team, it covers social, ethical and environmental issues and focuses particularly on reducing the carbon footprint of the institute.

In 2023, BRGM finalised its first carbon assessment (scopes 1, 2 and 3) using data from 2019, which was chosen as the reference year. This was then used as the basis for an initial transition plan - the foundation stone of the future Sustainable Development and CSR master plan - comprising around twenty priority activities. *"Half of them are aimed at improving data collection with a view to refining the measurement and management of our environmental footprint, which we will calculate every year in order to assess improvements and identify areas for improvement,"* explains Philippe Sabourault, CSR Manager, who states the objective as follows: a 10% reduction in greenhouse gas emissions in 5 years.

***"In our consultations, we want to introduce quantitative, in addition to just qualitative questions on the carbon footprint of the product or service on offer. On the basis of the answers we receive, we will assess the environmental impact of our services and more accurately calculate our carbon footprint. This will also promote positive dynamics among our suppliers."***

**PHILIPPE  
SABOURAULT**  
Head of CSR

**HERVÉ  
RIOILLAND**  
Head of Risk  
Prevention and  
Quality Auditing

Particular emphasis is placed on purchasing, which is responsible for most of BRGM's emissions. *"We want to introduce quantitative, in addition to just qualitative, questions into our consultations on the carbon footprint of the product or service on offer. The answers we receive will help us to assess the environmental impact of our offer and will contribute to the calculation of our carbon footprint. This approach will also stimulate*

*positive dynamics among our suppliers."*

Other steps have been initiated or are being pursued, particularly in the area of mobility, with employee travel accounting for a quarter of the emissions. Renewal of the fleet with less carbon-intensive electric or hybrid vehicles is continuing, along with the deployment of new charging points. A modal shift towards soft mobility, in particular cycling, is encouraged through participation in events such as *Mai à vélo* and its Cycle Activity Challenge. In addition, alternatives such as video conferencing are being promoted to reduce business travel.

## Building stock renovation

With regard to energy consumption, the move towards savings has gathered pace since 2022, following the war in Ukraine. In addition to the transition to less carbon-intensive energy sources (electric boilers, heating network), this involves a strategy to renovate the building stock at the Orléans site on the basis of an energy assessment of the buildings that were constructed between 1968 and 2003. The first studies were carried out in 2023. *"The resulting renovation plan will also optimise the use of space for remote working and hence the energy consumption involved. It will also make the buildings more accessible to people with disabilities."*

This aspect of BRGM's Diversity and Inclusion policy (see page 64) was expanded in 2023 with the implementation of a new institutional agreement and consideration of all disabilities, both visible and invisible (epilepsy, endometriosis,



Electric vehicle charging point.  
19 charging points were installed at  
the Orléans science centre in 2023.  
© BRGM - A. LEGENDRE

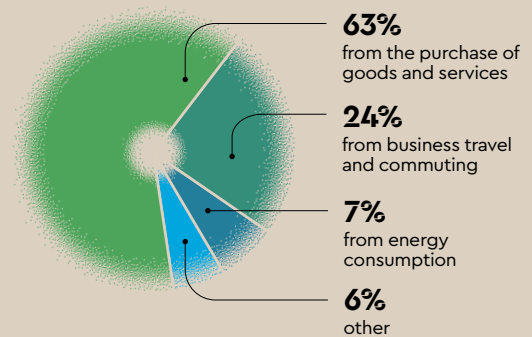
colour blindness, autism, etc.). The agenda for the European Week for the Employment of People with Disabilities, for example, included a range of events to raise awareness of neurodiversity and make BRGM an ever more disability-friendly establishment. Consideration has also been given to the situation of employees who need carers, in order to better meet their expectations. Finally, in terms of ethics, the institution intends to revitalise its system for guaranteeing ethics and integrity in its scientific and expert activities by overhauling its dedicated governance, stepping up employee training and spreading good practices. ●

#### **A SOUND APPROACH TO CONTINUOUS PERFORMANCE IMPROVEMENT**

The two quality and environmental management system (QEMS) certifications – ISO 9001 and ISO 14001 – have been confirmed for 2023. "The QEMS is both a structuring and a management tool, demonstrating the attention BRGM pays to satisfying its internal and external stakeholders, complying with regulations and controlling the environmental impact of its activities," stresses Hervé Riolland, Head of the Risk Prevention and Quality Auditing Department. Risk prevention was also expanded in 2023. The introduction of a quarterly review of the analyses required prior to any project means that the main risks can be identified and steps can be taken or adapted to control them. For its part, the project review introduced in 2022 provides feedback from project managers. More than 500 forms were received last year. Processing them helps to optimise BRGM's performance in terms of project management and the environmental impact of its activities.

#### **BRGM GREENHOUSE GAS EMISSIONS**

2019



19

electric vehicle charging points provided for employees at the Orléans site by the end of 2023



More than 3,000 km

cycled by employees during the 2023 Bike to Work Challenge



54

buildings on the Orléans site to be diagnosed as part of the energy audit of the building stock



328

employees attended the online conference entitled "Et si votre collègue était un zèbre (HPI)?" (What if your colleague was a zebra (with high intellectual potential)?), which was subsequently viewed in 70 replays



5.11%

employment rate for disabled workers



78%

success rate in 2023 for the massive open online course against sexist and sexual violence in the workplace, now compulsory training for new employees



# Board of directors



**Catherine Lagneau**  
Chair and CEO

**Christophe Poinssot**  
Deputy Managing Director  
Science Director

## Programme Directors



KNOWLEDGE  
OF GEOLOGICAL  
SYSTEMS  
**Pierre Nehlig**  
Programme Director



SUBSURFACE  
IMAGING AND  
MODELLING  
**Philippe Calcagno**  
Programme Director



NATURAL RISKS  
AND RESILIENCE  
OF COMMUNITIES  
**Gilles Grandjean**  
Programme Director



MANAGEMENT OF MINING AND  
INDUSTRIAL IMPACTS ON THE LAND  
(GROUND) AND SUBSURFACE  
**Dominique Guyonnet**  
Programme Director



DIGITAL DATA,  
SERVICES AND  
INFRASTRUCTURE  
**Michaël Chelle**  
Programme Director



GROUNDWATER  
AND GLOBAL  
CLIMATE CHANGE  
**Alain Dupuy**  
Programme Director



MINERAL RESOURCES  
AND THE CIRCULAR  
ECONOMY  
**Patrick d'Hughes**  
Programme Director



SUBSURFACE  
POTENTIAL FOR  
ENERGY TRANSITION  
**Francis Claret**  
Programme Director

1



2



3



4



5



6



7



8



9



10



**1 — Jean-Marc Trouillard**  
Secretary-General

**2 — Philippe Freyssinet**  
Director, Research,  
Scientific Programme  
and Communication

**3 — Marie Belossat**  
Human Resources Director

**4 — Catherine Bonin**  
Director of Innovation,  
Commercial and  
International Activities

**5 — Christophe Didier**  
Director, Georesources Division

**6 — Francis Garrido**  
Director of Water, Environment,  
Processes and Analytics

**7 — Karim Ben Slimane**  
Director for Risks and Risk Prevention

**8 — Arnaud Garnier**  
Director of Digital Applications  
for Geosciences

**9 — Jean-Marc Mompelat**  
Director, Regional Network

**10 — Natacha Girol**  
Financial Director

# Board of Governors and committees

## Board of Governors

January 2024

Chair of the Board of Governors  
**Catherine Lagneau**

Government Commissioner  
**Florence Riou**

### REPRESENTING THE MINISTERS FOR:

#### — RESEARCH

**Didier Marquer**, Policy Officer for Earth Sciences, Georesources and Geotechnologies, Research and Innovation Directorate

**Deputy: Fatima Laggoun**, CNRS Research Director and Policy Officer for "Continental Surfaces and Interfaces", Research and Innovation Directorate (Ministry of Higher Education and Research)

#### — THE ENVIRONMENT

**Anne-Cécile Rigail**, Head of the Technological Risks Department

**Deputy: Jean-Luc Perrin**, Deputy Director for Chronic Risks and Coordination (Ministry for the Ecological Transition and Regional Cohesion – DGPR)

#### — FOREIGN AFFAIRS

**Tristan Dufes**, Deputy Director for Strategic Sectors, Economic Diplomacy Directorate

**Deputy: Pierre Robion**, Head of the Energy Division, Strategic Sectors Sub-Directorate, Economic Diplomacy Directorate (DE/STRAT), (Ministry for Europe and Foreign Affairs)

#### — COOPERATION

**Natacha Ephimoff**, Deputy Director for Higher Education and Research (DCERR/ESR), Directorate General for Globalisation, Culture, Education and Development

**Deputy: Leïla Chabane**, Head of Division for Operators and Sector Strategies (DGM/DCERR/ESR), (Ministry for Europe and Foreign Affairs)

#### — THE ECONOMY

**Michel Schmitt**, Engineer General for Mines, Chairman of the "Innovation, Competitiveness, Modernisation" section, General Economic Council

**Deputy: Hélène Le Du**, Engineer-General for Mines, General Economic Council (Ministry of the Economy, Finance and Industrial and Digital Sovereignty)

#### — THE TREASURY

**Louis Pasquier de Francilieu**, Deputy Assistant Director, 3rd Sub-Directorate, Budget Directorate

**Deputy: Arnaud Wieber**, Head of Department for Energy, State Holdings, Industry and Innovation, 3BEP/II Department, Budget Directorate (Ministry of the Economy, Finance and Industrial and Digital Sovereignty)

#### — MINING

**Guglielmina Toro**, Assistant Deputy Director for Protection and Management of Water and Mineral Resources and Aquatic Ecosystems, Directorate for Water and Biodiversity, General Directorate for Spatial Planning, Housing and Nature

**Deputy: Jean-François Gaillaud**, Head of the Sub-Directorate for the Protection and Management of Water and Mineral Resources and Aquatic Ecosystems, Water and Biodiversity Directorate (Ministry of Ecological Transition and Regional Cohesion)

### MEMBERS SELECTED FOR THEIR PARTICULAR EXPERTISE:

**Anne Besnier**, Vice-President, Delegate for Higher Education and Research, Centre-Val de Loire Regional Council

**Pierre-Alain Gautier**, Director, Corporate Affairs & Partnerships – ERAMET Group

**Sylvie Joussaume**, Research Director, CNRS, IPSL/ Laboratory for Climate and Environmental Science,

**Marc Chaussidon**, Director, Paris Institute of Planetary Physics

### BRGM STAFF REPRESENTATIVES:

**Marie-Christine Dictor** (CFDT), **Nicolas Frissant** (CFDT), **Daniel Raucoules** (CFDT), **Denis Thiéblemont** (CGT), **Caroline Ricordel** (CFE/CGC), **Pierre Vassal** (CFE/CGC)

### ECONOMIC AND FINANCIAL AUDITING:

**Bruno Rossi**, **Jean-Pascal Codine**

## Strategic innovation steering committee,

January 2024

**Nathalie Collignon (ORANO)**, Innovation Director (Châtillon, France)

**Jimmy Klinger (SLB)**, Technology Centre Director (Montpellier, France)

**Gilles Boulanger (SUEZ)**, Director of CIRSEE (Le Pecq, France)

**Olivier Bouc (CCR)**, Prevention & Innovation Advisor (Paris, France)

**Chloé Clair (NamR)**, CEO (Paris, France)

**Olivia Touzé (BPIfrance)**, Innovation Delegate and Credit Manager (Maisons-Alfort)

## Science Committee

April 2024

Chair

**Vincent Lagneau**, Director, Geosciences Centre at the *École des Mines* (Paris, France)

**Philippe Agard**, Professor, Sorbonne University (Paris, France)

**Xavier Arnault De Sartre**, Professor at the University of Pau and the Pays de l'Adour (Pau, France)

**Hélène Baruca**, Director of Research at INRIA (Pau, France)

**Hélène Budzinski**, CNRS/INEE Research Director (UMR EPOC) (Bordeaux, France)

**Philippe Charvis**, Director for Science, IRD (Marseille, France)

**Tirza Van Daalen**, Director of the Netherlands Geological Survey – TNO (Pays-Bas)

**Anne Le Friant**, Research Director CNRS/INSU – IPGP (Paris, France)

**Stéphane Guillot**, CNRS/INSU Research Director, Risk Delegate to the CNRS General Directorate (Paris, France)

**Michel Jebrak**, Professor Emeritus at the Université du Québec in Montreal (Canada)

**Patrick Landais**, Specialist in energy transition issues and subsurface uses, ex-CEA (retired)

**Anne Laurent**, Professor at the University of Montpellier (Montpellier, France)

**Louis Londe**, Technical and Innovation Director at GEOSTOCK (Paris, France)

**Christelle Marlin**, Professor at the University of Paris-Saclay (Paris, France)

**Valérie November**, Research Director at CNRS, affiliated to the LATTs laboratory, École des Ponts, Université Paris-Est (Paris, France)

**Judith Sausse**, Director of the *École Nationale Supérieure de Géologie* (Nancy, France)

**Olivier Vidal**, Research Director at CNRS/IS Terre (Grenoble, France)

**Ralph Watzel**, Director of the German Geological Survey – BGR (Germany)

## International Committee

January 2024

Chair

**Jean Lamy**, Former Ambassador

**Pierre Robion**, Head of the Energy Division, Strategic Sectors Sub-Directorate, Economic Diplomacy Directorate – Ministry for Europe and Foreign Affairs

**Özlem Adiyaman Lopes**, UNESCO

**Theresa Ponce de Leão**, Chair of the Board of Directors of the National Laboratory for Energy and Geology (LNEG), Portuguese Geological Survey

**Denis Favier**, Safety Director – TotalEnergies Group

**Rémi Pelon**, Senior Mining Specialist – World Bank

**Céline Adrien**, Director of the EuroGeoSurveys (EGS) secretariat

**Louis Maréchal**, Head of Minerals and Extractive Sector – OECD

**Vanessa Salas-Pouget**, Head of the Energy Unit – (Ministry for Europe and Foreign Affairs)

**Rokhaya Samba Diene**, Director of Exploration and Promotion of mining at the Ministry of Mines and Geology of Senegal, and President of the Organisation of African Geological Surveys (OAGS)

**Yadh Zahar**, Professor of Higher Education at the Ecole Polytechnique de Tunisie (EPT) and Director of the VDEC Laboratory (Sustainable Cities and Built Environment)

**Jean Launay**, President of the French Water Partnership (PFE) or **Marie-Laure Vercambre**, Director General of the PFE

**Frédéric Maurel**, Deputy Head of the Water and Sanitation Division – AFD

**Didier Marquer**, Policy Officer for Earth Sciences, Georesources and Geotechnologies, Research and Innovation Directorate (Ministry of Higher Education and Research)

**Hervé Boisguillaume**, Deputy Director of Strategy, Partnerships and General Affairs or **Chahoul Gaffar**, Head of Partnerships, Operators, and Projects Office (Ministry of Ecological Transition and Regional Cohesion)

## National public-services strategy committee

January 2024

### MINISTRY OF ECONOMY, FINANCE AND INDUSTRIAL AND DIGITAL SOVEREIGNTY

By delegation, the Director General of Development, Housing and Nature

### REPRESENTING THE MINISTRY OF ECOLOGICAL TRANSITIONS AND REGIONAL COHESION

Director for Water and Biodiversity  
Director-General for Infrastructure, Transport and Mobility

Director-General for Energy and Climate  
Director-General for the Prevention of Risks

### REPRESENTING THE MINISTRY OF HIGHER EDUCATION AND RESEARCH

Director-General for Research and Innovation

### REPRESENTING THE MINISTRY OF AGRICULTURE AND FOOD SOVEREIGNTY

Deputy Director for Environmental Performance and Regional Development

### REPRESENTING THE MINISTRY OF LABOUR, HEALTH AND SOLIDARITY

Director-General for Health

### REPRESENTING THE MINISTRY OF THE INTERIOR AND FRENCH OVERSEAS TERRITORIES AND DEPARTMENTS

Director-General for Civil Defence and Crisis Management  
Director-General for Overseas France

### REPRESENTING THE MINISTRY OF CULTURE

Director-General for Heritage and Architecture

### CHAIR OF THE BRGM SCIENCE COMMITTEE

BRGM CHAIR & CEO

## Audit Committee

January 2024

Chair

**Marie-Madeleine Mialot-Muller**

**Jean-Pascal Codine**

**Jean-Luc Perrin**

**Louis Pasquier De Francieuv**

**Marie-Christine Dictor**

**Denis Thiéblemont**

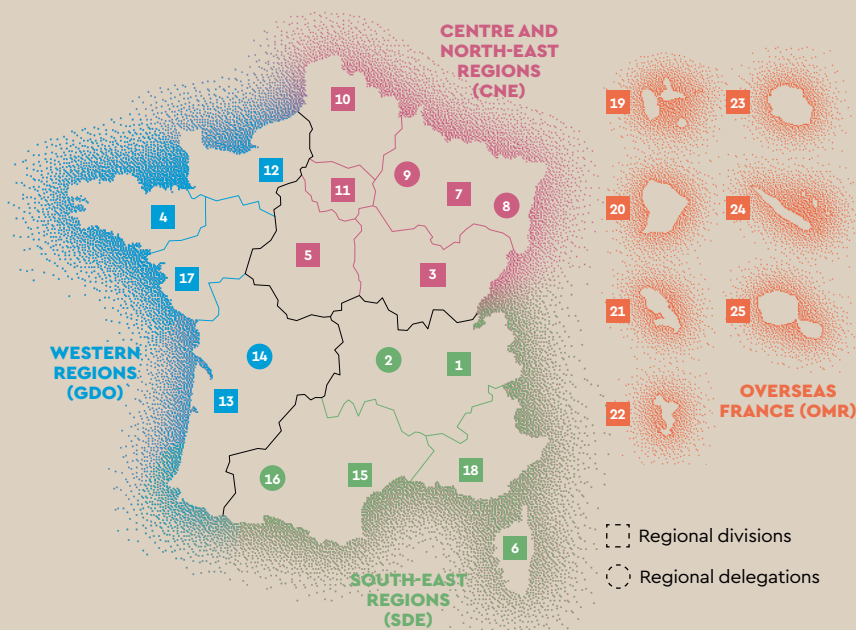
**Pierre Vassal**

Government Commissioner

**Florence Riou**



# Regional network



13

REGIONAL DIVISIONS  
IN MAINLAND FRANCE

5

OVERSEAS  
REGIONS

5

DELEGATIONS IN  
MAINLAND FRANCE

## REGIONAL NETWORK



### Director Jean-Marc Mompelat

Director,  
Regional Network  
Tel. +33 (0)2 38 64 31 88  
jm.mompelat@brgm.fr



### Deputy Directors Centre and North-East Regions Patrick Charbonnier

Deputy Director  
tel. +33 (0)2 38 64 33 26  
p.charbonnier@brgm.fr



### West Pierre Pannet

Deputy Director  
tel. +33 (0)2 38 64 48 21  
p.pannet@brgm.fr



### South-East Pierre Pannet (acting)

Deputy Director  
tel. +33 (0)2 38 64 48 21  
p.pannet@brgm.fr



### Overseas France Caroline Ricordel

Deputy Director  
tel. +33 (0)2 38 64 38 93  
c.ricordel@brgm.fr



### AUVERGNE- RHÔNE-ALPES

#### Regional Head Office

Lyon site  
**Stéphane Buschaert**  
58 boulevard Niels Bohr  
69100 Villeurbanne Cedex  
tel. +33 (0)4 72 82 11 50  
s.buschaert@brgm.fr



#### Regional Delegation

Clermont-Ferrand site  
**Christian Iasio**  
12 avenue des Landais  
63170 Aubière  
tel. +33 (0)4 73 15 23 00  
c.iasio@brgm.fr



### BOURGOGNE- FRANCHE-COMTÉ

#### Regional Head Office

Dijon site  
**Aurélien Vallet**  
Parc technologique  
27 rue Louis de Broglie  
21000 Dijon  
tel. +33 (0)3 80 72 90 40  
a.vallet@brgm.fr



### BRITTANY

#### Regional Head Office

Rennes site  
**Pauline Drzewiecki**  
Rennes Atalante Beaulieu  
2 rue de Jouanet  
35700 Rennes  
tel. +33 (0)2 99 84 26 70  
p.drzewiecki@brgm.fr



### CENTRE-VAL DE LOIRE

#### Regional Head Office

Orléans site  
**Alain Saada**  
3 avenue Claude Guillemin  
BP 36009  
45060 Orléans Cedex 2  
tel. +33 (0)2 38 64 31 92  
a.saada@brgm.fr



### CORSICA

#### Regional Head Office

Bastia site  
**Baptiste Vignerot**  
Immeuble Agostini  
Zone Industrielle de Furiani  
20600 Bastia  
tel. +33 (0)4 95 58 04 33  
b.vignerot@brgm.fr

## EASTERN FRANCE

### Regional Head Office



Nancy site  
**Nicolas Koeberlé**  
1 rue Jean Zay  
54500 Vandœuvre-lès-Nancy  
tel. +33 (0)3 83 44 81 49  
n.koeberle@brgm.fr

### Regional Delegation



Strasbourg site  
**Damien Salquebre**  
Parc Activités Porte Sud  
Rue Pont du Péage  
Bâtiment H1  
67118 Geispolsheim  
tel. +33 (0)3 88 77 48 90  
d.salquebre@brgm.fr

### Regional Delegation



Reims site  
**Hélène Vinot**  
1 Rue Maurice Hollande  
Bât. B1  
51100 Reims  
tel. +33 (0)3 26 84 47 70  
h.vinot@brgm.fr

## HAUTS-DE-FRANCE

### Regional Head Office



Lille site  
**Xavier Daupley**  
Arteparc Bâtiment A  
2 rue des Peupliers  
BP 10406  
59810 Lesquin Cedex  
tel. +33 (0)3 20 19 15 40  
x.daupley@brgm.fr

## PARIS REGION

### Regional Head Office



Paris site  
**Benjamin Lopez**  
Tour Mirabeau  
39-43 quai André Citroën  
75739 Paris Cedex 15  
tel. +33 (0)1 40 58 89 17  
b.lopez@brgm.fr

## NORMANDY

### Regional Head Office



Rouen site  
**Manuel Parizot**  
7 rue Andreï Sakharov  
76130 Mont-Saint-Aignan  
tel. +33 (0)2 35 60 12 00  
m.parizot@brgm.fr

## NOUVELLE-AQUITAINE

### Regional Head Office



Bordeaux site  
**Cécile Le Gall**  
Parc Technologique Europarc  
24 avenue Léonard de Vinci  
33600 Pessac  
tel. +33 (0)5 57 26 52 70  
c.legall@brgm.fr

### Regional Delegation



Poitiers site  
**Jean-Christophe Audru**  
5 rue de la Goëlette  
86280 Saint-Benoît  
tel. +33 (0)5 49 38 15 38  
jc.audru@brgm.fr

## OCCITANIE REGION

### Regional Head Office



Montpellier site  
**Anthony Rey**  
1039 rue de Pinville  
34000 Montpellier  
tel. +33 (0)4 67 15 79 80  
a.rey@brgm.fr

### Regional Delegation



Toulouse site  
**Frédéric Tronel**  
Parc technologique du Canal  
3 rue Marie Curie  
Bâtiment ARUBA – BP 49  
31527 Ramonville-Saint-Agne  
tel. +33 (0)5 62 24 14 50  
f.tronel@brgm.fr

## PAYS DE LA LOIRE

### Regional Head Office



Nantes site  
**Xavier Rachez**  
1 rue des Saumonières  
BP 92342  
44323 Nantes Cedex 3  
tel. +33 (0)2 51 86 01 51  
x.rachez@brgm.fr

## PROVENCE-ALPES-CÔTE D'AZUR

### Regional Head Office



Marseille site  
**Isabelle Duhamel-Achin**  
117 avenue de Luminy  
BP 168  
13276 Marseille Cedex 9  
tel. +33 (0)4 91 17 74 77  
i.duhamelachin@brgm.fr

## GUADELOUPE

### Regional Head Office



**Ywenn De La Torre**  
Parc d'activités de Colin  
La Lézarde  
97170 Petit-Bourg  
tel. +33 (0)5 90 41 35 48  
y.delatorre@brgm.fr

## FRENCH GUIANA

### Regional Head Office



**Floriane Deneuville-Mayer**  
Domaine de Suzini  
Route de Montabo  
B.P. 552  
97333 Cayenne Cedex 2  
tel. +33 (0)5 94 30 06 24  
f.deneuville-mayer@brgm.fr

## MARTINIQUE

### Regional Head Office



**Benoît Vittecoq**  
Villa Bel Azur  
4 lotissement Miramar  
Route Pointe des Nègres  
97200 Fort-de-France  
tel. +33 (0)5 96 71 17 70  
b.vittecoq@brgm.fr

## MAYOTTE

### Regional Head Office



**Ludivine Sadeski**  
N° 2 Les Terrasses Maasakini  
Kaweni  
97600 Mamoudzou  
tel. +33 (0)2 69 61 28 13  
l.sadeski@brgm.fr

## LA RÉUNION

### Regional Head Office



**Ingrid Girardeau**  
5 rue Sainte-Anne – CS 51016  
97404 Saint-Denis Cedex  
tel. +33 (0)2 62 21 22 14  
i.girardeau@brgm.fr

## BRANCH OFFICES

### NEW CALEDONIA

#### Vincent Mardhel



DIMENC/SGNC,  
1 ter, rue Édouard Unger  
Vallée du Tir – BP 56  
98845 Nouméa Cedex  
tel. +33 (0)6 87 27 03 65  
v.mardhel@brgm.fr

### FRENCH POLYNESIA

#### Activity temporarily suspended

Contact: Caroline Ricordel  
c.ricordel@brgm.fr



## MINE SAFETY AND RISK PREVENTION DEPARTMENT

UTAM (regional post-mining unit)

### Head of Department

**Jean-Dominique Barnichon**  
tel. +33 (0)2 38 64 38 08  
jd.barnichon@brgm.fr

### UTAM Centre Ouest

**Boris Chevier**  
3 avenue Claude Guillemin  
BP 36009  
45060 Orléans Cedex 2  
tel. +33 (0)2 38 64 35 43  
utamcentreouest@brgm.fr

### UTAM SUD

**Florence Rivet**  
Puits Yvon Morandat  
Quartier la Plaine  
13120 Gardanne  
tel. +33 (0)4 42 65 46 20  
utamsud@brgm.fr

### UTAM NORD

**Fabrice Quirin**  
Rue Louis Blériot  
62420 Billy-Montigny  
tel. +33 (0)3 21 79 00 60  
utamnord@brgm.fr

### UTAM EST

**Nicolas Taillefer**  
2 avenue de la Moselle  
57800 Freyming-Merlebach  
tel. +33 (0)3 87 83 14 01  
utamest@brgm.fr

# A net profit for 2023 once again

2023 is the first year of the new Contract of Objectives, Means and Performance (COMP) signed in March 2023. The year was marked by the launch of the priority research and equipment programmes (PEPRs), the French Observatory of Mineral Resources for Industrial Sectors (OFREMI) and, more generally, by strong growth in business directly related to social issues. Despite an ongoing industrial action aimed at wage rises to keep pace with the cost of living, the increase in production and the rise in the activity rate bear witness to the employees' ongoing commitment.

Along with four other public research institutes (INRAE, CIRAD, IFREMER and IRD), BRGM acts on behalf of the government under Programme 172 of the Organic Act on Public Accounts (LOLF). BRGM also receives subsidies for public service expenditure (SCSP) under Programme 181, for its activities of "support for public-policy development in particular" and in "post-mining", as well as for two specific projects (Trackdéchets, RNDTS). Finally, it benefits from an SCSP subsidy under Programme 113 to finance the piezometric network.

## At the BRGM Group level

The net consolidated profit for the group stands at €0.7M in 2023 (compared to €2.6M in 2022). The contribution of the different entities to this net result is as follows:

- The BRGM EPIC contributed €1.4M, which corresponds to its net social result of €1.8M, adjusted to take account of entries for transactions with subsidiaries (mainly write-back for €2M in dividends received from SAGEOS);
- BRGM SA's loss-contribution was -€1.9M;
- SAGEOS contributed €0.5M to the group's result in 2023, which corresponds to its corporate result adjusted for dividends received from its subsidiaries and intra-group provisions;
- CFG and IRIS INSTRUMENTS contributed respectively +€0.1M and +€0.8M; SOLTRACING's loss-contribution was -€0.1M.

**+ €1.5 M**

BRGM EPIC  
operating result in 2023

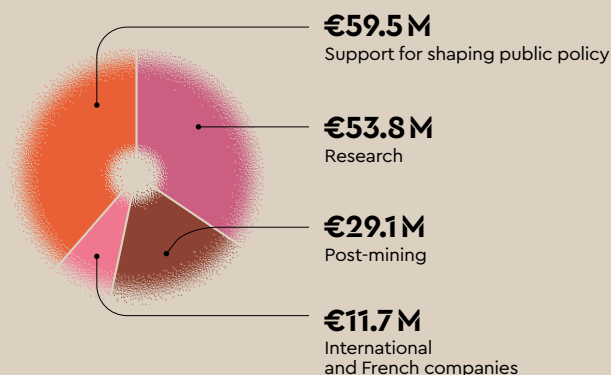
**€156.8 M**

Operating  
expenses 2023

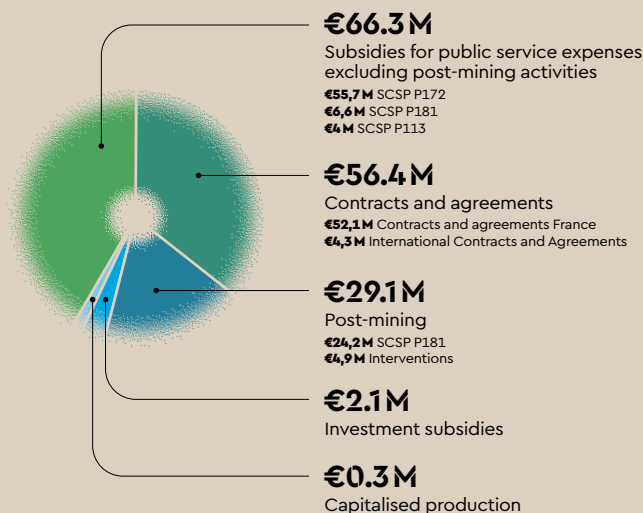
**€158.3 M**

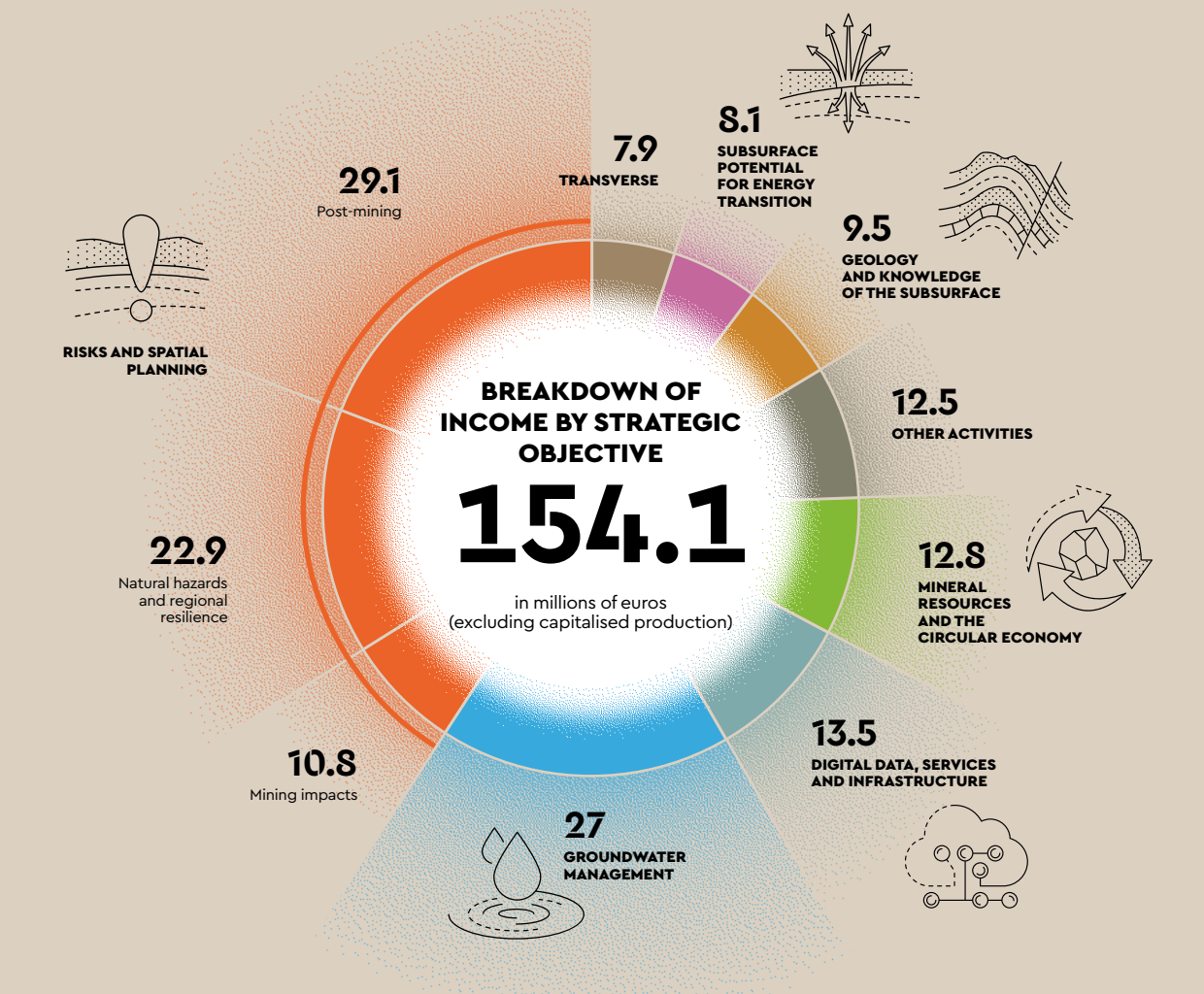
2023 operating  
income

## INCOME BREAKDOWN BY MISSION

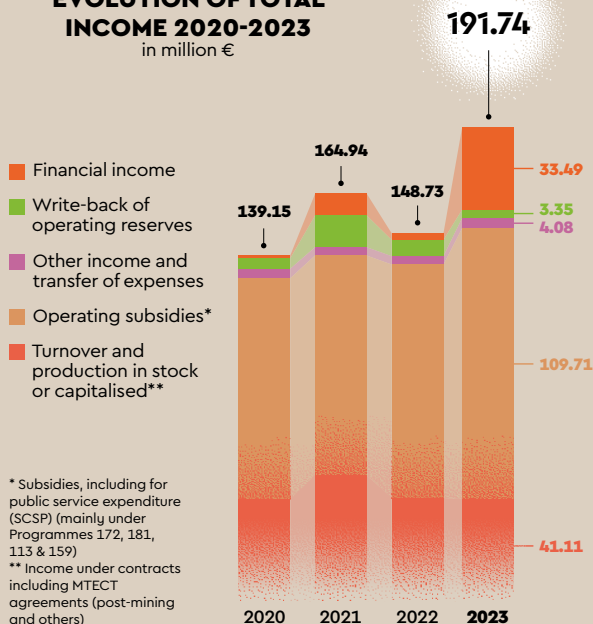


## BREAKDOWN OF ACTIVITY BY TYPE OF FUNDING

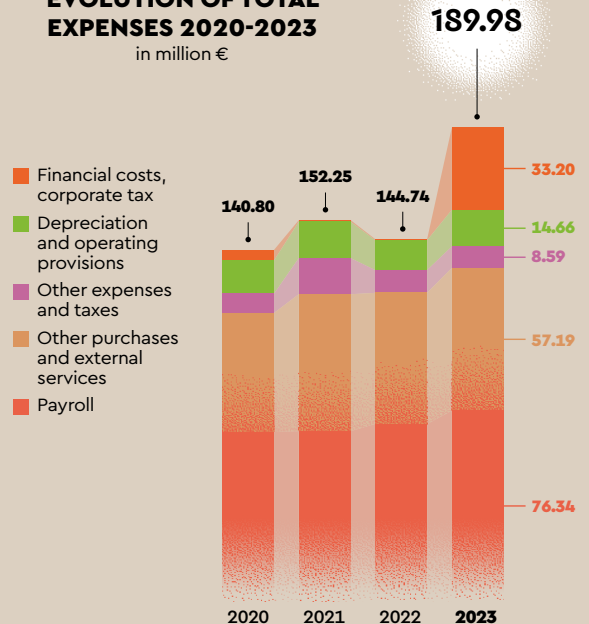




**EVOLUTION OF TOTAL INCOME 2020-2023**  
in million €



**EVOLUTION OF TOTAL EXPENSES 2020-2023**  
in million €





Salient points of the 2023 financial year are various restructuring operations within the Group.

In the mining sector, NICRON, a company wholly owned by *Société Minière de CHESSY* (SM CHESSY), itself a wholly owned subsidiary of BRGM SA, was dissolved. SM CHESSY was then recapitalised. These operations were the first step towards SM CHESSY resuming operations in 2024 as part of the programme to update the National Inventory of Mineral Resources (IRM) announced by the President of France in September 2023, for the purpose of boosting mining investment in France.

On the geothermal side, the search for a new industrial and financial partner for CFG, capable of providing the resources necessary for its development, continued in 2023 and should be finalised in early 2024.

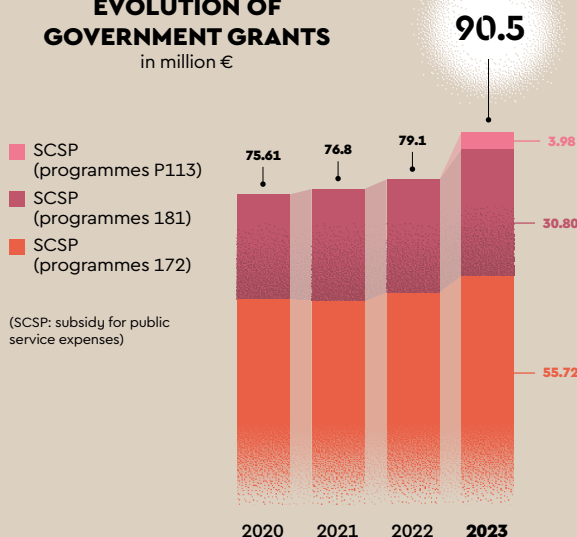
#### At the BRGM EPIC level

BRGM posted a net profit of €1.8M for its 2023 financial year compared with a net profit of €4M in 2022. The operating result was again positive, amounting to €1.5M; for the record, the operating result amounted to €1.4M in 2022. The financial result amounted to €1.1M, down from €2.5M in 2022. All these elements led to the payment of a profit-sharing bonus (€2M) and will allow the Group to contribute to the company savings plan in 2024.

Funds from ordinary activities amounted to €152M, an increase of 10.8% compared with 2022. At a total of €125M, non post-mining resources were €13M higher than in 2022 (+11.6%). As for post-mining resources, they amounted to €29.1M, an increase of €2.3M compared to 2022 (+8.7%).

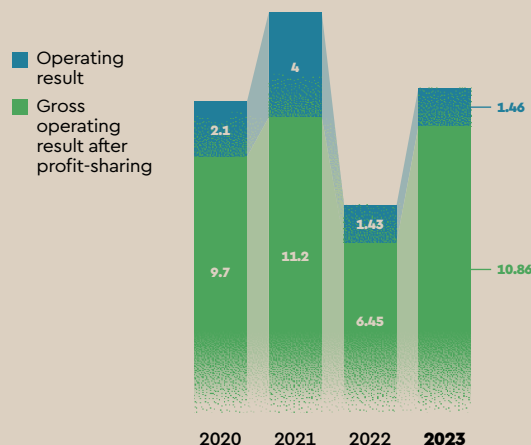
#### EVOLUTION OF GOVERNMENT GRANTS

in million €



#### EVOLUTION OF OPERATING RESULT

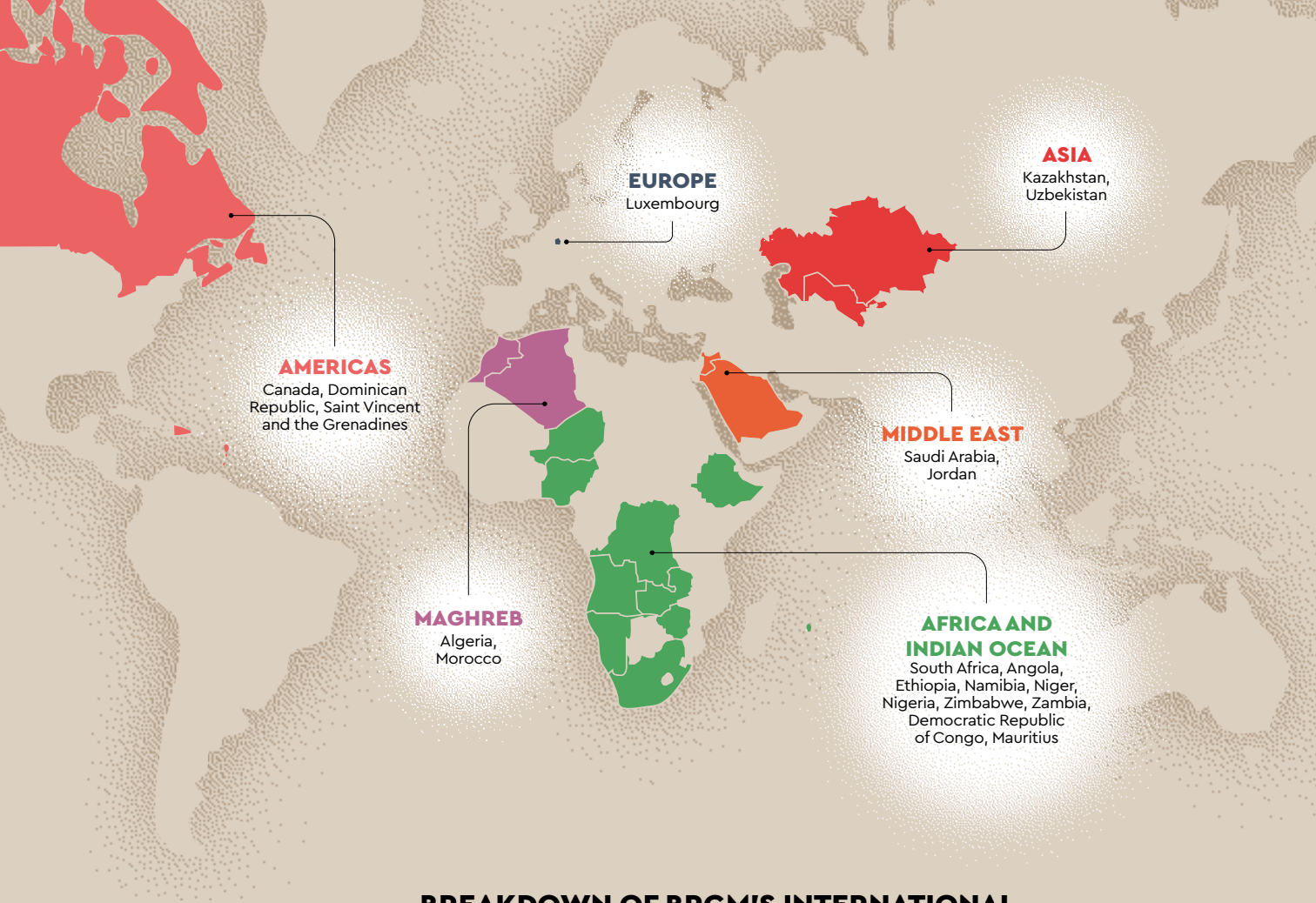
in million €



#### INCOME UNDER CONTRACTS FOR SCIENTIFIC RESEARCH AND SUPPORT FOR PUBLIC POLICY DEVELOPMENT

(in million euros exclusive of VAT)

Contracts and agreements + capitalised production	2021	2022	2023
European Union + ERDF	4.618	6.517	6.678
ANR	2.410	1.854	2.724
Agencies other than ANR	8.900	7.549	6.057
Local and regional authorities	8.455	7.253	8.557
Government Ministries and departments	16.065	20.873	20.210
Companies	1.127	0.717	2.600
<b>Sub-total research contracts and agreements + policy support (APP)</b>	<b>41.809</b>	<b>44.763</b>	<b>46.826</b>



## BREAKDOWN OF BRGM'S INTERNATIONAL OPERATIONS BY COUNTRY IN 2023

Excluding post-mining activities, the level of SCSP has risen compared with 2022 (+€10.5 M), due in particular to the change in the method of financing the piezometric network (now financed by SCSP from P113) and the DGPR Trackdéchets and RNDTS projects (financed by SCSP from P181); BRGM also received an exceptional non-renewable grant from the Ministry of Research (+€3.4 M from P172) to cover the increase in energy costs and to compensate for the increase in its payroll. The proportion of contracts and agreements (€56.4 M) was up by 4% compared to 2022.

The level of income from contracts relating to the public policy support mission was slightly lower than in 2022, at €29.7 M compared with €30.7 M in 2022, which was a record year. This decrease is artificial, given the change in the way the piezometric network is financed. Excluding the piezometric network effect, production under the public policy support (APP) contract for 2023 would be €33.5 M, which would be a new all-time record. Moreover, income from public research funded by contracts and agreements (€15.3 M) increased by €2.5 M compared with 2022. This was

mainly due to the sharp rise in production under European contracts. International production remained stable compared with 2022, at €4.3 M (compared with €3.9 M in 2022). Sales in France grew slightly (from €5.0 M in 2022 to €5.4 M in 2023).

Income from post-mining business increased, standing at €4.8 M (up €1.4 M compared to 2022). The monitoring activity benefited from an additional SCSP of €0.7 M to partially cover the additional energy costs of the pumping stations.

Current operating expenses (excluding provisions and reversals) are €10 M higher than in 2022 (+7.2%), at €149.5 M. Excluding "exceptional" items (write-offs of €1 M in 2022), structural external costs increased by €2.2 M compared with 2022. The payroll also increased by €5.3 M compared with 2022, with the wage increase rate for permanent staff (RMPP) rising to 5%.

Net financial income was €1.1 M in 2023, mainly due to integration of the €2 M in dividends from SAGEOS. The Group's income resulted in corporate tax of €0.8 M in 2023. ●

# Subsidiaries and holdings

BRGM Group's subsidiaries and equity are divided between three holding companies each corresponding to a specific sector.

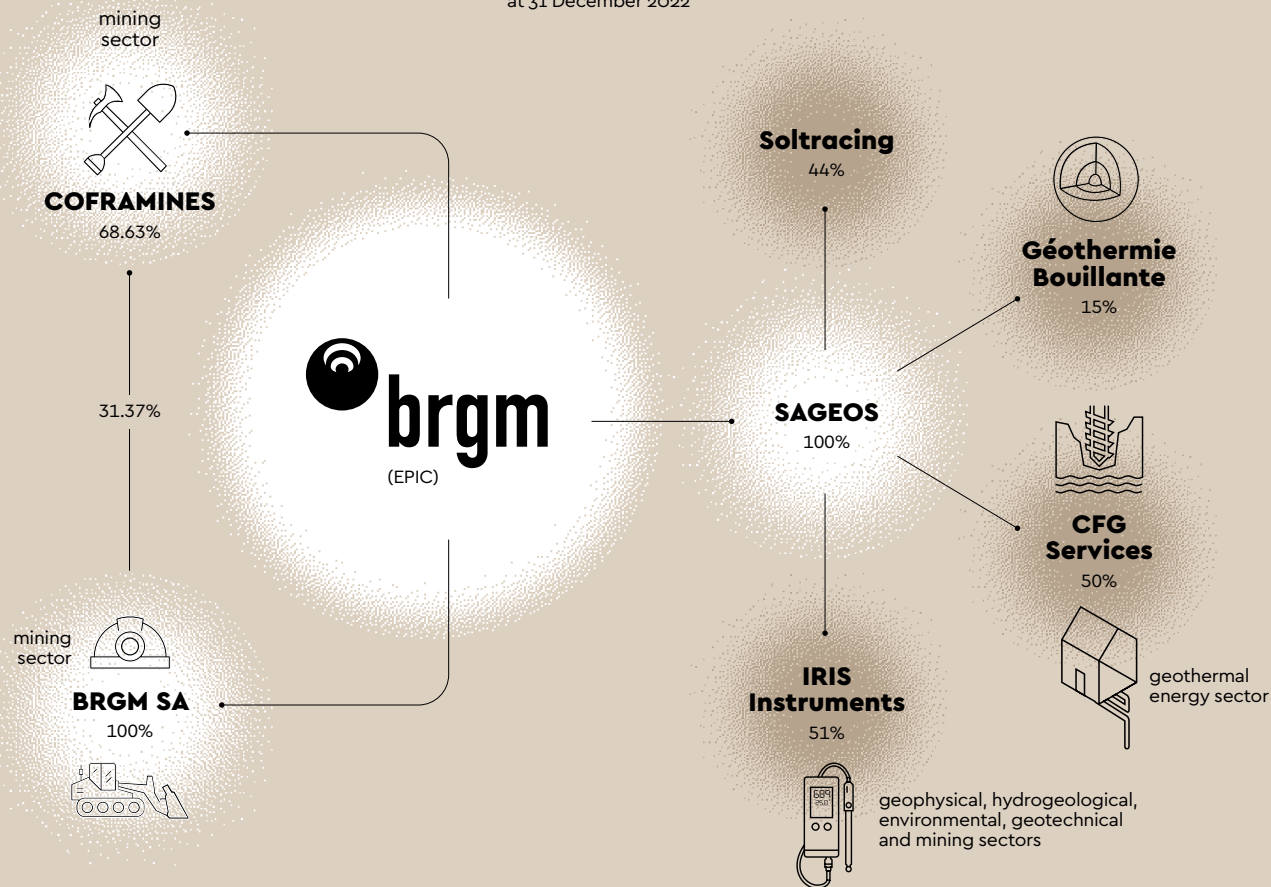
SAGEOS is the holding company for all shares held in subsidiaries operating in geothermal energy, with, on the one hand, CFG Services for which it owns 50% of the capital (BeicipFranlab Groupe IFPEN, of which it owns 50% since March 2024), and on the other, *Geothermie Bouillante*, in which it has a 15% holding (ORMAT Systems and the *Caisse des Dépôts et Consignations* own 63.75% and 21.25% of the capital, respectively) and in measurement instruments for geophysical, hydrogeological, hydraulic, geotechnical and mining surveys, where it has a 51% holding in IRIS Instruments (the Japanese OYO Group holds the other

49%). For the management of excavated earth, it has a 44% holding in Soltracing (with HESUS owning 55%).

COFRAMINES and BRGM SA hold the BRGM Group's remaining equity in the mining sector (dormant companies with no activities or development planned, or companies under liquidation).

BRGM SA has held receivables from the *Société de Participation Minière du Sud Calédonien* (SPMSC) since 2005, when the BRGM Group transferred its share in the GORO project in New Caledonia to the SPMSC. ●

**BRGM GROUP ORGANISATION**  
at 31 December 2022







# 2023: Structuring and investment

2023 will be remembered as a landmark year for geothermal energy, in particular through the geothermal energy plan presented in February 2023, "an action plan to accelerate", one of the objectives of which is to increase the number of deep geothermal energy projects in France by 40%.

Thanks to political impetus, geothermal energy is positioning itself as a credible alternative for meeting the major challenges of the energy transition.

With its leading position in its markets, CFG has certainly benefited from a favourable economic climate, but has also been able to seize opportunities through efficient new approaches, thereby establishing its reputation with long-standing customers.

In order to meet its ambitions as set out in the "Ambitions 2030" strategic plan, the priorities have been to recruit new staff, particularly to strengthen its production teams, but also to develop new market segments.

Six new employees joined the Group in 2023 and since their recruitment, they are currently being groomed so that they are fully operational for the 2024 financial year.

CFG is now active in the geothermal energy market, offering geothermal energy to industrial sites to help them make the transition to a carbon-neutral energy future. Positioning ourselves in these markets requires a specific sales approach and agility, and in 2023 there were a number of changes in the way we operate.

As a result of its consolidation and involvement in the sector, CFG has taken part in preliminary studies to help minimise the risks to the resource in areas where it is less well known, notably in the west of the Paris region, in Hauts-de-France and in the Rhone corridor.

The Dogger underground project management business in the Paris region was buoyant, with drilling of the Saint Denis doublet and a first doublet at Pantin - Les Lilas. Preliminary studies carried out as part of project management assignments at Villeteuse, Roissy-Charles de Gaulle (Paris Airport) and Dugny-Le Bourget will culminate in the drilling of boreholes scheduled for 2024.

In terms of innovations, 2023 will remain a major year with the completion of the first all-composite doublet at Champigny-sur-Marne and the development of an innovative approach to the resources of related substances in geothermal brines. This approach has enabled CFG, as part of a partnership with Beicip-Franlab, to offer manufacturers technical solutions for optimising their strategy for mobilising lithium resources in France.



**ÉRIC BERTET**  
CEO of CFG

CEO:  
**Éric Lasne**

Turnover:  
**€5.300 M**

SAGEOS  
holding:  
**50%**

Beicip-Franlab  
holding:  
**50%**

Staff:  
**25 employees**

After two years devoted to obtaining exclusive exploration licences in island regions (Réunion, Mayotte, Guadeloupe and Martinique) for electricity production, 2023 was a year of transition and support for project owners in preparing additional exploration and scheduling future drilling.

Also in 2023, the supervision of the programme for three new boreholes on the Bouillante concession was completed, all of them successfully.

As part of what can be described as a classic year for maintenance and operational monitoring, CFG has decided to revitalise its activities in the field of corrosion-related microbiology expertise. Two leads have already been identified: research into innovative solutions for quantifying bacteria in an anaerobic environment, and the development of improved services for detecting leaks in underground pipes.

After an excellent 2022 FY in terms of results, boosted by a number of exceptional items, 2023 will be a year of investment and getting up to speed in order to provide the best responses to the many demands generated by a dynamic and growing market. ●



**Drilling rig,  
Champigny-sur-Marne.**  
© OCÉANE DURIER





# 2023, a year of record achievement

Despite a complex economic and geopolitical context, 2023 was noteworthy at IRIS Instruments for intense activity with the launching of new products and numerous commercial and exploratory requests.

The very positive results for 2023 confirm the company's choice of long-term strategy, which in recent years has led to a significant increase in stocks of electronic components and other raw materials. This initiative aims to secure supply chains and better meet customer needs. IRIS Instruments is more than ever committed to ensuring that its products are robust and can be repaired. As part of its Corporate Social Responsibility (CSR) approach, these decisions, despite their heavy financial implications, keep IRIS Instruments in step with the times.

Backed by in-house electronics research and development, IRIS products are achieved through know-how acquired over decades. Technicians and engineers with varied and complementary skills are an exceptional asset that gives IRIS a unique strategic agility and adequate means to innovate.

IRIS equipment is distributed in more than fifty countries on five continents through a network of dedicated representatives. Local representatives, who account for half of global sales, are trained in the use of new products, and some of them are also trained in first-level repairs.



**CATHERINE TRUFFERT**  
CEO, Iris Instruments

Turnover:  
**€7.986 M**

SAGEOS holding:  
**51%**

OYO holding:  
**49%**

Staff:  
**27 employees including one apprentice**

The mineral exploration, environment and groundwater research markets received equal attention.

In the field of mining exploration, a noteworthy event in 2023 was the launch of the TIP12, a unique, high-power (12 kilowatts), current- and voltage-regulated transmitter. This instrument follows on from its predecessor, the TIP6 (6 kilowatts), which can also be used with the ELREC and FULLWAVERS electrical resistivity and induced polarisation recorders used for investigations at depths of up to one kilometre. Despite market reluctance to invest in the mining sector, mining exploration accounted for a third of IRIS sales, with almost a quarter attributed to the new TIP6 and TIP12 transmitters.

SYSCAL resistivity meters continued to dominate the interconnected water research and environmental markets, with the addition of proton magnetic resonance for groundwater prospecting.

IRIS Instruments' success is due to its teams and partners who work daily to meet customers' challenges. In 2023, the number of training sessions led by IRIS geophysicists at its customers' sites exceeded that prior to the COVID crisis.

Faced with the magnitude of environmental and societal challenges, IRIS Instruments continues to pursue its research and innovation activities to meet emerging needs in imaging and time-series monitoring of the subsurface.

In 2023, research and development projects such as MEGAMU, involving the *Institut de Physique des deux infinis* in Lyon, IPGP, GEG Experts, the University of Geneva and Géosciences Rennes, have strengthened IRIS Instruments' position in the geothermal exploration market.

Demonstrating its commitment to quality and continuous improvement, IRIS is proud to announce the renewal of its ISO 9001 version 2015 certification in 2023. ●



Training on a SYSCAL PRO in Angola on behalf of GEOLANDER.

© IRIS INSTRUMENTS