



Project Information

Grant agreement ID: 689909

Project website 

10.3030/689909

Project closed

11 December 2015

1 February 2016

31 January 2020

SOCIETAL CHALLENGES - Climate action,
Environment, Resource Efficiency and Raw
Materials

€ 5 395 296,00

€ 5 395 296,00

THE UNIVERSITY OF EXETER

 United Kingdom

1 of 11



Sustainable innovative solutions for mineral exploration

Objective

Five of the 20 raw materials identified by the European Commission as critical are commonly found in association with alkaline rocks and carbonatites (heavy and light rare earth elements, niobium, fluor spar, and phosphate). Other elements increasingly important for 'hi-tech' applications, and found in these rocks include hafnium (Hf), tantalum (Ta), scandium (Sc) and zirconium (Zr). In fact, there is a greater chance of a carbonatite complex having resources economic to mine than any other rock type (about 20 active mines in ca. 500 known carbonatite complexes).

Less than 3% of critical raw materials supply is indigenous to the EU. However, deposits are known and exploration is ongoing in parts of northern Europe. In central and southern Europe the presence of abundant alkaline volcanic rocks indicates the likelihood that deposits exist within about a km of the surface.

This project will make a step-change in exploration models for alkaline and carbonatite provinces, using mineralogy, petrology, and geochemistry, and state-of-the-art interpretation of high resolution geophysics and downhole measurement tools, to make robust predictions about mineral prospectivity at depth. This will be achieved through studies at seven key natural laboratories, combined with Expert Council workshops. The results will be incorporated into new geomodels on multiple scales.

In contrast to known deposits, Europe is well endowed with expertise. The project brings together industry partners involved in exploration, geophysics and environmental assessment with two geological surveys, a major museum and five universities. The results will make Europe the world leader in this specialist area. They will give the four SME industry partners world-leading expertise to develop and expand their businesses, transferring their business expertise from Africa to Europe. The project will help give European 'hi-tech' industry the confidence to innovate in manufacturing using critical raw materials.

[natural sciences](#) > [chemical sciences](#) > [inorganic chemistry](#) > **[transition metals](#)**

[natural sciences](#) > [earth and related environmental sciences](#) > [geology](#) > **[mineralogy](#)**

[natural sciences](#) > [earth and related environmental sciences](#) > **[geophysics](#)**

[natural sciences](#) > [earth and related environmental sciences](#) > [atmospheric sciences](#) > [climatology](#) > **[climatic changes](#)**

[natural sciences](#) > [earth and related environmental sciences](#) > [geology](#) > **[petrology](#)**



Programme(s)

[H2020-EU.3.5. - SOCIETAL CHALLENGES - Climate action, Environment, Resource Efficiency and Raw Materials](#)

MAIN PROGRAMME

[H2020-EU.3.5.3. - Ensuring the sustainable supply of non-energy and non-agricultural raw materials](#)

Topic(s)

[SC5-11d-2015 - New sustainable exploration technologies and geomodels](#)

Call for proposal

[H2020-SC5-2014-2015](#)

[See other projects for this call](#)

Sub call

H2020-SC5-2015-one-stage

Funding Scheme

[RIA - Research and Innovation action](#)

Coordinator



THE UNIVERSITY OF EXETER

Net EU contribution

€ 1 540 425,51

Total cost

€ 1 540 425,51

Address

THE QUEEN'S DRIVE NORTHCOTE HOUSE

EX4 4QJ Exeter

 **United Kingdom** 

Region

South West (England) > Devon > Devon CC

Activity type

Higher or Secondary Education Establishments

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Participants (12)



GEO-AFRICA PROSPECTING SERVICES CC

 **Namibia**

Net EU contribution

€ 237 010,00

Address

23 SCHANZENWEG EROS

9000 WINDHOEK 

SME 

Yes

Activity type

Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links

[Contact the organisation](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

€ 237 010,00



UNITED KINGDOM RESEARCH AND INNOVATION

United Kingdom

Net EU contribution

€ 386 237,50

Address

**POLARIS HOUSE NORTH STAR AVENUE
SN2 1FL Swindon**

Region

South West (England) > Gloucestershire, Wiltshire and Bristol/Bath area > Swindon

Activity type

Research Organisations

Links

[Contact the organisation](#) [Website](#)

[Participation in EU R&I programmes](#)

[HORIZON collaboration network](#)

Total cost

€ 386 237,50



TERRATEC GEOPHYSICAL SERVICES GMBH & CO KG

Germany

Net EU contribution

€ 738 294,35

Address

**SCHILLERSTRASSE 3
79423 Heitersheim**

SME

Yes

Region

Baden-Württemberg > Freiburg > Breisgau-Hochschwarzwald

Activity type

Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links

[Contact the organisation](#)
[Participation in EU R&I programmes](#)
[HORIZON collaboration network](#)

Total cost
€ 808 200,00

 **THIRD-PARTY** 

TERRATEC GEOPHYSICAL SERVICES NAMIBIA CC

 Namibia
Net EU contribution
€ 69 905,65

Address
KLEIN WINDHOEK
WINDHOEK 

SME 
Yes

Activity type
Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links
[Contact the organisation](#)
[Participation in EU R&I programmes](#)
[HORIZON collaboration network](#)

Total cost
€ 69 905,65



EBERHARD KARLS UNIVERSITAET TUEBINGEN

 Germany
Net EU contribution
€ 497 068,75

Address
GESCHWISTER-SCHOLL-PLATZ
72074 Tuebingen 

Region
Baden-Württemberg > Tübingen > Tübingen, Landkreis

Activity type

Higher or Secondary Education Establishments

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

€ 497 068,75



MENDELOVA UNIVERZITA V BRNE

 Czechia

Net EU contribution

€ 336 625,00

Address

ZEMEDELSKA 1/1665

613 00 Brno Sever 

Region

Česko > Jihovýchod > Jihomoravský kraj

Activity type

Higher or Secondary Education Establishments

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

€ 336 625,00



THE UNIVERSITY COURT OF THE UNIVERSITY OF ST ANDREWS

 United Kingdom

Net EU contribution

€ 410 986,25

Address

NORTH STREET 66 COLLEGE GATE

KY16 9AJ St Andrews 

Region

Activity type

Higher or Secondary Education Establishments

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

€ 410 986,25



UNIVERSITA DEGLI STUDI GABRIELE D'ANNUNZIO DI CHIETI-PESCARA

 Italy

Net EU contribution

€ 295 312,50

Address

Via dei Vestini 31

66013 Chieti 

Region

Sud > Abruzzo > Chieti

Activity type

Higher or Secondary Education Establishments

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

€ 295 312,50



LANCASTER EXPLORATION LIMITED

 British Virgin Islands

Net EU contribution

€ 168 553,24

Address

**58 ADMINISTRATION DRIVE WICKHAMS CAY
ROAD TOWN, TORTOLA** 

Activity type

Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links

[Contact the organisation](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

€ 168 553,24



NATURAL HISTORY MUSEUM

 United Kingdom

Net EU contribution

€ 138 625,00

Address

**CROMWELL ROAD
SW7 5BD London** 

Region

London > Inner London — West > Kensington & Chelsea and Hammersmith & Fulham

Activity type

Public bodies (excluding Research Organisations and Secondary or Higher Education Establishments)

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

€ 138 625,00



A. SPEISER-ENVIRONMENTAL CONSULTANTS CC

 Namibia

Net EU contribution

€ 106 902,25

Address

12THFL, SANLAM CENTRE, 145-157 INDEPENDENCE AVENUE
9999 WINDHOEK 

SME 

Yes

Activity type

Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links

[Contact the organisation](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

€ 106 902,25



Geological Survey of Denmark and Greenland

 Denmark

Net EU contribution

€ 469 350,00

Address

OSTER VOLDGADE 10
1350 Kobenhavn K 

Region

Danmark > Hovedstaden > Byen København

Activity type

Other

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

€ 469 350,00

Last update: 6 September 2024

Permalink: <https://cordis.europa.eu/project/id/689909>

