



REMIX
Interreg Europe



European Union
European Regional
Development Fund

Centro Region Action Plan

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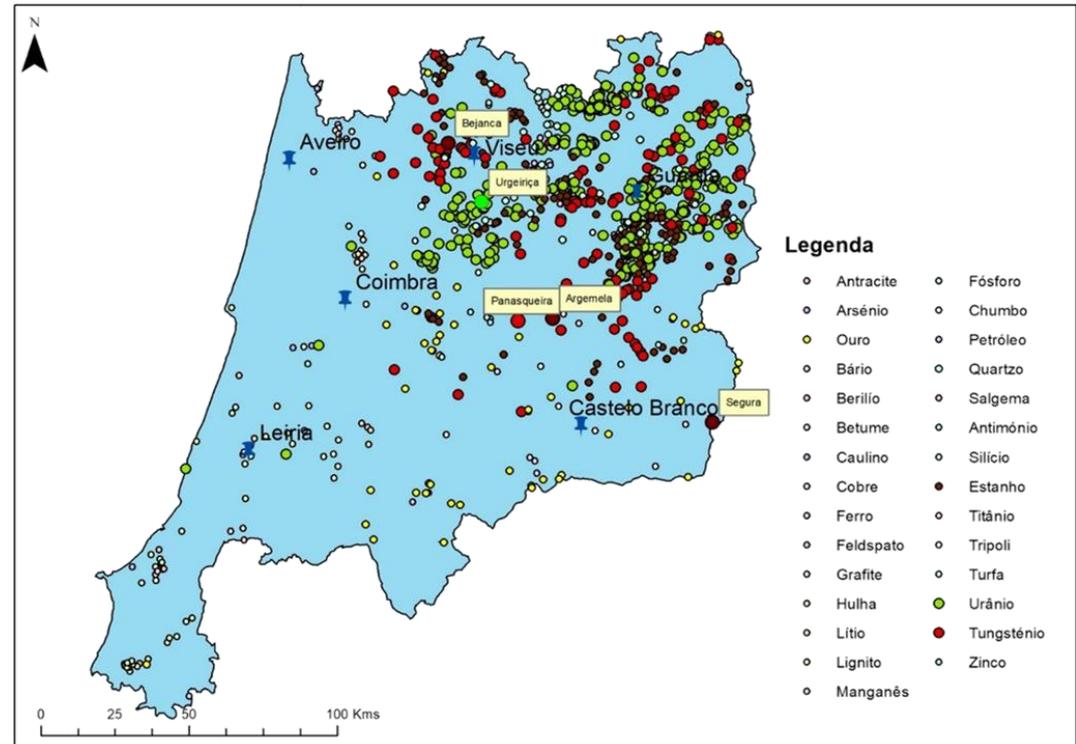
FCT, NOVA University of Lisbon

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Centro Mining Region – General Overview



- Tungsten, one of the EU critical raw materials, is exploited in the region for over 100 years in the Panasqueira mine.
- Apart from tungsten the potential for tin (153 oc.), lithium, uranium (409 oc.) and gold (51 oc.) is also high.



Centro Mining Region - Policies

New Mining Code (Law 54/2015) introduced the following changes:

- Addition of more resources (ex: geological heritage, natural mineral waters, spring waters)
- “Public Domain” include more mineral resources such as gypsum, white clays and special sands
- Granting of rights over the public domain goods is subject to the award of a concession contract, while the granting of rights over the private domain goods is subject to a licensing procedure, with increase relevance of experimental exploitation permits;
- Financial funding supported by the mining industry (through royalties) to be used in research, knowledge, geological heritage protection and valuing of geological resources, among others.

Centro Mining Region - Governance

New Decree-Law No 90/2018 of 9th of November 2018

Drives, executes, formulates and evaluates, among others, energy and geology in a sustainable developing perspective and social and territorial cohesion

Ministry of Environment and Energetic Transition (MEET)

Definition, implementation and evaluation of the geological and energy policies, is also the main administrative entity on the licensing, granting and claiming of mining concessions.

Directorate General for Energy and Geology (DGEG)

Centro Mining Region - Environment

The main environmental authorisations applicable to mining activities are:

- (1) a favourable environmental impact assessment (EIA) declaration – issued under the environmental impact assessment legislation; or a favourable (more simplified) environmental assessment declaration – issued according to Natura 2000 legislation.
- (2) a financial guarantee shall be delivered together with the exploration and research, experimental exploitation and exploitation agreements in order to ensure compliance with the contract, the landscape recovery and the closure of mines
- (3) the holder of the mining right must submit a waste management plan, which must be reviewed every five years.
- (4) Mining operations may only be carried out in designated areas for these activities in the applicable municipal zoning plans or in areas where mining is considered compatible with the use foreseen in the municipal zoning plan.

Importance of REMIX to Centro Region

Definition methodologies for Stakeholder participatory process in Centro region:

- According to REMIX methodology, **Centro Action Group** of REMIX project was set involving in total **23 institutions, 88 participants**.

A total of **5 meetings** were held. Several e-mails were also sent to stakeholders after the 5th meeting, requesting further contributions to Action Plan. These come from several sectors: Business, local, regional and national public sector, and academia.



Importance of REMIX to Centro Region

Identification and visit of Good Practices by stakeholders

- Stakeholders involved in visits and seminars that allowed changes of good practices included in the Action Plan.
- A total of 23 stakeholders Institutions participated in REMIX exchange of good practices visits, which created new views of implementation and acceptance of mining sector activities.



Good practice:

REMINE - Valorization of mining and other mineral wastes into construction materials

Integration of complementary competences for turning mining waste into innovative alkali-activated based structural panels, precast applications and ready mixes

Evidence of success

Techniques developed can be used in other mining waste materials – REMINE project resulted in the development of a spin-off named eCO2blocks that won the international competition ClimateLaunchpad in Edinburgh, 2018.

High added value networks of researchers and mining industries contribute to growing circular economy principles since these new approaches are able to turn waste in a good and even have more efficiency than current goods.

Future of mining in Centro region

Centro Region Action Plan divided in 3 types of actions target to Centro 2020 Region OP:

- **Action 1) Sustainable Industrial Solutions Actions**
- **Action 2) Improvement and valorisation of endogenous resources**
- **Action 3) Territorial Innovation**

Future of mining in Centro region

Action 1) Sustainable Industrial Solutions Actions:

- Inspired by Centro Region Stakeholder Group in REMINE H2020-MSCA-RISE

Sectorial actions	Partners and role	Estimated costs
1.1 Development and implementation of Appropriate Process Technologies (APT) for industrial beneficiation of substances produced in mining projects	Universities, R&D centres, technological and biotechnological companies	1 M€
1.2 R&D projects in automation, remote operations, telemetry, communication and intercommunication in underground environment	– Research and development	2 projects 1 M€ each
1.3 Development of innovative technologies for sustainable exploitation of metallic and non-metallic mineral resources with the purpose to turn the processes more efficient, less costly, and, at the same time, reducing mining waste	Metallic and non-metallic mining companies and EDM – Provide data, implementation and testing	4 projects 350 k€ each
1.4 Turn mining wastes in raw materials and also reinforcing the circular economy (e.g. metal recovery from tailings and dumps, stone aggregates, geopolymers)	Mineral Resources Cluster – facilitator and dissemination Municipalities – the same as the mining companies in the case of being owners of mining wastes	4 projects de 350 k€ each
Total investment		5,8 M€

Future of mining in Centro region

Action 2) Improvement and valorisation of endogenous resources

- Inspired Poland (Lower Silesia) provide excellent models for the development of the needs found not only in Centro region but also in other parts of Portugal (e.g. Alentejo), since they have developed a “Database with geochemical maps of selected areas”.

Sectorial actions	Players involved and role	Estimated costs
2.1 Assessment and mapping of the potential in deep metallic deposits with focus on critical minerals	Universities, R&D centres and LNEG – Research, development and mapping Metallic and non-metallic mining companies and EDM – Provide data, access to test sites and support research work Mineral Resources Cluster – promote links between research entities and companies as well as dissemination CCDR Centro – Provide data and build database	500 k€
2.2 Mineral resources assessment of the mining tailing and dumps		350 k€
2.3 Assessment and mapping of geothermal potential for the production of electricity;		250 k€
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2.4 Assessment and mapping of lithium resources;		300 k€
2.5 Geological mapping, exploration and inventory of the available mineral resources;		1 M€
2.6 Streamline access to exploitation and sustainable supply of resources, under properly framed legal conditions, with participation and follow-up of all stakeholders and interested parties – development of Centro region policy for mining		250 k€
2.7 Innovative technologies to restoration, environmental monitoring and control of the old mining sites		4 projects of 200 k€ each
2.8 Assessment of the groundwater resources and the impacts of global change;		250 k€
2.9 Assessment of the potential of unconventional water sources (quarries and other abandoned sites)	200 k€	
TOTAL investment		3.9M€

Future of mining in Centro region

Action 3) Territorial Innovation

- Inspired by examples from Cornwall and Isles of Scilly: we learned from transforming a disused tin mine site into an environmentally pioneering earth science cluster, attracting international mining and minerals businesses, developed by a cluster of business, and also from Poland with the “Revitalisation of a closed coal mine into a living science and art centre”

Sectorial actions		Estimated costs
3.1 To promote tourism in the mining regions, in partnership with local decision-makers, NGOs and local associations through the promotion of the old or present mining activities but also to allow the mineral dependence awareness of our society among the young people using innovative dissemination tools; includes also the promotion of the “Roteiro de Minas - Guide of the Portuguese geological and mines sites”	Universities and R&D centres National Laboratory of Energy and Geology (LNEG) Directorate General for Energy and Geology (DGEG) Mineral Resource Cluster (MRC) Metallic and non-metallic mining companies, EDM, Design and multimedia companies Mining and old mining workers Associations (MWA)	3 x 200 k€
3.2 Preservation of the mining heritage supported in cultural centres, museums and other similar structures	Municipalities Regional centres for the dissemination of science (CCV) Center Portugal Regional Coordination and Development Commission (CCDRC) Turismo Centro de Portugal	5 M€
Total investment		5.6 M€

Current situation

After formal presentation on the 22nd of April in CCDR Centro it is now under final review and endorsement by CCDR OP.

Endorsement OSIRIS, Municipality of Fundão

Mayor Statement
Dr. Paulo Fernandes

The participation of the Municipality of Fundão in OSIRIS project has been a unique experience of sharing and learning, which will greatly contribute to building a more sustainable path for our collective future.

We look at local economy valuation, job promotion and quality of life as central issues in public policy and this requires networking with the promotion of partnerships, synergies and opportunities.

Today, Fundão is known as a land of tradition, innovation and major investments. In four years, Fundão has attracted 14 information technology companies, created more than 500 jobs and launched an ecosystem that generated 48 startups and projects, in addition to the implementation of intensive programs of conversion of unemployed into computer programmers, which already covered 240 people (90% without university education and a 95% employability rate). Our territory begins to stand out in several other fields related to industry and innovation: not just for a rural town in the hinterland of Portugal, it even more relevant because Fundão emerged in a country in a low population density and seen as a depressed part of the country.

The strategy aims to be an integrant and coherent as possible, and at the same time we seek to project our city to the world, not Fundão on the map, but also to strengthen its connection with the local community.

This Action Plan also represents another way of doing local politics, not only thinking of job structures, but also of the most essential conditions that are of the social and open innovation, in the open area, whether in the reconstruction of careers, in the transfer of technology to the market, in support systems for companies or in the use of knowledge and innovation.

On behalf of the Municipality of Fundão, I would like to thank all those involved in this project, for integrating the Local Action Group and all European partners, for kindness, hospitality and sharing.

On the part of the Municipality, you can count on total commitment and motivation in the implementation of the Action Plan. Make Fundão a Better City! It will be another step in a journey that we are making on everyone.

Paulo Fernandes
Mayor of Fundão

CCDR Statement
Prof. Ana Abrunhosa

Centro Regional Coordination and Development Commission - CCDR, as the Managing Authority of the Regional Operational Program for Centro Portugal - CENTR0302020 - approved from the local support by the Municipality of Fundão is OSIRIS partner of the Centro Region of Portugal, and has also been a member of the Local Group of Stakeholders.

We had the opportunity to participate in eight meetings of the Local Stakeholder Group and three inter-regional events (Funchal, Oporto and Brussels).

In these contexts, it was possible to follow and participate in the development of the project and to be aware of the quality of the work developed.

The Action Plan results and brings together the contributions of all the stakeholders involved and constitutes a working tool of great utility for the development of this municipality and, ultimately, the region as a whole.

In this context, we endorse the Action Plan submitted by the Municipality of Fundão in the context of the Interreg Europe project OSIRIS.

Coimbra, January 2019

University views:
Prof. Ana Abrunhosa
President of Centro Regional Coordination and Development Commission

19



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Thank you!

Questions welcome



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