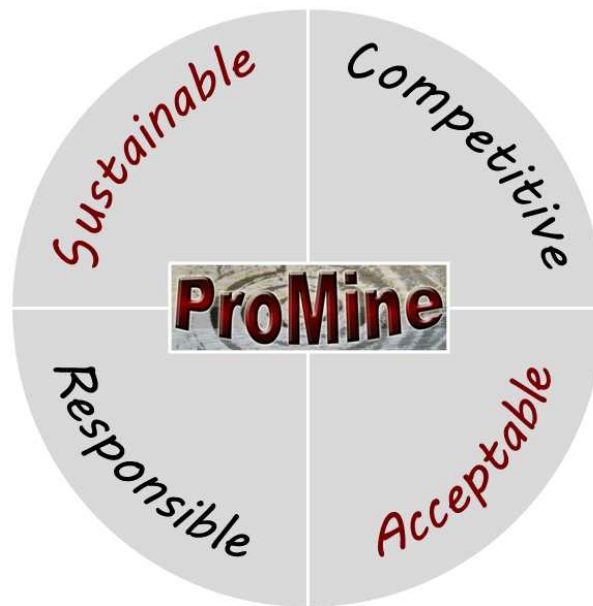




ProMine



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ProMine Recommendations (good practices and good governance)

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1. The ProMine Message

1.1 Sustainable

ProMine created a Pan-European integrated database containing known mineral resources and related mining waste repositories. Statistical analyses of these data reveal known and predicted mineral districts which bring to light the fact that Europe is still vastly underexplored. ProMine is therefore promoting smart deep exploration methods and applies predictive 3D & 4D modelling and visualization approaches to identify deep-seated mineral resources in order to reduce the mining footprint. In addition, ProMine is producing new high-value (nano) metal and mineral products from mining waste and introduces new avant garde biotechnologies in processing ore and mining waste. ProMine uses the Sustainability Performance Assessment approach to kick start an upward trend of more sustainable operations underlying an environmentally responsible mining approach, and to optimize the use of Europe's mineral resources towards a resource efficient and supply secure Europe.

The European mining industry becomes more sustainable by:

- Adopting current 3 & 4D mineral exploration technologies and predictive mapping to provide the best visualization of existing mineral resources in order to improve prospecting efficiency and at the same time reduce capital risks of mining while keeping in mind availability of mineral resources for future generations.
- Defining the mining footprint methodology to include all relevant factors and value-chain stages (e.g. the transportation of minerals from extraction site to production facilities over long distances) to be able to identify potential risks of mining activities and to better understand the impacts on the landscape's carrying capacity, thus respecting the land.
- Using geo-models alongside other ecological and economic models as an integral part of land resource planning & management approaches, and together with the ProMine Portal (mineral resources database) present them as essential tools to the EU relevant directorates including the GMES bureau, (Global Monitoring and Environment Security), when planning land, water, & mineral resources on a European continental, regional & local scale.
- Focusing on increasing recycling rates, reuse (and substitution) of mineral resources from mineral extraction and processing waste streams where applicable. And recommend that the legislation on mineral resources re-use in the EU focuses to treat them by their quality and not by their source.
- Supporting the Commission in addressing the issue of the magnitude of the mining waste as a potential environmental & social hazard, but also as a potential secondary resource everywhere in Europe and include it in the main

stream of the Raw Materials Initiative so that practices such as utilizing waste streams become part of the initial planning and day-to-day mining operations.

- Encouraging production of by-products which lower production costs and energy consumption while reducing pollutants and carbon emissions. Additional measures such as the use of renewable energy and the use of inert mining wastes for backfill material also become part of the initial planning.

2.2 Competitive

ProMine has put the mining and related downstream industries back in the economic limelight to address Europe's current trade deficit which is heavily dependent on mineral and metal imports. ProMine's innovative partnership with its leading industrial partners is instrumental in enabling Europe to change this course to make full use of its own mineral wealth. The ProMine project is kick starting an upward trend of more sustainable operations and new business practices which will increase access to new employment & industrial development opportunities & contribute towards competitive and long term European economic growth.

The European mining industry becomes more competitive by:

- Using the European Mineral Resource and Mining Waste databases developed by ProMine and making it the Portal of the European mining industry, thus enabling it to focus exploration efforts to those areas where predictions for new resources are indicated and be able to take optimum decisions on a holistic European platform.
- Understanding that increasing extraction brings not only economic growth but also adverse environmental and social impacts and ensuring that this is considered in resource economics calculations. Competitive mining approaches that decouple economic growth & adverse impacts contribute to a higher quality of living.
- Taking the lead in the global markets extractive industries to achieve a fair distribution of costs and benefits and to change the concept from "cheap is good" to "sustainable is better" by encouraging EU governments to offer transparent financial initiatives and/or tax reliefs to companies with smart mining practices & those that make innovative products out of existing mining waste, in other words turning wastes to exploitable secondary mineral resources.
- Striving to introduce the green label for sustainable mining products across the board and encouraging EU governments to support a green mining concept through buying high value products that were extracted and produced in a sustainable manner for its public requirements and needs, as well as its industrial demand.

- Encouraging European legislation on raw materials to demand high environmental requirements for mineral resources extraction in the European Union by putting higher taxes on domestic and imported raw materials and related products that do not meet the required standards.
- Recognising that implementing resource efficient and environmentally friendly technologies will enable new business opportunities and new industrial links to emerge.
- Promoting a strong synergy between mining, traditional mineral processing and recycling keeping in mind that recycling and material substitution are not stand alone solutions and have to be considered in the overall mining scenario; for example for maximum economic & environmental benefits it may be advisable to locate recycling plants in exhausted mines or in the abandoned part of active mines
- Investing in European knowledge triangles which integrate education, research and industry. Encourage the mobility of students, researchers and mining experts to face the problems of the mining industry as a challenge and come up with best practices and solutions at every level from different approaches including social, environmental, industrial, technological, health & safety, risk assessment, business aspects.
- Encouraging the European Commission to continue supporting EU projects on sustainable approaches in European mining such as the ProMine project, which brings together human and financial capital from the mining and manufacturing industries and research institutions in order to reach the necessary critical mass to comprehensively address specific issues in one project.
- Encouraging the European Commission to carry out a review of best practices at local, regional, national, European & international level and adopt and adapt where appropriate to feed the Raw Materials Initiative.

2.3 Responsible

ProMine contributes to making mining responsible throughout exploration, exploitation and closure. The project strives to enhance good governance of the mining industry in Europe by being conscientious about the social and economic wellbeing of its local communities whilst acting as an environmental steward for the land, including water, under its care. The ProMine consortium includes 5 extractive industry key partners who throughout the project came together in regular meetings and are willing to share their good practices beyond the project.

The European mining industry becomes more responsible by:

- Reaching mining decisions after consulting the ProMine Portal (mineral resources and mining waste databases) and employing predictive mapping to assess where feasible sites for mining are located, while keeping in mind that the demand for the said commodities match the European market demand at the time; and using the necessary tools to calculate the environmental and social impacts of the proposed activity.
- Improving post-closure restoration and rehabilitation land measures after mine exhaustion from the initial planning phase of opening new mining sites by establishing a framework for a rehabilitation program that may include a replacement of the topsoil from a stored soil seed bank to enable a return of some of the original biodiversity as opposed to stockpiling practices.
- Setting up voluntary certification and monitoring schemes in the mining sites, accompanied by environmental performance indicators (i.e. controlling all mining activities including the monitoring of air, water & land pollution). Ensuring that such data is continuously collected and made available on line as advised by the Aarhus convention and the EEA, to demonstrate their bona fide intentions and to gain trust by the local communities.
- Adopting higher standards of operation with best available techniques in production of mineral raw materials that would minimize adverse effects on human health and reduce degradation of the natural environment; and accept to be heavily fined if these standards are not adhered to.
- Improving contingency and mitigation plans with all stakeholders involved including the local community to ensure that in case of an environmental accident all parties are informed of what needs to be done immediately to affect minimum health and environmental damage.
- Establishing good governance in the mining industry demands a regulatory body that is authorised to co-ordinate the co-operation between all involved authorities and that it ensures that stringent directives are enforced especially EIA's & Mining Waste Directives especially when it comes to large scale precious metal mining and others.

2.4 Acceptable

ProMine partners are working from all corners of Europe to help to improve the image of mining in Europe by demonstrating new technological tools and solutions for the mining industry to operate in a progressive, considerate manner and to act in partnership with local communities & local economies. Society accepts that minerals and metals are an integral part of modern everyday life and that the industry is making efforts to decrease its environmental impact & footprint through the use of innovative technologies whilst providing Europe with the necessary raw materials for modern life.

The European mining industry becomes more acceptable by:

- Recognising that the mining industry evokes a different emotional reaction from other sectors as it changes once pristine landscapes and affects the identity of local communities therefore socio-economic impact assessments & social planning are to be taken into account at the earliest stages of project development & the Social licence shall seek to cover a gender & age perspective.
- Being aware that legislation drawn up at international level is applicable to people at the local level and the local situation may present different challenges, also that enforcement is in many cases under regional or local responsibilities. Therefore recognising the importance of working with independent legal and technical advisors who can guide communities through the negotiating process.
- Recognizing that addressing gaps in the area of responsible grievance handling together with building skills & capacity both amongst operations personnel as well as community relations practitioners is the affirmative way forward. When grievances policies are adopted in the policy framework of the company, a sound dialogue platform contributes towards building a positive image of mining.
- Ensuring that community relations are handled by professional people who are trained to understand and value local knowledge and that environmental concerns are not always explainable by scientific descriptors & technical data and they may cover cultural and spiritual dimensions that override or contradict technical explanations.
- Adopting a taxation system so that corporate tax will benefit the local communities and not only the government.
- Foreseeing the importance of identifying leading community stakeholders and demonstrate an all inclusive approach to gain people's confidence, and invite them to visit similar sites where sustainable mining is occurring.

- Participating actively in innovative community decision making processes such as public participatory GIS (ppgis, also called community mapping) to understand how groups within a community may have different interests in relation to the mining project, and to address those interests.
- Raising awareness of joint global responsibility and point out that smart mining in Europe is more conscientious than importing raw materials from countries that do not have environmental impact regulations enforced. Changing the negative mindset of “not in my back yard” which can be reached through educational tourism for the wider public to witness first hand achievements in improved mining approaches.
- Adopting the ProMine model of using the Sustainability Performance Assessment of new raw materials and their products to present a comprehensive view on production and consumption costs, that is the whole process from extraction and production of materials to consumption and disposal of waste. Sustainability Performance Assessment is to become a common process for long term planning, managing, monitoring and evaluating the raw material life-cycle on European, national and regional level.